



wwPDB EM Validation Summary Report ⓘ

Dec 13, 2022 – 05:15 PM EST

PDB ID : 7UNG
EMDB ID : EMD-26624
Title : 48-nm repeat of the human respiratory doublet microtubule
Authors : Gui, M.; Croft, J.T.; Zabeo, D.; Acharya, V.; Kollman, J.M.; Burgoyne, T.;
Hoog, J.L.; Brown, A.
Deposited on : 2022-04-11
Resolution : 3.60 Å(reported)

This is a wwPDB EM Validation Summary Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

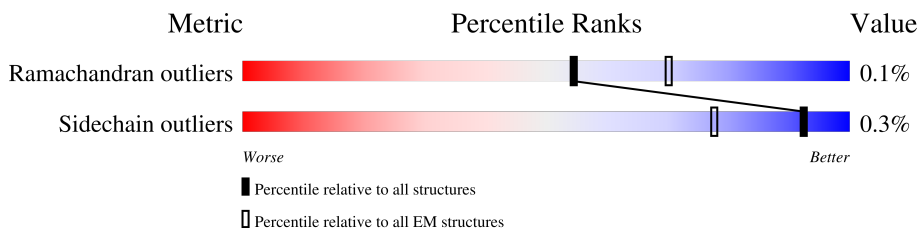
EMDB validation analysis : 0.0.1.dev43
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : **FAILED**
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.2

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.60 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.





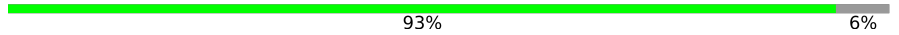
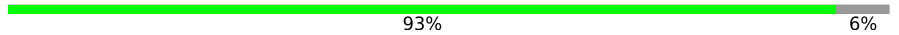


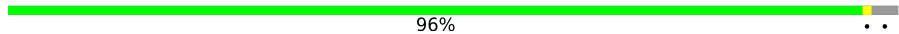
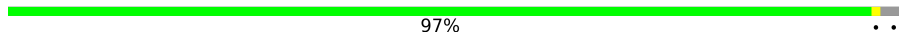
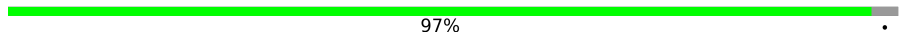
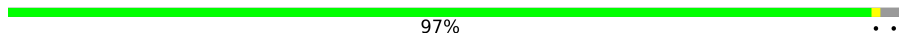
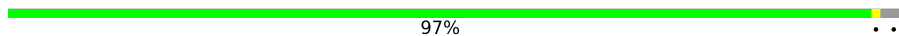
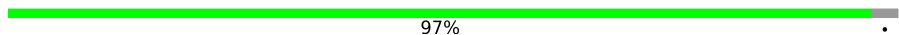
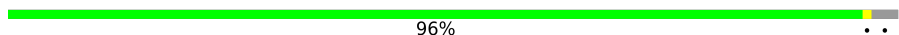
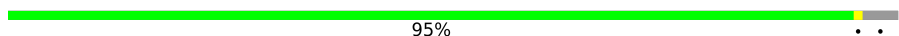
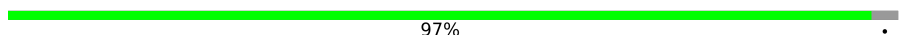
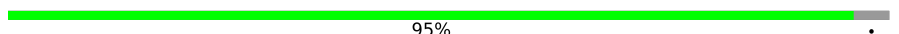
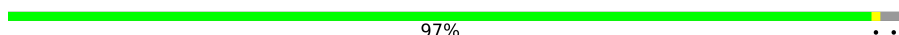
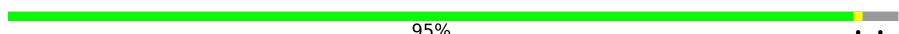
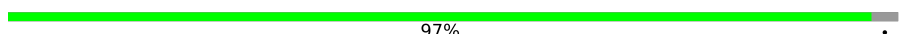
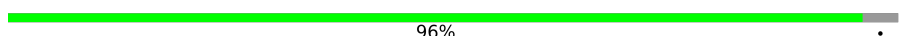
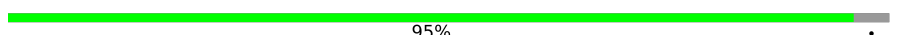
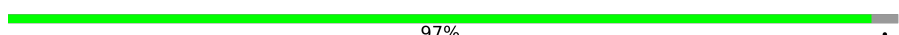
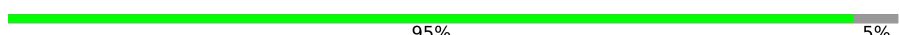

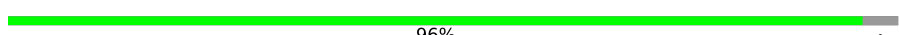
| Metric | Whole archive (#Entries) | EM structures (#Entries) |
|-----------------------|--------------------------|--------------------------|
| Ramachandran outliers | 154571 | 4023 |
| Sidechain outliers | 154315 | 3826 |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$.

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1 | 0 | 229 | |
| 1 | 7 | 229 | |
| 2 | 1 | 833 | |
| 2 | 2 | 833 | |
| 3 | 3 | 514 | |
| 3 | 4 | 514 | |
| 4 | 5 | 376 | |
| 4 | 6 | 376 | |
| 5 | 8 | 194 | |
| 5 | 9 | 194 | |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|---|
| 6 | A | 101 |  50% 50% |
| 7 | A0 | 418 |  52% 47% |
| 7 | A1 | 418 |  93% 6% |
| 7 | A2 | 418 |  93% 6% |
| 7 | A3 | 418 |  80% 20% |
| 7 | A4 | 418 |  8% 92% |
| 8 | AA | 451 |  96% .. |
| 8 | AC | 451 |  97% .. |
| 8 | AE | 451 |  97% . |
| 8 | AG | 451 |  97% .. |
| 8 | AI | 451 |  97% .. |
| 8 | AK | 451 |  97% . |
| 8 | AM | 451 |  96% .. |
| 8 | BA | 451 |  95% .. |
| 8 | BC | 451 |  97% . |
| 8 | BE | 451 |  95% . |
| 8 | BG | 451 |  97% .. |
| 8 | BI | 451 |  95% .. |
| 8 | BK | 451 |  97% . |
| 8 | BM | 451 |  96% . |
| 8 | CA | 451 |  95% . |
| 8 | CC | 451 |  97% . |
| 8 | CE | 451 |  95% 5% |
| 8 | CG | 451 |  97% .. |
| 8 | CI | 451 |  96% . |

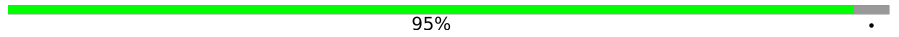
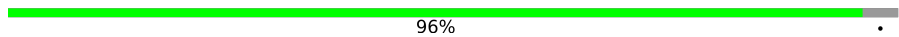
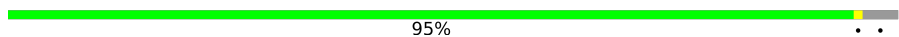
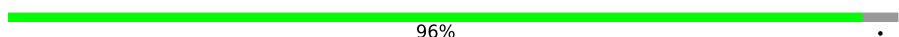

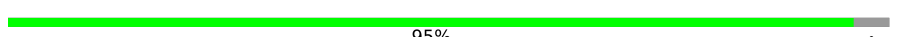
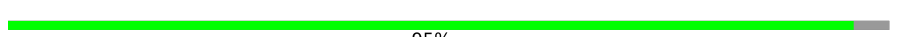



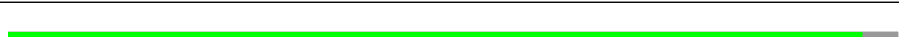


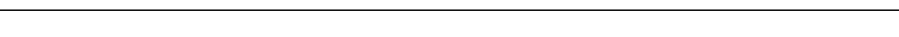
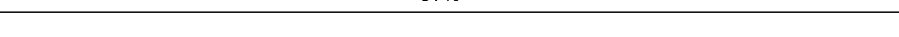
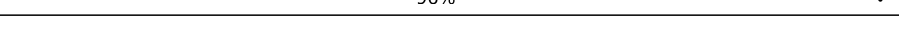
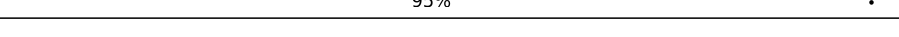
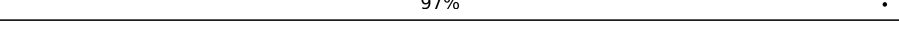
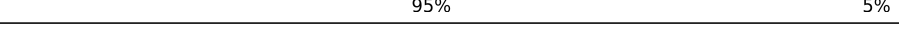
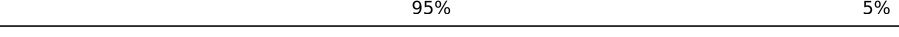
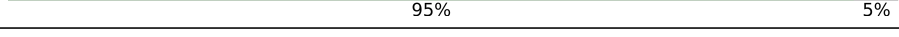
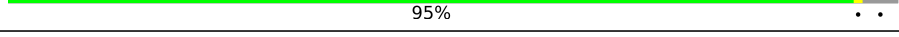
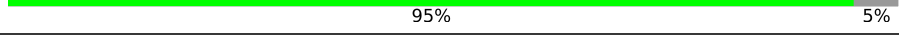
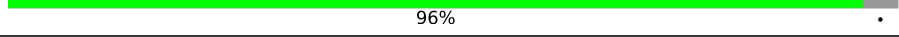
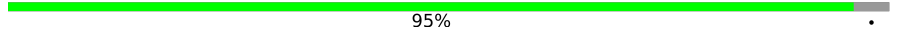
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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 8 | CK | 451 | 97% |
| 8 | CM | 451 | 95% |
| 8 | DA | 451 | 84% 15% |
| 8 | DC | 451 | 95% 5% |
| 8 | DE | 451 | 95% |
| 8 | DG | 451 | 95% 5% |
| 8 | DI | 451 | 95% 5% |
| 8 | DK | 451 | 95% 5% |
| 8 | DM | 451 | 95% |
| 8 | EC | 451 | 97% |
| 8 | EE | 451 | 97% |
| 8 | EG | 451 | 97% |
| 8 | EI | 451 | 97% |
| 8 | EK | 451 | 97% |
| 8 | EM | 451 | 97% |
| 8 | FC | 451 | 95% |
| 8 | FE | 451 | 95% |
| 8 | FG | 451 | 95% 5% |
| 8 | FI | 451 | 95% 5% |
| 8 | FK | 451 | 95% 5% |
| 8 | FM | 451 | 95% 5% |
| 8 | GC | 451 | 96% |
| 8 | GE | 451 | 95% 5% |
| 8 | GG | 451 | 95% |
| 8 | GI | 451 | 95% 5% |

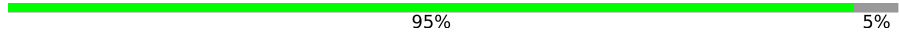
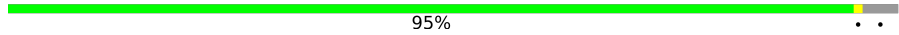
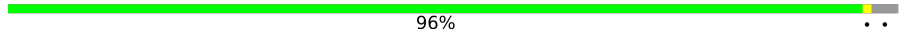
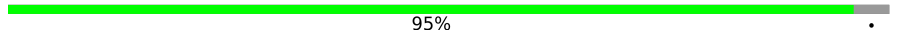
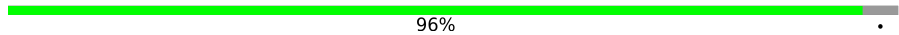
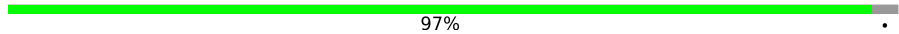
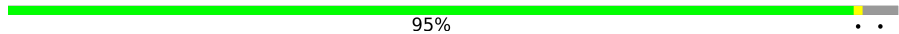
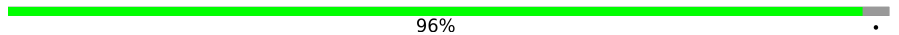
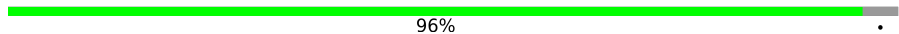
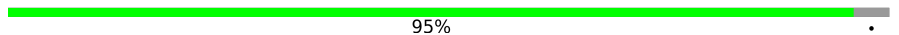
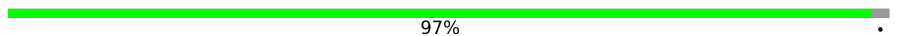
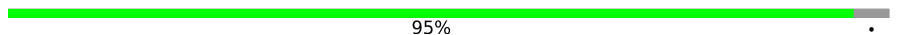
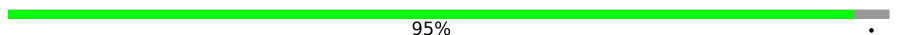
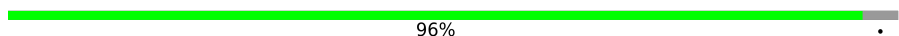
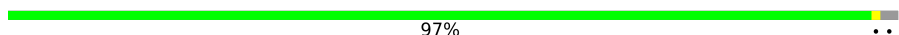
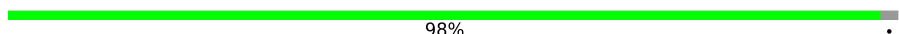
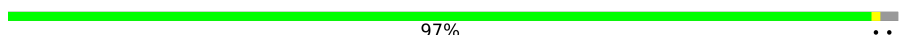
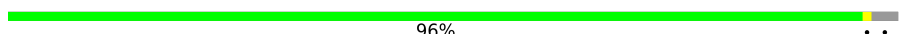
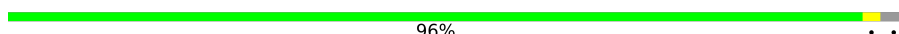
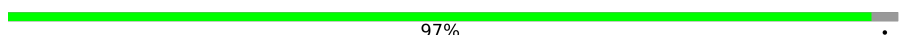
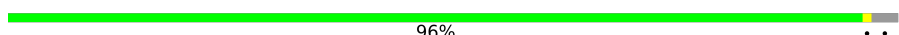
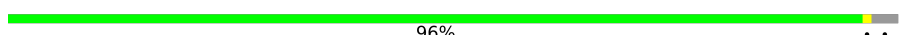
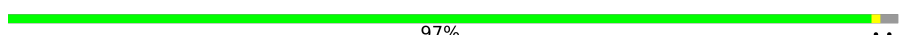

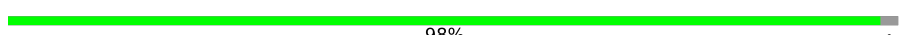
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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 8 | GK | 451 |  95% . |
| 8 | GM | 451 |  96% . |
| 8 | HC | 451 |  95% .. |
| 8 | HE | 451 |  96% . |
| 8 | HG | 451 |  95% . |
| 8 | HI | 451 |  95% . |
| 8 | HK | 451 |  95% . |
| 8 | HM | 451 |  95% . |
| 8 | HO | 451 |  86% . 14% |
| 8 | IC | 451 |  95% .. |
| 8 | IE | 451 |  96% . |
| 8 | IG | 451 |  97% . |
| 8 | II | 451 |  96% . |
| 8 | IK | 451 |  97% . |
| 8 | IM | 451 |  96% . |
| 8 | IO | 451 |  95% . |
| 8 | JC | 451 |  97% . |
| 8 | JE | 451 |  95% 5% |
| 8 | JG | 451 |  95% 5% |
| 8 | JI | 451 |  95% 5% |
| 8 | JK | 451 |  95% .. |
| 8 | JM | 451 |  95% 5% |
| 8 | KC | 451 |  96% . |
| 8 | KE | 451 |  95% . |
| 8 | KG | 451 |  96% . |

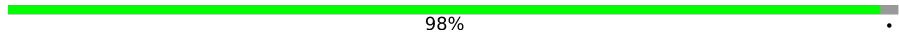
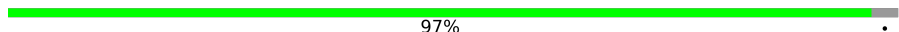
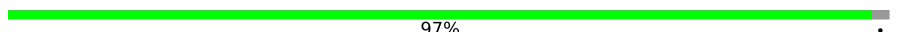

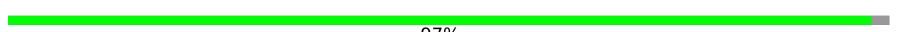
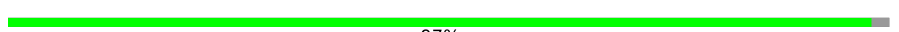






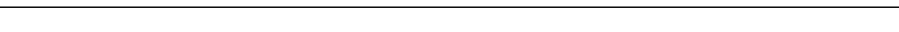

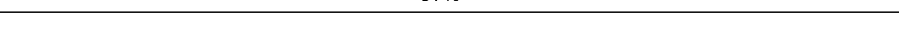
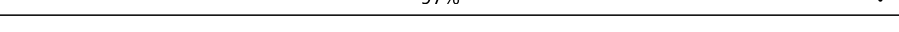
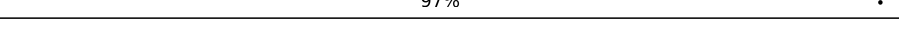
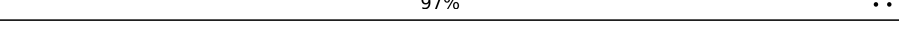
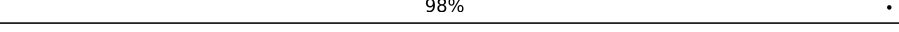

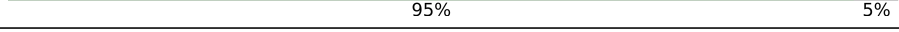
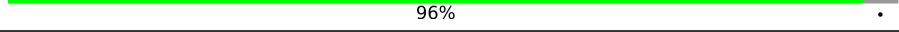
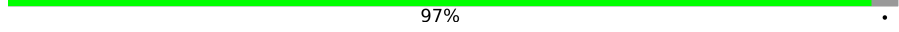
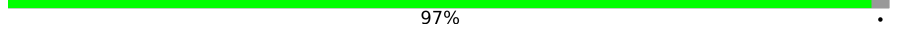
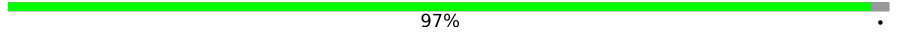
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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|---|
| 8 | KI | 451 |  95% 5% |
| 8 | KK | 451 |  95% .. |
| 8 | KM | 451 |  96% .. |
| 8 | KO | 451 |  95% . |
| 8 | LC | 451 |  96% . |
| 8 | LE | 451 |  97% . |
| 8 | LG | 451 |  95% .. |
| 8 | LI | 451 |  96% . |
| 8 | LK | 451 |  96% . |
| 8 | LM | 451 |  95% . |
| 8 | MC | 451 |  97% . |
| 8 | ME | 451 |  95% . |
| 8 | MG | 451 |  95% . |
| 8 | MI | 451 |  96% . |
| 8 | MK | 451 |  97% .. |
| 8 | MM | 451 |  98% . |
| 8 | NC | 451 |  97% .. |
| 8 | NE | 451 |  96% .. |
| 8 | NG | 451 |  96% .. |
| 8 | NI | 451 |  97% . |
| 8 | NK | 451 |  96% .. |
| 8 | NM | 451 |  96% .. |
| 8 | OC | 451 |  97% .. |
| 8 | OE | 451 |  97% . |
| 8 | OG | 451 |  98% . |

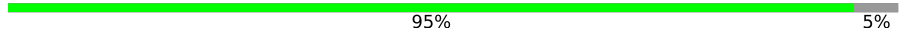
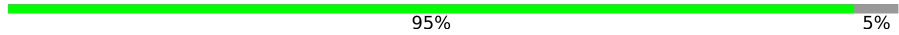
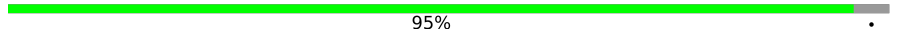
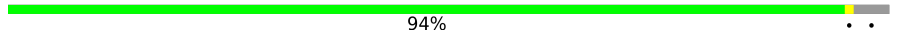
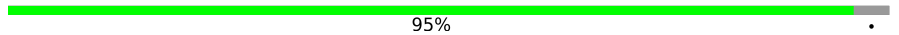
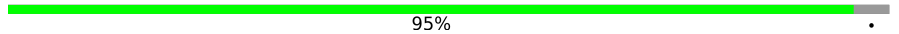
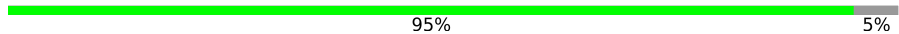
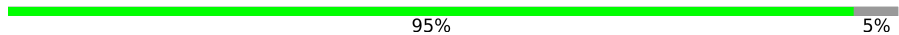
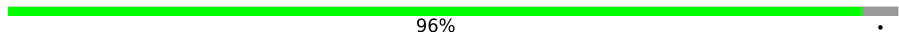
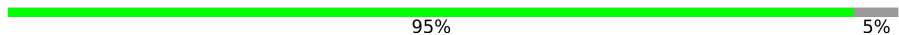
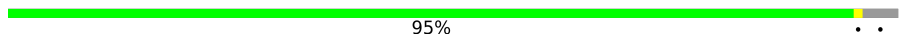
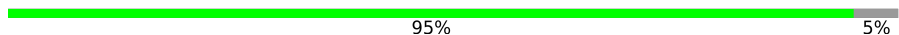
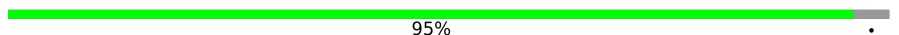
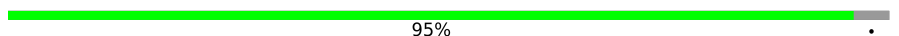
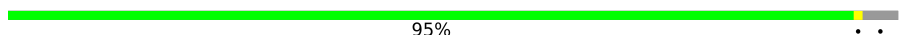
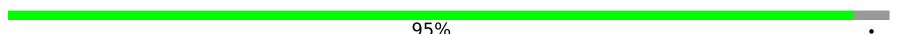
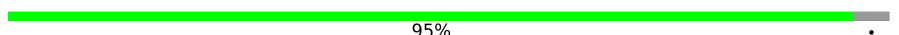
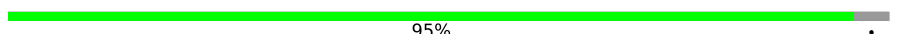
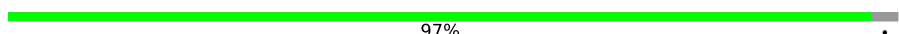
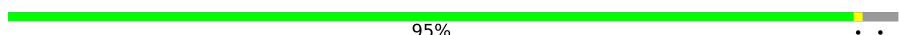
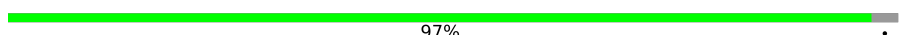
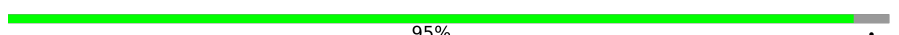
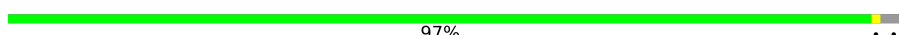
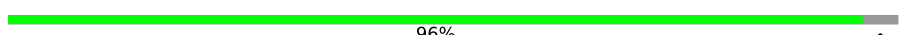
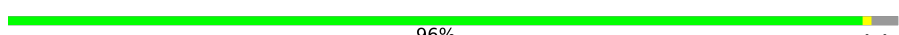
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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|---|
| 8 | OI | 451 |  98% . |
| 8 | OK | 451 |  97% . |
| 8 | OM | 451 |  97% . |
| 8 | OO | 451 |  94% 6% |
| 8 | PC | 451 |  97% . |
| 8 | PE | 451 |  97% . |
| 8 | PG | 451 |  97% . |
| 8 | PI | 451 |  97% . |
| 8 | PK | 451 |  97% .. |
| 8 | PM | 451 |  97% . |
| 8 | PO | 451 |  97% . |
| 8 | QC | 451 |  97% . |
| 8 | QE | 451 |  98% . |
| 8 | QG | 451 |  97% .. |
| 8 | QI | 451 |  97% . |
| 8 | QK | 451 |  97% . |
| 8 | QM | 451 |  97% .. |
| 8 | QO | 451 |  98% . |
| 8 | RC | 451 |  90% 9% |
| 8 | RE | 451 |  95% 5% |
| 8 | RG | 451 |  96% . |
| 8 | RI | 451 |  97% . |
| 8 | RK | 451 |  97% . |
| 8 | RM | 451 |  97% . |
| 8 | RO | 451 |  97% . |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 8 | SE | 451 |  95% 5% |
| 8 | SG | 451 |  95% 5% |
| 8 | SI | 451 |  95% . |
| 8 | SK | 451 |  94% . . |
| 8 | SM | 451 |  95% . |
| 8 | SO | 451 |  95% . |
| 8 | TE | 451 |  95% 5% |
| 8 | TG | 451 |  95% 5% |
| 8 | TI | 451 |  96% . |
| 8 | TK | 451 |  95% 5% |
| 8 | TM | 451 |  95% . . |
| 8 | TO | 451 |  95% 5% |
| 8 | UE | 451 |  95% . |
| 8 | UG | 451 |  95% . |
| 8 | UI | 451 |  95% . . |
| 8 | UK | 451 |  95% . |
| 8 | UM | 451 |  95% . |
| 8 | UO | 451 |  95% . |
| 8 | VE | 451 |  97% . |
| 8 | VG | 451 |  95% . . |
| 8 | VI | 451 |  97% . |
| 8 | VK | 451 |  95% . |
| 8 | VM | 451 |  97% . . |
| 8 | VO | 451 |  96% . |
| 8 | WE | 451 |  96% . . |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 8 | WG | 451 | 95% 5% |
| 8 | WI | 451 | 97% . |
| 8 | WK | 451 | 95% 5% |
| 8 | WM | 451 | 96% .. |
| 8 | WO | 451 | 96% . |
| 9 | AB | 445 | 98% .. |
| 9 | AD | 445 | 98% . |
| 9 | AF | 445 | 97% .. |
| 9 | AH | 445 | 97% .. |
| 9 | AJ | 445 | 97% .. |
| 9 | AL | 445 | 98% .. |
| 9 | BB | 445 | 96% . |
| 9 | BD | 445 | 95% .. |
| 9 | BF | 445 | 95% .. |
| 9 | BH | 445 | 95% . |
| 9 | BJ | 445 | 95% .. |
| 9 | BL | 445 | 96% . |
| 9 | CB | 445 | 96% .. |
| 9 | CD | 445 | 96% . |
| 9 | CF | 445 | 95% . |
| 9 | CH | 445 | 96% . |
| 9 | CJ | 445 | 95% . |
| 9 | CL | 445 | 96% . |
| 9 | DB | 445 | 95% .. |
| 9 | DD | 445 | 95% .. |

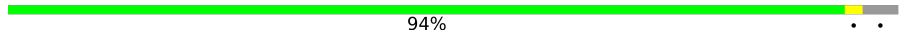
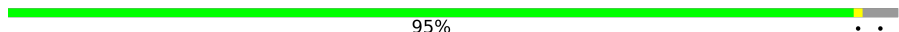
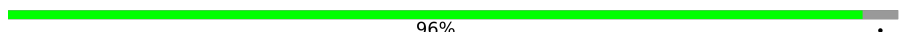
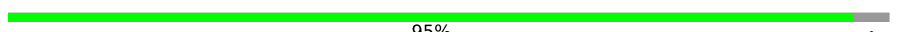
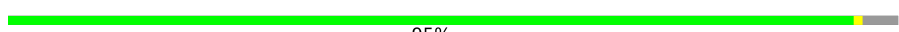







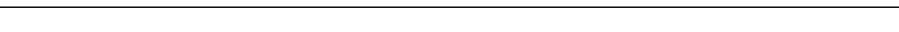

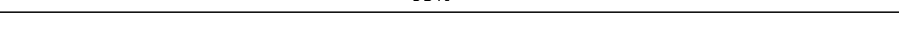
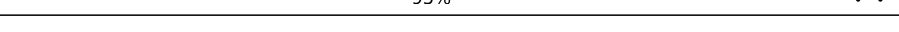
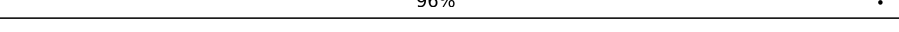
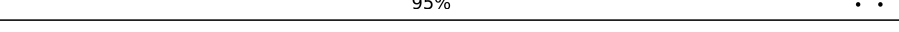
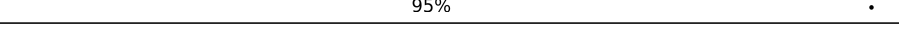
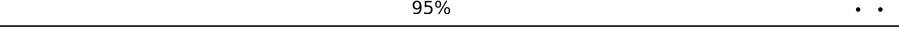
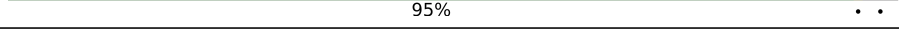
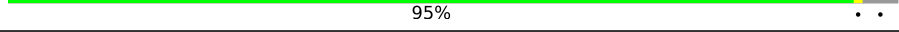
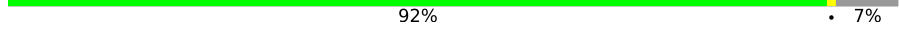
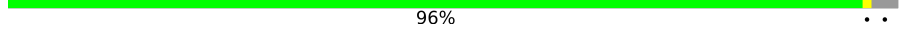
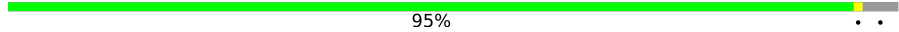
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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 9 | DF | 445 | 95% . . |
| 9 | DH | 445 | 96% . |
| 9 | DJ | 445 | 95% . . |
| 9 | DL | 445 | 95% . |
| 9 | EB | 445 | 96% . |
| 9 | ED | 445 | 95% . . |
| 9 | EF | 445 | 95% . . |
| 9 | EH | 445 | 95% . . |
| 9 | EJ | 445 | 95% . . |
| 9 | EL | 445 | 95% . . |
| 9 | EN | 445 | 96% . |
| 9 | FB | 445 | 95% . |
| 9 | FD | 445 | 96% . |
| 9 | FF | 445 | 95% . |
| 9 | FH | 445 | 95% . . |
| 9 | FJ | 445 | 96% . |
| 9 | FL | 445 | 95% . . |
| 9 | FN | 445 | 95% . . |
| 9 | GB | 445 | 91% . 8% |
| 9 | GD | 445 | 95% . |
| 9 | GF | 445 | 95% . . |
| 9 | GH | 445 | 96% . |
| 9 | GJ | 445 | 96% . . |
| 9 | GL | 445 | 95% . |
| 9 | GN | 445 | 95% . . |

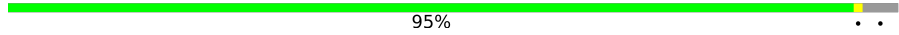
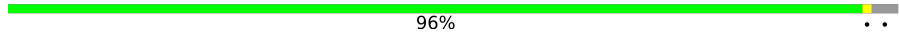
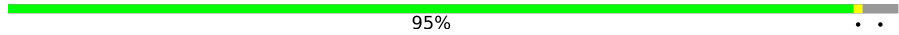
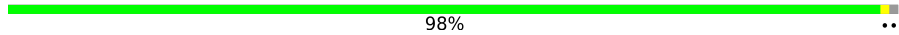
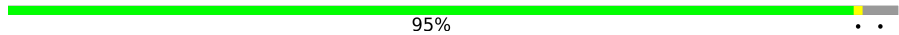
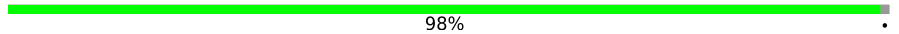
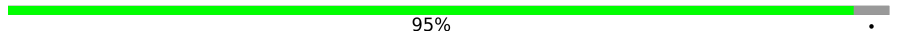
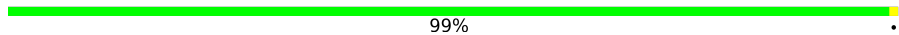
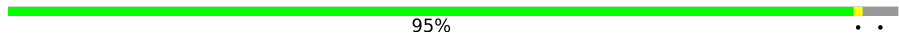
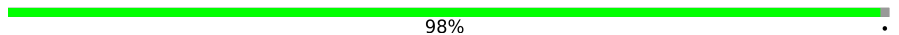
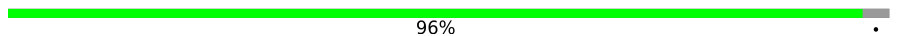
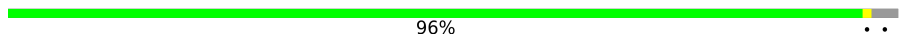
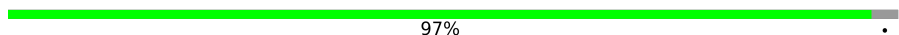
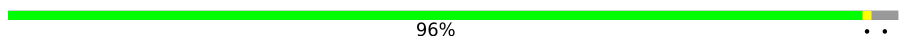
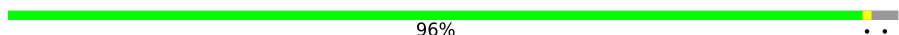
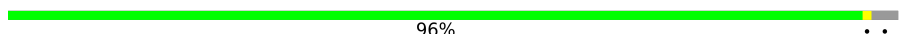
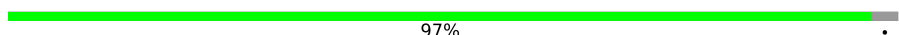
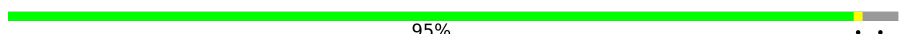
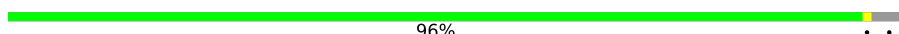
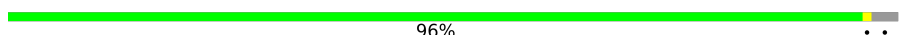
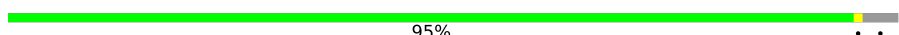
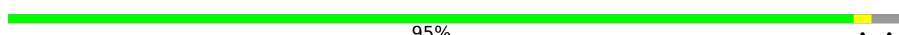
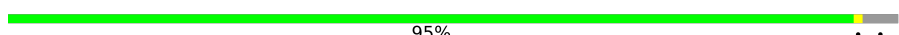
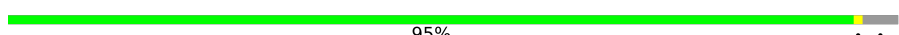
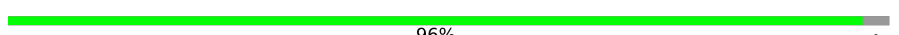
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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|---|
| 9 | HB | 445 |  94% |
| 9 | HD | 445 |  95% |
| 9 | HF | 445 |  96% |
| 9 | HH | 445 |  95% |
| 9 | HJ | 445 |  95% |
| 9 | HL | 445 |  94% |
| 9 | HN | 445 |  94% |
| 9 | IB | 445 |  91% 9% |
| 9 | ID | 445 |  95% |
| 9 | IF | 445 |  96% |
| 9 | IH | 445 |  95% |
| 9 | IJ | 445 |  96% |
| 9 | IL | 445 |  95% |
| 9 | IN | 445 |  95% |
| 9 | JB | 445 |  95% |
| 9 | JD | 445 |  96% |
| 9 | JF | 445 |  95% |
| 9 | JH | 445 |  95% |
| 9 | JJ | 445 |  95% |
| 9 | JL | 445 |  95% |
| 9 | JN | 445 |  95% |
| 9 | KB | 445 |  92% 7% |
| 9 | KD | 445 |  96% |
| 9 | KF | 445 |  95% |
| 9 | KH | 445 |  96% |

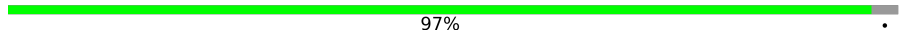
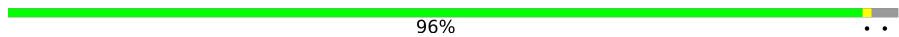
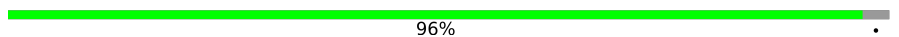
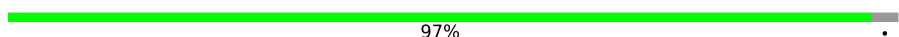
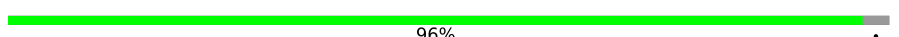
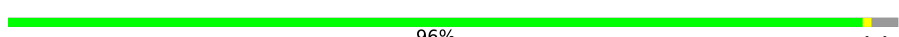
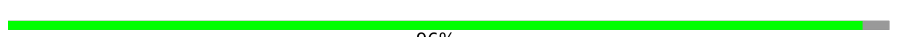



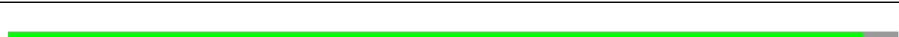


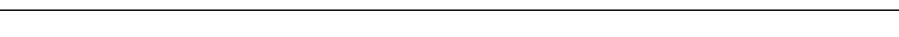
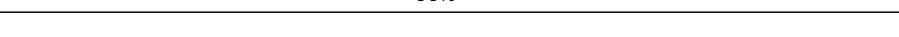
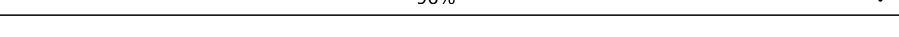
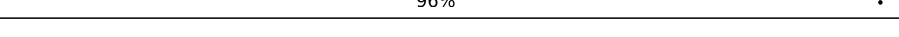
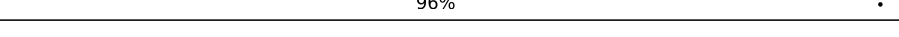
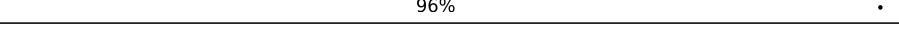
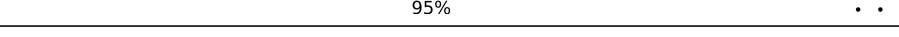
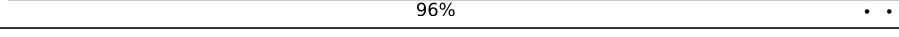
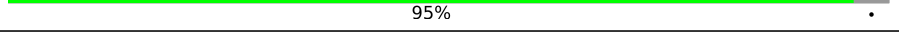
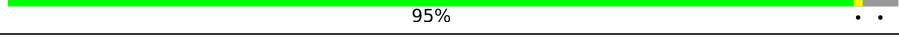
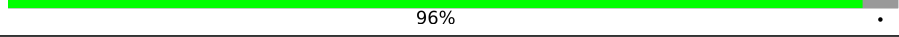
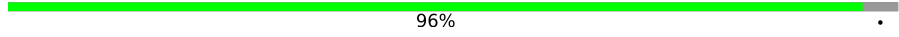
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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|---|
| 9 | KJ | 445 |  95% .. |
| 9 | KL | 445 |  96% .. |
| 9 | KN | 445 |  95% .. |
| 9 | LB | 445 |  98% .. |
| 9 | LD | 445 |  95% .. |
| 9 | LF | 445 |  98% . |
| 9 | LH | 445 |  95% . |
| 9 | LJ | 445 |  99% . |
| 9 | LL | 445 |  95% .. |
| 9 | LN | 445 |  98% . |
| 9 | MB | 445 |  96% . |
| 9 | MD | 445 |  96% .. |
| 9 | MF | 445 |  97% . |
| 9 | MH | 445 |  96% .. |
| 9 | MJ | 445 |  96% .. |
| 9 | ML | 445 |  96% .. |
| 9 | MN | 445 |  97% . |
| 9 | NB | 445 |  95% .. |
| 9 | ND | 445 |  96% .. |
| 9 | NF | 445 |  96% .. |
| 9 | NH | 445 |  95% .. |
| 9 | NJ | 445 |  95% .. |
| 9 | NL | 445 |  95% .. |
| 9 | NN | 445 |  95% .. |
| 9 | OB | 445 |  96% . |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 9 | OD | 445 |  97% |
| 9 | OF | 445 |  96% |
| 9 | OH | 445 |  96% |
| 9 | OJ | 445 |  97% |
| 9 | OL | 445 |  96% |
| 9 | ON | 445 |  96% |
| 9 | PD | 445 |  96% |
| 9 | PF | 445 |  96% |
| 9 | PH | 445 |  95% |
| 9 | PJ | 445 |  96% |
| 9 | PL | 445 |  96% |
| 9 | PN | 445 |  96% |
| 9 | QD | 445 |  96% |
| 9 | QF | 445 |  96% |
| 9 | QH | 445 |  96% |
| 9 | QJ | 445 |  96% |
| 9 | QL | 445 |  96% |
| 9 | QN | 445 |  96% |
| 9 | RD | 445 |  95% |
| 9 | RF | 445 |  96% |
| 9 | RH | 445 |  95% |
| 9 | RJ | 445 |  95% |
| 9 | RL | 445 |  96% |
| 9 | RN | 445 |  96% |
| 9 | SD | 445 |  95% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 9 | SF | 445 | 95% |
| 9 | SH | 445 | 95% |
| 9 | SJ | 445 | 95% |
| 9 | SL | 445 | 96% |
| 9 | SN | 445 | 95% |
| 9 | TD | 445 | 95% |
| 9 | TF | 445 | 96% |
| 9 | TH | 445 | 95% |
| 9 | TJ | 445 | 95% |
| 9 | TL | 445 | 95% |
| 9 | TN | 445 | 95% |
| 9 | TP | 445 | 94% |
| 9 | UD | 445 | 95% |
| 9 | UF | 445 | 95% |
| 9 | UH | 445 | 95% |
| 9 | UJ | 445 | 96% |
| 9 | UL | 445 | 94% |
| 9 | UN | 445 | 95% |
| 9 | UP | 445 | 96% |
| 9 | VD | 445 | 96% |
| 9 | VF | 445 | 95% |
| 9 | VH | 445 | 95% |
| 9 | VJ | 445 | 95% |
| 9 | VL | 445 | 95% |
| 9 | VN | 445 | 95% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 9 | VP | 445 | 95% |
| 9 | WD | 445 | 95% |
| 9 | WF | 445 | 95% |
| 9 | WH | 445 | 96% |
| 9 | WJ | 445 | 95% |
| 9 | WL | 445 | 95% |
| 9 | WN | 445 | 96% |
| 9 | WP | 445 | 95% |
| 10 | B | 495 | 36% |
| 10 | C | 495 | 72% |
| 11 | B0 | 430 | 45% |
| 11 | B1 | 430 | 91% |
| 11 | B2 | 430 | 91% |
| 11 | B3 | 430 | 82% |
| 11 | B4 | 430 | 12% |
| 11 | B5 | 430 | 12% |
| 11 | B6 | 430 | 82% |
| 11 | B7 | 430 | 91% |
| 11 | B8 | 430 | 91% |
| 11 | B9 | 430 | 45% |
| 12 | C0 | 490 | 7% |
| 12 | C1 | 490 | 68% |
| 12 | C2 | 490 | 79% |
| 12 | C3 | 490 | 80% |
| 12 | C4 | 490 | 44% |

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| Mol | Chain | Length | Quality of chain | |
|-----|-------|--------|------------------|-----|
| 13 | D | 485 | 37% | 63% |
| 14 | D0 | 435 | 61% | 39% |
| 14 | D1 | 435 | 91% | 9% |
| 14 | D2 | 435 | 91% | 9% |
| 14 | D3 | 435 | 73% | 27% |
| 14 | D5 | 435 | 73% | 27% |
| 14 | D6 | 435 | 91% | 9% |
| 14 | D7 | 435 | 91% | 9% |
| 14 | D8 | 435 | 61% | 39% |
| 15 | E | 301 | 92% | 8% |
| 15 | F | 301 | 92% | 8% |
| 16 | F0 | 222 | 70% | 29% |
| 16 | F1 | 222 | 72% | 28% |
| 16 | F2 | 222 | 70% | 30% |
| 16 | F3 | 222 | 71% | 29% |
| 16 | F4 | 222 | 72% | 28% |
| 16 | F5 | 222 | 70% | 30% |
| 16 | F6 | 222 | 70% | 29% |
| 16 | F7 | 222 | 71% | 28% |
| 16 | F8 | 222 | 70% | 30% |
| 16 | G0 | 222 | 72% | 28% |
| 16 | G1 | 222 | 71% | 29% |
| 16 | G2 | 222 | 70% | 30% |
| 16 | G3 | 222 | 71% | 29% |
| 16 | G4 | 222 | 71% | 28% |

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| Mol | Chain | Length | Quality of chain | |
|-----|-------|--------|------------------|-----|
| 16 | G5 | 222 | 70% | 30% |
| 16 | G6 | 222 | 70% | 29% |
| 16 | G7 | 222 | 72% | 28% |
| 16 | G8 | 222 | 70% | 30% |
| 16 | H0 | 222 | 70% | 29% |
| 16 | H1 | 222 | 72% | 28% |
| 16 | H2 | 222 | 70% | 30% |
| 17 | G | 121 | 76% | 22% |
| 18 | H | 275 | 29% | 71% |
| 18 | I | 275 | 53% | 47% |
| 18 | J | 275 | 53% | 47% |
| 18 | K | 275 | 52% | 47% |
| 18 | L | 275 | 52% | 47% |
| 18 | M | 275 | 52% | 47% |
| 18 | N | 275 | 52% | 47% |
| 19 | I1 | 150 | 58% | 41% |
| 20 | J1 | 284 | 29% | 71% |
| 20 | J2 | 284 | 79% | 20% |
| 20 | J3 | 284 | 79% | 20% |
| 20 | J4 | 284 | 71% | 28% |
| 20 | J5 | 284 | 23% | 77% |
| 21 | K1 | 134 | 82% | 17% |
| 22 | L1 | 147 | 86% | 14% |
| 22 | L2 | 147 | 61% | 39% |
| 23 | M1 | 201 | 51% | 49% |

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| Mol | Chain | Length | Quality of chain | |
|-----|-------|--------|------------------|-------|
| 23 | M2 | 201 | 50% | 50% |
| 23 | M3 | 201 | 50% | 49% |
| 23 | M4 | 201 | 50% | 49% |
| 24 | O | 382 | 7% | 93% |
| 24 | P | 382 | 96% | .. |
| 24 | Q | 382 | 10% | 90% |
| 24 | R | 382 | 57% | 43% |
| 24 | S | 382 | 43% | 57% |
| 25 | T | 640 | 75% | 24% |
| 25 | U | 640 | 76% | 24% |
| 25 | V | 640 | 76% | 24% |
| 26 | W | 749 | 81% | . 18% |
| 26 | X | 749 | 93% | . 6% |
| 26 | Y | 749 | 93% | . 6% |
| 26 | Z | 749 | 68% | . 32% |
| 27 | XA | 193 | 96% | . |
| 27 | XB | 193 | 96% | .. |
| 27 | XC | 193 | 96% | .. |
| 27 | XD | 193 | 96% | .. |
| 27 | XE | 193 | 95% | .. |
| 27 | XF | 193 | 96% | . |
| 27 | XG | 193 | 96% | . |
| 28 | YB | 257 | 86% | 14% |
| 28 | YC | 257 | 86% | 14% |
| 28 | YD | 257 | 85% | 14% |

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| Mol | Chain | Length | Quality of chain | |
|-----|-------|--------|------------------|-----|
| 28 | YE | 257 | 86% | 14% |
| 28 | YF | 257 | 85% | 14% |
| 28 | YG | 257 | 86% | 14% |
| 29 | a | 551 | 31% | 68% |
| 29 | b | 551 | 61% | 39% |
| 29 | c | 551 | 51% | 48% |
| 29 | d | 551 | 39% | 60% |
| 30 | e | 620 | 98% | . |
| 30 | f | 620 | 98% | . |
| 30 | g | 620 | 98% | . |
| 31 | h | 256 | 57% | 43% |
| 31 | i | 256 | 97% | . |
| 31 | j | 256 | 96% | . |
| 31 | k | 256 | 98% | . |
| 32 | l | 177 | 66% | 34% |
| 32 | m | 177 | 66% | 34% |
| 32 | n | 177 | 66% | 34% |
| 33 | o | 552 | 72% | 27% |
| 33 | o1 | 552 | 7% | 93% |
| 33 | p | 552 | 28% | 71% |
| 34 | q | 169 | 66% | 34% |
| 34 | r | 169 | 66% | 34% |
| 34 | s | 169 | 66% | 34% |
| 35 | y | 136 | 46% | 54% |
| 35 | z | 136 | 82% | 18% |

2 Entry composition [i](#)

There are 38 unique types of molecules in this entry. The entry contains 1265783 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Protein CFAP95.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 1 | 0 | 52 | Total | C | N | O | S | 0 | 0 |
| | | | 418 | 265 | 75 | 77 | 1 | | |
| 1 | 7 | 146 | Total | C | N | O | S | 0 | 0 |
| | | | 1197 | 757 | 206 | 230 | 4 | | |

- Molecule 2 is a protein called EF-hand domain-containing family member B.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 2 | 1 | 272 | Total | C | N | O | S | 0 | 0 |
| | | | 2226 | 1407 | 388 | 424 | 7 | | |
| 2 | 2 | 446 | Total | C | N | O | S | 0 | 0 |
| | | | 3607 | 2298 | 629 | 667 | 13 | | |

- Molecule 3 is a protein called Cilia- and flagella-associated protein 53.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 3 | 3 | 297 | Total | C | N | O | S | 0 | 0 |
| | | | 2514 | 1539 | 476 | 489 | 10 | | |
| 3 | 4 | 215 | Total | C | N | O | S | 0 | 0 |
| | | | 1837 | 1120 | 349 | 358 | 10 | | |

- Molecule 4 is a protein called Nucleoside diphosphate kinase 7.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 4 | 5 | 371 | Total | C | N | O | S | 0 | 0 |
| | | | 2943 | 1873 | 506 | 543 | 21 | | |
| 4 | 6 | 371 | Total | C | N | O | S | 0 | 0 |
| | | | 2943 | 1873 | 506 | 543 | 21 | | |

- Molecule 5 is a protein called Protein CFAP107.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 5 | 8 | 168 | Total | C | N | O | S | 0 | 0 |
| | | | 1414 | 909 | 251 | 251 | 3 | | |
| 5 | 9 | 48 | Total | C | N | O | S | 0 | 0 |
| | | | 411 | 261 | 71 | 78 | 1 | | |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| 8 | 191 | PHE | LEU | conflict | UNP Q8N1D5 |
| 9 | 191 | PHE | LEU | conflict | UNP Q8N1D5 |

- Molecule 6 is a protein called Protein CFAP141.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 6 | A | 50 | Total | C | N | O | S | 0 | 0 |
| | | | 423 | 269 | 75 | 76 | 3 | | |

- Molecule 7 is a protein called Tektin-1.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 7 | A0 | 220 | Total | C | N | O | S | 0 | 0 |
| | | | 1771 | 1102 | 325 | 335 | 9 | | |
| 7 | A1 | 391 | Total | C | N | O | S | 0 | 0 |
| | | | 3185 | 1978 | 576 | 619 | 12 | | |
| 7 | A2 | 391 | Total | C | N | O | S | 0 | 0 |
| | | | 3185 | 1978 | 576 | 619 | 12 | | |
| 7 | A3 | 333 | Total | C | N | O | S | 0 | 0 |
| | | | 2715 | 1688 | 485 | 532 | 10 | | |
| 7 | A4 | 35 | Total | C | N | O | | 0 | 0 |
| | | | 294 | 183 | 59 | 52 | | | |

- Molecule 8 is a protein called Tubulin alpha-1A chain.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 8 | AA | 439 | Total | C | N | O | S | 0 | 0 |
| | | | 3429 | 2170 | 583 | 654 | 22 | | |
| 8 | AC | 439 | Total | C | N | O | S | 0 | 0 |
| | | | 3429 | 2170 | 583 | 654 | 22 | | |
| 8 | AE | 439 | Total | C | N | O | S | 0 | 0 |
| | | | 3429 | 2170 | 583 | 654 | 22 | | |
| 8 | AG | 439 | Total | C | N | O | S | 0 | 0 |
| | | | 3429 | 2170 | 583 | 654 | 22 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 8 | AI | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | AK | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | AM | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | BA | 432 | 3383 | 2143 | 575 | 643 | 22 | 0 | 0 |
| 8 | BC | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | BE | 432 | 3383 | 2143 | 575 | 643 | 22 | 0 | 0 |
| 8 | BG | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | BI | 432 | 3383 | 2143 | 575 | 643 | 22 | 0 | 0 |
| 8 | BK | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | BM | 433 | 3387 | 2145 | 576 | 644 | 22 | 0 | 0 |
| 8 | CA | 432 | 3385 | 2144 | 575 | 644 | 22 | 0 | 0 |
| 8 | CC | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | CE | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |
| 8 | CG | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | CI | 431 | 3377 | 2140 | 574 | 641 | 22 | 0 | 0 |
| 8 | CK | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | CM | 431 | 3377 | 2140 | 574 | 641 | 22 | 0 | 0 |
| 8 | DA | 383 | 2978 | 1887 | 504 | 567 | 20 | 0 | 0 |
| 8 | DC | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |
| 8 | DE | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | DG | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |

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Continued from previous page...

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 8 | DI | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |
| 8 | DK | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |
| 8 | DM | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | EC | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | EE | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | EG | 438 | 3423 | 2167 | 582 | 652 | 22 | 0 | 0 |
| 8 | EI | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | EK | 438 | 3423 | 2167 | 582 | 652 | 22 | 0 | 0 |
| 8 | EM | 438 | 3423 | 2167 | 582 | 652 | 22 | 0 | 0 |
| 8 | FC | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | FE | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | FG | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |
| 8 | FI | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |
| 8 | FK | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |
| 8 | FM | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |
| 8 | GC | 435 | 3409 | 2158 | 579 | 650 | 22 | 0 | 0 |
| 8 | GE | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |
| 8 | GG | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | GI | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |
| 8 | GK | 432 | 3385 | 2144 | 575 | 644 | 22 | 0 | 0 |
| 8 | GM | 434 | 3402 | 2154 | 578 | 648 | 22 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|-------|
| | | | Total | C | N | O | S | | |
| 8 | HC | 431 | Total 3379 | C 2141 | N 574 | O 642 | S 22 | 0 | 0 |
| 8 | HE | 432 | Total 3385 | C 2144 | N 575 | O 644 | S 22 | 0 | 0 |
| 8 | HG | 432 | Total 3385 | C 2144 | N 575 | O 644 | S 22 | 0 | 0 |
| 8 | HI | 432 | Total 3385 | C 2144 | N 575 | O 644 | S 22 | 0 | 0 |
| 8 | HK | 431 | Total 3377 | C 2140 | N 574 | O 641 | S 22 | 0 | 0 |
| 8 | HM | 431 | Total 3379 | C 2141 | N 574 | O 642 | S 22 | 0 | 0 |
| 8 | HO | 389 | Total 3058 | C 1935 | N 520 | O 582 | S 21 | 0 | 0 |
| 8 | IC | 433 | Total 3393 | C 2148 | N 576 | O 647 | S 22 | 0 | 0 |
| 8 | IE | 431 | Total 3379 | C 2141 | N 574 | O 642 | S 22 | 0 | 0 |
| 8 | IG | 439 | Total 3429 | C 2170 | N 583 | O 654 | S 22 | 0 | 0 |
| 8 | II | 432 | Total 3385 | C 2144 | N 575 | O 644 | S 22 | 0 | 0 |
| 8 | IK | 439 | Total 3429 | C 2170 | N 583 | O 654 | S 22 | 0 | 0 |
| 8 | IM | 431 | Total 3379 | C 2141 | N 574 | O 642 | S 22 | 0 | 0 |
| 8 | IO | 431 | Total 3377 | C 2140 | N 574 | O 641 | S 22 | 0 | 0 |
| 8 | JC | 439 | Total 3429 | C 2170 | N 583 | O 654 | S 22 | 0 | 0 |
| 8 | JE | 430 | Total 3371 | C 2137 | N 573 | O 639 | S 22 | 0 | 0 |
| 8 | JG | 430 | Total 3371 | C 2137 | N 573 | O 639 | S 22 | 0 | 0 |
| 8 | JI | 430 | Total 3371 | C 2137 | N 573 | O 639 | S 22 | 0 | 0 |
| 8 | JK | 431 | Total 3377 | C 2140 | N 574 | O 641 | S 22 | 0 | 0 |
| 8 | JM | 430 | Total 3371 | C 2137 | N 573 | O 639 | S 22 | 0 | 0 |
| 8 | KC | 433 | Total 3390 | C 2148 | N 576 | O 644 | S 22 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 8 | KE | 432 | 3385 | 2144 | 575 | 644 | 22 | 0 | 0 |
| 8 | KG | 433 | 3390 | 2148 | 576 | 644 | 22 | 0 | 0 |
| 8 | KI | 430 | 3373 | 2138 | 573 | 640 | 22 | 0 | 0 |
| 8 | KK | 433 | 3390 | 2148 | 576 | 644 | 22 | 0 | 0 |
| 8 | KM | 438 | 3423 | 2167 | 582 | 652 | 22 | 0 | 0 |
| 8 | KO | 432 | 3383 | 2143 | 575 | 643 | 22 | 0 | 0 |
| 8 | LC | 433 | 3389 | 2146 | 576 | 645 | 22 | 0 | 0 |
| 8 | LE | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | LG | 434 | 3397 | 2150 | 577 | 648 | 22 | 0 | 0 |
| 8 | LI | 436 | 3410 | 2158 | 580 | 650 | 22 | 0 | 0 |
| 8 | LK | 433 | 3390 | 2148 | 576 | 644 | 22 | 0 | 0 |
| 8 | LM | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | MC | 440 | 3436 | 2175 | 584 | 655 | 22 | 0 | 0 |
| 8 | ME | 432 | 3386 | 2146 | 575 | 643 | 22 | 0 | 0 |
| 8 | MG | 432 | 3384 | 2145 | 575 | 642 | 22 | 0 | 0 |
| 8 | MI | 433 | 3392 | 2149 | 576 | 645 | 22 | 0 | 0 |
| 8 | MK | 440 | 3436 | 2175 | 584 | 655 | 22 | 0 | 0 |
| 8 | MM | 440 | 3436 | 2175 | 584 | 655 | 22 | 0 | 0 |
| 8 | NC | 440 | 3436 | 2175 | 584 | 655 | 22 | 0 | 0 |
| 8 | NE | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | NG | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|-------|
| 8 | NI | 439 | Total 3429 | C 2170 | N 583 | O 654 | S 22 | 0 | 0 |
| 8 | NK | 439 | Total 3429 | C 2170 | N 583 | O 654 | S 22 | 0 | 0 |
| 8 | NM | 439 | Total 3429 | C 2170 | N 583 | O 654 | S 22 | 0 | 0 |
| 8 | OC | 441 | Total 3445 | C 2180 | N 585 | O 658 | S 22 | 0 | 0 |
| 8 | OE | 440 | Total 3436 | C 2175 | N 584 | O 655 | S 22 | 0 | 0 |
| 8 | OG | 441 | Total 3445 | C 2180 | N 585 | O 658 | S 22 | 0 | 0 |
| 8 | OI | 441 | Total 3445 | C 2180 | N 585 | O 658 | S 22 | 0 | 0 |
| 8 | OK | 439 | Total 3429 | C 2170 | N 583 | O 654 | S 22 | 0 | 0 |
| 8 | OM | 441 | Total 3445 | C 2180 | N 585 | O 658 | S 22 | 0 | 0 |
| 8 | OO | 422 | Total 3309 | C 2092 | N 563 | O 632 | S 22 | 0 | 0 |
| 8 | PC | 441 | Total 3445 | C 2180 | N 585 | O 658 | S 22 | 0 | 0 |
| 8 | PE | 440 | Total 3436 | C 2175 | N 584 | O 655 | S 22 | 0 | 0 |
| 8 | PG | 441 | Total 3445 | C 2180 | N 585 | O 658 | S 22 | 0 | 0 |
| 8 | PI | 439 | Total 3429 | C 2170 | N 583 | O 654 | S 22 | 0 | 0 |
| 8 | PK | 440 | Total 3436 | C 2175 | N 584 | O 655 | S 22 | 0 | 0 |
| 8 | PM | 439 | Total 3429 | C 2170 | N 583 | O 654 | S 22 | 0 | 0 |
| 8 | PO | 439 | Total 3429 | C 2170 | N 583 | O 654 | S 22 | 0 | 0 |
| 8 | QC | 440 | Total 3436 | C 2175 | N 584 | O 655 | S 22 | 0 | 0 |
| 8 | QE | 440 | Total 3436 | C 2175 | N 584 | O 655 | S 22 | 0 | 0 |
| 8 | QG | 440 | Total 3436 | C 2175 | N 584 | O 655 | S 22 | 0 | 0 |
| 8 | QI | 440 | Total 3436 | C 2175 | N 584 | O 655 | S 22 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 8 | QK | 440 | 3436 | 2175 | 584 | 655 | 22 | 0 | 0 |
| 8 | QM | 440 | 3436 | 2175 | 584 | 655 | 22 | 0 | 0 |
| 8 | QO | 440 | 3436 | 2175 | 584 | 655 | 22 | 0 | 0 |
| 8 | RC | 411 | 3209 | 2029 | 547 | 612 | 21 | 0 | 0 |
| 8 | RE | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |
| 8 | RG | 432 | 3384 | 2145 | 575 | 642 | 22 | 0 | 0 |
| 8 | RI | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | RK | 440 | 3436 | 2175 | 584 | 655 | 22 | 0 | 0 |
| 8 | RM | 440 | 3436 | 2175 | 584 | 655 | 22 | 0 | 0 |
| 8 | RO | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | SE | 429 | 3365 | 2134 | 572 | 637 | 22 | 0 | 0 |
| 8 | SG | 430 | 3373 | 2138 | 573 | 640 | 22 | 0 | 0 |
| 8 | SI | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | SK | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | SM | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | SO | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | TE | 429 | 3365 | 2134 | 572 | 637 | 22 | 0 | 0 |
| 8 | TG | 430 | 3373 | 2138 | 573 | 640 | 22 | 0 | 0 |
| 8 | TI | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | TK | 429 | 3365 | 2134 | 572 | 637 | 22 | 0 | 0 |
| 8 | TM | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 8 | TO | 429 | 3365 | 2134 | 572 | 637 | 22 | 0 | 0 |
| 8 | UE | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | UG | 432 | 3385 | 2144 | 575 | 644 | 22 | 0 | 0 |
| 8 | UI | 432 | 3385 | 2144 | 575 | 644 | 22 | 0 | 0 |
| 8 | UK | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | UM | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | UO | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | VE | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | VG | 433 | 3393 | 2148 | 576 | 647 | 22 | 0 | 0 |
| 8 | VI | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | VK | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | VM | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | VO | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |
| 8 | WE | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | WG | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |
| 8 | WI | 438 | 3423 | 2167 | 582 | 652 | 22 | 0 | 0 |
| 8 | WK | 430 | 3371 | 2137 | 573 | 639 | 22 | 0 | 0 |
| 8 | WM | 439 | 3429 | 2170 | 583 | 654 | 22 | 0 | 0 |
| 8 | WO | 431 | 3379 | 2141 | 574 | 642 | 22 | 0 | 0 |

- Molecule 9 is a protein called Tubulin beta-4B chain.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 9 | AB | 437 | 3433 | 2155 | 585 | 667 | 26 | 0 | 0 |
| 9 | AD | 437 | 3433 | 2155 | 585 | 667 | 26 | 0 | 0 |
| 9 | AF | 437 | 3433 | 2155 | 585 | 667 | 26 | 0 | 0 |
| 9 | AH | 437 | 3433 | 2155 | 585 | 667 | 26 | 0 | 0 |
| 9 | AJ | 437 | 3433 | 2155 | 585 | 667 | 26 | 0 | 0 |
| 9 | AL | 437 | 3433 | 2155 | 585 | 667 | 26 | 0 | 0 |
| 9 | BB | 427 | 3356 | 2109 | 575 | 646 | 26 | 0 | 0 |
| 9 | BD | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | BF | 427 | 3356 | 2109 | 575 | 646 | 26 | 0 | 0 |
| 9 | BH | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | BJ | 430 | 3373 | 2119 | 578 | 650 | 26 | 0 | 0 |
| 9 | BL | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | CB | 428 | 3361 | 2112 | 576 | 647 | 26 | 0 | 0 |
| 9 | CD | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | CF | 427 | 3356 | 2109 | 575 | 646 | 26 | 0 | 0 |
| 9 | CH | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | CJ | 427 | 3356 | 2109 | 575 | 646 | 26 | 0 | 0 |
| 9 | CL | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | DB | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | DD | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | DF | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | DH | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|-------|
| | | | Total | C | N | O | S | | |
| 9 | DJ | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | DL | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | EB | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | ED | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | EF | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | EH | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | EJ | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | EL | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | EN | 428 | Total 3361 | C 2112 | N 576 | O 647 | S 26 | 0 | 0 |
| 9 | FB | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | FD | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | FF | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | FH | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | FJ | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | FL | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | FN | 427 | Total 3356 | C 2109 | N 575 | O 646 | S 26 | 0 | 0 |
| 9 | GB | 410 | Total 3208 | C 2016 | N 548 | O 619 | S 25 | 0 | 0 |
| 9 | GD | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | GF | 427 | Total 3356 | C 2109 | N 575 | O 646 | S 26 | 0 | 0 |
| 9 | GH | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | GJ | 430 | Total 3373 | C 2119 | N 578 | O 650 | S 26 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|-------|
| | | | Total | C | N | O | S | | |
| 9 | GL | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | GN | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | HB | 427 | Total 3356 | C 2109 | N 575 | O 646 | S 26 | 0 | 0 |
| 9 | HD | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | HF | 427 | Total 3356 | C 2109 | N 575 | O 646 | S 26 | 0 | 0 |
| 9 | HH | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | HJ | 428 | Total 3361 | C 2112 | N 576 | O 647 | S 26 | 0 | 0 |
| 9 | HL | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | HN | 425 | Total 3339 | C 2100 | N 572 | O 641 | S 26 | 0 | 0 |
| 9 | IB | 407 | Total 3197 | C 2010 | N 544 | O 618 | S 25 | 0 | 0 |
| 9 | ID | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | IF | 428 | Total 3361 | C 2112 | N 576 | O 647 | S 26 | 0 | 0 |
| 9 | IH | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | IJ | 429 | Total 3368 | C 2116 | N 577 | O 649 | S 26 | 0 | 0 |
| 9 | IL | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | IN | 427 | Total 3356 | C 2109 | N 575 | O 646 | S 26 | 0 | 0 |
| 9 | JB | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | JD | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | JF | 427 | Total 3356 | C 2109 | N 575 | O 646 | S 26 | 0 | 0 |
| 9 | JH | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | JJ | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|-------|
| | | | Total | C | N | O | S | | |
| 9 | JL | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | JN | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | KB | 412 | Total 3222 | C 2021 | N 550 | O 625 | S 26 | 0 | 0 |
| 9 | KD | 431 | Total 3382 | C 2124 | N 579 | O 653 | S 26 | 0 | 0 |
| 9 | KF | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | KH | 431 | Total 3382 | C 2124 | N 579 | O 653 | S 26 | 0 | 0 |
| 9 | KJ | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | KL | 431 | Total 3382 | C 2124 | N 579 | O 653 | S 26 | 0 | 0 |
| 9 | KN | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | LB | 440 | Total 3456 | C 2168 | N 588 | O 674 | S 26 | 0 | 0 |
| 9 | LD | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | LF | 439 | Total 3451 | C 2165 | N 587 | O 673 | S 26 | 0 | 0 |
| 9 | LH | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | LJ | 443 | Total 3483 | C 2183 | N 591 | O 683 | S 26 | 0 | 0 |
| 9 | LL | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | LN | 440 | Total 3456 | C 2168 | N 588 | O 674 | S 26 | 0 | 0 |
| 9 | MB | 430 | Total 3373 | C 2119 | N 578 | O 650 | S 26 | 0 | 0 |
| 9 | MD | 432 | Total 3391 | C 2129 | N 580 | O 656 | S 26 | 0 | 0 |
| 9 | MF | 431 | Total 3382 | C 2124 | N 579 | O 653 | S 26 | 0 | 0 |
| 9 | MH | 432 | Total 3391 | C 2129 | N 580 | O 656 | S 26 | 0 | 0 |
| 9 | MJ | 432 | Total 3391 | C 2129 | N 580 | O 656 | S 26 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|-------|
| | | | Total | C | N | O | S | | |
| 9 | ML | 432 | Total 3391 | C 2129 | N 580 | O 656 | S 26 | 0 | 0 |
| 9 | MN | 430 | Total 3373 | C 2119 | N 578 | O 650 | S 26 | 0 | 0 |
| 9 | NB | 428 | Total 3361 | C 2112 | N 576 | O 647 | S 26 | 0 | 0 |
| 9 | ND | 428 | Total 3361 | C 2112 | N 576 | O 647 | S 26 | 0 | 0 |
| 9 | NF | 430 | Total 3373 | C 2119 | N 578 | O 650 | S 26 | 0 | 0 |
| 9 | NH | 428 | Total 3361 | C 2112 | N 576 | O 647 | S 26 | 0 | 0 |
| 9 | NJ | 429 | Total 3368 | C 2116 | N 577 | O 649 | S 26 | 0 | 0 |
| 9 | NL | 428 | Total 3361 | C 2112 | N 576 | O 647 | S 26 | 0 | 0 |
| 9 | NN | 428 | Total 3361 | C 2112 | N 576 | O 647 | S 26 | 0 | 0 |
| 9 | OB | 431 | Total 3382 | C 2124 | N 579 | O 653 | S 26 | 0 | 0 |
| 9 | OD | 430 | Total 3373 | C 2119 | N 578 | O 650 | S 26 | 0 | 0 |
| 9 | OF | 432 | Total 3391 | C 2129 | N 580 | O 656 | S 26 | 0 | 0 |
| 9 | OH | 430 | Total 3373 | C 2119 | N 578 | O 650 | S 26 | 0 | 0 |
| 9 | OJ | 432 | Total 3391 | C 2129 | N 580 | O 656 | S 26 | 0 | 0 |
| 9 | OL | 430 | Total 3373 | C 2119 | N 578 | O 650 | S 26 | 0 | 0 |
| 9 | ON | 431 | Total 3382 | C 2124 | N 579 | O 653 | S 26 | 0 | 0 |
| 9 | PD | 430 | Total 3373 | C 2119 | N 578 | O 650 | S 26 | 0 | 0 |
| 9 | PF | 432 | Total 3391 | C 2129 | N 580 | O 656 | S 26 | 0 | 0 |
| 9 | PH | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | PJ | 430 | Total 3373 | C 2119 | N 578 | O 650 | S 26 | 0 | 0 |
| 9 | PL | 429 | Total 3368 | C 2116 | N 577 | O 649 | S 26 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|-------|
| | | | Total | C | N | O | S | | |
| 9 | PN | 430 | Total 3373 | C 2119 | N 578 | O 650 | S 26 | 0 | 0 |
| 9 | QD | 428 | Total 3361 | C 2112 | N 576 | O 647 | S 26 | 0 | 0 |
| 9 | QF | 430 | Total 3373 | C 2119 | N 578 | O 650 | S 26 | 0 | 0 |
| 9 | QH | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | QJ | 429 | Total 3368 | C 2116 | N 577 | O 649 | S 26 | 0 | 0 |
| 9 | QL | 427 | Total 3356 | C 2109 | N 575 | O 646 | S 26 | 0 | 0 |
| 9 | QN | 428 | Total 3361 | C 2112 | N 576 | O 647 | S 26 | 0 | 0 |
| 9 | RD | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | RF | 429 | Total 3368 | C 2116 | N 577 | O 649 | S 26 | 0 | 0 |
| 9 | RH | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | RJ | 428 | Total 3361 | C 2112 | N 576 | O 647 | S 26 | 0 | 0 |
| 9 | RL | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | RN | 427 | Total 3356 | C 2109 | N 575 | O 646 | S 26 | 0 | 0 |
| 9 | SD | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | SF | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | SH | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | SJ | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | SL | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | SN | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | TD | 426 | Total 3348 | C 2105 | N 574 | O 643 | S 26 | 0 | 0 |
| 9 | TF | 427 | Total 3356 | C 2109 | N 575 | O 646 | S 26 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 9 | TH | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | TJ | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | TL | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | TN | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | TP | 421 | 3302 | 2074 | 567 | 635 | 26 | 0 | 0 |
| 9 | UD | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | UF | 427 | 3356 | 2109 | 575 | 646 | 26 | 0 | 0 |
| 9 | UH | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | UJ | 427 | 3356 | 2109 | 575 | 646 | 26 | 0 | 0 |
| 9 | UL | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | UN | 427 | 3356 | 2109 | 575 | 646 | 26 | 0 | 0 |
| 9 | UP | 427 | 3356 | 2109 | 575 | 646 | 26 | 0 | 0 |
| 9 | VD | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | VF | 427 | 3356 | 2109 | 575 | 646 | 26 | 0 | 0 |
| 9 | VH | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | VJ | 427 | 3356 | 2109 | 575 | 646 | 26 | 0 | 0 |
| 9 | VL | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | VN | 427 | 3356 | 2109 | 575 | 646 | 26 | 0 | 0 |
| 9 | VP | 427 | 3356 | 2109 | 575 | 646 | 26 | 0 | 0 |
| 9 | WD | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |
| 9 | WF | 426 | 3348 | 2105 | 574 | 643 | 26 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 9 | WH | 426 | Total | C | N | O | S | 0 | 0 |
| | | | 3348 | 2105 | 574 | 643 | 26 | | |
| 9 | WJ | 426 | Total | C | N | O | S | 0 | 0 |
| | | | 3348 | 2105 | 574 | 643 | 26 | | |
| 9 | WL | 426 | Total | C | N | O | S | 0 | 0 |
| | | | 3348 | 2105 | 574 | 643 | 26 | | |
| 9 | WN | 427 | Total | C | N | O | S | 0 | 0 |
| | | | 3356 | 2109 | 575 | 646 | 26 | | |
| 9 | WP | 427 | Total | C | N | O | S | 0 | 0 |
| | | | 3356 | 2109 | 575 | 646 | 26 | | |

- Molecule 10 is a protein called Meiosis-specific nuclear structural protein 1.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 10 | B | 180 | Total | C | N | O | S | 0 | 0 |
| | | | 1507 | 921 | 287 | 289 | 10 | | |
| 10 | C | 356 | Total | C | N | O | S | 0 | 0 |
| | | | 3062 | 1903 | 551 | 592 | 16 | | |

- Molecule 11 is a protein called Tektin-2.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 11 | B0 | 193 | Total | C | N | O | S | 0 | 0 |
| | | | 1574 | 958 | 294 | 315 | 7 | | |
| 11 | B1 | 392 | Total | C | N | O | S | 0 | 0 |
| | | | 3187 | 1956 | 586 | 630 | 15 | | |
| 11 | B2 | 391 | Total | C | N | O | S | 0 | 0 |
| | | | 3180 | 1951 | 585 | 629 | 15 | | |
| 11 | B3 | 354 | Total | C | N | O | S | 0 | 0 |
| | | | 2868 | 1760 | 521 | 572 | 15 | | |
| 11 | B4 | 51 | Total | C | N | O | S | 0 | 0 |
| | | | 412 | 255 | 76 | 80 | 1 | | |
| 11 | B5 | 51 | Total | C | N | O | | 0 | 0 |
| | | | 254 | 152 | 51 | 51 | | | |
| 11 | B6 | 354 | Total | C | N | O | | 0 | 0 |
| | | | 1766 | 1058 | 354 | 354 | | | |
| 11 | B7 | 391 | Total | C | N | O | | 0 | 0 |
| | | | 1951 | 1169 | 391 | 391 | | | |
| 11 | B8 | 392 | Total | C | N | O | | 0 | 0 |
| | | | 1956 | 1172 | 392 | 392 | | | |
| 11 | B9 | 193 | Total | C | N | O | | 0 | 0 |
| | | | 962 | 576 | 193 | 193 | | | |

- Molecule 12 is a protein called Tektin-3.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 12 | C0 | 33 | Total | C | N | O | | 0 | 0 |
| | | | 285 | 171 | 54 | 60 | | | |
| 12 | C1 | 336 | Total | C | N | O | S | 0 | 0 |
| | | | 2732 | 1683 | 495 | 541 | 13 | | |
| 12 | C2 | 393 | Total | C | N | O | S | 0 | 0 |
| | | | 3199 | 1968 | 584 | 632 | 15 | | |
| 12 | C3 | 394 | Total | C | N | O | S | 0 | 0 |
| | | | 3210 | 1974 | 588 | 633 | 15 | | |
| 12 | C4 | 219 | Total | C | N | O | S | 0 | 0 |
| | | | 1786 | 1111 | 321 | 341 | 13 | | |

- Molecule 13 is a protein called Sperm-associated antigen 8.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 13 | D | 179 | Total | C | N | O | S | 0 | 0 |
| | | | 1459 | 919 | 260 | 271 | 9 | | |

- Molecule 14 is a protein called Tektin-4.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 14 | D0 | 266 | Total | C | N | O | S | 0 | 0 |
| | | | 2180 | 1326 | 409 | 432 | 13 | | |
| 14 | D1 | 396 | Total | C | N | O | S | 0 | 0 |
| | | | 3256 | 1989 | 616 | 632 | 19 | | |
| 14 | D2 | 398 | Total | C | N | O | S | 0 | 0 |
| | | | 3275 | 2000 | 620 | 636 | 19 | | |
| 14 | D3 | 317 | Total | C | N | O | S | 0 | 0 |
| | | | 2603 | 1596 | 492 | 498 | 17 | | |
| 14 | D5 | 317 | Total | C | N | O | | 0 | 0 |
| | | | 1583 | 948 | 317 | 318 | | | |
| 14 | D6 | 398 | Total | C | N | O | | 0 | 0 |
| | | | 1987 | 1190 | 398 | 399 | | | |
| 14 | D7 | 396 | Total | C | N | O | | 0 | 0 |
| | | | 1976 | 1184 | 396 | 396 | | | |
| 14 | D8 | 266 | Total | C | N | O | | 0 | 0 |
| | | | 1327 | 794 | 266 | 267 | | | |

- Molecule 15 is a protein called Cilia- and flagella-associated protein 161.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 15 | E | 277 | Total | C | N | O | S | 0 | 0 |
| | | | 2227 | 1403 | 397 | 415 | 12 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 15 | F | 277 | 2227 | 1403 | 397 | 415 | 12 | 0 | 0 |

- Molecule 16 is a protein called Sperm acrosome-associated protein 9.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 16 | F0 | 157 | 1263 | 788 | 225 | 240 | 10 | 0 | 0 |
| 16 | F1 | 160 | 1289 | 805 | 231 | 243 | 10 | 0 | 0 |
| 16 | F2 | 156 | 776 | 464 | 156 | 156 | | 0 | 0 |
| 16 | F3 | 157 | 1263 | 788 | 225 | 240 | 10 | 0 | 0 |
| 16 | F4 | 160 | 1289 | 805 | 231 | 243 | 10 | 0 | 0 |
| 16 | F5 | 156 | 776 | 464 | 156 | 156 | | 0 | 0 |
| 16 | F6 | 157 | 1263 | 788 | 225 | 240 | 10 | 0 | 0 |
| 16 | F7 | 160 | 1289 | 805 | 231 | 243 | 10 | 0 | 0 |
| 16 | F8 | 156 | 776 | 464 | 156 | 156 | | 0 | 0 |
| 16 | G0 | 159 | 1278 | 799 | 227 | 242 | 10 | 0 | 0 |
| 16 | G1 | 158 | 1271 | 794 | 226 | 241 | 10 | 0 | 0 |
| 16 | G2 | 156 | 776 | 464 | 156 | 156 | | 0 | 0 |
| 16 | G3 | 157 | 1263 | 788 | 225 | 240 | 10 | 0 | 0 |
| 16 | G4 | 160 | 1289 | 805 | 231 | 243 | 10 | 0 | 0 |
| 16 | G5 | 156 | 776 | 464 | 156 | 156 | | 0 | 0 |
| 16 | G6 | 157 | 1263 | 788 | 225 | 240 | 10 | 0 | 0 |
| 16 | G7 | 160 | 1289 | 805 | 231 | 243 | 10 | 0 | 0 |
| 16 | G8 | 156 | 776 | 464 | 156 | 156 | | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|----|---------|-------|
| 16 | H0 | 157 | Total | C | N | O | S | 0 | 0 |
| | | | 1263 | 788 | 225 | 240 | 10 | | |
| 16 | H1 | 160 | Total | C | N | O | S | 0 | 0 |
| | | | 1289 | 805 | 231 | 243 | 10 | | |
| 16 | H2 | 156 | Total | C | N | O | | 0 | 0 |
| | | | 776 | 464 | 156 | 156 | | | |

- Molecule 17 is a protein called Uncharacterized protein C15orf65.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 17 | G | 94 | Total | C | N | O | S | 0 | 0 |
| | | | 750 | 478 | 127 | 139 | 6 | | |

- Molecule 18 is a protein called Protein FAM166B.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 18 | H | 80 | Total | C | N | O | S | 0 | 0 |
| | | | 619 | 405 | 108 | 103 | 3 | | |
| 18 | I | 145 | Total | C | N | O | S | 0 | 0 |
| | | | 1080 | 698 | 187 | 189 | 6 | | |
| 18 | J | 146 | Total | C | N | O | S | 0 | 0 |
| | | | 1085 | 701 | 188 | 190 | 6 | | |
| 18 | K | 145 | Total | C | N | O | S | 0 | 0 |
| | | | 1080 | 698 | 187 | 189 | 6 | | |
| 18 | L | 145 | Total | C | N | O | S | 0 | 0 |
| | | | 1080 | 698 | 187 | 189 | 6 | | |
| 18 | M | 145 | Total | C | N | O | S | 0 | 0 |
| | | | 1080 | 698 | 187 | 189 | 6 | | |
| 18 | N | 146 | Total | C | N | O | S | 0 | 0 |
| | | | 1085 | 701 | 188 | 190 | 6 | | |

- Molecule 19 is a protein called UPF0686 protein C11orf1.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 19 | I1 | 89 | Total | C | N | O | S | 0 | 0 |
| | | | 763 | 481 | 135 | 143 | 4 | | |

- Molecule 20 is a protein called Isoform 2 of Cilia- and flagella-associated protein 77.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 20 | J1 | 81 | Total | C | N | O | S | 0 | 0 |
| | | | 704 | 448 | 135 | 119 | 2 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 20 | J2 | 226 | Total | C | N | O | S | 0 | 0 |
| | | | 1849 | 1169 | 349 | 323 | 8 | | |
| 20 | J3 | 226 | Total | C | N | O | S | 0 | 0 |
| | | | 1849 | 1169 | 349 | 323 | 8 | | |
| 20 | J4 | 205 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1064 | 313 | 290 | 7 | | |
| 20 | J5 | 65 | Total | C | N | O | S | 0 | 0 |
| | | | 514 | 324 | 94 | 93 | 3 | | |

- Molecule 21 is a protein called Protein FAM183A.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 21 | K1 | 111 | Total | C | N | O | S | 0 | 0 |
| | | | 945 | 594 | 179 | 170 | 2 | | |

- Molecule 22 is a protein called Uncharacterized protein C5orf49.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 22 | L1 | 127 | Total | C | N | O | S | 0 | 0 |
| | | | 1045 | 659 | 195 | 190 | 1 | | |
| 22 | L2 | 90 | Total | C | N | O | S | 0 | 0 |
| | | | 746 | 469 | 139 | 137 | 1 | | |

- Molecule 23 is a protein called Protein FAM166C.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 23 | M1 | 102 | Total | C | N | O | S | 0 | 0 |
| | | | 825 | 526 | 147 | 148 | 4 | | |
| 23 | M2 | 101 | Total | C | N | O | S | 0 | 0 |
| | | | 818 | 521 | 146 | 147 | 4 | | |
| 23 | M3 | 102 | Total | C | N | O | S | 0 | 0 |
| | | | 825 | 526 | 147 | 148 | 4 | | |
| 23 | M4 | 102 | Total | C | N | O | S | 0 | 0 |
| | | | 825 | 526 | 147 | 148 | 4 | | |

- Molecule 24 is a protein called RIB43A-like with coiled-coils protein 2.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 24 | O | 25 | Total | C | N | O | S | 0 | 0 |
| | | | 212 | 129 | 51 | 31 | 1 | | |
| 24 | P | 368 | Total | C | N | O | S | 0 | 0 |
| | | | 3089 | 1886 | 608 | 584 | 11 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 24 | Q | 40 | Total | C | N | O | S | 0 | 0 |
| | | | 327 | 203 | 56 | 67 | 1 | | |
| 24 | R | 219 | Total | C | N | O | S | 0 | 0 |
| | | | 1816 | 1105 | 354 | 348 | 9 | | |
| 24 | S | 165 | Total | C | N | O | S | 0 | 0 |
| | | | 1387 | 852 | 269 | 263 | 3 | | |

- Molecule 25 is a protein called EF-hand domain-containing protein 1.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 25 | T | 484 | Total | C | N | O | S | 0 | 0 |
| | | | 3984 | 2570 | 666 | 734 | 14 | | |
| 25 | U | 485 | Total | C | N | O | S | 0 | 0 |
| | | | 3992 | 2576 | 667 | 735 | 14 | | |
| 25 | V | 485 | Total | C | N | O | S | 0 | 0 |
| | | | 3992 | 2576 | 667 | 735 | 14 | | |

- Molecule 26 is a protein called EF-hand domain-containing family member C2.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|------|----|---------|-------|
| 26 | W | 614 | Total | C | N | O | S | 0 | 0 |
| | | | 5064 | 3269 | 845 | 926 | 24 | | |
| 26 | X | 701 | Total | C | N | O | S | 0 | 0 |
| | | | 5797 | 3742 | 964 | 1063 | 28 | | |
| 26 | Y | 701 | Total | C | N | O | S | 0 | 0 |
| | | | 5797 | 3742 | 964 | 1063 | 28 | | |
| 26 | Z | 510 | Total | C | N | O | S | 0 | 0 |
| | | | 4239 | 2739 | 702 | 776 | 22 | | |

- Molecule 27 is a protein called Cilia- and flagella-associated protein 20.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 27 | XA | 186 | Total | C | N | O | S | 0 | 0 |
| | | | 1549 | 998 | 270 | 274 | 7 | | |
| 27 | XB | 186 | Total | C | N | O | S | 0 | 0 |
| | | | 1549 | 998 | 270 | 274 | 7 | | |
| 27 | XC | 186 | Total | C | N | O | S | 0 | 0 |
| | | | 1549 | 998 | 270 | 274 | 7 | | |
| 27 | XD | 186 | Total | C | N | O | S | 0 | 0 |
| | | | 1549 | 998 | 270 | 274 | 7 | | |
| 27 | XE | 186 | Total | C | N | O | S | 0 | 0 |
| | | | 1549 | 998 | 270 | 274 | 7 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 27 | XF | 186 | Total | C | N | O | S | 0 | 0 |
| | | | 1549 | 998 | 270 | 274 | 7 | | |
| 27 | XG | 186 | Total | C | N | O | S | 0 | 0 |
| | | | 1549 | 998 | 270 | 274 | 7 | | |

- Molecule 28 is a protein called Parkin coregulated gene protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 28 | YB | 220 | Total | C | N | O | S | 0 | 0 |
| | | | 1771 | 1147 | 301 | 314 | 9 | | |
| 28 | YC | 220 | Total | C | N | O | S | 0 | 0 |
| | | | 1771 | 1147 | 301 | 314 | 9 | | |
| 28 | YD | 220 | Total | C | N | O | S | 0 | 0 |
| | | | 1771 | 1147 | 301 | 314 | 9 | | |
| 28 | YE | 220 | Total | C | N | O | S | 0 | 0 |
| | | | 1771 | 1147 | 301 | 314 | 9 | | |
| 28 | YF | 220 | Total | C | N | O | S | 0 | 0 |
| | | | 1771 | 1147 | 301 | 314 | 9 | | |
| 28 | YG | 220 | Total | C | N | O | S | 0 | 0 |
| | | | 1771 | 1147 | 301 | 314 | 9 | | |

- Molecule 29 is a protein called Cilia- and flagella-associated protein 45.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 29 | a | 174 | Total | C | N | O | S | 0 | 0 |
| | | | 1467 | 898 | 279 | 280 | 10 | | |
| 29 | b | 334 | Total | C | N | O | S | 0 | 0 |
| | | | 2878 | 1734 | 571 | 560 | 13 | | |
| 29 | c | 284 | Total | C | N | O | S | 0 | 0 |
| | | | 2419 | 1475 | 454 | 472 | 18 | | |
| 29 | d | 218 | Total | C | N | O | S | 0 | 0 |
| | | | 1858 | 1126 | 373 | 353 | 6 | | |

- Molecule 30 is a protein called Cilia- and flagella-associated protein 52.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 30 | e | 610 | Total | C | N | O | S | 0 | 0 |
| | | | 4717 | 2978 | 827 | 882 | 30 | | |
| 30 | f | 610 | Total | C | N | O | S | 0 | 0 |
| | | | 4717 | 2978 | 827 | 882 | 30 | | |
| 30 | g | 610 | Total | C | N | O | S | 0 | 0 |
| | | | 4717 | 2978 | 827 | 882 | 30 | | |

- Molecule 31 is a protein called Enkurin.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 31 | h | 146 | Total | C | N | O | S | 0 | 0 |
| | | | 1210 | 766 | 213 | 227 | 4 | | |
| 31 | i | 250 | Total | C | N | O | S | 0 | 0 |
| | | | 2023 | 1290 | 350 | 373 | 10 | | |
| 31 | j | 248 | Total | C | N | O | S | 0 | 0 |
| | | | 2010 | 1283 | 348 | 370 | 9 | | |
| 31 | k | 250 | Total | C | N | O | S | 0 | 0 |
| | | | 2023 | 1290 | 350 | 373 | 10 | | |

- Molecule 32 is a protein called Protein Flattop.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 32 | l | 117 | Total | C | N | O | S | 0 | 0 |
| | | | 908 | 577 | 159 | 168 | 4 | | |
| 32 | m | 117 | Total | C | N | O | S | 0 | 0 |
| | | | 908 | 577 | 159 | 168 | 4 | | |
| 32 | n | 117 | Total | C | N | O | S | 0 | 0 |
| | | | 908 | 577 | 159 | 168 | 4 | | |

- Molecule 33 is a protein called Protein CFAP210.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 33 | o | 404 | Total | C | N | O | S | 0 | 0 |
| | | | 3471 | 2149 | 654 | 653 | 15 | | |
| 33 | o1 | 36 | Total | C | N | O | S | 0 | 0 |
| | | | 301 | 185 | 60 | 55 | 1 | | |
| 33 | p | 158 | Total | C | N | O | S | 0 | 0 |
| | | | 1285 | 809 | 229 | 243 | 4 | | |

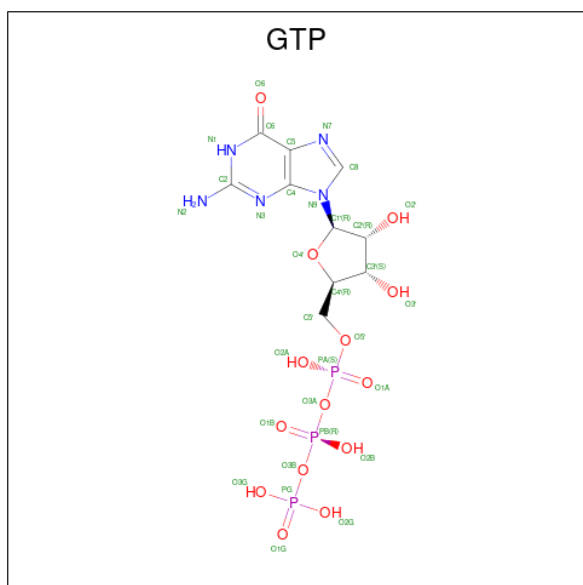
- Molecule 34 is a protein called Protein CFAP276.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 34 | q | 112 | Total | C | N | O | S | 0 | 0 |
| | | | 906 | 568 | 166 | 171 | 1 | | |
| 34 | r | 112 | Total | C | N | O | S | 0 | 0 |
| | | | 906 | 568 | 166 | 171 | 1 | | |
| 34 | s | 112 | Total | C | N | O | S | 0 | 0 |
| | | | 906 | 568 | 166 | 171 | 1 | | |

- Molecule 35 is a protein called UPF0691 protein C9orf116.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 35 | y | 63 | Total | C | N | O | S | 0 | 0 |
| | | | 498 | 312 | 88 | 94 | 4 | | |
| 35 | z | 111 | Total | C | N | O | S | 0 | 0 |
| | | | 891 | 559 | 163 | 165 | 4 | | |

- Molecule 36 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).



| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|---|----|---|---------|
| 36 | AA | 1 | Total | C | N | O | P | 0 |
| | | | 32 | 10 | 5 | 14 | 3 | |
| 36 | AC | 1 | Total | C | N | O | P | 0 |
| | | | 32 | 10 | 5 | 14 | 3 | |
| 36 | AE | 1 | Total | C | N | O | P | 0 |
| | | | 32 | 10 | 5 | 14 | 3 | |
| 36 | AG | 1 | Total | C | N | O | P | 0 |
| | | | 32 | 10 | 5 | 14 | 3 | |
| 36 | AI | 1 | Total | C | N | O | P | 0 |
| | | | 32 | 10 | 5 | 14 | 3 | |
| 36 | AK | 1 | Total | C | N | O | P | 0 |
| | | | 32 | 10 | 5 | 14 | 3 | |
| 36 | AM | 1 | Total | C | N | O | P | 0 |
| | | | 32 | 10 | 5 | 14 | 3 | |
| 36 | BA | 1 | Total | C | N | O | P | 0 |
| | | | 32 | 10 | 5 | 14 | 3 | |
| 36 | BC | 1 | Total | C | N | O | P | 0 |
| | | | 32 | 10 | 5 | 14 | 3 | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------------|---------|--------|---------|--------|---------|
| | | | Total | C | N | O | P | |
| 36 | BE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | BG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | BI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | BK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | BM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | CA | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | CC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | CE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | CG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | CI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | CK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | CM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | DA | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | DC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | DE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | DG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | DI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | DK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | DM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | EC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | EE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------------|---------|--------|---------|--------|---------|
| | | | Total | C | N | O | P | |
| 36 | EG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | EI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | EK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | EM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | FC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | FE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | FG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | FI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | FK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | FM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | GC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | GE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | GG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | GI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | GK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | GM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | HC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | HE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | HG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | HI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | HK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------------|---------|--------|---------|--------|---------|
| | | | Total | C | N | O | P | |
| 36 | HM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | HO | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | IC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | IE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | IG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | II | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | IK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | IM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | IO | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | JC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | JE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | JG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | JI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | JK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | JM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | KC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | KE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | KG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | KI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | KK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | KM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------------|---------|--------|---------|--------|---------|
| | | | Total | C | N | O | P | |
| 36 | KO | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | LC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | LE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | LG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | LI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | LK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | LM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | MC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | ME | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | MG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | MI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | MK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | MM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | NC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | NE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | NG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | NI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | NK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | NM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | OC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | OE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------------|---------|--------|---------|--------|---------|
| | | | Total | C | N | O | P | |
| 36 | OG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | OI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | OK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | OM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | OO | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | PC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | PE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | PG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | PI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | PK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | PM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | PO | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | QC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | QE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | QG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | QI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | QK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | QM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | QO | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | RC | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | RE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------------|---------|--------|---------|--------|---------|
| | | | Total | C | N | O | P | |
| 36 | RG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | RI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | RK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | RM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | RO | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | SE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | SG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | SI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | SK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | SM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | SO | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | TE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | TG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | TI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | TK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | TM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | TO | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | UE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | UG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | UI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | UK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------------|---------|--------|---------|--------|---------|
| | | | Total | C | N | O | P | |
| 36 | UM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | UO | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | VE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | VG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | VI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | VK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | VM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | VO | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | WE | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | WG | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | WI | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | WK | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | WM | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |
| 36 | WO | 1 | Total 32 | C 10 | N 5 | O 14 | P 3 | 0 |

- Molecule 37 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|------------|---------|---------|
| | | | Total | Mg | |
| 37 | AA | 1 | Total 1 | Mg 1 | 0 |
| 37 | AC | 1 | Total 1 | Mg 1 | 0 |
| 37 | AE | 1 | Total 1 | Mg 1 | 0 |
| 37 | AG | 1 | Total 1 | Mg 1 | 0 |
| 37 | AI | 1 | Total 1 | Mg 1 | 0 |

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| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| | | | Total | Mg | |
| 37 | AK | 1 | 1 | 1 | 0 |
| 37 | AM | 1 | 1 | 1 | 0 |
| 37 | BA | 1 | 1 | 1 | 0 |
| 37 | BC | 1 | 1 | 1 | 0 |
| 37 | BE | 1 | 1 | 1 | 0 |
| 37 | BG | 1 | 1 | 1 | 0 |
| 37 | BI | 1 | 1 | 1 | 0 |
| 37 | BK | 1 | 1 | 1 | 0 |
| 37 | BM | 1 | 1 | 1 | 0 |
| 37 | CA | 1 | 1 | 1 | 0 |
| 37 | CC | 1 | 1 | 1 | 0 |
| 37 | CE | 1 | 1 | 1 | 0 |
| 37 | CG | 1 | 1 | 1 | 0 |
| 37 | CI | 1 | 1 | 1 | 0 |
| 37 | CK | 1 | 1 | 1 | 0 |
| 37 | CM | 1 | 1 | 1 | 0 |
| 37 | DA | 1 | 1 | 1 | 0 |
| 37 | DC | 1 | 1 | 1 | 0 |
| 37 | DE | 1 | 1 | 1 | 0 |
| 37 | DG | 1 | 1 | 1 | 0 |
| 37 | DI | 1 | 1 | 1 | 0 |

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| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| | | | Total | Mg | |
| 37 | DK | 1 | 1 | 1 | 0 |
| 37 | DM | 1 | 1 | 1 | 0 |
| 37 | EC | 1 | 1 | 1 | 0 |
| 37 | EE | 1 | 1 | 1 | 0 |
| 37 | EG | 1 | 1 | 1 | 0 |
| 37 | EI | 1 | 1 | 1 | 0 |
| 37 | EK | 1 | 1 | 1 | 0 |
| 37 | EM | 1 | 1 | 1 | 0 |
| 37 | FC | 1 | 1 | 1 | 0 |
| 37 | FE | 1 | 1 | 1 | 0 |
| 37 | FG | 1 | 1 | 1 | 0 |
| 37 | FI | 1 | 1 | 1 | 0 |
| 37 | FK | 1 | 1 | 1 | 0 |
| 37 | FM | 1 | 1 | 1 | 0 |
| 37 | GC | 1 | 1 | 1 | 0 |
| 37 | GE | 1 | 1 | 1 | 0 |
| 37 | GG | 1 | 1 | 1 | 0 |
| 37 | GI | 1 | 1 | 1 | 0 |
| 37 | GK | 1 | 1 | 1 | 0 |
| 37 | GM | 1 | 1 | 1 | 0 |
| 37 | HC | 1 | 1 | 1 | 0 |

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| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| | | | Total | Mg | |
| 37 | HE | 1 | 1 | 1 | 0 |
| 37 | HG | 1 | 1 | 1 | 0 |
| 37 | HI | 1 | 1 | 1 | 0 |
| 37 | HK | 1 | 1 | 1 | 0 |
| 37 | HM | 1 | 1 | 1 | 0 |
| 37 | HO | 1 | 1 | 1 | 0 |
| 37 | IC | 1 | 1 | 1 | 0 |
| 37 | IE | 1 | 1 | 1 | 0 |
| 37 | IG | 1 | 1 | 1 | 0 |
| 37 | II | 1 | 1 | 1 | 0 |
| 37 | IK | 1 | 1 | 1 | 0 |
| 37 | IM | 1 | 1 | 1 | 0 |
| 37 | IO | 1 | 1 | 1 | 0 |
| 37 | JC | 1 | 1 | 1 | 0 |
| 37 | JE | 1 | 1 | 1 | 0 |
| 37 | JG | 1 | 1 | 1 | 0 |
| 37 | JI | 1 | 1 | 1 | 0 |
| 37 | JK | 1 | 1 | 1 | 0 |
| 37 | JM | 1 | 1 | 1 | 0 |
| 37 | KC | 1 | 1 | 1 | 0 |
| 37 | KE | 1 | 1 | 1 | 0 |

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| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| | | | Total | Mg | |
| 37 | KG | 1 | 1 | 1 | 0 |
| 37 | KI | 1 | 1 | 1 | 0 |
| 37 | KK | 1 | 1 | 1 | 0 |
| 37 | KM | 1 | 1 | 1 | 0 |
| 37 | KO | 1 | 1 | 1 | 0 |
| 37 | LC | 1 | 1 | 1 | 0 |
| 37 | LE | 1 | 1 | 1 | 0 |
| 37 | LG | 1 | 1 | 1 | 0 |
| 37 | LI | 1 | 1 | 1 | 0 |
| 37 | LK | 1 | 1 | 1 | 0 |
| 37 | LM | 1 | 1 | 1 | 0 |
| 37 | MC | 1 | 1 | 1 | 0 |
| 37 | ME | 1 | 1 | 1 | 0 |
| 37 | MG | 1 | 1 | 1 | 0 |
| 37 | MI | 1 | 1 | 1 | 0 |
| 37 | MK | 1 | 1 | 1 | 0 |
| 37 | MM | 1 | 1 | 1 | 0 |
| 37 | NC | 1 | 1 | 1 | 0 |
| 37 | NE | 1 | 1 | 1 | 0 |
| 37 | NG | 1 | 1 | 1 | 0 |
| 37 | NI | 1 | 1 | 1 | 0 |

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| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| | | | Total | Mg | |
| 37 | NK | 1 | 1 | 1 | 0 |
| 37 | NM | 1 | 1 | 1 | 0 |
| 37 | OC | 1 | 1 | 1 | 0 |
| 37 | OE | 1 | 1 | 1 | 0 |
| 37 | OG | 1 | 1 | 1 | 0 |
| 37 | OI | 1 | 1 | 1 | 0 |
| 37 | OK | 1 | 1 | 1 | 0 |
| 37 | OM | 1 | 1 | 1 | 0 |
| 37 | OO | 1 | 1 | 1 | 0 |
| 37 | PC | 1 | 1 | 1 | 0 |
| 37 | PE | 1 | 1 | 1 | 0 |
| 37 | PG | 1 | 1 | 1 | 0 |
| 37 | PI | 1 | 1 | 1 | 0 |
| 37 | PK | 1 | 1 | 1 | 0 |
| 37 | PM | 1 | 1 | 1 | 0 |
| 37 | PO | 1 | 1 | 1 | 0 |
| 37 | QC | 1 | 1 | 1 | 0 |
| 37 | QE | 1 | 1 | 1 | 0 |
| 37 | QG | 1 | 1 | 1 | 0 |
| 37 | QI | 1 | 1 | 1 | 0 |
| 37 | QK | 1 | 1 | 1 | 0 |

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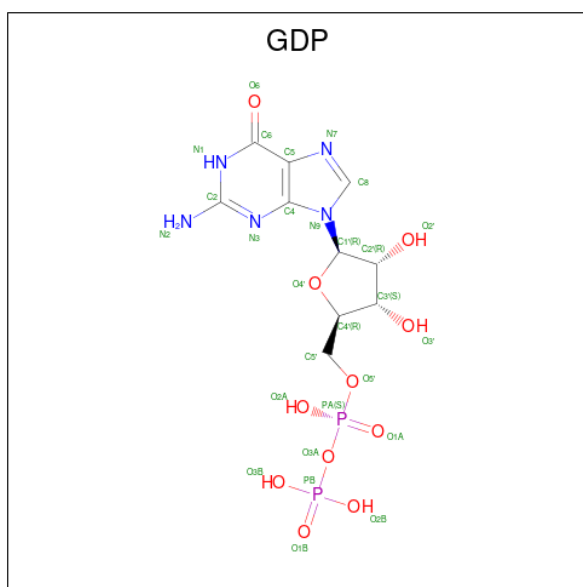
| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| | | | Total | Mg | |
| 37 | QM | 1 | 1 | 1 | 0 |
| 37 | QO | 1 | 1 | 1 | 0 |
| 37 | RC | 1 | 1 | 1 | 0 |
| 37 | RE | 1 | 1 | 1 | 0 |
| 37 | RG | 1 | 1 | 1 | 0 |
| 37 | RI | 1 | 1 | 1 | 0 |
| 37 | RK | 1 | 1 | 1 | 0 |
| 37 | RM | 1 | 1 | 1 | 0 |
| 37 | RO | 1 | 1 | 1 | 0 |
| 37 | SE | 1 | 1 | 1 | 0 |
| 37 | SG | 1 | 1 | 1 | 0 |
| 37 | SI | 1 | 1 | 1 | 0 |
| 37 | SK | 1 | 1 | 1 | 0 |
| 37 | SM | 1 | 1 | 1 | 0 |
| 37 | SO | 1 | 1 | 1 | 0 |
| 37 | TE | 1 | 1 | 1 | 0 |
| 37 | TG | 1 | 1 | 1 | 0 |
| 37 | TI | 1 | 1 | 1 | 0 |
| 37 | TK | 1 | 1 | 1 | 0 |
| 37 | TM | 1 | 1 | 1 | 0 |
| 37 | TO | 1 | 1 | 1 | 0 |

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| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| | | | Total | Mg | |
| 37 | UE | 1 | 1 | 1 | 0 |
| 37 | UG | 1 | 1 | 1 | 0 |
| 37 | UI | 1 | 1 | 1 | 0 |
| 37 | UK | 1 | 1 | 1 | 0 |
| 37 | UM | 1 | 1 | 1 | 0 |
| 37 | UO | 1 | 1 | 1 | 0 |
| 37 | VE | 1 | 1 | 1 | 0 |
| 37 | VG | 1 | 1 | 1 | 0 |
| 37 | VI | 1 | 1 | 1 | 0 |
| 37 | VK | 1 | 1 | 1 | 0 |
| 37 | VM | 1 | 1 | 1 | 0 |
| 37 | VO | 1 | 1 | 1 | 0 |
| 37 | WE | 1 | 1 | 1 | 0 |
| 37 | WG | 1 | 1 | 1 | 0 |
| 37 | WI | 1 | 1 | 1 | 0 |
| 37 | WK | 1 | 1 | 1 | 0 |
| 37 | WM | 1 | 1 | 1 | 0 |
| 37 | WO | 1 | 1 | 1 | 0 |

- Molecule 38 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).



| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|---|----|---|---------|
| | | | Total | C | N | O | P | |
| 38 | AB | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |
| 38 | AD | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |
| 38 | AF | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |
| 38 | AH | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |
| 38 | AJ | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |
| 38 | AL | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |
| 38 | BB | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |
| 38 | BD | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |
| 38 | BF | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |
| 38 | BH | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |
| 38 | BJ | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |
| 38 | BL | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |
| 38 | CB | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |
| 38 | CD | 1 | Total | C | N | O | P | 0 |
| | | | 28 | 10 | 5 | 11 | 2 | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------------|---------|--------|---------|--------|---------|
| | | | Total | C | N | O | P | |
| 38 | CF | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | CH | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | CJ | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | CL | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | DB | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | DD | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | DF | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | DH | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | DJ | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | DL | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | EB | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | ED | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | EF | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | EH | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | EJ | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | EL | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | EN | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | FB | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | FD | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | FF | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | FH | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|---|----|---|---------|
| | | | Total | C | N | O | P | |
| 38 | FJ | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | FL | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | FN | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | GB | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | GD | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | GF | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | GH | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | GJ | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | GL | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | GN | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | HB | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | HD | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | HF | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | HH | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | HJ | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | HL | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | HN | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | IB | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | ID | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | IF | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | IH | 1 | 28 | 10 | 5 | 11 | 2 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|---|----|---|---------|
| | | | Total | C | N | O | P | |
| 38 | IJ | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | IL | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | IN | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | JB | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | JD | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | JF | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | JH | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | JJ | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | JL | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | JN | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | KB | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | KD | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | KF | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | KH | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | KJ | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | KL | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | KN | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | LB | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | LD | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | LF | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | LH | 1 | 28 | 10 | 5 | 11 | 2 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|---|----|---|---------|
| | | | Total | C | N | O | P | |
| 38 | LJ | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | LL | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | LN | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | MB | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | MD | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | MF | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | MH | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | MJ | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | ML | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | MN | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | NB | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | ND | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | NF | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | NH | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | NJ | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | NL | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | NN | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | OB | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | OD | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | OF | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | OH | 1 | 28 | 10 | 5 | 11 | 2 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------------|---------|--------|---------|--------|---------|
| | | | Total | C | N | O | P | |
| 38 | OJ | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | OL | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | ON | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | PD | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | PF | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | PH | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | PJ | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | PL | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | PN | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | QD | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | QF | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | QH | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | QJ | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | QL | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | QN | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | RD | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | RF | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | RH | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | RJ | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | RL | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | RN | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|---|----|---|---------|
| | | | Total | C | N | O | P | |
| 38 | SD | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | SF | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | SH | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | SJ | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | SL | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | SN | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | TD | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | TF | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | TH | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | TJ | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | TL | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | TN | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | TP | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | UD | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | UF | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | UH | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | UJ | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | UL | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | UN | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | UP | 1 | 28 | 10 | 5 | 11 | 2 | 0 |
| 38 | VD | 1 | 28 | 10 | 5 | 11 | 2 | 0 |

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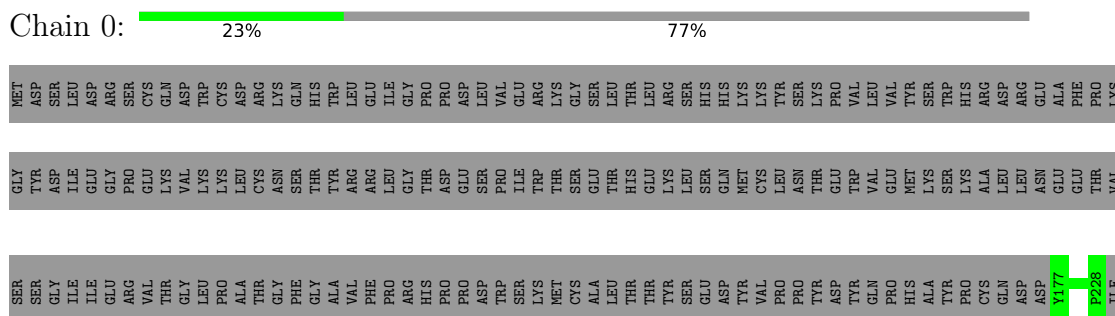
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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------------|---------|--------|---------|--------|---------|
| | | | Total | C | N | O | P | |
| 38 | VF | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | VH | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | VJ | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | VL | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | VN | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | VP | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | WD | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | WF | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | WH | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | WJ | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
| 38 | WL | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |
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| 38 | WP | 1 | Total 28 | C 10 | N 5 | O 11 | P 2 | 0 |

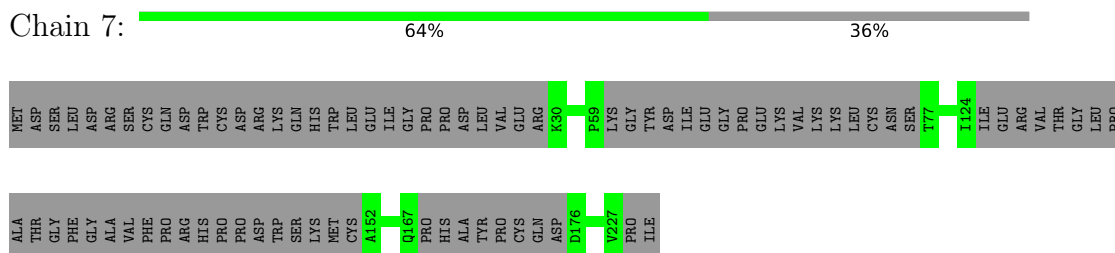
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

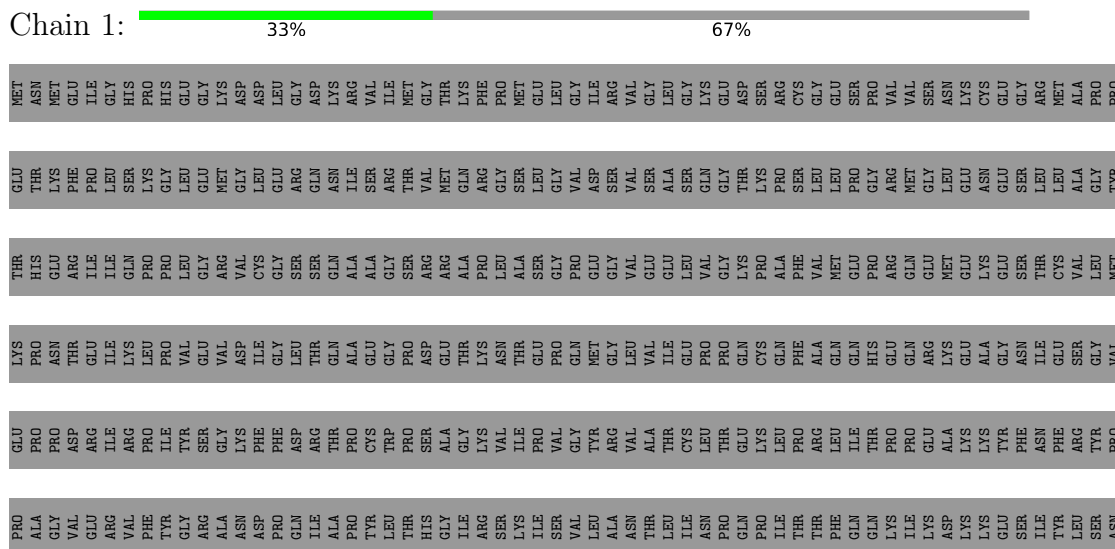
- Molecule 1: Protein CFAP95

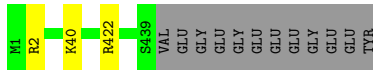


- Molecule 1: Protein CFAP95



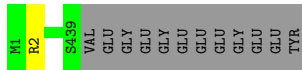
- Molecule 2: EF-hand domain-containing family member B





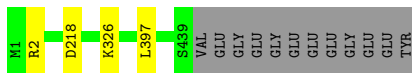
- Molecule 8: Tubulin alpha-1A chain

Chain AK: 97%



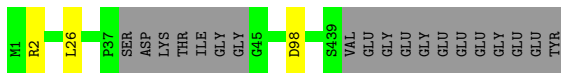
- Molecule 8: Tubulin alpha-1A chain

Chain AM: 96%



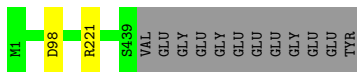
- Molecule 8: Tubulin alpha-1A chain

Chain BA: 95%



- Molecule 8: Tubulin alpha-1A chain

Chain BC: 97%



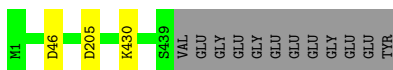
- Molecule 8: Tubulin alpha-1A chain

Chain BE: 95%



- Molecule 8: Tubulin alpha-1A chain

Chain BG: 97%



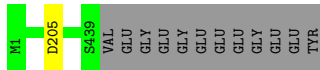
- Molecule 8: Tubulin alpha-1A chain

Chain BI: 95%



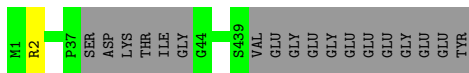
- Molecule 8: Tubulin alpha-1A chain

Chain BK: 97%



- Molecule 8: Tubulin alpha-1A chain

Chain BM: 96%



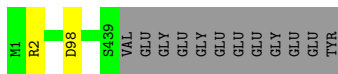
- Molecule 8: Tubulin alpha-1A chain

Chain CA: 95%



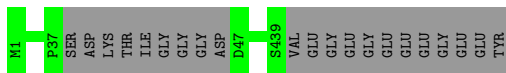
- Molecule 8: Tubulin alpha-1A chain

Chain CC: 97%



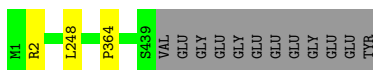
- Molecule 8: Tubulin alpha-1A chain

Chain CE: 95% 5%



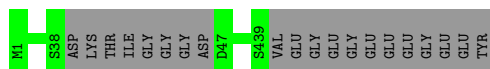
- Molecule 8: Tubulin alpha-1A chain

Chain CG: 97%



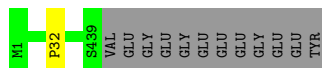
- Molecule 8: Tubulin alpha-1A chain

Chain CI: 96%



- Molecule 8: Tubulin alpha-1A chain

Chain CK: 97%



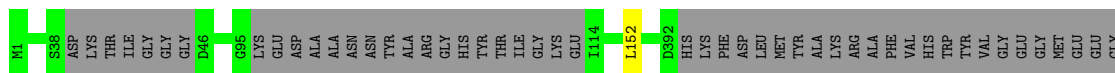
- Molecule 8: Tubulin alpha-1A chain

Chain CM: 95%



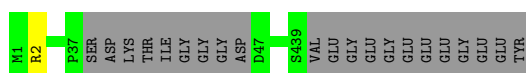
- Molecule 8: Tubulin alpha-1A chain

Chain DA: 84% 15%



- Molecule 8: Tubulin alpha-1A chain

Chain DC: 95% 5%



- Molecule 8: Tubulin alpha-1A chain

Chain DE: 95%



- Molecule 8: Tubulin alpha-1A chain

Chain DG: 95% 5%



- Molecule 8: Tubulin alpha-1A chain

Chain DI:  95% 5%



• Molecule 8: Tubulin alpha-1A chain

Chain DK:  95% 5%



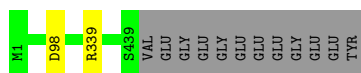
• Molecule 8: Tubulin alpha-1A chain

Chain DM:  95% .



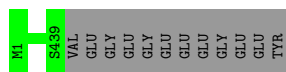
• Molecule 8: Tubulin alpha-1A chain

Chain EC:  97% .



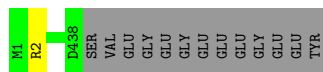
• Molecule 8: Tubulin alpha-1A chain

Chain EE:  97% .



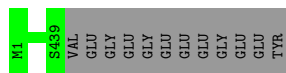
• Molecule 8: Tubulin alpha-1A chain

Chain EG:  97% .



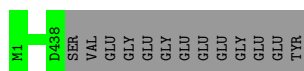
• Molecule 8: Tubulin alpha-1A chain

Chain EI:  97% .



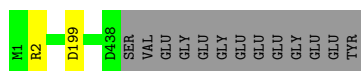
• Molecule 8: Tubulin alpha-1A chain

Chain EK:  97%



- Molecule 8: Tubulin alpha-1A chain

Chain EM:  97%



- Molecule 8: Tubulin alpha-1A chain

Chain FC:  95%



- Molecule 8: Tubulin alpha-1A chain

Chain FE:  95%



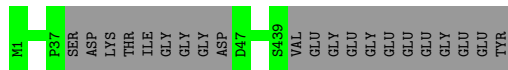
- Molecule 8: Tubulin alpha-1A chain

Chain FG:  95% 5%

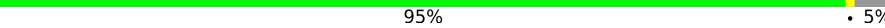


- Molecule 8: Tubulin alpha-1A chain

Chain FI:  95% 5%



- Molecule 8: Tubulin alpha-1A chain

Chain FK:  95% 5%



- Molecule 8: Tubulin alpha-1A chain

Chain FM:  95% 5%



• Molecule 8: Tubulin alpha-1A chain

Chain GC:  96% .



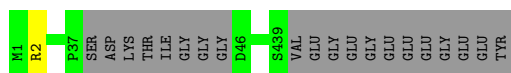
• Molecule 8: Tubulin alpha-1A chain

Chain GE:  95% 5%



• Molecule 8: Tubulin alpha-1A chain

Chain GG:  95% .



• Molecule 8: Tubulin alpha-1A chain

Chain GI:  95% 5%



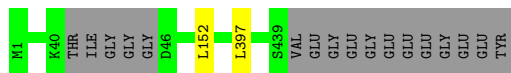
• Molecule 8: Tubulin alpha-1A chain

Chain GK:  95% .



• Molecule 8: Tubulin alpha-1A chain

Chain GM:  96% .



• Molecule 8: Tubulin alpha-1A chain

Chain HC:  95%



• Molecule 8: Tubulin alpha-1A chain

Chain HE:  96%



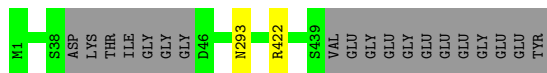
• Molecule 8: Tubulin alpha-1A chain

Chain HG:  95%



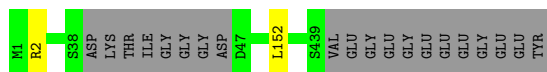
• Molecule 8: Tubulin alpha-1A chain

Chain HI:  95%



• Molecule 8: Tubulin alpha-1A chain

Chain HK:  95%




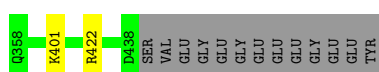
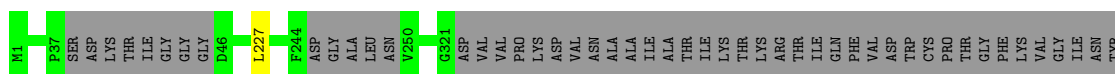
• Molecule 8: Tubulin alpha-1A chain

Chain HM:  95%



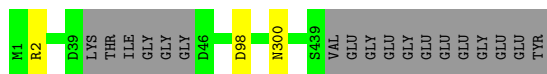
• Molecule 8: Tubulin alpha-1A chain

Chain HO:  86% 14%



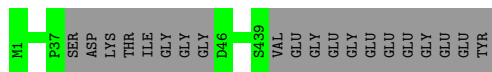
• Molecule 8: Tubulin alpha-1A chain

Chain IC:  95%



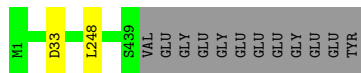
• Molecule 8: Tubulin alpha-1A chain

Chain IE:  96%



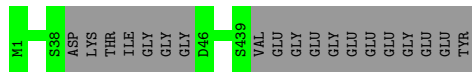
• Molecule 8: Tubulin alpha-1A chain

Chain IG:  97%



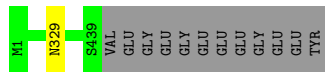
• Molecule 8: Tubulin alpha-1A chain

Chain II:  96%



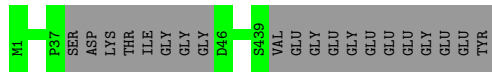
• Molecule 8: Tubulin alpha-1A chain

Chain IK:  97%



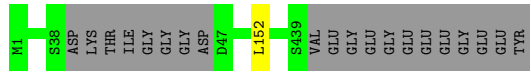
• Molecule 8: Tubulin alpha-1A chain

Chain IM:  96%



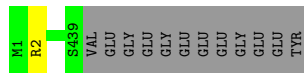
• Molecule 8: Tubulin alpha-1A chain

Chain IO:  95%



• Molecule 8: Tubulin alpha-1A chain

Chain JC:  97%



• Molecule 8: Tubulin alpha-1A chain

Chain JE:  95%



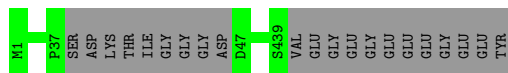
• Molecule 8: Tubulin alpha-1A chain

Chain JG:  95%



• Molecule 8: Tubulin alpha-1A chain

Chain JI:  95%



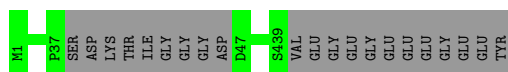
• Molecule 8: Tubulin alpha-1A chain

Chain JK:  95%



• Molecule 8: Tubulin alpha-1A chain

Chain JM:  95%



• Molecule 8: Tubulin alpha-1A chain

Chain KC:  96%



• Molecule 8: Tubulin alpha-1A chain

Chain KE:  95%



- Molecule 8: Tubulin alpha-1A chain

Chain KG:  96%



- Molecule 8: Tubulin alpha-1A chain

Chain KI:  95% 5%



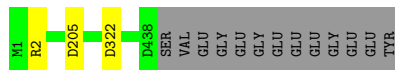
- Molecule 8: Tubulin alpha-1A chain

Chain KK:  95%



- Molecule 8: Tubulin alpha-1A chain

Chain KM:  96%



- Molecule 8: Tubulin alpha-1A chain

Chain KO:  95%



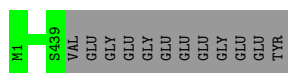
- Molecule 8: Tubulin alpha-1A chain

Chain LC:  96%



- Molecule 8: Tubulin alpha-1A chain

Chain LE:  97%



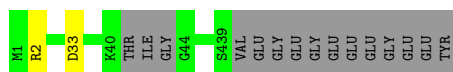
• Molecule 8: Tubulin alpha-1A chain

Chain LG:  95%



• Molecule 8: Tubulin alpha-1A chain

Chain LI:  96%



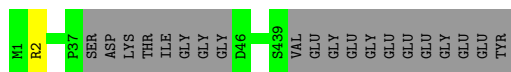
• Molecule 8: Tubulin alpha-1A chain

Chain LK:  96%



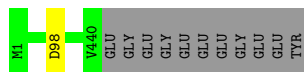
• Molecule 8: Tubulin alpha-1A chain

Chain LM:  95%



• Molecule 8: Tubulin alpha-1A chain

Chain MC:  97%



• Molecule 8: Tubulin alpha-1A chain

Chain ME:  95%



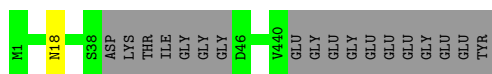
• Molecule 8: Tubulin alpha-1A chain

Chain MG:  95%



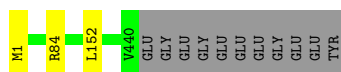
• Molecule 8: Tubulin alpha-1A chain

Chain MI:  96%



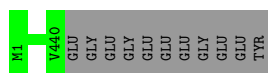
• Molecule 8: Tubulin alpha-1A chain

Chain MK:  97%



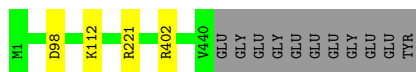
• Molecule 8: Tubulin alpha-1A chain

Chain MM:  98%



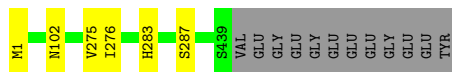
• Molecule 8: Tubulin alpha-1A chain

Chain NC:  97%



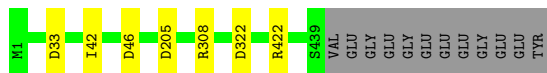
• Molecule 8: Tubulin alpha-1A chain

Chain NE:  96%



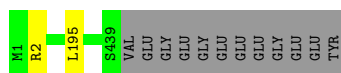
• Molecule 8: Tubulin alpha-1A chain

Chain NG:  96%



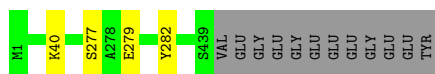
• Molecule 8: Tubulin alpha-1A chain

Chain NI:  97%



• Molecule 8: Tubulin alpha-1A chain

Chain NK:  96%



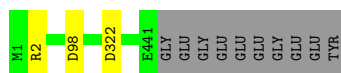
• Molecule 8: Tubulin alpha-1A chain

Chain NM:  96%



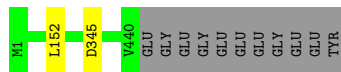
• Molecule 8: Tubulin alpha-1A chain

Chain OC:  97%



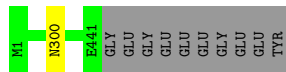
• Molecule 8: Tubulin alpha-1A chain

Chain OE:  97%



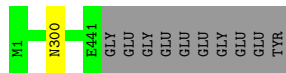
• Molecule 8: Tubulin alpha-1A chain

Chain OG:  98%



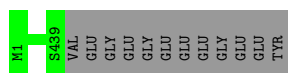
• Molecule 8: Tubulin alpha-1A chain

Chain OI:  98%



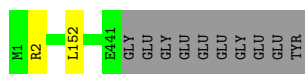
• Molecule 8: Tubulin alpha-1A chain

Chain OK:  97%



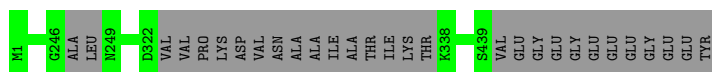
• Molecule 8: Tubulin alpha-1A chain

Chain OM:  97%



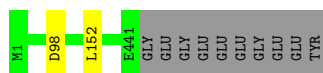
• Molecule 8: Tubulin alpha-1A chain

Chain OO:  94% 6%



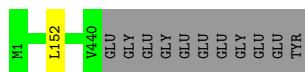
• Molecule 8: Tubulin alpha-1A chain

Chain PC:  97%



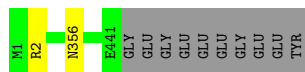
• Molecule 8: Tubulin alpha-1A chain

Chain PE:  97%



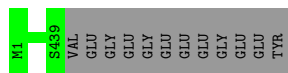
• Molecule 8: Tubulin alpha-1A chain

Chain PG:  97%



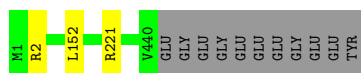
• Molecule 8: Tubulin alpha-1A chain

Chain PI:  97%



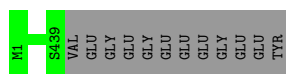
• Molecule 8: Tubulin alpha-1A chain

Chain PK:  97% ..



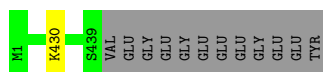
• Molecule 8: Tubulin alpha-1A chain

Chain PM:  97% .



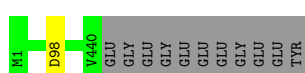
• Molecule 8: Tubulin alpha-1A chain

Chain PO:  97% .



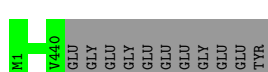
• Molecule 8: Tubulin alpha-1A chain

Chain QC:  97% .



• Molecule 8: Tubulin alpha-1A chain

Chain QE:  98% .



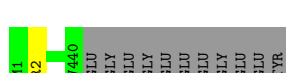
• Molecule 8: Tubulin alpha-1A chain

Chain QG:  97% ..



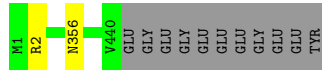
• Molecule 8: Tubulin alpha-1A chain

Chain QI:  97% .



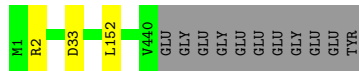
• Molecule 8: Tubulin alpha-1A chain

Chain QK:  97%



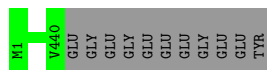
- Molecule 8: Tubulin alpha-1A chain

Chain QM:  97%



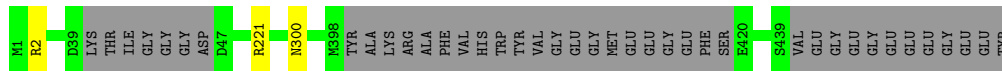
- Molecule 8: Tubulin alpha-1A chain

Chain QO:  98%



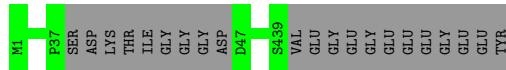
- Molecule 8: Tubulin alpha-1A chain

Chain RC:  90% 9%



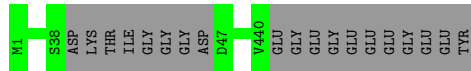
- Molecule 8: Tubulin alpha-1A chain

Chain RE:  95% 5%



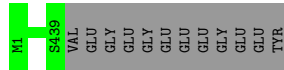
- Molecule 8: Tubulin alpha-1A chain

Chain RG:  96%



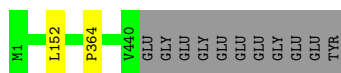
- Molecule 8: Tubulin alpha-1A chain

Chain RI:  97%



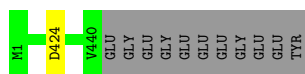
- Molecule 8: Tubulin alpha-1A chain

Chain RK:  97%



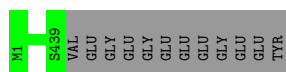
• Molecule 8: Tubulin alpha-1A chain

Chain RM:  97%



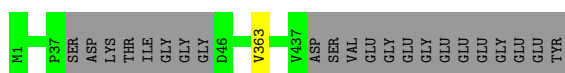
• Molecule 8: Tubulin alpha-1A chain

Chain RO:  97%



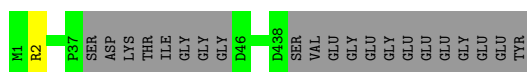
• Molecule 8: Tubulin alpha-1A chain

Chain SE:  95% 5%



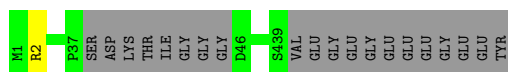
• Molecule 8: Tubulin alpha-1A chain

Chain SG:  95% 5%



• Molecule 8: Tubulin alpha-1A chain

Chain SI:  95%



• Molecule 8: Tubulin alpha-1A chain

Chain SK:  94%



• Molecule 8: Tubulin alpha-1A chain

Chain SM:  95%



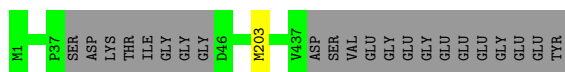
- Molecule 8: Tubulin alpha-1A chain

Chain SO:  95%



- Molecule 8: Tubulin alpha-1A chain

Chain TE:  95% 5%



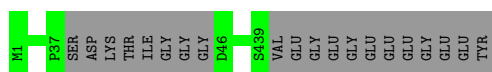
- Molecule 8: Tubulin alpha-1A chain

Chain TG:  95% 5%



- Molecule 8: Tubulin alpha-1A chain

Chain TI:  96%



- Molecule 8: Tubulin alpha-1A chain

Chain TK:  95% 5%



- Molecule 8: Tubulin alpha-1A chain

Chain TM:  95%



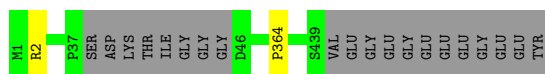
- Molecule 8: Tubulin alpha-1A chain

Chain TO:  95% 5%



• Molecule 8: Tubulin alpha-1A chain

Chain UE:  95% .



• Molecule 8: Tubulin alpha-1A chain

Chain UG:  95% .



• Molecule 8: Tubulin alpha-1A chain

Chain UI:  95% . .



• Molecule 8: Tubulin alpha-1A chain

Chain UK:  95% .



• Molecule 8: Tubulin alpha-1A chain

Chain UM:  95% .



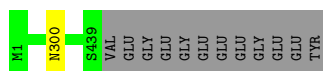
• Molecule 8: Tubulin alpha-1A chain

Chain UO:  95% .



• Molecule 8: Tubulin alpha-1A chain

Chain VE:  97%



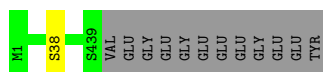
- Molecule 8: Tubulin alpha-1A chain

Chain VG:  95%



- Molecule 8: Tubulin alpha-1A chain

Chain VI:  97%



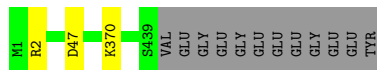
- Molecule 8: Tubulin alpha-1A chain

Chain VK:  95%



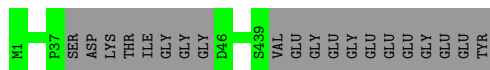
- Molecule 8: Tubulin alpha-1A chain

Chain VM:  97%



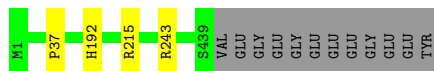
- Molecule 8: Tubulin alpha-1A chain

Chain VO:  96%

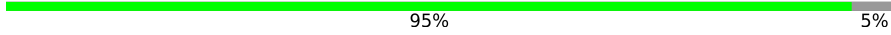


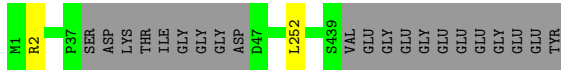
- Molecule 8: Tubulin alpha-1A chain

Chain WE:  96%



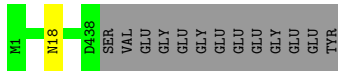
- Molecule 8: Tubulin alpha-1A chain

Chain WG:  95% 5%



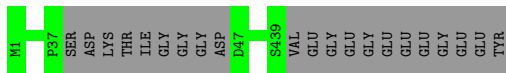
- Molecule 8: Tubulin alpha-1A chain

Chain WI:  97% .



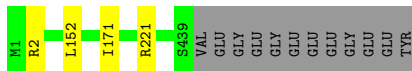
- Molecule 8: Tubulin alpha-1A chain

Chain WK:  95% 5%



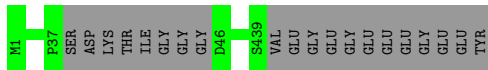
- Molecule 8: Tubulin alpha-1A chain

Chain WM:  96% ..



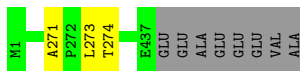
- Molecule 8: Tubulin alpha-1A chain

Chain WO:  96% .



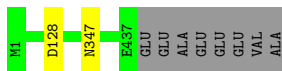
- Molecule 9: Tubulin beta-4B chain

Chain AB:  98% ..



- Molecule 9: Tubulin beta-4B chain

Chain AD:  98% .



- Molecule 9: Tubulin beta-4B chain

Chain AF:  97% ..



- Molecule 9: Tubulin beta-4B chain

Chain AH: 97%



- Molecule 9: Tubulin beta-4B chain

Chain AJ: 97%



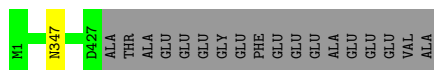
- Molecule 9: Tubulin beta-4B chain

Chain AL: 98%



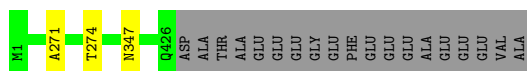
- Molecule 9: Tubulin beta-4B chain

Chain BB: 96%



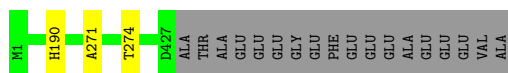
- Molecule 9: Tubulin beta-4B chain

Chain BD: 95%



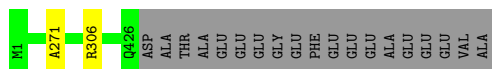
- Molecule 9: Tubulin beta-4B chain

Chain BF: 95%

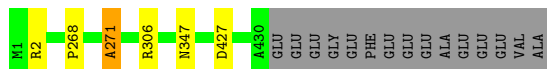


- Molecule 9: Tubulin beta-4B chain

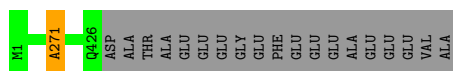
Chain BH: 95%



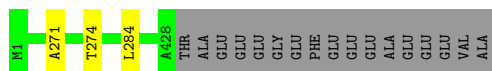
• Molecule 9: Tubulin beta-4B chain



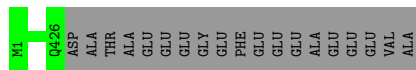
• Molecule 9: Tubulin beta-4B chain



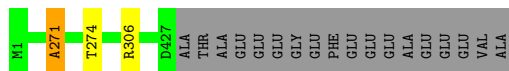
• Molecule 9: Tubulin beta-4B chain



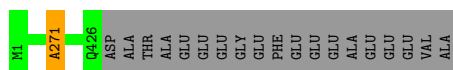
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

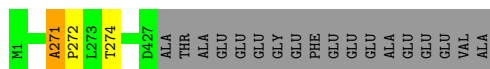


• Molecule 9: Tubulin beta-4B chain



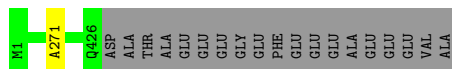
• Molecule 9: Tubulin beta-4B chain





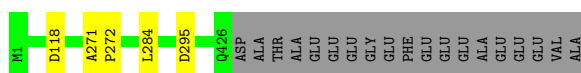
- Molecule 9: Tubulin beta-4B chain

Chain CL: 96%



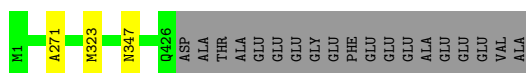
- Molecule 9: Tubulin beta-4B chain

Chain DB: 95%



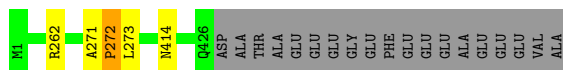
- Molecule 9: Tubulin beta-4B chain

Chain DD: 95%



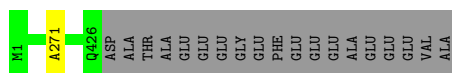
- Molecule 9: Tubulin beta-4B chain

Chain DF: 95%



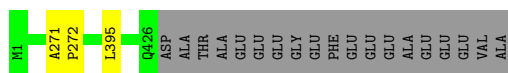
- Molecule 9: Tubulin beta-4B chain

Chain DH: 96%



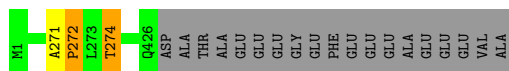
- Molecule 9: Tubulin beta-4B chain

Chain DJ: 95%

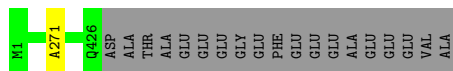


- Molecule 9: Tubulin beta-4B chain

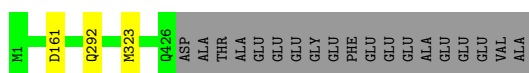
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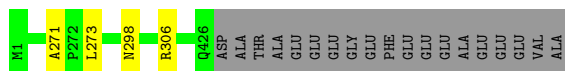
• Molecule 9: Tubulin beta-4B chain



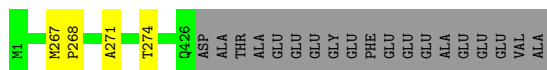
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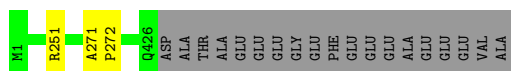
• Molecule 9: Tubulin beta-4B chain



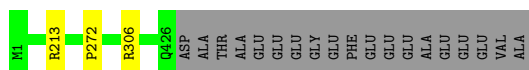
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

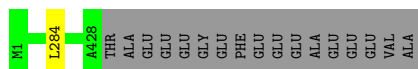


• Molecule 9: Tubulin beta-4B chain

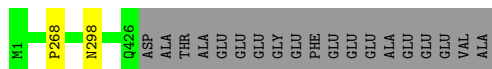


• Molecule 9: Tubulin beta-4B chain

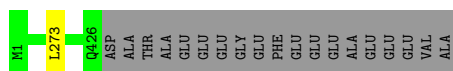




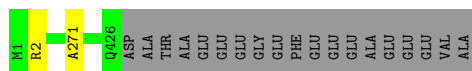
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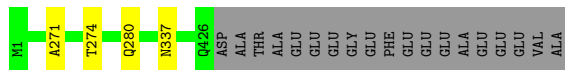
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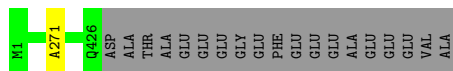
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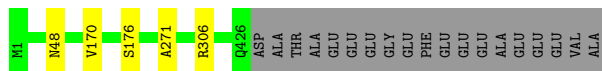
• Molecule 9: Tubulin beta-4B chain



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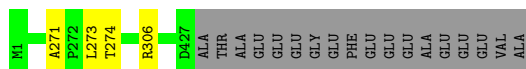


• Molecule 9: Tubulin beta-4B chain



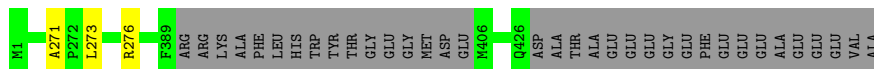
• Molecule 9: Tubulin beta-4B chain





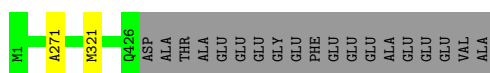
- Molecule 9: Tubulin beta-4B chain

Chain GB: 91% 8%



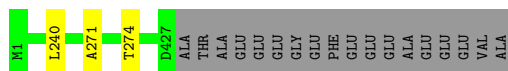
- Molecule 9: Tubulin beta-4B chain

Chain GD: 95%



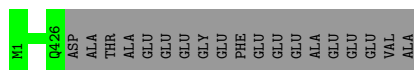
- Molecule 9: Tubulin beta-4B chain

Chain GF: 95%



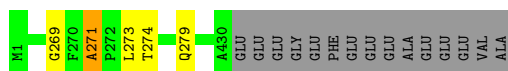
- Molecule 9: Tubulin beta-4B chain

Chain GH: 96%



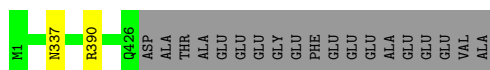
- Molecule 9: Tubulin beta-4B chain

Chain GJ: 96%



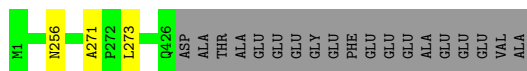
- Molecule 9: Tubulin beta-4B chain

Chain GL: 95%



- Molecule 9: Tubulin beta-4B chain

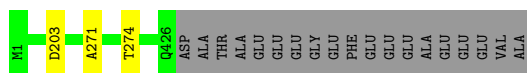
Chain GN: 95%



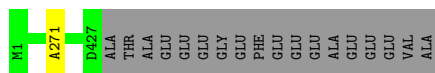
• Molecule 9: Tubulin beta-4B chain



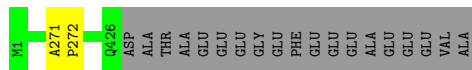
• Molecule 9: Tubulin beta-4B chain



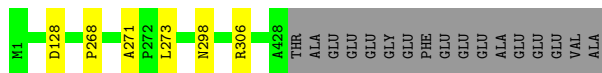
• Molecule 9: Tubulin beta-4B chain



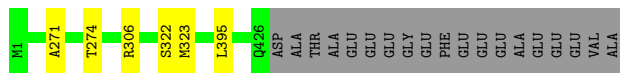
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

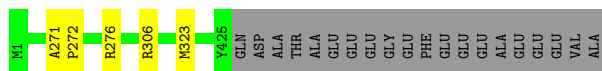


• Molecule 9: Tubulin beta-4B chain

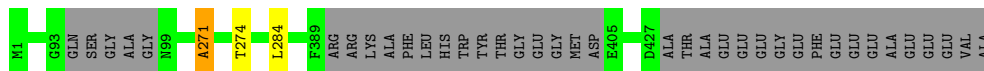


• Molecule 9: Tubulin beta-4B chain

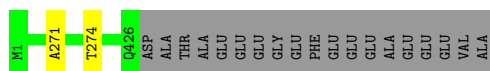




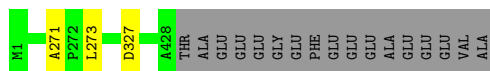
• Molecule 9: Tubulin beta-4B chain



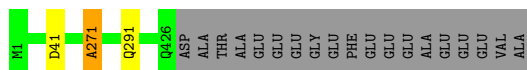
• Molecule 9: Tubulin beta-4B chain



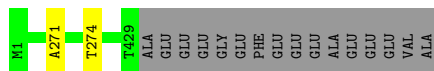
• Molecule 9: Tubulin beta-4B chain



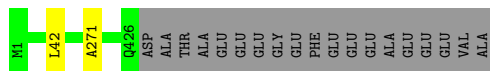
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

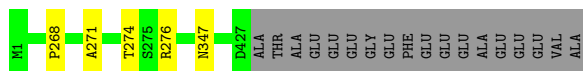


• Molecule 9: Tubulin beta-4B chain



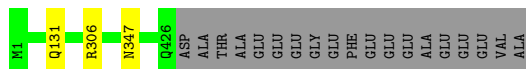
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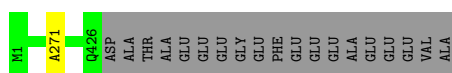
- Molecule 9: Tubulin beta-4B chain

Chain JB: 95%



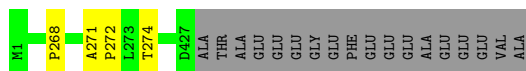
- Molecule 9: Tubulin beta-4B chain

Chain JD: 96%



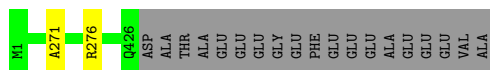
- Molecule 9: Tubulin beta-4B chain

Chain JF: 95%



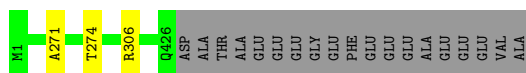
- Molecule 9: Tubulin beta-4B chain

Chain JH: 95%



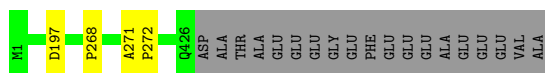
- Molecule 9: Tubulin beta-4B chain

Chain JJ: 95%



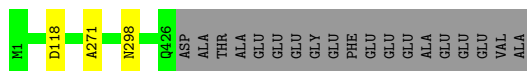
- Molecule 9: Tubulin beta-4B chain

Chain JL: 95%

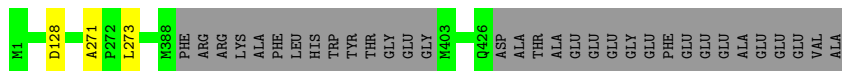


- Molecule 9: Tubulin beta-4B chain

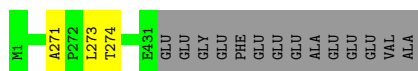
Chain JN: 95%



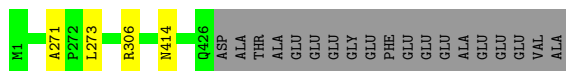
• Molecule 9: Tubulin beta-4B chain



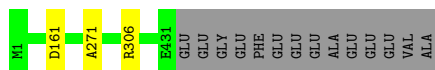
• Molecule 9: Tubulin beta-4B chain



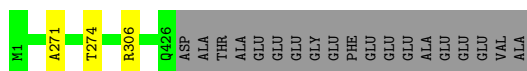
• Molecule 9: Tubulin beta-4B chain



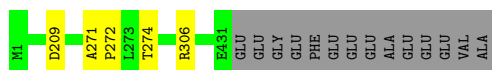
• Molecule 9: Tubulin beta-4B chain



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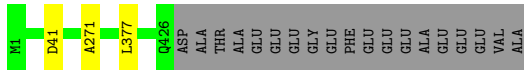


• Molecule 9: Tubulin beta-4B chain



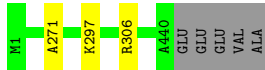
• Molecule 9: Tubulin beta-4B chain





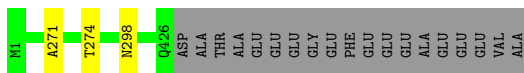
- Molecule 9: Tubulin beta-4B chain

Chain LB: 98%



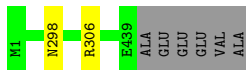
- Molecule 9: Tubulin beta-4B chain

Chain LD: 95%



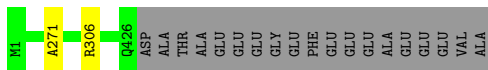
- Molecule 9: Tubulin beta-4B chain

Chain LF: 98%



- Molecule 9: Tubulin beta-4B chain

Chain LH: 95%



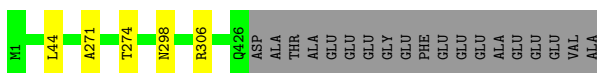
- Molecule 9: Tubulin beta-4B chain

Chain LJ: 99%



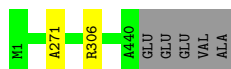
- Molecule 9: Tubulin beta-4B chain

Chain LL: 95%



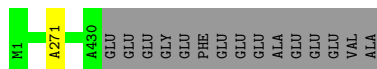
- Molecule 9: Tubulin beta-4B chain

Chain LN: 98%



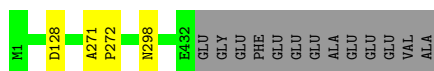
- Molecule 9: Tubulin beta-4B chain

Chain MB: 96%



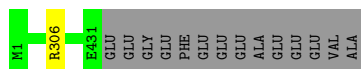
- Molecule 9: Tubulin beta-4B chain

Chain MD: 96%



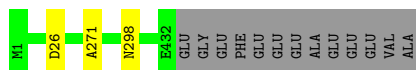
- Molecule 9: Tubulin beta-4B chain

Chain MF: 97%



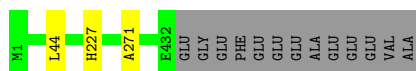
- Molecule 9: Tubulin beta-4B chain

Chain MH: 96%



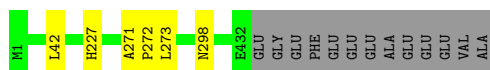
- Molecule 9: Tubulin beta-4B chain

Chain MJ: 96%



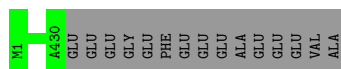
- Molecule 9: Tubulin beta-4B chain

Chain ML: 96%



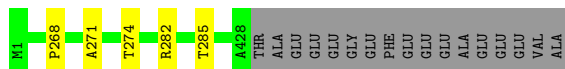
- Molecule 9: Tubulin beta-4B chain

Chain MN: 97%



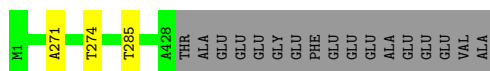
- Molecule 9: Tubulin beta-4B chain

Chain NB: 95%



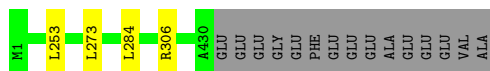
- Molecule 9: Tubulin beta-4B chain

Chain ND: 96%



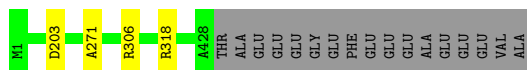
- Molecule 9: Tubulin beta-4B chain

Chain NF: 96%



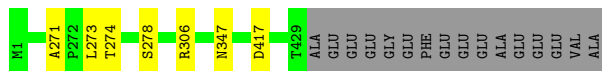
- Molecule 9: Tubulin beta-4B chain

Chain NH: 95%



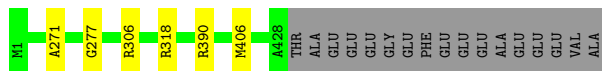
- Molecule 9: Tubulin beta-4B chain

Chain NJ: 95%



- Molecule 9: Tubulin beta-4B chain

Chain NL: 95%

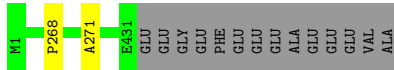


- Molecule 9: Tubulin beta-4B chain

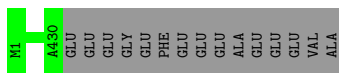
Chain NN: 95%



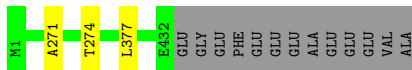
• Molecule 9: Tubulin beta-4B chain



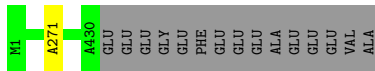
• Molecule 9: Tubulin beta-4B chain



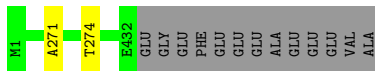
• Molecule 9: Tubulin beta-4B chain



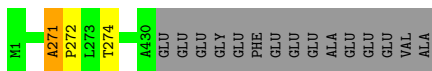
• Molecule 9: Tubulin beta-4B chain



• Molecule 9: Tubulin beta-4B chain

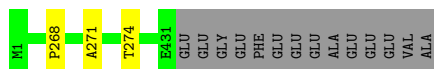


• Molecule 9: Tubulin beta-4B chain



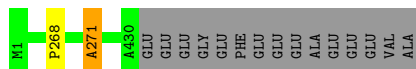
• Molecule 9: Tubulin beta-4B chain





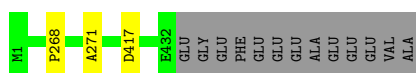
- Molecule 9: Tubulin beta-4B chain

Chain PD: 96%



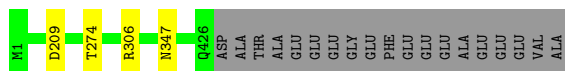
- Molecule 9: Tubulin beta-4B chain

Chain PF: 96%



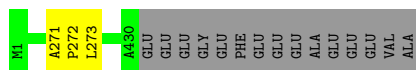
- Molecule 9: Tubulin beta-4B chain

Chain PH: 95%



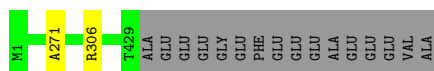
- Molecule 9: Tubulin beta-4B chain

Chain PJ: 96%



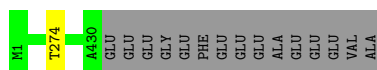
- Molecule 9: Tubulin beta-4B chain

Chain PL: 96%



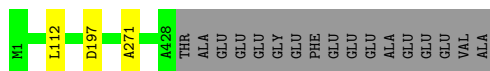
- Molecule 9: Tubulin beta-4B chain

Chain PN: 96%



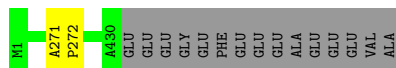
- Molecule 9: Tubulin beta-4B chain

Chain QD: 96%



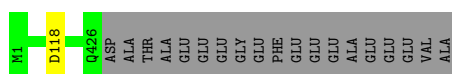
- Molecule 9: Tubulin beta-4B chain

Chain QF: 96%



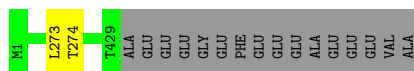
- Molecule 9: Tubulin beta-4B chain

Chain QH: 96%



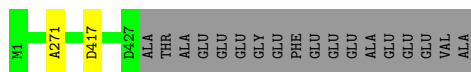
- Molecule 9: Tubulin beta-4B chain

Chain QJ: 96%



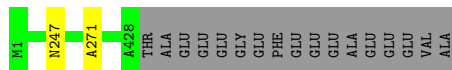
- Molecule 9: Tubulin beta-4B chain

Chain QL: 96%



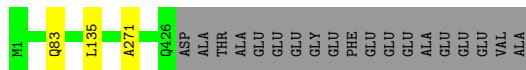
- Molecule 9: Tubulin beta-4B chain

Chain QN: 96%



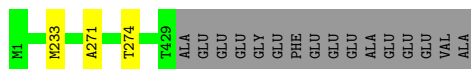
- Molecule 9: Tubulin beta-4B chain

Chain RD: 95%



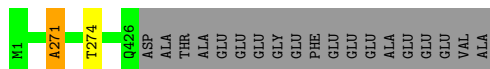
- Molecule 9: Tubulin beta-4B chain

Chain RF: 96%



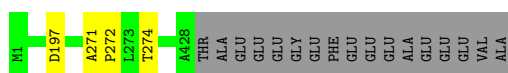
- Molecule 9: Tubulin beta-4B chain

Chain RH: 95%



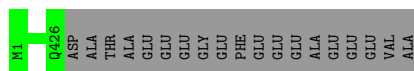
- Molecule 9: Tubulin beta-4B chain

Chain RJ: 95%



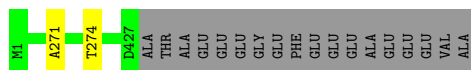
- Molecule 9: Tubulin beta-4B chain

Chain RL: 96%



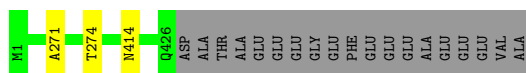
- Molecule 9: Tubulin beta-4B chain

Chain RN: 96%



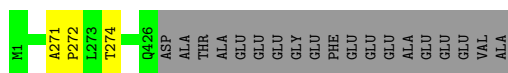
- Molecule 9: Tubulin beta-4B chain

Chain SD: 95%



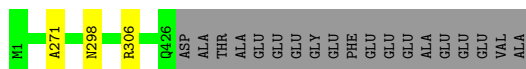
- Molecule 9: Tubulin beta-4B chain

Chain SF: 95%



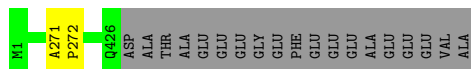
- Molecule 9: Tubulin beta-4B chain

Chain SH: 95%



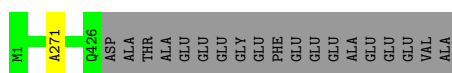
- Molecule 9: Tubulin beta-4B chain

Chain SJ: 95%



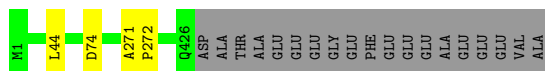
- Molecule 9: Tubulin beta-4B chain

Chain SL: 96%



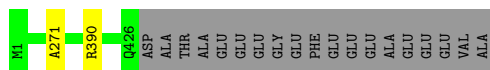
- Molecule 9: Tubulin beta-4B chain

Chain SN: 95%



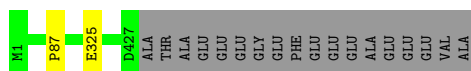
- Molecule 9: Tubulin beta-4B chain

Chain TD: 95%



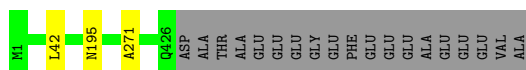
- Molecule 9: Tubulin beta-4B chain

Chain TF: 96%



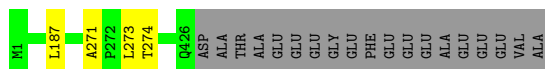
- Molecule 9: Tubulin beta-4B chain

Chain TH: 95%



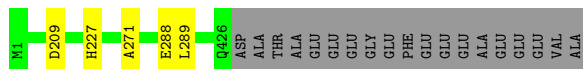
- Molecule 9: Tubulin beta-4B chain

Chain TJ: 95%



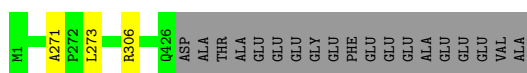
- Molecule 9: Tubulin beta-4B chain

Chain TL: 95%



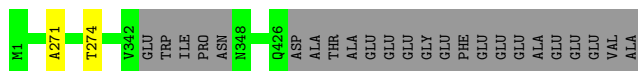
- Molecule 9: Tubulin beta-4B chain

Chain TN: 95%



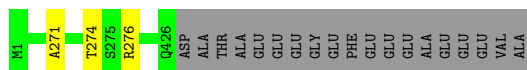
- Molecule 9: Tubulin beta-4B chain

Chain TP: 94% 5%



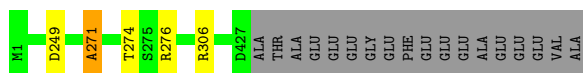
- Molecule 9: Tubulin beta-4B chain

Chain UD: 95%



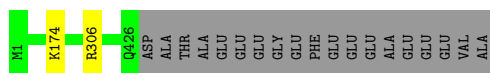
- Molecule 9: Tubulin beta-4B chain

Chain UF: 95%



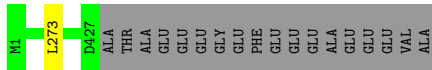
- Molecule 9: Tubulin beta-4B chain

Chain UH: 95%



- Molecule 9: Tubulin beta-4B chain

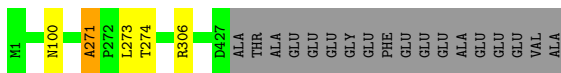
Chain UJ: 96%



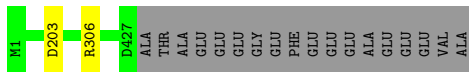
• Molecule 9: Tubulin beta-4B chain



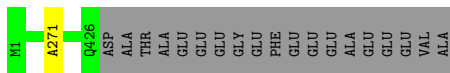
• Molecule 9: Tubulin beta-4B chain



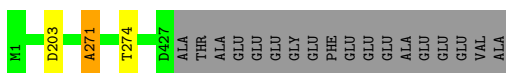
• Molecule 9: Tubulin beta-4B chain



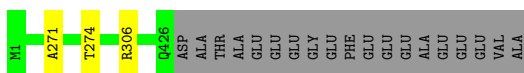
• Molecule 9: Tubulin beta-4B chain



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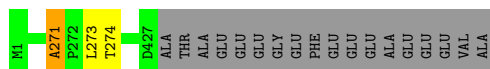


• Molecule 9: Tubulin beta-4B chain



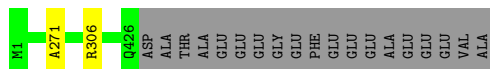
• Molecule 9: Tubulin beta-4B chain





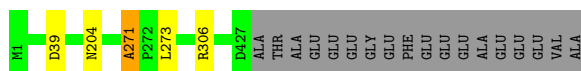
- Molecule 9: Tubulin beta-4B chain

Chain VL: 95%



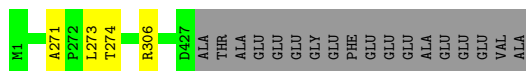
- Molecule 9: Tubulin beta-4B chain

Chain VN: 95%



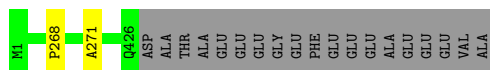
- Molecule 9: Tubulin beta-4B chain

Chain VP: 95%



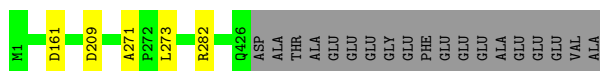
- Molecule 9: Tubulin beta-4B chain

Chain WD: 95%



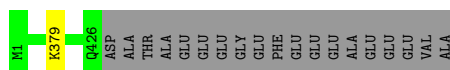
- Molecule 9: Tubulin beta-4B chain

Chain WF: 95%



- Molecule 9: Tubulin beta-4B chain

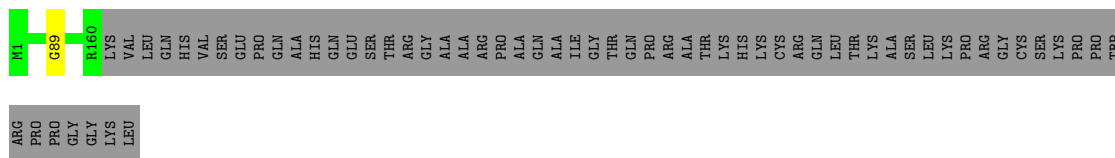
Chain WH: 96%



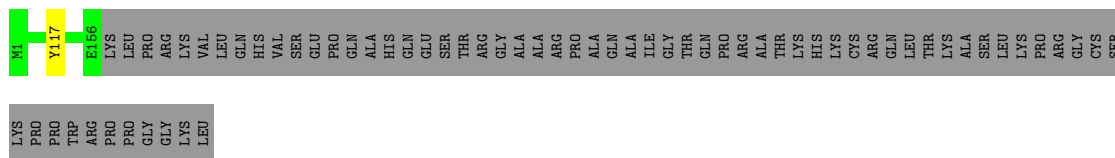
- Molecule 9: Tubulin beta-4B chain

Chain WJ: 95%

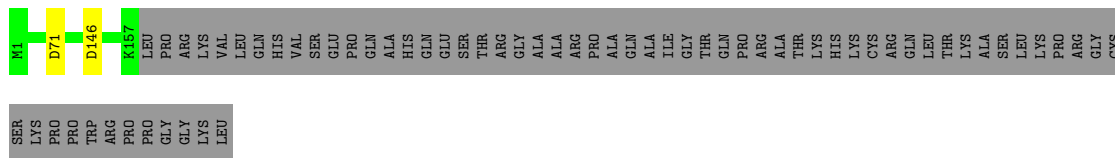
• Molecule 16: Sperm acrosome-associated protein 9



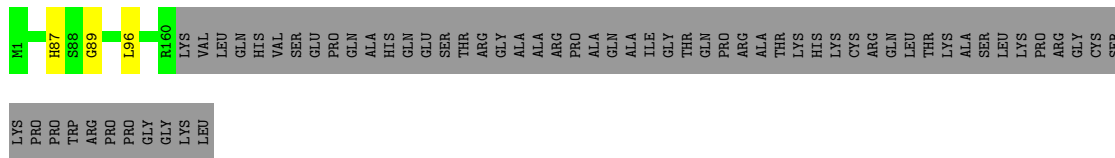
• Molecule 16: Sperm acrosome-associated protein 9



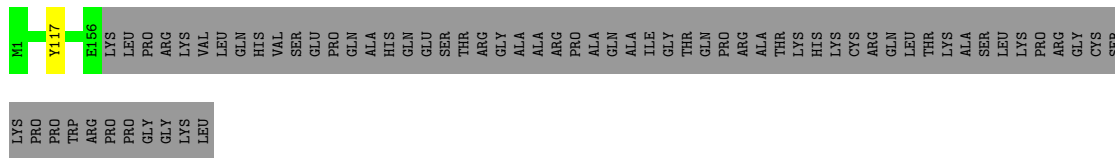
• Molecule 16: Sperm acrosome-associated protein 9



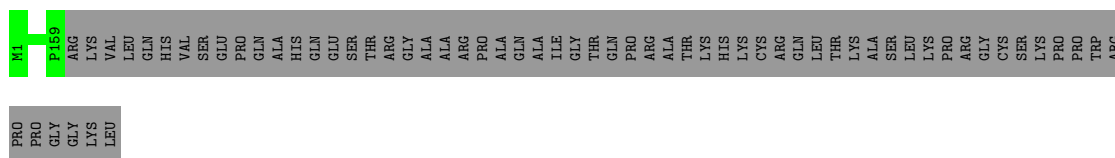
• Molecule 16: Sperm acrosome-associated protein 9



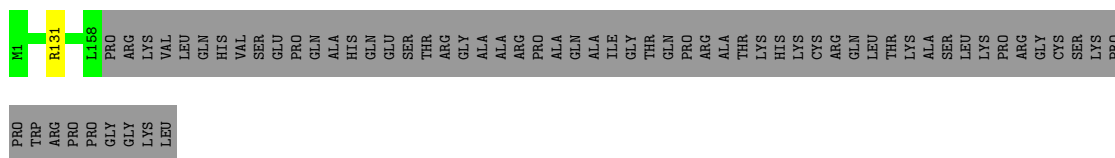
• Molecule 16: Sperm acrosome-associated protein 9



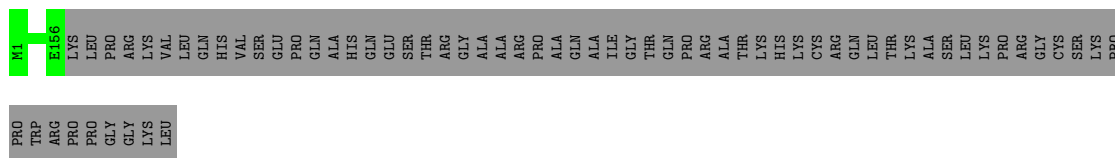
• Molecule 16: Sperm acrosome-associated protein 9



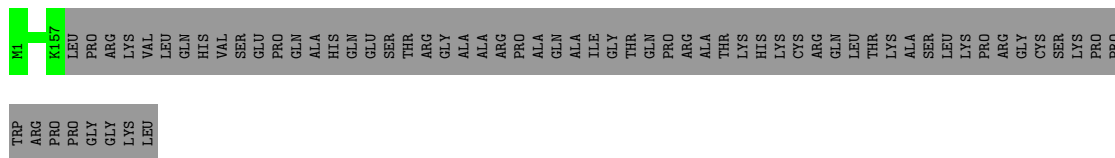
- Molecule 16: Sperm acrosome-associated protein 9



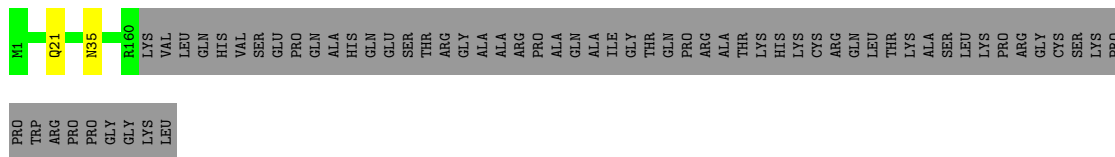
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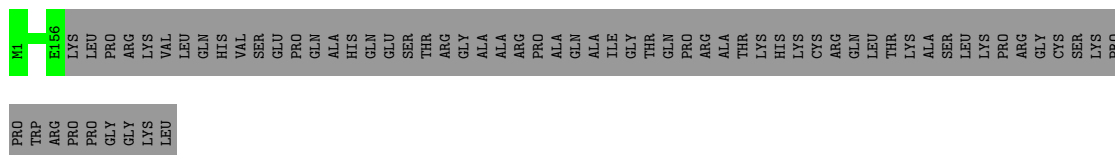


- Molecule 16: Sperm acrosome-associated protein 9

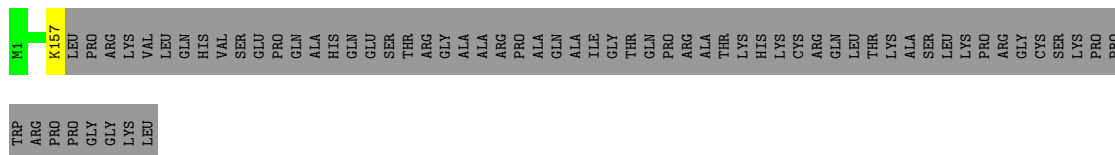


- Molecule 16: Sperm acrosome-associated protein 9

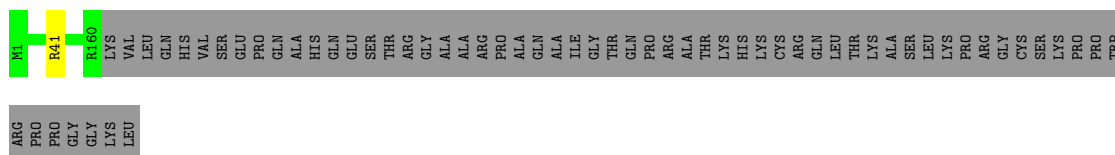




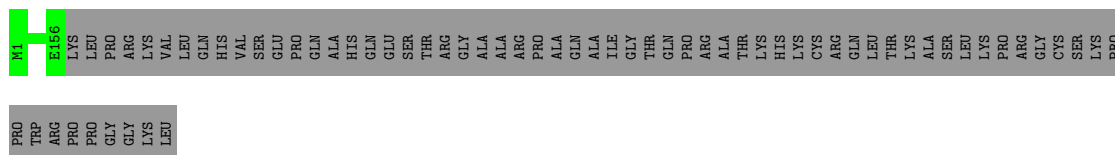
• Molecule 16: Sperm acrosome-associated protein 9



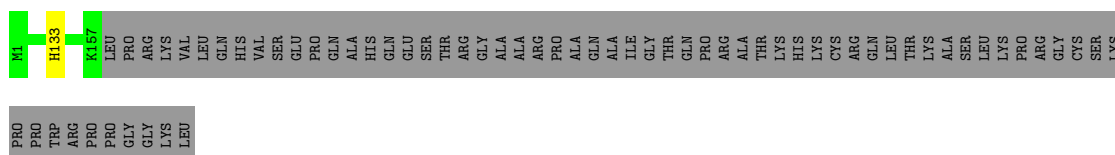
• Molecule 16: Sperm acrosome-associated protein 9



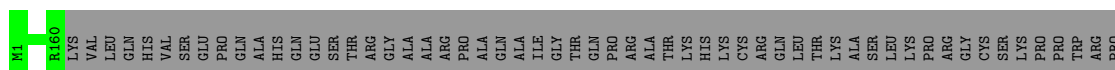
• Molecule 16: Sperm acrosome-associated protein 9

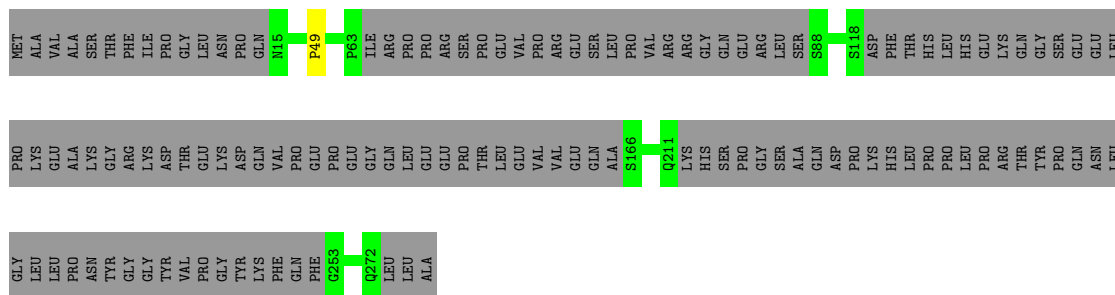


• Molecule 16: Sperm acrosome-associated protein 9

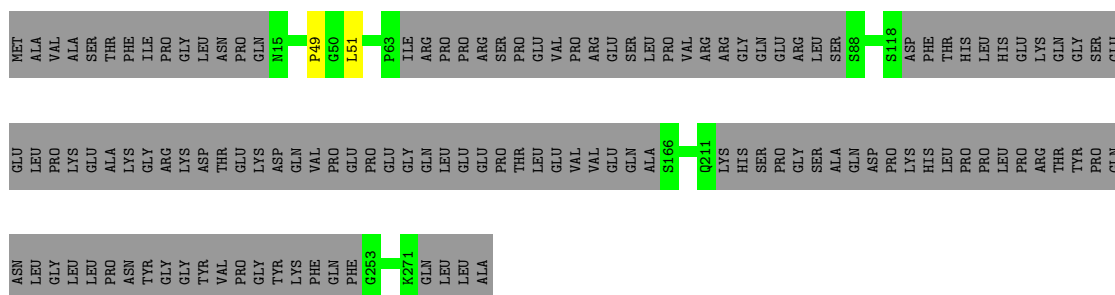


• Molecule 16: Sperm acrosome-associated protein 9

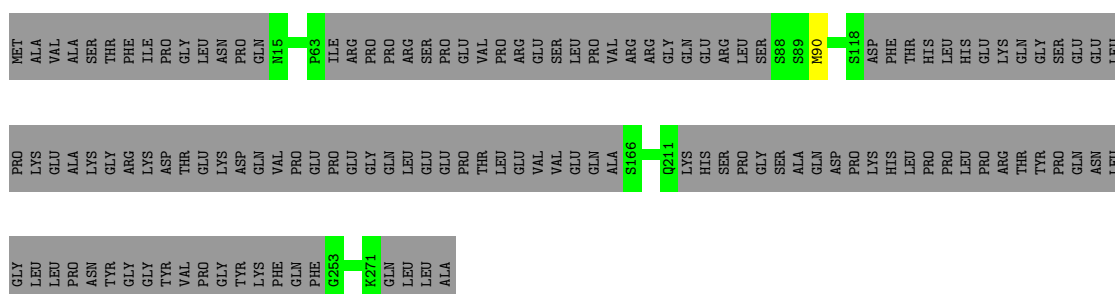




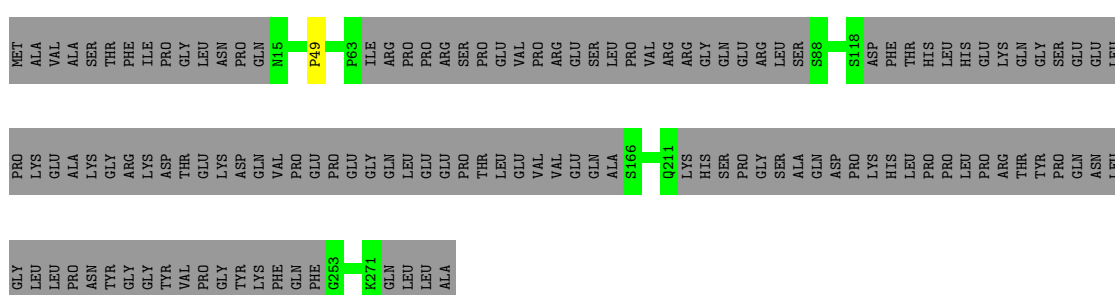
• Molecule 18: Protein FAM166B



• Molecule 18: Protein FAM166B



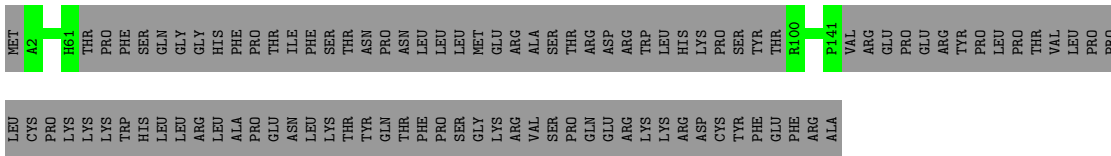
• Molecule 18: Protein FAM166B



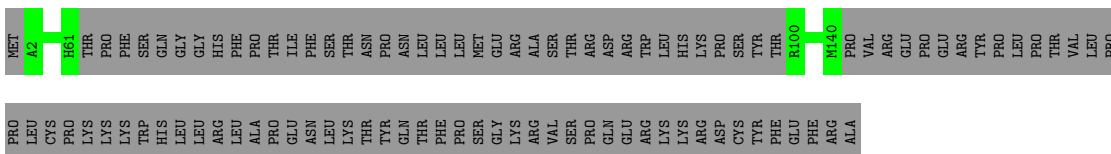
• Molecule 18: Protein FAM166B

PRO
SER

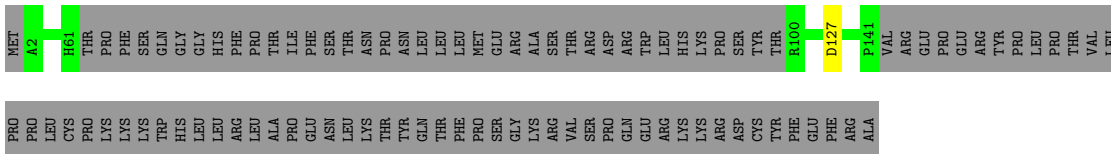
- Molecule 23: Protein FAM166C



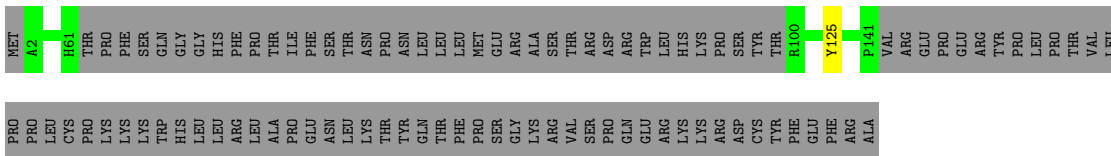
- Molecule 23: Protein FAM166C



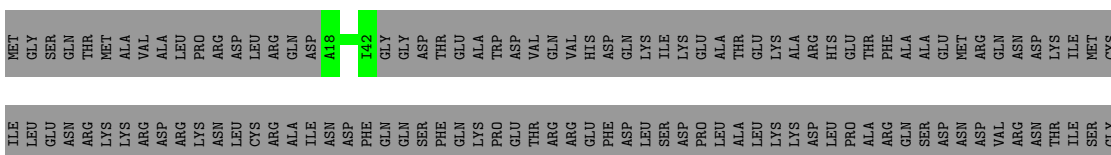
- Molecule 23: Protein FAM166C



- Molecule 23: Protein FAM166C



- Molecule 24: RIB43A-like with coiled-coils protein 2

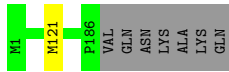


Chain XA:  96%



- Molecule 27: Cilia- and flagella-associated protein 20

Chain XB:  96%



- Molecule 27: Cilia- and flagella-associated protein 20

Chain XC:  96%



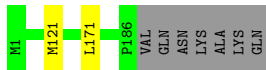
- Molecule 27: Cilia- and flagella-associated protein 20

Chain XD:  96%



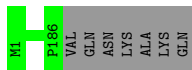
- Molecule 27: Cilia- and flagella-associated protein 20

Chain XE:  95%



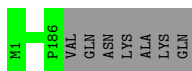
- Molecule 27: Cilia- and flagella-associated protein 20

Chain XF:  96%



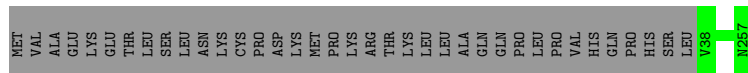
- Molecule 27: Cilia- and flagella-associated protein 20

Chain XG:  96%



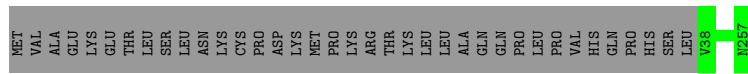
- Molecule 28: Parkin coregulated gene protein

Chain YB: 86% 14%



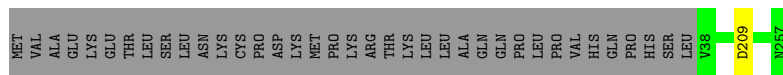
- Molecule 28: Parkin coregulated gene protein

Chain YC: 86% 14%



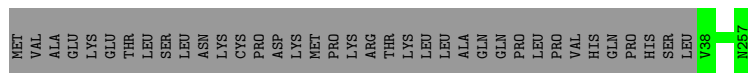
- Molecule 28: Parkin coregulated gene protein

Chain YD: 85% 14%



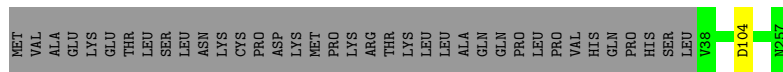
- Molecule 28: Parkin coregulated gene protein

Chain YE: 86% 14%



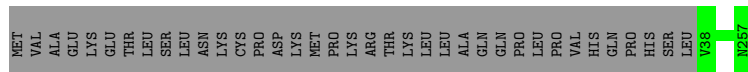
- Molecule 28: Parkin coregulated gene protein

Chain YF: 85% 14%



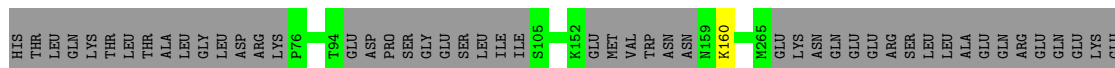
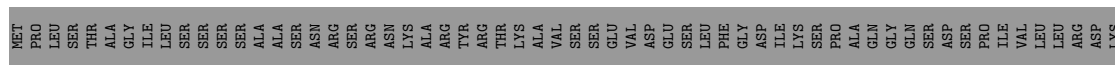
- Molecule 28: Parkin coregulated gene protein

Chain YG: 86% 14%

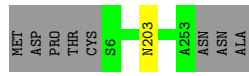


- Molecule 29: Cilia- and flagella-associated protein 45

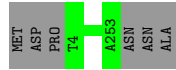
Chain a: 31% 68%



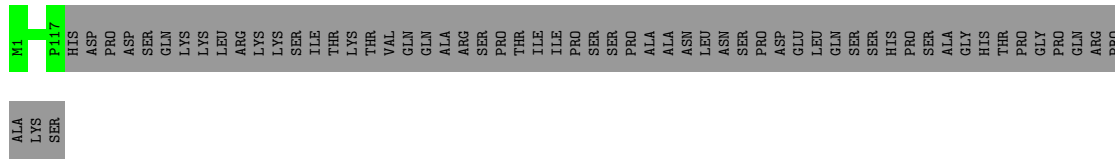
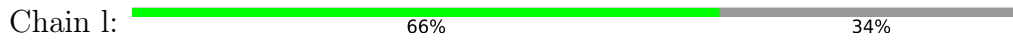
• Molecule 31: Enkurin



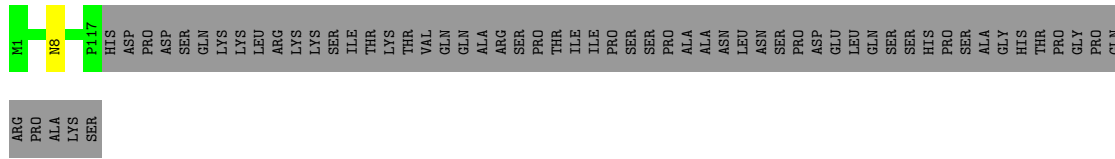
• Molecule 31: Enkurin



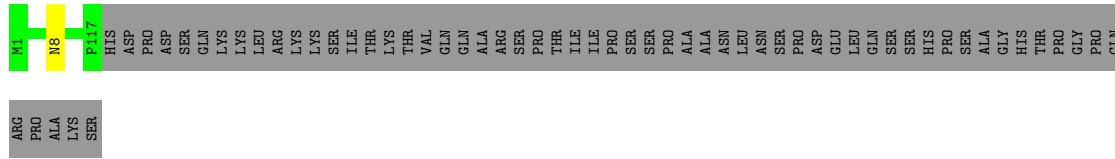
• Molecule 32: Protein Flattop



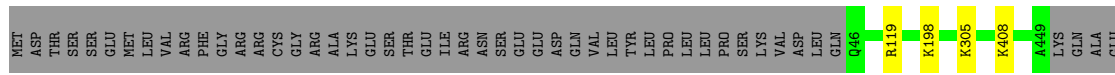
• Molecule 32: Protein Flattop

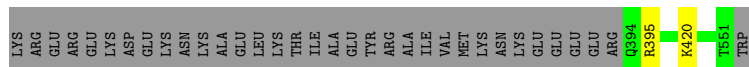


• Molecule 32: Protein Flattop

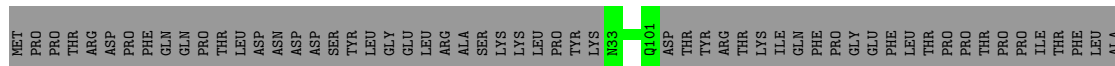


• Molecule 33: Protein CFAP210

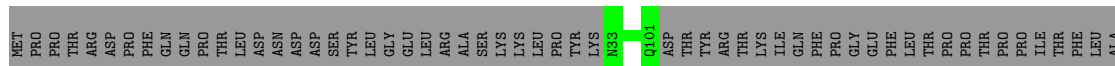




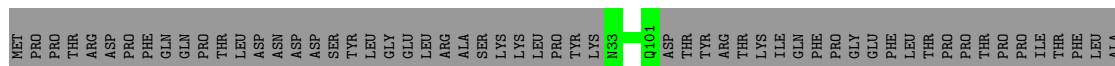
• Molecule 34: Protein CFAP276



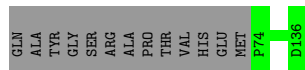
• Molecule 34: Protein CFAP276



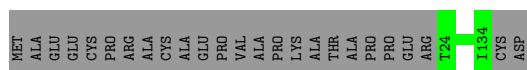
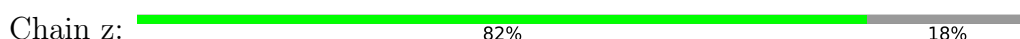
• Molecule 34: Protein CFAP276



• Molecule 35: UPF0691 protein C9orf116



• Molecule 35: UPF0691 protein C9orf116



4 Experimental information

| Property | Value | Source |
|--------------------------------------|---|-----------|
| EM reconstruction method | SINGLE PARTICLE | Depositor |
| Imposed symmetry | POINT, Not provided | |
| Number of particles used | 208558 | Depositor |
| Resolution determination method | FSC 0.143 CUT-OFF | Depositor |
| CTF correction method | PHASE FLIPPING AND AMPLITUDE CORRECTION | Depositor |
| Microscope | FEI TITAN KRIOS | Depositor |
| Voltage (kV) | 300 | Depositor |
| Electron dose ($e^-/\text{\AA}^2$) | 60 | Depositor |
| Minimum defocus (nm) | 800 | Depositor |
| Maximum defocus (nm) | 2000 | Depositor |
| Magnification | 64000 | Depositor |
| Image detector | GATAN K3 BIOQUANTUM (6k x 4k) | Depositor |

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: GTP, GDP, MG

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------|-------------|---------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 1 | 0 | 0.29 | 0/429 | 0.64 | 0/580 |
| 1 | 7 | 0.28 | 0/1227 | 0.59 | 0/1659 |
| 2 | 1 | 0.27 | 0/2265 | 0.55 | 0/3049 |
| 2 | 2 | 0.27 | 0/3697 | 0.53 | 0/4999 |
| 3 | 3 | 0.33 | 0/2531 | 0.58 | 0/3362 |
| 3 | 4 | 0.35 | 0/1851 | 0.57 | 0/2456 |
| 4 | 5 | 0.27 | 0/3006 | 0.55 | 0/4056 |
| 4 | 6 | 0.28 | 0/3006 | 0.54 | 1/4056 (0.0%) |
| 5 | 8 | 0.30 | 0/1467 | 0.61 | 1/1999 (0.1%) |
| 5 | 9 | 0.27 | 0/422 | 0.57 | 0/570 |
| 6 | A | 0.29 | 0/429 | 0.45 | 0/571 |
| 7 | A0 | 0.29 | 0/1785 | 0.53 | 0/2399 |
| 7 | A1 | 0.32 | 0/3221 | 0.56 | 2/4335 (0.0%) |
| 7 | A2 | 0.33 | 0/3221 | 0.56 | 0/4335 |
| 7 | A3 | 0.32 | 0/2744 | 0.57 | 0/3689 |
| 7 | A4 | 0.31 | 0/303 | 0.66 | 0/410 |
| 8 | AA | 0.28 | 0/3507 | 0.52 | 1/4761 (0.0%) |
| 8 | AC | 0.29 | 0/3507 | 0.55 | 2/4761 (0.0%) |
| 8 | AE | 0.28 | 0/3507 | 0.55 | 0/4761 |
| 8 | AG | 0.29 | 0/3507 | 0.54 | 3/4761 (0.1%) |
| 8 | AI | 0.28 | 0/3507 | 0.54 | 0/4761 |
| 8 | AK | 0.29 | 0/3507 | 0.54 | 0/4761 |
| 8 | AM | 0.28 | 0/3507 | 0.53 | 2/4761 (0.0%) |
| 8 | BA | 0.27 | 0/3460 | 0.55 | 1/4697 (0.0%) |
| 8 | BC | 0.26 | 0/3507 | 0.52 | 0/4761 |
| 8 | BE | 0.29 | 0/3460 | 0.57 | 2/4697 (0.0%) |
| 8 | BG | 0.28 | 0/3507 | 0.55 | 2/4761 (0.0%) |
| 8 | BI | 0.28 | 0/3460 | 0.56 | 3/4697 (0.1%) |
| 8 | BK | 0.28 | 0/3507 | 0.56 | 1/4761 (0.0%) |
| 8 | BM | 0.29 | 0/3464 | 0.54 | 0/4702 |
| 8 | CA | 0.26 | 0/3462 | 0.53 | 1/4700 (0.0%) |
| 8 | CC | 0.27 | 0/3507 | 0.53 | 0/4761 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------|-------------|---------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 8 | CE | 0.26 | 0/3448 | 0.55 | 0/4681 |
| 8 | CG | 0.27 | 0/3507 | 0.53 | 2/4761 (0.0%) |
| 8 | CI | 0.28 | 0/3454 | 0.56 | 0/4689 |
| 8 | CK | 0.28 | 0/3507 | 0.57 | 2/4761 (0.0%) |
| 8 | CM | 0.29 | 0/3454 | 0.55 | 0/4689 |
| 8 | DA | 0.27 | 0/3041 | 0.56 | 1/4133 (0.0%) |
| 8 | DC | 0.26 | 0/3448 | 0.54 | 0/4681 |
| 8 | DE | 0.27 | 0/3456 | 0.54 | 0/4692 |
| 8 | DG | 0.27 | 0/3448 | 0.54 | 1/4681 (0.0%) |
| 8 | DI | 0.27 | 0/3448 | 0.55 | 0/4681 |
| 8 | DK | 0.26 | 0/3448 | 0.55 | 1/4681 (0.0%) |
| 8 | DM | 0.26 | 0/3456 | 0.53 | 1/4692 (0.0%) |
| 8 | EC | 0.27 | 0/3507 | 0.57 | 0/4761 |
| 8 | EE | 0.27 | 0/3507 | 0.54 | 0/4761 |
| 8 | EG | 0.27 | 0/3501 | 0.56 | 0/4753 |
| 8 | EI | 0.27 | 0/3507 | 0.56 | 0/4761 |
| 8 | EK | 0.26 | 0/3501 | 0.54 | 0/4753 |
| 8 | EM | 0.27 | 0/3501 | 0.58 | 1/4753 (0.0%) |
| 8 | FC | 0.26 | 0/3456 | 0.54 | 1/4692 (0.0%) |
| 8 | FE | 0.28 | 0/3456 | 0.57 | 2/4692 (0.0%) |
| 8 | FG | 0.28 | 0/3448 | 0.56 | 2/4681 (0.0%) |
| 8 | FI | 0.27 | 0/3448 | 0.56 | 0/4681 |
| 8 | FK | 0.27 | 0/3448 | 0.55 | 0/4681 |
| 8 | FM | 0.26 | 0/3448 | 0.55 | 1/4681 (0.0%) |
| 8 | GC | 0.27 | 0/3486 | 0.56 | 1/4732 (0.0%) |
| 8 | GE | 0.27 | 0/3448 | 0.56 | 1/4681 (0.0%) |
| 8 | GG | 0.26 | 0/3456 | 0.55 | 0/4692 |
| 8 | GI | 0.27 | 0/3448 | 0.55 | 0/4681 |
| 8 | GK | 0.27 | 0/3462 | 0.55 | 1/4700 (0.0%) |
| 8 | GM | 0.28 | 0/3479 | 0.58 | 2/4722 (0.0%) |
| 8 | HC | 0.26 | 0/3456 | 0.53 | 1/4692 (0.0%) |
| 8 | HE | 0.26 | 0/3462 | 0.52 | 0/4700 |
| 8 | HG | 0.27 | 0/3462 | 0.56 | 2/4700 (0.0%) |
| 8 | HI | 0.26 | 0/3462 | 0.52 | 0/4700 |
| 8 | HK | 0.28 | 0/3454 | 0.55 | 1/4689 (0.0%) |
| 8 | HM | 0.28 | 0/3456 | 0.54 | 0/4692 |
| 8 | HO | 0.28 | 0/3126 | 0.57 | 1/4238 (0.0%) |
| 8 | IC | 0.26 | 0/3470 | 0.53 | 0/4711 |
| 8 | IE | 0.28 | 0/3456 | 0.55 | 0/4692 |
| 8 | IG | 0.26 | 0/3507 | 0.54 | 2/4761 (0.0%) |
| 8 | II | 0.27 | 0/3462 | 0.54 | 0/4700 |
| 8 | IK | 0.26 | 0/3507 | 0.51 | 0/4761 |
| 8 | IM | 0.29 | 0/3456 | 0.56 | 0/4692 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------|-------------|---------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 8 | IO | 0.27 | 0/3454 | 0.56 | 1/4689 (0.0%) |
| 8 | JC | 0.26 | 0/3507 | 0.53 | 0/4761 |
| 8 | JE | 0.27 | 0/3448 | 0.54 | 1/4681 (0.0%) |
| 8 | JG | 0.27 | 0/3448 | 0.53 | 0/4681 |
| 8 | JI | 0.27 | 0/3448 | 0.54 | 0/4681 |
| 8 | JK | 0.29 | 0/3454 | 0.58 | 3/4689 (0.1%) |
| 8 | JM | 0.26 | 0/3448 | 0.54 | 0/4681 |
| 8 | KC | 0.30 | 0/3467 | 0.55 | 0/4707 |
| 8 | KE | 0.28 | 0/3462 | 0.53 | 0/4700 |
| 8 | KG | 0.30 | 0/3467 | 0.55 | 0/4707 |
| 8 | KI | 0.31 | 0/3450 | 0.55 | 1/4684 (0.0%) |
| 8 | KK | 0.29 | 0/3467 | 0.56 | 2/4707 (0.0%) |
| 8 | KM | 0.29 | 0/3501 | 0.55 | 2/4753 (0.0%) |
| 8 | KO | 0.29 | 0/3460 | 0.54 | 0/4697 |
| 8 | LC | 0.29 | 0/3466 | 0.54 | 0/4705 |
| 8 | LE | 0.28 | 0/3507 | 0.53 | 0/4761 |
| 8 | LG | 0.30 | 0/3474 | 0.56 | 2/4716 (0.0%) |
| 8 | LI | 0.29 | 0/3487 | 0.54 | 1/4732 (0.0%) |
| 8 | LK | 0.30 | 0/3467 | 0.56 | 1/4707 (0.0%) |
| 8 | LM | 0.29 | 0/3456 | 0.52 | 0/4692 |
| 8 | MC | 0.28 | 0/3514 | 0.55 | 0/4771 |
| 8 | ME | 0.28 | 0/3463 | 0.54 | 1/4702 (0.0%) |
| 8 | MG | 0.28 | 0/3461 | 0.54 | 0/4699 |
| 8 | MI | 0.29 | 0/3469 | 0.53 | 0/4710 |
| 8 | MK | 0.28 | 0/3514 | 0.55 | 1/4771 (0.0%) |
| 8 | MM | 0.30 | 0/3514 | 0.54 | 0/4771 |
| 8 | NC | 0.28 | 0/3514 | 0.56 | 0/4771 |
| 8 | NE | 0.27 | 0/3507 | 0.54 | 0/4761 |
| 8 | NG | 0.27 | 0/3507 | 0.58 | 4/4761 (0.1%) |
| 8 | NI | 0.27 | 0/3507 | 0.55 | 1/4761 (0.0%) |
| 8 | NK | 0.26 | 0/3507 | 0.54 | 0/4761 |
| 8 | NM | 0.27 | 0/3507 | 0.54 | 1/4761 (0.0%) |
| 8 | OC | 0.29 | 0/3523 | 0.55 | 1/4783 (0.0%) |
| 8 | OE | 0.28 | 0/3514 | 0.56 | 2/4771 (0.0%) |
| 8 | OG | 0.28 | 0/3523 | 0.53 | 0/4783 |
| 8 | OI | 0.29 | 0/3523 | 0.54 | 0/4783 |
| 8 | OK | 0.26 | 0/3507 | 0.52 | 0/4761 |
| 8 | OM | 0.29 | 0/3523 | 0.54 | 1/4783 (0.0%) |
| 8 | OO | 0.29 | 0/3384 | 0.54 | 0/4588 |
| 8 | PC | 0.29 | 0/3523 | 0.55 | 1/4783 (0.0%) |
| 8 | PE | 0.29 | 0/3514 | 0.54 | 1/4771 (0.0%) |
| 8 | PG | 0.28 | 0/3523 | 0.54 | 0/4783 |
| 8 | PI | 0.27 | 0/3507 | 0.51 | 0/4761 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------|-------------|---------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 8 | PK | 0.28 | 0/3514 | 0.55 | 1/4771 (0.0%) |
| 8 | PM | 0.27 | 0/3507 | 0.53 | 0/4761 |
| 8 | PO | 0.27 | 0/3507 | 0.53 | 0/4761 |
| 8 | QC | 0.28 | 0/3514 | 0.55 | 0/4771 |
| 8 | QE | 0.28 | 0/3514 | 0.52 | 0/4771 |
| 8 | QG | 0.28 | 0/3514 | 0.55 | 2/4771 (0.0%) |
| 8 | QI | 0.28 | 0/3514 | 0.54 | 0/4771 |
| 8 | QK | 0.27 | 0/3514 | 0.53 | 0/4771 |
| 8 | QM | 0.29 | 0/3514 | 0.55 | 2/4771 (0.0%) |
| 8 | QO | 0.27 | 0/3514 | 0.55 | 0/4771 |
| 8 | RC | 0.28 | 0/3278 | 0.55 | 0/4451 |
| 8 | RE | 0.27 | 0/3448 | 0.54 | 0/4681 |
| 8 | RG | 0.27 | 0/3461 | 0.57 | 0/4699 |
| 8 | RI | 0.27 | 0/3507 | 0.55 | 0/4761 |
| 8 | RK | 0.28 | 0/3514 | 0.58 | 2/4771 (0.0%) |
| 8 | RM | 0.28 | 0/3514 | 0.56 | 1/4771 (0.0%) |
| 8 | RO | 0.27 | 0/3507 | 0.55 | 0/4761 |
| 8 | SE | 0.27 | 0/3442 | 0.56 | 0/4673 |
| 8 | SG | 0.27 | 0/3450 | 0.54 | 0/4684 |
| 8 | SI | 0.27 | 0/3456 | 0.55 | 0/4692 |
| 8 | SK | 0.26 | 0/3456 | 0.54 | 2/4692 (0.0%) |
| 8 | SM | 0.27 | 0/3456 | 0.57 | 1/4692 (0.0%) |
| 8 | SO | 0.27 | 0/3456 | 0.55 | 2/4692 (0.0%) |
| 8 | TE | 0.27 | 0/3442 | 0.57 | 0/4673 |
| 8 | TG | 0.28 | 0/3450 | 0.58 | 0/4684 |
| 8 | TI | 0.27 | 0/3456 | 0.52 | 0/4692 |
| 8 | TK | 0.27 | 0/3442 | 0.53 | 0/4673 |
| 8 | TM | 0.27 | 0/3456 | 0.55 | 2/4692 (0.0%) |
| 8 | TO | 0.28 | 0/3442 | 0.58 | 0/4673 |
| 8 | UE | 0.26 | 0/3456 | 0.52 | 1/4692 (0.0%) |
| 8 | UG | 0.26 | 0/3462 | 0.56 | 2/4700 (0.0%) |
| 8 | UI | 0.27 | 0/3462 | 0.56 | 2/4700 (0.0%) |
| 8 | UK | 0.26 | 0/3456 | 0.53 | 0/4692 |
| 8 | UM | 0.26 | 0/3456 | 0.55 | 0/4692 |
| 8 | UO | 0.26 | 0/3456 | 0.54 | 1/4692 (0.0%) |
| 8 | VE | 0.26 | 0/3507 | 0.54 | 0/4761 |
| 8 | VG | 0.28 | 0/3470 | 0.58 | 2/4711 (0.0%) |
| 8 | VI | 0.27 | 0/3507 | 0.52 | 0/4761 |
| 8 | VK | 0.27 | 0/3456 | 0.54 | 0/4692 |
| 8 | VM | 0.27 | 0/3507 | 0.53 | 1/4761 (0.0%) |
| 8 | VO | 0.26 | 0/3456 | 0.53 | 0/4692 |
| 8 | WE | 0.27 | 0/3507 | 0.55 | 0/4761 |
| 8 | WG | 0.26 | 0/3448 | 0.55 | 1/4681 (0.0%) |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------|-------------|---------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 8 | WI | 0.27 | 0/3501 | 0.55 | 0/4753 |
| 8 | WK | 0.29 | 0/3448 | 0.55 | 0/4681 |
| 8 | WM | 0.28 | 0/3507 | 0.57 | 2/4761 (0.0%) |
| 8 | WO | 0.28 | 0/3456 | 0.55 | 0/4692 |
| 9 | AB | 0.30 | 0/3509 | 0.58 | 1/4754 (0.0%) |
| 9 | AD | 0.30 | 0/3509 | 0.60 | 1/4754 (0.0%) |
| 9 | AF | 0.31 | 0/3509 | 0.58 | 2/4754 (0.0%) |
| 9 | AH | 0.30 | 0/3509 | 0.58 | 2/4754 (0.0%) |
| 9 | AJ | 0.31 | 0/3509 | 0.58 | 1/4754 (0.0%) |
| 9 | AL | 0.31 | 0/3509 | 0.59 | 1/4754 (0.0%) |
| 9 | BB | 0.27 | 0/3431 | 0.55 | 0/4649 |
| 9 | BD | 0.28 | 0/3423 | 0.55 | 1/4638 (0.0%) |
| 9 | BF | 0.28 | 0/3431 | 0.55 | 1/4649 (0.0%) |
| 9 | BH | 0.29 | 0/3423 | 0.57 | 1/4638 (0.0%) |
| 9 | BJ | 0.30 | 0/3448 | 0.59 | 2/4673 (0.0%) |
| 9 | BL | 0.30 | 0/3423 | 0.57 | 1/4638 (0.0%) |
| 9 | CB | 0.29 | 0/3436 | 0.59 | 2/4656 (0.0%) |
| 9 | CD | 0.27 | 0/3423 | 0.56 | 0/4638 |
| 9 | CF | 0.29 | 0/3431 | 0.57 | 1/4649 (0.0%) |
| 9 | CH | 0.28 | 0/3423 | 0.57 | 1/4638 (0.0%) |
| 9 | CJ | 0.28 | 0/3431 | 0.56 | 1/4649 (0.0%) |
| 9 | CL | 0.29 | 0/3423 | 0.56 | 0/4638 |
| 9 | DB | 0.27 | 0/3423 | 0.59 | 4/4638 (0.1%) |
| 9 | DD | 0.28 | 0/3423 | 0.60 | 2/4638 (0.0%) |
| 9 | DF | 0.29 | 0/3423 | 0.59 | 2/4638 (0.0%) |
| 9 | DH | 0.28 | 0/3423 | 0.61 | 1/4638 (0.0%) |
| 9 | DJ | 0.28 | 0/3423 | 0.59 | 2/4638 (0.0%) |
| 9 | DL | 0.29 | 0/3423 | 0.60 | 3/4638 (0.1%) |
| 9 | EB | 0.28 | 0/3423 | 0.58 | 1/4638 (0.0%) |
| 9 | ED | 0.27 | 0/3423 | 0.57 | 1/4638 (0.0%) |
| 9 | EF | 0.28 | 0/3423 | 0.58 | 1/4638 (0.0%) |
| 9 | EH | 0.28 | 0/3423 | 0.59 | 3/4638 (0.1%) |
| 9 | EJ | 0.27 | 0/3423 | 0.57 | 2/4638 (0.0%) |
| 9 | EL | 0.27 | 0/3423 | 0.56 | 0/4638 |
| 9 | EN | 0.28 | 0/3436 | 0.60 | 1/4656 (0.0%) |
| 9 | FB | 0.26 | 0/3423 | 0.55 | 0/4638 |
| 9 | FD | 0.27 | 0/3423 | 0.58 | 0/4638 |
| 9 | FF | 0.28 | 0/3423 | 0.59 | 0/4638 |
| 9 | FH | 0.28 | 0/3423 | 0.58 | 1/4638 (0.0%) |
| 9 | FJ | 0.28 | 0/3423 | 0.58 | 1/4638 (0.0%) |
| 9 | FL | 0.27 | 0/3423 | 0.58 | 0/4638 |
| 9 | FN | 0.27 | 0/3431 | 0.57 | 1/4649 (0.0%) |
| 9 | GB | 0.28 | 0/3277 | 0.59 | 1/4441 (0.0%) |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------|-------------|---------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 9 | GD | 0.28 | 0/3423 | 0.55 | 1/4638 (0.0%) |
| 9 | GF | 0.27 | 0/3431 | 0.58 | 2/4649 (0.0%) |
| 9 | GH | 0.28 | 0/3423 | 0.58 | 0/4638 |
| 9 | GJ | 0.29 | 0/3448 | 0.60 | 2/4673 (0.0%) |
| 9 | GL | 0.28 | 0/3423 | 0.58 | 0/4638 |
| 9 | GN | 0.26 | 0/3423 | 0.55 | 1/4638 (0.0%) |
| 9 | HB | 0.27 | 0/3431 | 0.56 | 2/4649 (0.0%) |
| 9 | HD | 0.27 | 0/3423 | 0.55 | 2/4638 (0.0%) |
| 9 | HF | 0.27 | 0/3431 | 0.53 | 0/4649 |
| 9 | HH | 0.27 | 0/3423 | 0.55 | 1/4638 (0.0%) |
| 9 | HJ | 0.28 | 0/3436 | 0.59 | 2/4656 (0.0%) |
| 9 | HL | 0.28 | 0/3423 | 0.57 | 2/4638 (0.0%) |
| 9 | HN | 0.28 | 0/3414 | 0.60 | 3/4626 (0.1%) |
| 9 | IB | 0.28 | 0/3265 | 0.56 | 2/4424 (0.0%) |
| 9 | ID | 0.27 | 0/3423 | 0.53 | 1/4638 (0.0%) |
| 9 | IF | 0.28 | 0/3436 | 0.58 | 3/4656 (0.1%) |
| 9 | IH | 0.29 | 0/3423 | 0.57 | 2/4638 (0.0%) |
| 9 | IJ | 0.28 | 0/3443 | 0.56 | 1/4666 (0.0%) |
| 9 | IL | 0.28 | 0/3423 | 0.56 | 2/4638 (0.0%) |
| 9 | IN | 0.28 | 0/3431 | 0.57 | 1/4649 (0.0%) |
| 9 | JB | 0.27 | 0/3423 | 0.55 | 0/4638 |
| 9 | JD | 0.27 | 0/3423 | 0.55 | 1/4638 (0.0%) |
| 9 | JF | 0.27 | 0/3431 | 0.56 | 2/4649 (0.0%) |
| 9 | JH | 0.28 | 0/3423 | 0.58 | 1/4638 (0.0%) |
| 9 | JJ | 0.27 | 0/3423 | 0.54 | 1/4638 (0.0%) |
| 9 | JL | 0.29 | 0/3423 | 0.60 | 3/4638 (0.1%) |
| 9 | JN | 0.29 | 0/3423 | 0.60 | 2/4638 (0.0%) |
| 9 | KB | 0.29 | 0/3290 | 0.56 | 2/4458 (0.0%) |
| 9 | KD | 0.31 | 0/3457 | 0.57 | 1/4685 (0.0%) |
| 9 | KF | 0.28 | 0/3423 | 0.55 | 1/4638 (0.0%) |
| 9 | KH | 0.32 | 0/3457 | 0.58 | 2/4685 (0.0%) |
| 9 | KJ | 0.28 | 0/3423 | 0.55 | 1/4638 (0.0%) |
| 9 | KL | 0.31 | 0/3457 | 0.60 | 2/4685 (0.0%) |
| 9 | KN | 0.29 | 0/3423 | 0.55 | 3/4638 (0.1%) |
| 9 | LB | 0.29 | 0/3532 | 0.56 | 1/4785 (0.0%) |
| 9 | LD | 0.29 | 0/3423 | 0.55 | 1/4638 (0.0%) |
| 9 | LF | 0.30 | 0/3527 | 0.56 | 0/4778 |
| 9 | LH | 0.29 | 0/3423 | 0.55 | 1/4638 (0.0%) |
| 9 | LJ | 0.30 | 0/3559 | 0.57 | 1/4821 (0.0%) |
| 9 | LL | 0.29 | 0/3423 | 0.57 | 2/4638 (0.0%) |
| 9 | LN | 0.30 | 0/3532 | 0.57 | 1/4785 (0.0%) |
| 9 | MB | 0.30 | 0/3448 | 0.58 | 1/4673 (0.0%) |
| 9 | MD | 0.29 | 0/3466 | 0.56 | 2/4697 (0.0%) |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------|-------------|---------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 9 | MF | 0.28 | 0/3457 | 0.56 | 0/4685 |
| 9 | MH | 0.30 | 0/3466 | 0.58 | 1/4697 (0.0%) |
| 9 | MJ | 0.28 | 0/3466 | 0.56 | 2/4697 (0.0%) |
| 9 | ML | 0.30 | 0/3466 | 0.61 | 2/4697 (0.0%) |
| 9 | MN | 0.28 | 0/3448 | 0.56 | 0/4673 |
| 9 | NB | 0.28 | 0/3436 | 0.56 | 1/4656 (0.0%) |
| 9 | ND | 0.29 | 0/3436 | 0.56 | 1/4656 (0.0%) |
| 9 | NF | 0.28 | 0/3448 | 0.58 | 0/4673 |
| 9 | NH | 0.29 | 0/3436 | 0.57 | 1/4656 (0.0%) |
| 9 | NJ | 0.28 | 0/3443 | 0.58 | 3/4666 (0.1%) |
| 9 | NL | 0.29 | 0/3436 | 0.60 | 2/4656 (0.0%) |
| 9 | NN | 0.28 | 0/3436 | 0.59 | 3/4656 (0.1%) |
| 9 | OB | 0.30 | 0/3457 | 0.58 | 1/4685 (0.0%) |
| 9 | OD | 0.29 | 0/3448 | 0.55 | 0/4673 |
| 9 | OF | 0.28 | 0/3466 | 0.56 | 2/4697 (0.0%) |
| 9 | OH | 0.30 | 0/3448 | 0.58 | 1/4673 (0.0%) |
| 9 | OJ | 0.29 | 0/3466 | 0.57 | 1/4697 (0.0%) |
| 9 | OL | 0.29 | 0/3448 | 0.56 | 1/4673 (0.0%) |
| 9 | ON | 0.30 | 0/3457 | 0.56 | 1/4685 (0.0%) |
| 9 | PD | 0.29 | 0/3448 | 0.56 | 1/4673 (0.0%) |
| 9 | PF | 0.29 | 0/3466 | 0.57 | 2/4697 (0.0%) |
| 9 | PH | 0.28 | 0/3423 | 0.55 | 1/4638 (0.0%) |
| 9 | PJ | 0.28 | 0/3448 | 0.56 | 1/4673 (0.0%) |
| 9 | PL | 0.29 | 0/3443 | 0.56 | 1/4666 (0.0%) |
| 9 | PN | 0.30 | 0/3448 | 0.57 | 0/4673 |
| 9 | QD | 0.30 | 0/3436 | 0.59 | 3/4656 (0.1%) |
| 9 | QF | 0.28 | 0/3448 | 0.55 | 1/4673 (0.0%) |
| 9 | QH | 0.27 | 0/3423 | 0.54 | 1/4638 (0.0%) |
| 9 | QJ | 0.28 | 0/3443 | 0.55 | 0/4666 |
| 9 | QL | 0.27 | 0/3431 | 0.57 | 2/4649 (0.0%) |
| 9 | QN | 0.29 | 0/3436 | 0.55 | 1/4656 (0.0%) |
| 9 | RD | 0.28 | 0/3423 | 0.58 | 2/4638 (0.0%) |
| 9 | RF | 0.28 | 0/3443 | 0.58 | 2/4666 (0.0%) |
| 9 | RH | 0.27 | 0/3423 | 0.54 | 1/4638 (0.0%) |
| 9 | RJ | 0.28 | 0/3436 | 0.58 | 2/4656 (0.0%) |
| 9 | RL | 0.27 | 0/3423 | 0.56 | 0/4638 |
| 9 | RN | 0.27 | 0/3431 | 0.58 | 1/4649 (0.0%) |
| 9 | SD | 0.27 | 0/3423 | 0.56 | 1/4638 (0.0%) |
| 9 | SF | 0.28 | 0/3423 | 0.59 | 2/4638 (0.0%) |
| 9 | SH | 0.27 | 0/3423 | 0.57 | 1/4638 (0.0%) |
| 9 | SJ | 0.27 | 0/3423 | 0.57 | 2/4638 (0.0%) |
| 9 | SL | 0.28 | 0/3423 | 0.59 | 1/4638 (0.0%) |
| 9 | SN | 0.28 | 0/3423 | 0.58 | 3/4638 (0.1%) |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------|-------------|---------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 9 | TD | 0.27 | 0/3423 | 0.54 | 1/4638 (0.0%) |
| 9 | TF | 0.28 | 0/3431 | 0.57 | 1/4649 (0.0%) |
| 9 | TH | 0.27 | 0/3423 | 0.58 | 2/4638 (0.0%) |
| 9 | TJ | 0.27 | 0/3423 | 0.57 | 2/4638 (0.0%) |
| 9 | TL | 0.27 | 0/3423 | 0.59 | 2/4638 (0.0%) |
| 9 | TN | 0.28 | 0/3423 | 0.58 | 1/4638 (0.0%) |
| 9 | TP | 0.26 | 0/3373 | 0.57 | 1/4566 (0.0%) |
| 9 | UD | 0.27 | 0/3423 | 0.54 | 1/4638 (0.0%) |
| 9 | UF | 0.27 | 0/3431 | 0.55 | 2/4649 (0.0%) |
| 9 | UH | 0.26 | 0/3423 | 0.54 | 0/4638 |
| 9 | UJ | 0.27 | 0/3431 | 0.54 | 0/4649 |
| 9 | UL | 0.27 | 0/3423 | 0.56 | 2/4638 (0.0%) |
| 9 | UN | 0.27 | 0/3431 | 0.55 | 1/4649 (0.0%) |
| 9 | UP | 0.27 | 0/3431 | 0.55 | 1/4649 (0.0%) |
| 9 | VD | 0.27 | 0/3423 | 0.54 | 1/4638 (0.0%) |
| 9 | VF | 0.28 | 0/3431 | 0.57 | 2/4649 (0.0%) |
| 9 | VH | 0.28 | 0/3423 | 0.56 | 1/4638 (0.0%) |
| 9 | VJ | 0.28 | 0/3431 | 0.56 | 1/4649 (0.0%) |
| 9 | VL | 0.27 | 0/3423 | 0.55 | 0/4638 |
| 9 | VN | 0.28 | 0/3431 | 0.57 | 2/4649 (0.0%) |
| 9 | VP | 0.26 | 0/3431 | 0.52 | 1/4649 (0.0%) |
| 9 | WD | 0.28 | 0/3423 | 0.57 | 1/4638 (0.0%) |
| 9 | WF | 0.29 | 0/3423 | 0.58 | 3/4638 (0.1%) |
| 9 | WH | 0.27 | 0/3423 | 0.55 | 0/4638 |
| 9 | WJ | 0.28 | 0/3423 | 0.55 | 0/4638 |
| 9 | WL | 0.29 | 0/3423 | 0.57 | 1/4638 (0.0%) |
| 9 | WN | 0.28 | 0/3431 | 0.56 | 1/4649 (0.0%) |
| 9 | WP | 0.29 | 0/3431 | 0.57 | 1/4649 (0.0%) |
| 10 | B | 0.32 | 0/1515 | 0.53 | 0/2006 |
| 10 | C | 0.34 | 0/3089 | 0.54 | 0/4093 |
| 11 | B0 | 0.30 | 0/1594 | 0.54 | 0/2152 |
| 11 | B1 | 0.31 | 0/3223 | 0.52 | 0/4347 |
| 11 | B2 | 0.32 | 0/3216 | 0.52 | 0/4337 |
| 11 | B3 | 0.31 | 0/2896 | 0.53 | 0/3903 |
| 11 | B4 | 0.26 | 0/416 | 0.57 | 0/562 |
| 11 | B5 | 0.23 | 0/253 | 0.32 | 0/352 |
| 11 | B6 | 0.28 | 0/1765 | 0.32 | 0/2467 |
| 11 | B7 | 0.28 | 0/1950 | 0.31 | 0/2726 |
| 11 | B8 | 0.29 | 0/1955 | 0.31 | 0/2733 |
| 11 | B9 | 0.27 | 0/960 | 0.29 | 0/1339 |
| 12 | C0 | 0.32 | 0/291 | 0.60 | 0/395 |
| 12 | C1 | 0.31 | 0/2768 | 0.56 | 1/3733 (0.0%) |
| 12 | C2 | 0.30 | 0/3239 | 0.57 | 1/4368 (0.0%) |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------|-------------|---------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 12 | C3 | 0.30 | 0/3250 | 0.56 | 0/4382 |
| 12 | C4 | 0.29 | 0/1803 | 0.53 | 2/2426 (0.1%) |
| 13 | D | 0.28 | 0/1502 | 0.61 | 0/2038 |
| 14 | D0 | 0.30 | 0/2209 | 0.53 | 0/2976 |
| 14 | D1 | 0.31 | 0/3303 | 0.56 | 0/4452 |
| 14 | D2 | 0.33 | 0/3322 | 0.56 | 0/4475 |
| 14 | D3 | 0.31 | 0/2634 | 0.58 | 0/3542 |
| 14 | D5 | 0.27 | 0/1581 | 0.30 | 0/2207 |
| 14 | D6 | 0.28 | 0/1986 | 0.31 | 0/2775 |
| 14 | D7 | 0.28 | 0/1975 | 0.32 | 0/2761 |
| 14 | D8 | 0.27 | 0/1324 | 0.30 | 0/1845 |
| 15 | E | 0.26 | 0/2278 | 0.53 | 0/3085 |
| 15 | F | 0.25 | 0/2278 | 0.53 | 0/3085 |
| 16 | F0 | 0.29 | 0/1286 | 0.59 | 1/1735 (0.1%) |
| 16 | F1 | 0.28 | 0/1313 | 0.55 | 0/1772 |
| 16 | F2 | 0.23 | 0/775 | 0.35 | 0/1081 |
| 16 | F3 | 0.29 | 0/1286 | 0.58 | 0/1735 |
| 16 | F4 | 0.30 | 0/1313 | 0.58 | 1/1772 (0.1%) |
| 16 | F5 | 0.24 | 0/775 | 0.35 | 0/1081 |
| 16 | F6 | 0.31 | 0/1286 | 0.66 | 2/1735 (0.1%) |
| 16 | F7 | 0.28 | 0/1313 | 0.56 | 2/1772 (0.1%) |
| 16 | F8 | 0.24 | 0/775 | 0.35 | 0/1081 |
| 16 | G0 | 0.30 | 0/1302 | 0.58 | 0/1758 |
| 16 | G1 | 0.31 | 0/1294 | 0.58 | 0/1746 |
| 16 | G2 | 0.24 | 0/775 | 0.35 | 0/1081 |
| 16 | G3 | 0.29 | 0/1286 | 0.52 | 0/1735 |
| 16 | G4 | 0.30 | 0/1313 | 0.56 | 1/1772 (0.1%) |
| 16 | G5 | 0.23 | 0/775 | 0.34 | 0/1081 |
| 16 | G6 | 0.29 | 0/1286 | 0.57 | 0/1735 |
| 16 | G7 | 0.28 | 0/1313 | 0.54 | 0/1772 |
| 16 | G8 | 0.23 | 0/775 | 0.34 | 0/1081 |
| 16 | H0 | 0.30 | 0/1286 | 0.61 | 0/1735 |
| 16 | H1 | 0.32 | 0/1313 | 0.58 | 0/1772 |
| 16 | H2 | 0.24 | 0/775 | 0.36 | 0/1081 |
| 17 | G | 0.28 | 0/775 | 0.68 | 1/1058 (0.1%) |
| 18 | H | 0.28 | 0/643 | 0.54 | 0/881 |
| 18 | I | 0.28 | 0/1115 | 0.55 | 0/1518 |
| 18 | J | 0.28 | 0/1120 | 0.58 | 0/1525 |
| 18 | K | 0.27 | 0/1115 | 0.61 | 0/1518 |
| 18 | L | 0.28 | 0/1115 | 0.57 | 0/1518 |
| 18 | M | 0.27 | 0/1115 | 0.53 | 0/1518 |
| 18 | N | 0.27 | 0/1120 | 0.52 | 0/1525 |
| 19 | I1 | 0.28 | 0/791 | 0.50 | 0/1075 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------|-------------|---------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 20 | J1 | 0.28 | 0/721 | 0.58 | 0/964 |
| 20 | J2 | 0.28 | 0/1892 | 0.58 | 0/2553 |
| 20 | J3 | 0.32 | 0/1892 | 0.63 | 0/2553 |
| 20 | J4 | 0.29 | 0/1714 | 0.59 | 0/2315 |
| 20 | J5 | 0.30 | 0/525 | 0.66 | 0/711 |
| 21 | K1 | 0.26 | 0/970 | 0.62 | 0/1317 |
| 22 | L1 | 0.26 | 0/1075 | 0.58 | 0/1454 |
| 22 | L2 | 0.27 | 0/766 | 0.63 | 1/1035 (0.1%) |
| 23 | M1 | 0.31 | 0/851 | 0.62 | 0/1153 |
| 23 | M2 | 0.29 | 0/843 | 0.58 | 0/1141 |
| 23 | M3 | 0.30 | 0/851 | 0.61 | 1/1153 (0.1%) |
| 23 | M4 | 0.29 | 0/851 | 0.57 | 0/1153 |
| 24 | O | 0.30 | 0/213 | 0.73 | 0/281 |
| 24 | P | 0.30 | 0/3132 | 0.54 | 1/4187 (0.0%) |
| 24 | Q | 0.31 | 0/333 | 0.49 | 0/448 |
| 24 | R | 0.30 | 0/1836 | 0.52 | 1/2446 (0.0%) |
| 24 | S | 0.30 | 0/1406 | 0.51 | 0/1883 |
| 25 | T | 0.28 | 0/4085 | 0.55 | 1/5532 (0.0%) |
| 25 | U | 0.28 | 0/4093 | 0.56 | 0/5544 |
| 25 | V | 0.29 | 0/4093 | 0.56 | 0/5544 |
| 26 | W | 0.28 | 0/5192 | 0.59 | 4/7006 (0.1%) |
| 26 | X | 0.28 | 0/5941 | 0.56 | 1/8009 (0.0%) |
| 26 | Y | 0.28 | 0/5941 | 0.57 | 1/8009 (0.0%) |
| 26 | Z | 0.28 | 0/4337 | 0.58 | 2/5833 (0.0%) |
| 27 | XA | 0.27 | 0/1583 | 0.55 | 0/2137 |
| 27 | XB | 0.26 | 0/1583 | 0.55 | 0/2137 |
| 27 | XC | 0.26 | 0/1583 | 0.55 | 0/2137 |
| 27 | XD | 0.27 | 0/1583 | 0.57 | 1/2137 (0.0%) |
| 27 | XE | 0.26 | 0/1583 | 0.56 | 1/2137 (0.0%) |
| 27 | XF | 0.27 | 0/1583 | 0.56 | 0/2137 |
| 27 | XG | 0.27 | 0/1583 | 0.56 | 0/2137 |
| 28 | YB | 0.27 | 0/1814 | 0.53 | 0/2452 |
| 28 | YC | 0.26 | 0/1814 | 0.52 | 0/2452 |
| 28 | YD | 0.27 | 0/1814 | 0.54 | 1/2452 (0.0%) |
| 28 | YE | 0.26 | 0/1814 | 0.50 | 0/2452 |
| 28 | YF | 0.28 | 0/1814 | 0.55 | 1/2452 (0.0%) |
| 28 | YG | 0.28 | 0/1814 | 0.55 | 0/2452 |
| 29 | a | 0.30 | 0/1473 | 0.60 | 0/1951 |
| 29 | b | 0.34 | 0/2890 | 0.62 | 0/3818 |
| 29 | c | 0.31 | 0/2430 | 0.60 | 0/3216 |
| 29 | d | 0.33 | 0/1869 | 0.63 | 1/2472 (0.0%) |
| 30 | e | 0.27 | 0/4811 | 0.58 | 1/6512 (0.0%) |
| 30 | f | 0.27 | 0/4811 | 0.59 | 2/6512 (0.0%) |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|-----------|-------------|--------------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 30 | g | 0.27 | 0/4811 | 0.60 | 1/6512 (0.0%) |
| 31 | h | 0.30 | 0/1230 | 0.60 | 0/1643 |
| 31 | i | 0.26 | 0/2065 | 0.49 | 0/2773 |
| 31 | j | 0.27 | 0/2052 | 0.52 | 0/2755 |
| 31 | k | 0.28 | 0/2065 | 0.50 | 0/2773 |
| 32 | l | 0.26 | 0/934 | 0.53 | 0/1271 |
| 32 | m | 0.28 | 0/934 | 0.51 | 0/1271 |
| 32 | n | 0.26 | 0/934 | 0.51 | 0/1271 |
| 33 | o | 0.32 | 0/3512 | 0.54 | 0/4648 |
| 33 | o1 | 0.25 | 0/304 | 0.55 | 0/406 |
| 33 | p | 0.30 | 0/1309 | 0.51 | 0/1754 |
| 34 | q | 0.25 | 0/930 | 0.48 | 0/1259 |
| 34 | r | 0.26 | 0/930 | 0.55 | 0/1259 |
| 34 | s | 0.27 | 0/930 | 0.55 | 0/1259 |
| 35 | y | 0.28 | 0/510 | 0.59 | 0/691 |
| 35 | z | 0.27 | 0/916 | 0.60 | 0/1244 |
| All | All | 0.28 | 0/1283717 | 0.56 | 333/1739902 (0.0%) |

There are no bond length outliers.

The worst 5 of 333 bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 8 | CK | 32 | PRO | CA-N-CD | -10.04 | 97.44 | 111.50 |
| 8 | FG | 173 | PRO | CA-N-CD | -9.64 | 98.00 | 111.50 |
| 8 | FE | 298 | PRO | CA-N-CD | -9.59 | 98.08 | 111.50 |
| 9 | HN | 271 | ALA | C-N-CD | -9.50 | 99.69 | 120.60 |
| 9 | KL | 209 | ASP | CB-CG-OD1 | 8.42 | 125.88 | 118.30 |

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [\(i\)](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|------------|---------|----------|-------------|-----|
| 1 | 0 | 50/229 (22%) | 44 (88%) | 6 (12%) | 0 | 100 | 100 |
| 1 | 7 | 138/229 (60%) | 127 (92%) | 11 (8%) | 0 | 100 | 100 |
| 2 | 1 | 266/833 (32%) | 259 (97%) | 7 (3%) | 0 | 100 | 100 |
| 2 | 2 | 442/833 (53%) | 436 (99%) | 6 (1%) | 0 | 100 | 100 |
| 3 | 3 | 295/514 (57%) | 292 (99%) | 3 (1%) | 0 | 100 | 100 |
| 3 | 4 | 213/514 (41%) | 213 (100%) | 0 | 0 | 100 | 100 |
| 4 | 5 | 369/376 (98%) | 358 (97%) | 11 (3%) | 0 | 100 | 100 |
| 4 | 6 | 369/376 (98%) | 361 (98%) | 8 (2%) | 0 | 100 | 100 |
| 5 | 8 | 166/194 (86%) | 151 (91%) | 15 (9%) | 0 | 100 | 100 |
| 5 | 9 | 46/194 (24%) | 41 (89%) | 5 (11%) | 0 | 100 | 100 |
| 6 | A | 48/101 (48%) | 48 (100%) | 0 | 0 | 100 | 100 |
| 7 | A0 | 216/418 (52%) | 215 (100%) | 1 (0%) | 0 | 100 | 100 |
| 7 | A1 | 389/418 (93%) | 383 (98%) | 6 (2%) | 0 | 100 | 100 |
| 7 | A2 | 389/418 (93%) | 382 (98%) | 7 (2%) | 0 | 100 | 100 |
| 7 | A3 | 329/418 (79%) | 324 (98%) | 5 (2%) | 0 | 100 | 100 |
| 7 | A4 | 33/418 (8%) | 32 (97%) | 1 (3%) | 0 | 100 | 100 |
| 8 | AA | 437/451 (97%) | 428 (98%) | 8 (2%) | 1 (0%) | 47 | 79 |
| 8 | AC | 437/451 (97%) | 425 (97%) | 11 (2%) | 1 (0%) | 47 | 79 |
| 8 | AE | 437/451 (97%) | 426 (98%) | 11 (2%) | 0 | 100 | 100 |
| 8 | AG | 437/451 (97%) | 425 (97%) | 12 (3%) | 0 | 100 | 100 |
| 8 | AI | 437/451 (97%) | 424 (97%) | 12 (3%) | 1 (0%) | 47 | 79 |
| 8 | AK | 437/451 (97%) | 428 (98%) | 9 (2%) | 0 | 100 | 100 |
| 8 | AM | 437/451 (97%) | 424 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | BA | 428/451 (95%) | 414 (97%) | 13 (3%) | 1 (0%) | 47 | 79 |
| 8 | BC | 437/451 (97%) | 425 (97%) | 11 (2%) | 1 (0%) | 47 | 79 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 8 | BE | 428/451 (95%) | 416 (97%) | 12 (3%) | 0 | 100 | 100 |
| 8 | BG | 437/451 (97%) | 420 (96%) | 17 (4%) | 0 | 100 | 100 |
| 8 | BI | 428/451 (95%) | 415 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | BK | 437/451 (97%) | 420 (96%) | 17 (4%) | 0 | 100 | 100 |
| 8 | BM | 429/451 (95%) | 419 (98%) | 10 (2%) | 0 | 100 | 100 |
| 8 | CA | 428/451 (95%) | 418 (98%) | 9 (2%) | 1 (0%) | 47 | 79 |
| 8 | CC | 437/451 (97%) | 423 (97%) | 13 (3%) | 1 (0%) | 47 | 79 |
| 8 | CE | 426/451 (94%) | 413 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | CG | 437/451 (97%) | 418 (96%) | 19 (4%) | 0 | 100 | 100 |
| 8 | CI | 427/451 (95%) | 412 (96%) | 15 (4%) | 0 | 100 | 100 |
| 8 | CK | 437/451 (97%) | 425 (97%) | 12 (3%) | 0 | 100 | 100 |
| 8 | CM | 427/451 (95%) | 414 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | DA | 375/451 (83%) | 364 (97%) | 11 (3%) | 0 | 100 | 100 |
| 8 | DC | 426/451 (94%) | 413 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | DE | 427/451 (95%) | 418 (98%) | 9 (2%) | 0 | 100 | 100 |
| 8 | DG | 426/451 (94%) | 410 (96%) | 16 (4%) | 0 | 100 | 100 |
| 8 | DI | 426/451 (94%) | 411 (96%) | 15 (4%) | 0 | 100 | 100 |
| 8 | DK | 426/451 (94%) | 409 (96%) | 17 (4%) | 0 | 100 | 100 |
| 8 | DM | 427/451 (95%) | 418 (98%) | 9 (2%) | 0 | 100 | 100 |
| 8 | EC | 437/451 (97%) | 423 (97%) | 13 (3%) | 1 (0%) | 47 | 79 |
| 8 | EE | 437/451 (97%) | 426 (98%) | 11 (2%) | 0 | 100 | 100 |
| 8 | EG | 436/451 (97%) | 412 (94%) | 24 (6%) | 0 | 100 | 100 |
| 8 | EI | 437/451 (97%) | 418 (96%) | 19 (4%) | 0 | 100 | 100 |
| 8 | EK | 436/451 (97%) | 420 (96%) | 16 (4%) | 0 | 100 | 100 |
| 8 | EM | 436/451 (97%) | 419 (96%) | 17 (4%) | 0 | 100 | 100 |
| 8 | FC | 427/451 (95%) | 416 (97%) | 11 (3%) | 0 | 100 | 100 |
| 8 | FE | 427/451 (95%) | 413 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | FG | 426/451 (94%) | 410 (96%) | 16 (4%) | 0 | 100 | 100 |
| 8 | FI | 426/451 (94%) | 411 (96%) | 15 (4%) | 0 | 100 | 100 |
| 8 | FK | 426/451 (94%) | 415 (97%) | 11 (3%) | 0 | 100 | 100 |
| 8 | FM | 426/451 (94%) | 410 (96%) | 16 (4%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 8 | GC | 431/451 (96%) | 420 (97%) | 10 (2%) | 1 (0%) | 47 | 79 |
| 8 | GE | 426/451 (94%) | 420 (99%) | 6 (1%) | 0 | 100 | 100 |
| 8 | GG | 427/451 (95%) | 414 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | GI | 426/451 (94%) | 419 (98%) | 7 (2%) | 0 | 100 | 100 |
| 8 | GK | 428/451 (95%) | 422 (99%) | 6 (1%) | 0 | 100 | 100 |
| 8 | GM | 430/451 (95%) | 417 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | HC | 427/451 (95%) | 414 (97%) | 12 (3%) | 1 (0%) | 47 | 79 |
| 8 | HE | 428/451 (95%) | 420 (98%) | 8 (2%) | 0 | 100 | 100 |
| 8 | HG | 428/451 (95%) | 414 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | HI | 428/451 (95%) | 419 (98%) | 9 (2%) | 0 | 100 | 100 |
| 8 | HK | 427/451 (95%) | 416 (97%) | 11 (3%) | 0 | 100 | 100 |
| 8 | HM | 427/451 (95%) | 417 (98%) | 10 (2%) | 0 | 100 | 100 |
| 8 | HO | 381/451 (84%) | 369 (97%) | 12 (3%) | 0 | 100 | 100 |
| 8 | IC | 429/451 (95%) | 422 (98%) | 6 (1%) | 1 (0%) | 47 | 79 |
| 8 | IE | 427/451 (95%) | 413 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | IG | 437/451 (97%) | 423 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | II | 428/451 (95%) | 416 (97%) | 12 (3%) | 0 | 100 | 100 |
| 8 | IK | 437/451 (97%) | 427 (98%) | 10 (2%) | 0 | 100 | 100 |
| 8 | IM | 427/451 (95%) | 414 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | IO | 427/451 (95%) | 413 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | JC | 437/451 (97%) | 423 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | JE | 426/451 (94%) | 412 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | JG | 426/451 (94%) | 415 (97%) | 11 (3%) | 0 | 100 | 100 |
| 8 | JI | 426/451 (94%) | 410 (96%) | 16 (4%) | 0 | 100 | 100 |
| 8 | JK | 427/451 (95%) | 411 (96%) | 16 (4%) | 0 | 100 | 100 |
| 8 | JM | 426/451 (94%) | 413 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | KC | 429/451 (95%) | 418 (97%) | 10 (2%) | 1 (0%) | 47 | 79 |
| 8 | KE | 428/451 (95%) | 415 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | KG | 429/451 (95%) | 417 (97%) | 12 (3%) | 0 | 100 | 100 |
| 8 | KI | 426/451 (94%) | 411 (96%) | 15 (4%) | 0 | 100 | 100 |
| 8 | KK | 429/451 (95%) | 419 (98%) | 10 (2%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 8 | KM | 436/451 (97%) | 421 (97%) | 15 (3%) | 0 | 100 | 100 |
| 8 | KO | 428/451 (95%) | 413 (96%) | 15 (4%) | 0 | 100 | 100 |
| 8 | LC | 429/451 (95%) | 418 (97%) | 10 (2%) | 1 (0%) | 47 | 79 |
| 8 | LE | 437/451 (97%) | 422 (97%) | 15 (3%) | 0 | 100 | 100 |
| 8 | LG | 430/451 (95%) | 417 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | LI | 432/451 (96%) | 420 (97%) | 12 (3%) | 0 | 100 | 100 |
| 8 | LK | 429/451 (95%) | 420 (98%) | 9 (2%) | 0 | 100 | 100 |
| 8 | LM | 427/451 (95%) | 418 (98%) | 9 (2%) | 0 | 100 | 100 |
| 8 | MC | 438/451 (97%) | 426 (97%) | 11 (2%) | 1 (0%) | 47 | 79 |
| 8 | ME | 428/451 (95%) | 411 (96%) | 17 (4%) | 0 | 100 | 100 |
| 8 | MG | 428/451 (95%) | 417 (97%) | 11 (3%) | 0 | 100 | 100 |
| 8 | MI | 429/451 (95%) | 418 (97%) | 11 (3%) | 0 | 100 | 100 |
| 8 | MK | 438/451 (97%) | 428 (98%) | 10 (2%) | 0 | 100 | 100 |
| 8 | MM | 438/451 (97%) | 420 (96%) | 18 (4%) | 0 | 100 | 100 |
| 8 | NC | 438/451 (97%) | 423 (97%) | 14 (3%) | 1 (0%) | 47 | 79 |
| 8 | NE | 437/451 (97%) | 424 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | NG | 437/451 (97%) | 424 (97%) | 12 (3%) | 1 (0%) | 47 | 79 |
| 8 | NI | 437/451 (97%) | 427 (98%) | 10 (2%) | 0 | 100 | 100 |
| 8 | NK | 437/451 (97%) | 429 (98%) | 8 (2%) | 0 | 100 | 100 |
| 8 | NM | 437/451 (97%) | 424 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | OC | 439/451 (97%) | 428 (98%) | 10 (2%) | 1 (0%) | 47 | 79 |
| 8 | OE | 438/451 (97%) | 427 (98%) | 11 (2%) | 0 | 100 | 100 |
| 8 | OG | 439/451 (97%) | 424 (97%) | 15 (3%) | 0 | 100 | 100 |
| 8 | OI | 439/451 (97%) | 429 (98%) | 10 (2%) | 0 | 100 | 100 |
| 8 | OK | 437/451 (97%) | 428 (98%) | 9 (2%) | 0 | 100 | 100 |
| 8 | OM | 439/451 (97%) | 425 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | OO | 416/451 (92%) | 402 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | PC | 439/451 (97%) | 426 (97%) | 12 (3%) | 1 (0%) | 47 | 79 |
| 8 | PE | 438/451 (97%) | 425 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | PG | 439/451 (97%) | 420 (96%) | 19 (4%) | 0 | 100 | 100 |
| 8 | PI | 437/451 (97%) | 424 (97%) | 13 (3%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 8 | PK | 438/451 (97%) | 426 (97%) | 12 (3%) | 0 | 100 | 100 |
| 8 | PM | 437/451 (97%) | 423 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | PO | 437/451 (97%) | 425 (97%) | 12 (3%) | 0 | 100 | 100 |
| 8 | QC | 438/451 (97%) | 420 (96%) | 17 (4%) | 1 (0%) | 47 | 79 |
| 8 | QE | 438/451 (97%) | 424 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | QG | 438/451 (97%) | 420 (96%) | 17 (4%) | 1 (0%) | 47 | 79 |
| 8 | QI | 438/451 (97%) | 422 (96%) | 16 (4%) | 0 | 100 | 100 |
| 8 | QK | 438/451 (97%) | 425 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | QM | 438/451 (97%) | 425 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | QO | 438/451 (97%) | 418 (95%) | 20 (5%) | 0 | 100 | 100 |
| 8 | RC | 405/451 (90%) | 389 (96%) | 16 (4%) | 0 | 100 | 100 |
| 8 | RE | 426/451 (94%) | 418 (98%) | 8 (2%) | 0 | 100 | 100 |
| 8 | RG | 428/451 (95%) | 410 (96%) | 18 (4%) | 0 | 100 | 100 |
| 8 | RI | 437/451 (97%) | 417 (95%) | 20 (5%) | 0 | 100 | 100 |
| 8 | RK | 438/451 (97%) | 427 (98%) | 11 (2%) | 0 | 100 | 100 |
| 8 | RM | 438/451 (97%) | 421 (96%) | 17 (4%) | 0 | 100 | 100 |
| 8 | RO | 437/451 (97%) | 420 (96%) | 17 (4%) | 0 | 100 | 100 |
| 8 | SE | 425/451 (94%) | 415 (98%) | 10 (2%) | 0 | 100 | 100 |
| 8 | SG | 426/451 (94%) | 416 (98%) | 10 (2%) | 0 | 100 | 100 |
| 8 | SI | 427/451 (95%) | 410 (96%) | 17 (4%) | 0 | 100 | 100 |
| 8 | SK | 427/451 (95%) | 417 (98%) | 10 (2%) | 0 | 100 | 100 |
| 8 | SM | 427/451 (95%) | 413 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | SO | 427/451 (95%) | 418 (98%) | 9 (2%) | 0 | 100 | 100 |
| 8 | TE | 425/451 (94%) | 414 (97%) | 11 (3%) | 0 | 100 | 100 |
| 8 | TG | 426/451 (94%) | 414 (97%) | 12 (3%) | 0 | 100 | 100 |
| 8 | TI | 427/451 (95%) | 417 (98%) | 10 (2%) | 0 | 100 | 100 |
| 8 | TK | 425/451 (94%) | 412 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | TM | 427/451 (95%) | 413 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | TO | 425/451 (94%) | 413 (97%) | 12 (3%) | 0 | 100 | 100 |
| 8 | UE | 427/451 (95%) | 413 (97%) | 14 (3%) | 0 | 100 | 100 |
| 8 | UG | 428/451 (95%) | 417 (97%) | 11 (3%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 8 | UI | 428/451 (95%) | 415 (97%) | 13 (3%) | 0 | 100 | 100 |
| 8 | UK | 427/451 (95%) | 418 (98%) | 9 (2%) | 0 | 100 | 100 |
| 8 | UM | 427/451 (95%) | 417 (98%) | 10 (2%) | 0 | 100 | 100 |
| 8 | UO | 427/451 (95%) | 416 (97%) | 11 (3%) | 0 | 100 | 100 |
| 8 | VE | 437/451 (97%) | 420 (96%) | 17 (4%) | 0 | 100 | 100 |
| 8 | VG | 429/451 (95%) | 413 (96%) | 16 (4%) | 0 | 100 | 100 |
| 8 | VI | 437/451 (97%) | 423 (97%) | 13 (3%) | 1 (0%) | 47 | 79 |
| 8 | VK | 427/451 (95%) | 419 (98%) | 8 (2%) | 0 | 100 | 100 |
| 8 | VM | 437/451 (97%) | 428 (98%) | 9 (2%) | 0 | 100 | 100 |
| 8 | VO | 427/451 (95%) | 418 (98%) | 9 (2%) | 0 | 100 | 100 |
| 8 | WE | 437/451 (97%) | 423 (97%) | 13 (3%) | 1 (0%) | 47 | 79 |
| 8 | WG | 426/451 (94%) | 410 (96%) | 16 (4%) | 0 | 100 | 100 |
| 8 | WI | 436/451 (97%) | 420 (96%) | 16 (4%) | 0 | 100 | 100 |
| 8 | WK | 426/451 (94%) | 414 (97%) | 12 (3%) | 0 | 100 | 100 |
| 8 | WM | 437/451 (97%) | 415 (95%) | 22 (5%) | 0 | 100 | 100 |
| 8 | WO | 427/451 (95%) | 408 (96%) | 19 (4%) | 0 | 100 | 100 |
| 9 | AB | 435/445 (98%) | 418 (96%) | 17 (4%) | 0 | 100 | 100 |
| 9 | AD | 435/445 (98%) | 419 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | AF | 435/445 (98%) | 415 (95%) | 20 (5%) | 0 | 100 | 100 |
| 9 | AH | 435/445 (98%) | 417 (96%) | 17 (4%) | 1 (0%) | 47 | 79 |
| 9 | AJ | 435/445 (98%) | 418 (96%) | 16 (4%) | 1 (0%) | 47 | 79 |
| 9 | AL | 435/445 (98%) | 410 (94%) | 24 (6%) | 1 (0%) | 47 | 79 |
| 9 | BB | 425/445 (96%) | 405 (95%) | 20 (5%) | 0 | 100 | 100 |
| 9 | BD | 424/445 (95%) | 410 (97%) | 14 (3%) | 0 | 100 | 100 |
| 9 | BF | 425/445 (96%) | 409 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | BH | 424/445 (95%) | 404 (95%) | 20 (5%) | 0 | 100 | 100 |
| 9 | BJ | 428/445 (96%) | 413 (96%) | 13 (3%) | 2 (0%) | 29 | 68 |
| 9 | BL | 424/445 (95%) | 408 (96%) | 15 (4%) | 1 (0%) | 47 | 79 |
| 9 | CB | 426/445 (96%) | 413 (97%) | 13 (3%) | 0 | 100 | 100 |
| 9 | CD | 424/445 (95%) | 408 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | CF | 425/445 (96%) | 410 (96%) | 14 (3%) | 1 (0%) | 47 | 79 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 9 | CH | 424/445 (95%) | 406 (96%) | 17 (4%) | 1 (0%) | 47 | 79 |
| 9 | CJ | 425/445 (96%) | 407 (96%) | 16 (4%) | 2 (0%) | 29 | 68 |
| 9 | CL | 424/445 (95%) | 410 (97%) | 13 (3%) | 1 (0%) | 47 | 79 |
| 9 | DB | 424/445 (95%) | 406 (96%) | 17 (4%) | 1 (0%) | 47 | 79 |
| 9 | DD | 424/445 (95%) | 408 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | DF | 424/445 (95%) | 407 (96%) | 16 (4%) | 1 (0%) | 47 | 79 |
| 9 | DH | 424/445 (95%) | 396 (93%) | 28 (7%) | 0 | 100 | 100 |
| 9 | DJ | 424/445 (95%) | 403 (95%) | 20 (5%) | 1 (0%) | 47 | 79 |
| 9 | DL | 424/445 (95%) | 397 (94%) | 26 (6%) | 1 (0%) | 47 | 79 |
| 9 | EB | 424/445 (95%) | 405 (96%) | 19 (4%) | 0 | 100 | 100 |
| 9 | ED | 424/445 (95%) | 405 (96%) | 19 (4%) | 0 | 100 | 100 |
| 9 | EF | 424/445 (95%) | 405 (96%) | 19 (4%) | 0 | 100 | 100 |
| 9 | EH | 424/445 (95%) | 408 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | EJ | 424/445 (95%) | 405 (96%) | 19 (4%) | 0 | 100 | 100 |
| 9 | EL | 424/445 (95%) | 411 (97%) | 12 (3%) | 1 (0%) | 47 | 79 |
| 9 | EN | 426/445 (96%) | 417 (98%) | 9 (2%) | 0 | 100 | 100 |
| 9 | FB | 424/445 (95%) | 407 (96%) | 17 (4%) | 0 | 100 | 100 |
| 9 | FD | 424/445 (95%) | 408 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | FF | 424/445 (95%) | 410 (97%) | 13 (3%) | 1 (0%) | 47 | 79 |
| 9 | FH | 424/445 (95%) | 407 (96%) | 17 (4%) | 0 | 100 | 100 |
| 9 | FJ | 424/445 (95%) | 409 (96%) | 15 (4%) | 0 | 100 | 100 |
| 9 | FL | 424/445 (95%) | 405 (96%) | 17 (4%) | 2 (0%) | 29 | 68 |
| 9 | FN | 425/445 (96%) | 416 (98%) | 9 (2%) | 0 | 100 | 100 |
| 9 | GB | 406/445 (91%) | 396 (98%) | 10 (2%) | 0 | 100 | 100 |
| 9 | GD | 424/445 (95%) | 408 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | GF | 425/445 (96%) | 406 (96%) | 19 (4%) | 0 | 100 | 100 |
| 9 | GH | 424/445 (95%) | 406 (96%) | 18 (4%) | 0 | 100 | 100 |
| 9 | GJ | 428/445 (96%) | 408 (95%) | 19 (4%) | 1 (0%) | 47 | 79 |
| 9 | GL | 424/445 (95%) | 403 (95%) | 21 (5%) | 0 | 100 | 100 |
| 9 | GN | 424/445 (95%) | 409 (96%) | 15 (4%) | 0 | 100 | 100 |
| 9 | HB | 425/445 (96%) | 408 (96%) | 15 (4%) | 2 (0%) | 29 | 68 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 9 | HD | 424/445 (95%) | 408 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | HF | 425/445 (96%) | 405 (95%) | 19 (4%) | 1 (0%) | 47 | 79 |
| 9 | HH | 424/445 (95%) | 406 (96%) | 17 (4%) | 1 (0%) | 47 | 79 |
| 9 | HJ | 426/445 (96%) | 411 (96%) | 14 (3%) | 1 (0%) | 47 | 79 |
| 9 | HL | 424/445 (95%) | 408 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | HN | 423/445 (95%) | 407 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | IB | 401/445 (90%) | 385 (96%) | 15 (4%) | 1 (0%) | 47 | 79 |
| 9 | ID | 424/445 (95%) | 405 (96%) | 19 (4%) | 0 | 100 | 100 |
| 9 | IF | 426/445 (96%) | 408 (96%) | 18 (4%) | 0 | 100 | 100 |
| 9 | IH | 424/445 (95%) | 404 (95%) | 19 (4%) | 1 (0%) | 47 | 79 |
| 9 | IJ | 427/445 (96%) | 410 (96%) | 17 (4%) | 0 | 100 | 100 |
| 9 | IL | 424/445 (95%) | 403 (95%) | 21 (5%) | 0 | 100 | 100 |
| 9 | IN | 425/445 (96%) | 406 (96%) | 18 (4%) | 1 (0%) | 47 | 79 |
| 9 | JB | 424/445 (95%) | 406 (96%) | 18 (4%) | 0 | 100 | 100 |
| 9 | JD | 424/445 (95%) | 408 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | JF | 425/445 (96%) | 409 (96%) | 15 (4%) | 1 (0%) | 47 | 79 |
| 9 | JH | 424/445 (95%) | 402 (95%) | 22 (5%) | 0 | 100 | 100 |
| 9 | JJ | 424/445 (95%) | 408 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | JL | 424/445 (95%) | 401 (95%) | 22 (5%) | 1 (0%) | 47 | 79 |
| 9 | JN | 424/445 (95%) | 409 (96%) | 15 (4%) | 0 | 100 | 100 |
| 9 | KB | 408/445 (92%) | 392 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | KD | 429/445 (96%) | 415 (97%) | 14 (3%) | 0 | 100 | 100 |
| 9 | KF | 424/445 (95%) | 409 (96%) | 15 (4%) | 0 | 100 | 100 |
| 9 | KH | 429/445 (96%) | 416 (97%) | 13 (3%) | 0 | 100 | 100 |
| 9 | KJ | 424/445 (95%) | 410 (97%) | 14 (3%) | 0 | 100 | 100 |
| 9 | KL | 429/445 (96%) | 410 (96%) | 18 (4%) | 1 (0%) | 47 | 79 |
| 9 | KN | 424/445 (95%) | 409 (96%) | 15 (4%) | 0 | 100 | 100 |
| 9 | LB | 438/445 (98%) | 423 (97%) | 15 (3%) | 0 | 100 | 100 |
| 9 | LD | 424/445 (95%) | 410 (97%) | 14 (3%) | 0 | 100 | 100 |
| 9 | LF | 437/445 (98%) | 418 (96%) | 19 (4%) | 0 | 100 | 100 |
| 9 | LH | 424/445 (95%) | 403 (95%) | 21 (5%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 9 | LJ | 441/445 (99%) | 424 (96%) | 17 (4%) | 0 | 100 | 100 |
| 9 | LL | 424/445 (95%) | 408 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | LN | 438/445 (98%) | 421 (96%) | 17 (4%) | 0 | 100 | 100 |
| 9 | MB | 428/445 (96%) | 414 (97%) | 14 (3%) | 0 | 100 | 100 |
| 9 | MD | 430/445 (97%) | 416 (97%) | 13 (3%) | 1 (0%) | 47 | 79 |
| 9 | MF | 429/445 (96%) | 414 (96%) | 15 (4%) | 0 | 100 | 100 |
| 9 | MH | 430/445 (97%) | 415 (96%) | 14 (3%) | 1 (0%) | 47 | 79 |
| 9 | MJ | 430/445 (97%) | 418 (97%) | 12 (3%) | 0 | 100 | 100 |
| 9 | ML | 430/445 (97%) | 414 (96%) | 15 (4%) | 1 (0%) | 47 | 79 |
| 9 | MN | 428/445 (96%) | 411 (96%) | 17 (4%) | 0 | 100 | 100 |
| 9 | NB | 426/445 (96%) | 410 (96%) | 15 (4%) | 1 (0%) | 47 | 79 |
| 9 | ND | 426/445 (96%) | 411 (96%) | 15 (4%) | 0 | 100 | 100 |
| 9 | NF | 428/445 (96%) | 406 (95%) | 22 (5%) | 0 | 100 | 100 |
| 9 | NH | 426/445 (96%) | 404 (95%) | 21 (5%) | 1 (0%) | 47 | 79 |
| 9 | NJ | 427/445 (96%) | 409 (96%) | 18 (4%) | 0 | 100 | 100 |
| 9 | NL | 426/445 (96%) | 404 (95%) | 22 (5%) | 0 | 100 | 100 |
| 9 | NN | 426/445 (96%) | 404 (95%) | 21 (5%) | 1 (0%) | 47 | 79 |
| 9 | OB | 429/445 (96%) | 412 (96%) | 16 (4%) | 1 (0%) | 47 | 79 |
| 9 | OD | 428/445 (96%) | 412 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | OF | 430/445 (97%) | 413 (96%) | 17 (4%) | 0 | 100 | 100 |
| 9 | OH | 428/445 (96%) | 409 (96%) | 19 (4%) | 0 | 100 | 100 |
| 9 | OJ | 430/445 (97%) | 415 (96%) | 15 (4%) | 0 | 100 | 100 |
| 9 | OL | 428/445 (96%) | 408 (95%) | 18 (4%) | 2 (0%) | 29 | 68 |
| 9 | ON | 429/445 (96%) | 414 (96%) | 14 (3%) | 1 (0%) | 47 | 79 |
| 9 | PD | 428/445 (96%) | 410 (96%) | 16 (4%) | 2 (0%) | 29 | 68 |
| 9 | PF | 430/445 (97%) | 411 (96%) | 18 (4%) | 1 (0%) | 47 | 79 |
| 9 | PH | 424/445 (95%) | 404 (95%) | 20 (5%) | 0 | 100 | 100 |
| 9 | PJ | 428/445 (96%) | 414 (97%) | 13 (3%) | 1 (0%) | 47 | 79 |
| 9 | PL | 427/445 (96%) | 407 (95%) | 20 (5%) | 0 | 100 | 100 |
| 9 | PN | 428/445 (96%) | 404 (94%) | 24 (6%) | 0 | 100 | 100 |
| 9 | QD | 426/445 (96%) | 407 (96%) | 19 (4%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 9 | QF | 428/445 (96%) | 411 (96%) | 16 (4%) | 1 (0%) | 47 | 79 |
| 9 | QH | 424/445 (95%) | 410 (97%) | 14 (3%) | 0 | 100 | 100 |
| 9 | QJ | 427/445 (96%) | 408 (96%) | 19 (4%) | 0 | 100 | 100 |
| 9 | QL | 425/445 (96%) | 414 (97%) | 11 (3%) | 0 | 100 | 100 |
| 9 | QN | 426/445 (96%) | 408 (96%) | 18 (4%) | 0 | 100 | 100 |
| 9 | RD | 424/445 (95%) | 410 (97%) | 14 (3%) | 0 | 100 | 100 |
| 9 | RF | 427/445 (96%) | 410 (96%) | 17 (4%) | 0 | 100 | 100 |
| 9 | RH | 424/445 (95%) | 406 (96%) | 17 (4%) | 1 (0%) | 47 | 79 |
| 9 | RJ | 426/445 (96%) | 408 (96%) | 17 (4%) | 1 (0%) | 47 | 79 |
| 9 | RL | 424/445 (95%) | 407 (96%) | 17 (4%) | 0 | 100 | 100 |
| 9 | RN | 425/445 (96%) | 409 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | SD | 424/445 (95%) | 410 (97%) | 14 (3%) | 0 | 100 | 100 |
| 9 | SF | 424/445 (95%) | 406 (96%) | 18 (4%) | 0 | 100 | 100 |
| 9 | SH | 424/445 (95%) | 412 (97%) | 12 (3%) | 0 | 100 | 100 |
| 9 | SJ | 424/445 (95%) | 405 (96%) | 19 (4%) | 0 | 100 | 100 |
| 9 | SL | 424/445 (95%) | 408 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | SN | 424/445 (95%) | 408 (96%) | 15 (4%) | 1 (0%) | 47 | 79 |
| 9 | TD | 424/445 (95%) | 413 (97%) | 11 (3%) | 0 | 100 | 100 |
| 9 | TF | 425/445 (96%) | 403 (95%) | 22 (5%) | 0 | 100 | 100 |
| 9 | TH | 424/445 (95%) | 407 (96%) | 17 (4%) | 0 | 100 | 100 |
| 9 | TJ | 424/445 (95%) | 407 (96%) | 17 (4%) | 0 | 100 | 100 |
| 9 | TL | 424/445 (95%) | 400 (94%) | 24 (6%) | 0 | 100 | 100 |
| 9 | TN | 424/445 (95%) | 402 (95%) | 22 (5%) | 0 | 100 | 100 |
| 9 | TP | 417/445 (94%) | 402 (96%) | 15 (4%) | 0 | 100 | 100 |
| 9 | UD | 424/445 (95%) | 410 (97%) | 14 (3%) | 0 | 100 | 100 |
| 9 | UF | 425/445 (96%) | 411 (97%) | 13 (3%) | 1 (0%) | 47 | 79 |
| 9 | UH | 424/445 (95%) | 413 (97%) | 11 (3%) | 0 | 100 | 100 |
| 9 | UJ | 425/445 (96%) | 407 (96%) | 18 (4%) | 0 | 100 | 100 |
| 9 | UL | 424/445 (95%) | 411 (97%) | 12 (3%) | 1 (0%) | 47 | 79 |
| 9 | UN | 425/445 (96%) | 407 (96%) | 17 (4%) | 1 (0%) | 47 | 79 |
| 9 | UP | 425/445 (96%) | 412 (97%) | 13 (3%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|------------|---------|----------|-------------|-----|
| 9 | VD | 424/445 (95%) | 411 (97%) | 13 (3%) | 0 | 100 | 100 |
| 9 | VF | 425/445 (96%) | 404 (95%) | 20 (5%) | 1 (0%) | 47 | 79 |
| 9 | VH | 424/445 (95%) | 408 (96%) | 16 (4%) | 0 | 100 | 100 |
| 9 | VJ | 425/445 (96%) | 408 (96%) | 16 (4%) | 1 (0%) | 47 | 79 |
| 9 | VL | 424/445 (95%) | 408 (96%) | 15 (4%) | 1 (0%) | 47 | 79 |
| 9 | VN | 425/445 (96%) | 406 (96%) | 18 (4%) | 1 (0%) | 47 | 79 |
| 9 | VP | 425/445 (96%) | 411 (97%) | 14 (3%) | 0 | 100 | 100 |
| 9 | WD | 424/445 (95%) | 412 (97%) | 11 (3%) | 1 (0%) | 47 | 79 |
| 9 | WF | 424/445 (95%) | 407 (96%) | 17 (4%) | 0 | 100 | 100 |
| 9 | WH | 424/445 (95%) | 401 (95%) | 23 (5%) | 0 | 100 | 100 |
| 9 | WJ | 424/445 (95%) | 401 (95%) | 23 (5%) | 0 | 100 | 100 |
| 9 | WL | 424/445 (95%) | 405 (96%) | 19 (4%) | 0 | 100 | 100 |
| 9 | WN | 425/445 (96%) | 401 (94%) | 24 (6%) | 0 | 100 | 100 |
| 9 | WP | 425/445 (96%) | 405 (95%) | 19 (4%) | 1 (0%) | 47 | 79 |
| 10 | B | 178/495 (36%) | 177 (99%) | 1 (1%) | 0 | 100 | 100 |
| 10 | C | 354/495 (72%) | 352 (99%) | 2 (1%) | 0 | 100 | 100 |
| 11 | B0 | 189/430 (44%) | 188 (100%) | 1 (0%) | 0 | 100 | 100 |
| 11 | B1 | 390/430 (91%) | 383 (98%) | 7 (2%) | 0 | 100 | 100 |
| 11 | B2 | 389/430 (90%) | 381 (98%) | 8 (2%) | 0 | 100 | 100 |
| 11 | B3 | 352/430 (82%) | 343 (97%) | 9 (3%) | 0 | 100 | 100 |
| 11 | B4 | 49/430 (11%) | 47 (96%) | 2 (4%) | 0 | 100 | 100 |
| 11 | B5 | 49/430 (11%) | 47 (96%) | 2 (4%) | 0 | 100 | 100 |
| 11 | B6 | 352/430 (82%) | 348 (99%) | 4 (1%) | 0 | 100 | 100 |
| 11 | B7 | 389/430 (90%) | 385 (99%) | 4 (1%) | 0 | 100 | 100 |
| 11 | B8 | 390/430 (91%) | 385 (99%) | 5 (1%) | 0 | 100 | 100 |
| 11 | B9 | 189/430 (44%) | 189 (100%) | 0 | 0 | 100 | 100 |
| 12 | C0 | 31/490 (6%) | 30 (97%) | 1 (3%) | 0 | 100 | 100 |
| 12 | C1 | 332/490 (68%) | 326 (98%) | 6 (2%) | 0 | 100 | 100 |
| 12 | C2 | 391/490 (80%) | 385 (98%) | 5 (1%) | 1 (0%) | 41 | 75 |
| 12 | C3 | 392/490 (80%) | 379 (97%) | 12 (3%) | 1 (0%) | 41 | 75 |
| 12 | C4 | 215/490 (44%) | 211 (98%) | 4 (2%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|---------|----------|-------------|-----|
| 13 | D | 177/485 (36%) | 165 (93%) | 12 (7%) | 0 | 100 | 100 |
| 14 | D0 | 260/435 (60%) | 256 (98%) | 4 (2%) | 0 | 100 | 100 |
| 14 | D1 | 394/435 (91%) | 389 (99%) | 5 (1%) | 0 | 100 | 100 |
| 14 | D2 | 396/435 (91%) | 391 (99%) | 5 (1%) | 0 | 100 | 100 |
| 14 | D3 | 313/435 (72%) | 308 (98%) | 5 (2%) | 0 | 100 | 100 |
| 14 | D5 | 313/435 (72%) | 309 (99%) | 4 (1%) | 0 | 100 | 100 |
| 14 | D6 | 396/435 (91%) | 390 (98%) | 6 (2%) | 0 | 100 | 100 |
| 14 | D7 | 394/435 (91%) | 383 (97%) | 11 (3%) | 0 | 100 | 100 |
| 14 | D8 | 260/435 (60%) | 257 (99%) | 3 (1%) | 0 | 100 | 100 |
| 15 | E | 275/301 (91%) | 265 (96%) | 10 (4%) | 0 | 100 | 100 |
| 15 | F | 275/301 (91%) | 267 (97%) | 8 (3%) | 0 | 100 | 100 |
| 16 | F0 | 155/222 (70%) | 150 (97%) | 4 (3%) | 1 (1%) | 25 | 64 |
| 16 | F1 | 158/222 (71%) | 152 (96%) | 6 (4%) | 0 | 100 | 100 |
| 16 | F2 | 154/222 (69%) | 150 (97%) | 3 (2%) | 1 (1%) | 25 | 64 |
| 16 | F3 | 155/222 (70%) | 150 (97%) | 5 (3%) | 0 | 100 | 100 |
| 16 | F4 | 158/222 (71%) | 155 (98%) | 3 (2%) | 0 | 100 | 100 |
| 16 | F5 | 154/222 (69%) | 150 (97%) | 3 (2%) | 1 (1%) | 25 | 64 |
| 16 | F6 | 155/222 (70%) | 148 (96%) | 7 (4%) | 0 | 100 | 100 |
| 16 | F7 | 158/222 (71%) | 150 (95%) | 8 (5%) | 0 | 100 | 100 |
| 16 | F8 | 154/222 (69%) | 150 (97%) | 3 (2%) | 1 (1%) | 25 | 64 |
| 16 | G0 | 157/222 (71%) | 150 (96%) | 7 (4%) | 0 | 100 | 100 |
| 16 | G1 | 156/222 (70%) | 148 (95%) | 8 (5%) | 0 | 100 | 100 |
| 16 | G2 | 154/222 (69%) | 149 (97%) | 5 (3%) | 0 | 100 | 100 |
| 16 | G3 | 155/222 (70%) | 150 (97%) | 5 (3%) | 0 | 100 | 100 |
| 16 | G4 | 158/222 (71%) | 150 (95%) | 8 (5%) | 0 | 100 | 100 |
| 16 | G5 | 154/222 (69%) | 151 (98%) | 3 (2%) | 0 | 100 | 100 |
| 16 | G6 | 155/222 (70%) | 150 (97%) | 5 (3%) | 0 | 100 | 100 |
| 16 | G7 | 158/222 (71%) | 149 (94%) | 9 (6%) | 0 | 100 | 100 |
| 16 | G8 | 154/222 (69%) | 149 (97%) | 5 (3%) | 0 | 100 | 100 |
| 16 | H0 | 155/222 (70%) | 151 (97%) | 3 (2%) | 1 (1%) | 25 | 64 |
| 16 | H1 | 158/222 (71%) | 153 (97%) | 5 (3%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|------------|---------|----------|-------------|-----|
| 16 | H2 | 154/222 (69%) | 149 (97%) | 5 (3%) | 0 | 100 | 100 |
| 17 | G | 92/121 (76%) | 88 (96%) | 4 (4%) | 0 | 100 | 100 |
| 18 | H | 76/275 (28%) | 72 (95%) | 3 (4%) | 1 (1%) | 12 | 50 |
| 18 | I | 137/275 (50%) | 131 (96%) | 6 (4%) | 0 | 100 | 100 |
| 18 | J | 138/275 (50%) | 131 (95%) | 6 (4%) | 1 (1%) | 22 | 61 |
| 18 | K | 137/275 (50%) | 134 (98%) | 2 (2%) | 1 (1%) | 22 | 61 |
| 18 | L | 137/275 (50%) | 131 (96%) | 6 (4%) | 0 | 100 | 100 |
| 18 | M | 137/275 (50%) | 131 (96%) | 5 (4%) | 1 (1%) | 22 | 61 |
| 18 | N | 138/275 (50%) | 130 (94%) | 7 (5%) | 1 (1%) | 22 | 61 |
| 19 | I1 | 87/150 (58%) | 85 (98%) | 2 (2%) | 0 | 100 | 100 |
| 20 | J1 | 75/284 (26%) | 72 (96%) | 3 (4%) | 0 | 100 | 100 |
| 20 | J2 | 218/284 (77%) | 209 (96%) | 8 (4%) | 1 (0%) | 29 | 68 |
| 20 | J3 | 218/284 (77%) | 208 (95%) | 8 (4%) | 2 (1%) | 17 | 57 |
| 20 | J4 | 197/284 (69%) | 186 (94%) | 10 (5%) | 1 (0%) | 29 | 68 |
| 20 | J5 | 63/284 (22%) | 58 (92%) | 4 (6%) | 1 (2%) | 9 | 46 |
| 21 | K1 | 109/134 (81%) | 100 (92%) | 9 (8%) | 0 | 100 | 100 |
| 22 | L1 | 125/147 (85%) | 116 (93%) | 9 (7%) | 0 | 100 | 100 |
| 22 | L2 | 88/147 (60%) | 83 (94%) | 5 (6%) | 0 | 100 | 100 |
| 23 | M1 | 98/201 (49%) | 94 (96%) | 4 (4%) | 0 | 100 | 100 |
| 23 | M2 | 97/201 (48%) | 94 (97%) | 3 (3%) | 0 | 100 | 100 |
| 23 | M3 | 98/201 (49%) | 95 (97%) | 3 (3%) | 0 | 100 | 100 |
| 23 | M4 | 98/201 (49%) | 95 (97%) | 3 (3%) | 0 | 100 | 100 |
| 24 | O | 23/382 (6%) | 23 (100%) | 0 | 0 | 100 | 100 |
| 24 | P | 366/382 (96%) | 359 (98%) | 6 (2%) | 1 (0%) | 41 | 75 |
| 24 | Q | 38/382 (10%) | 37 (97%) | 1 (3%) | 0 | 100 | 100 |
| 24 | R | 215/382 (56%) | 215 (100%) | 0 | 0 | 100 | 100 |
| 24 | S | 163/382 (43%) | 161 (99%) | 2 (1%) | 0 | 100 | 100 |
| 25 | T | 478/640 (75%) | 447 (94%) | 31 (6%) | 0 | 100 | 100 |
| 25 | U | 479/640 (75%) | 451 (94%) | 28 (6%) | 0 | 100 | 100 |
| 25 | V | 479/640 (75%) | 454 (95%) | 25 (5%) | 0 | 100 | 100 |
| 26 | W | 604/749 (81%) | 571 (94%) | 32 (5%) | 1 (0%) | 47 | 79 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|------------|---------|----------|-------------|-----|
| 26 | X | 689/749 (92%) | 638 (93%) | 49 (7%) | 2 (0%) | 41 | 75 |
| 26 | Y | 689/749 (92%) | 642 (93%) | 46 (7%) | 1 (0%) | 51 | 83 |
| 26 | Z | 498/749 (66%) | 468 (94%) | 30 (6%) | 0 | 100 | 100 |
| 27 | XA | 184/193 (95%) | 178 (97%) | 6 (3%) | 0 | 100 | 100 |
| 27 | XB | 184/193 (95%) | 177 (96%) | 7 (4%) | 0 | 100 | 100 |
| 27 | XC | 184/193 (95%) | 178 (97%) | 6 (3%) | 0 | 100 | 100 |
| 27 | XD | 184/193 (95%) | 178 (97%) | 6 (3%) | 0 | 100 | 100 |
| 27 | XE | 184/193 (95%) | 175 (95%) | 9 (5%) | 0 | 100 | 100 |
| 27 | XF | 184/193 (95%) | 174 (95%) | 10 (5%) | 0 | 100 | 100 |
| 27 | XG | 184/193 (95%) | 177 (96%) | 7 (4%) | 0 | 100 | 100 |
| 28 | YB | 218/257 (85%) | 212 (97%) | 6 (3%) | 0 | 100 | 100 |
| 28 | YC | 218/257 (85%) | 213 (98%) | 5 (2%) | 0 | 100 | 100 |
| 28 | YD | 218/257 (85%) | 210 (96%) | 8 (4%) | 0 | 100 | 100 |
| 28 | YE | 218/257 (85%) | 215 (99%) | 3 (1%) | 0 | 100 | 100 |
| 28 | YF | 218/257 (85%) | 215 (99%) | 3 (1%) | 0 | 100 | 100 |
| 28 | YG | 218/257 (85%) | 211 (97%) | 7 (3%) | 0 | 100 | 100 |
| 29 | a | 168/551 (30%) | 167 (99%) | 1 (1%) | 0 | 100 | 100 |
| 29 | b | 332/551 (60%) | 332 (100%) | 0 | 0 | 100 | 100 |
| 29 | c | 280/551 (51%) | 277 (99%) | 3 (1%) | 0 | 100 | 100 |
| 29 | d | 216/551 (39%) | 216 (100%) | 0 | 0 | 100 | 100 |
| 30 | e | 608/620 (98%) | 582 (96%) | 24 (4%) | 2 (0%) | 41 | 75 |
| 30 | f | 608/620 (98%) | 583 (96%) | 25 (4%) | 0 | 100 | 100 |
| 30 | g | 608/620 (98%) | 582 (96%) | 26 (4%) | 0 | 100 | 100 |
| 31 | h | 144/256 (56%) | 142 (99%) | 2 (1%) | 0 | 100 | 100 |
| 31 | i | 248/256 (97%) | 242 (98%) | 5 (2%) | 1 (0%) | 34 | 71 |
| 31 | j | 246/256 (96%) | 244 (99%) | 2 (1%) | 0 | 100 | 100 |
| 31 | k | 248/256 (97%) | 244 (98%) | 4 (2%) | 0 | 100 | 100 |
| 32 | l | 115/177 (65%) | 110 (96%) | 5 (4%) | 0 | 100 | 100 |
| 32 | m | 115/177 (65%) | 112 (97%) | 2 (2%) | 1 (1%) | 17 | 57 |
| 32 | n | 115/177 (65%) | 111 (96%) | 3 (3%) | 1 (1%) | 17 | 57 |
| 33 | o | 402/552 (73%) | 400 (100%) | 2 (0%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------------|--------------|-----------|----------|-------------|-----|
| 33 | o1 | 34/552 (6%) | 33 (97%) | 1 (3%) | 0 | 100 | 100 |
| 33 | p | 156/552 (28%) | 153 (98%) | 3 (2%) | 0 | 100 | 100 |
| 34 | q | 108/169 (64%) | 102 (94%) | 6 (6%) | 0 | 100 | 100 |
| 34 | r | 108/169 (64%) | 98 (91%) | 10 (9%) | 0 | 100 | 100 |
| 34 | s | 108/169 (64%) | 103 (95%) | 5 (5%) | 0 | 100 | 100 |
| 35 | y | 61/136 (45%) | 59 (97%) | 2 (3%) | 0 | 100 | 100 |
| 35 | z | 109/136 (80%) | 104 (95%) | 5 (5%) | 0 | 100 | 100 |
| All | All | 159406/181357 (88%) | 153891 (96%) | 5408 (3%) | 107 (0%) | 54 | 83 |

5 of 107 Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 8 | AC | 98 | ASP |
| 8 | BC | 98 | ASP |
| 12 | C2 | 213 | ASP |
| 12 | C3 | 407 | PRO |
| 9 | DF | 272 | PRO |

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 1 | 0 | 47/209 (22%) | 47 (100%) | 0 | 100 | 100 |
| 1 | 7 | 135/209 (65%) | 135 (100%) | 0 | 100 | 100 |
| 2 | 1 | 243/724 (34%) | 242 (100%) | 1 (0%) | 91 | 97 |
| 2 | 2 | 392/724 (54%) | 391 (100%) | 1 (0%) | 92 | 97 |
| 3 | 3 | 274/470 (58%) | 273 (100%) | 1 (0%) | 91 | 97 |
| 3 | 4 | 197/470 (42%) | 197 (100%) | 0 | 100 | 100 |
| 4 | 5 | 315/320 (98%) | 315 (100%) | 0 | 100 | 100 |
| 4 | 6 | 315/320 (98%) | 315 (100%) | 0 | 100 | 100 |
| 5 | 8 | 157/181 (87%) | 156 (99%) | 1 (1%) | 86 | 94 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 5 | 9 | 47/181 (26%) | 47 (100%) | 0 | 100 | 100 |
| 6 | A | 44/90 (49%) | 44 (100%) | 0 | 100 | 100 |
| 7 | A0 | 195/376 (52%) | 194 (100%) | 1 (0%) | 88 | 95 |
| 7 | A1 | 356/376 (95%) | 356 (100%) | 0 | 100 | 100 |
| 7 | A2 | 356/376 (95%) | 355 (100%) | 1 (0%) | 92 | 97 |
| 7 | A3 | 305/376 (81%) | 305 (100%) | 0 | 100 | 100 |
| 7 | A4 | 31/376 (8%) | 31 (100%) | 0 | 100 | 100 |
| 8 | AA | 369/378 (98%) | 367 (100%) | 2 (0%) | 88 | 95 |
| 8 | AC | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | AE | 369/378 (98%) | 367 (100%) | 2 (0%) | 88 | 95 |
| 8 | AG | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | AI | 369/378 (98%) | 367 (100%) | 2 (0%) | 88 | 95 |
| 8 | AK | 369/378 (98%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 8 | AM | 369/378 (98%) | 367 (100%) | 2 (0%) | 88 | 95 |
| 8 | BA | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | BC | 369/378 (98%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 8 | BE | 364/378 (96%) | 364 (100%) | 0 | 100 | 100 |
| 8 | BG | 369/378 (98%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 8 | BI | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | BK | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | BM | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | CA | 365/378 (97%) | 365 (100%) | 0 | 100 | 100 |
| 8 | CC | 369/378 (98%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 8 | CE | 363/378 (96%) | 363 (100%) | 0 | 100 | 100 |
| 8 | CG | 369/378 (98%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 8 | CI | 364/378 (96%) | 364 (100%) | 0 | 100 | 100 |
| 8 | CK | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | CM | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | DA | 327/378 (86%) | 326 (100%) | 1 (0%) | 92 | 97 |
| 8 | DC | 363/378 (96%) | 362 (100%) | 1 (0%) | 92 | 97 |
| 8 | DE | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 8 | DG | 363/378 (96%) | 362 (100%) | 1 (0%) | 92 | 97 |
| 8 | DI | 363/378 (96%) | 361 (99%) | 2 (1%) | 86 | 94 |
| 8 | DK | 363/378 (96%) | 362 (100%) | 1 (0%) | 92 | 97 |
| 8 | DM | 364/378 (96%) | 364 (100%) | 0 | 100 | 100 |
| 8 | EC | 369/378 (98%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 8 | EE | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | EG | 368/378 (97%) | 367 (100%) | 1 (0%) | 92 | 97 |
| 8 | EI | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | EK | 368/378 (97%) | 368 (100%) | 0 | 100 | 100 |
| 8 | EM | 368/378 (97%) | 367 (100%) | 1 (0%) | 92 | 97 |
| 8 | FC | 364/378 (96%) | 364 (100%) | 0 | 100 | 100 |
| 8 | FE | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | FG | 363/378 (96%) | 362 (100%) | 1 (0%) | 92 | 97 |
| 8 | FI | 363/378 (96%) | 363 (100%) | 0 | 100 | 100 |
| 8 | FK | 363/378 (96%) | 360 (99%) | 3 (1%) | 81 | 91 |
| 8 | FM | 363/378 (96%) | 362 (100%) | 1 (0%) | 92 | 97 |
| 8 | GC | 368/378 (97%) | 368 (100%) | 0 | 100 | 100 |
| 8 | GE | 363/378 (96%) | 363 (100%) | 0 | 100 | 100 |
| 8 | GG | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | GI | 363/378 (96%) | 361 (99%) | 2 (1%) | 86 | 94 |
| 8 | GK | 365/378 (97%) | 364 (100%) | 1 (0%) | 92 | 97 |
| 8 | GM | 367/378 (97%) | 367 (100%) | 0 | 100 | 100 |
| 8 | HC | 364/378 (96%) | 362 (100%) | 2 (0%) | 88 | 95 |
| 8 | HE | 365/378 (97%) | 364 (100%) | 1 (0%) | 92 | 97 |
| 8 | HG | 365/378 (97%) | 365 (100%) | 0 | 100 | 100 |
| 8 | HI | 365/378 (97%) | 363 (100%) | 2 (0%) | 88 | 95 |
| 8 | HK | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | HM | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | HO | 329/378 (87%) | 327 (99%) | 2 (1%) | 86 | 94 |
| 8 | IC | 366/378 (97%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 8 | IE | 364/378 (96%) | 364 (100%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 8 | IG | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | II | 365/378 (97%) | 365 (100%) | 0 | 100 | 100 |
| 8 | IK | 369/378 (98%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 8 | IM | 364/378 (96%) | 364 (100%) | 0 | 100 | 100 |
| 8 | IO | 364/378 (96%) | 364 (100%) | 0 | 100 | 100 |
| 8 | JC | 369/378 (98%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 8 | JE | 363/378 (96%) | 363 (100%) | 0 | 100 | 100 |
| 8 | JG | 363/378 (96%) | 362 (100%) | 1 (0%) | 92 | 97 |
| 8 | JI | 363/378 (96%) | 363 (100%) | 0 | 100 | 100 |
| 8 | JK | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | JM | 363/378 (96%) | 363 (100%) | 0 | 100 | 100 |
| 8 | KC | 365/378 (97%) | 365 (100%) | 0 | 100 | 100 |
| 8 | KE | 365/378 (97%) | 363 (100%) | 2 (0%) | 88 | 95 |
| 8 | KG | 365/378 (97%) | 363 (100%) | 2 (0%) | 88 | 95 |
| 8 | KI | 363/378 (96%) | 362 (100%) | 1 (0%) | 92 | 97 |
| 8 | KK | 365/378 (97%) | 364 (100%) | 1 (0%) | 92 | 97 |
| 8 | KM | 368/378 (97%) | 367 (100%) | 1 (0%) | 92 | 97 |
| 8 | KO | 364/378 (96%) | 362 (100%) | 2 (0%) | 88 | 95 |
| 8 | LC | 365/378 (97%) | 364 (100%) | 1 (0%) | 92 | 97 |
| 8 | LE | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | LG | 366/378 (97%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 8 | LI | 367/378 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 8 | LK | 365/378 (97%) | 364 (100%) | 1 (0%) | 92 | 97 |
| 8 | LM | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | MC | 370/378 (98%) | 370 (100%) | 0 | 100 | 100 |
| 8 | ME | 365/378 (97%) | 364 (100%) | 1 (0%) | 92 | 97 |
| 8 | MG | 365/378 (97%) | 363 (100%) | 2 (0%) | 88 | 95 |
| 8 | MI | 366/378 (97%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 8 | MK | 370/378 (98%) | 368 (100%) | 2 (0%) | 88 | 95 |
| 8 | MM | 370/378 (98%) | 370 (100%) | 0 | 100 | 100 |
| 8 | NC | 370/378 (98%) | 367 (99%) | 3 (1%) | 81 | 91 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 8 | NE | 369/378 (98%) | 363 (98%) | 6 (2%) | 62 | 83 |
| 8 | NG | 369/378 (98%) | 367 (100%) | 2 (0%) | 88 | 95 |
| 8 | NI | 369/378 (98%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 8 | NK | 369/378 (98%) | 365 (99%) | 4 (1%) | 73 | 88 |
| 8 | NM | 369/378 (98%) | 366 (99%) | 3 (1%) | 81 | 91 |
| 8 | OC | 371/378 (98%) | 370 (100%) | 1 (0%) | 92 | 97 |
| 8 | OE | 370/378 (98%) | 370 (100%) | 0 | 100 | 100 |
| 8 | OG | 371/378 (98%) | 370 (100%) | 1 (0%) | 92 | 97 |
| 8 | OI | 371/378 (98%) | 370 (100%) | 1 (0%) | 92 | 97 |
| 8 | OK | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | OM | 371/378 (98%) | 370 (100%) | 1 (0%) | 92 | 97 |
| 8 | OO | 356/378 (94%) | 356 (100%) | 0 | 100 | 100 |
| 8 | PC | 371/378 (98%) | 371 (100%) | 0 | 100 | 100 |
| 8 | PE | 370/378 (98%) | 370 (100%) | 0 | 100 | 100 |
| 8 | PG | 371/378 (98%) | 369 (100%) | 2 (0%) | 88 | 95 |
| 8 | PI | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | PK | 370/378 (98%) | 368 (100%) | 2 (0%) | 88 | 95 |
| 8 | PM | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | PO | 369/378 (98%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 8 | QC | 370/378 (98%) | 370 (100%) | 0 | 100 | 100 |
| 8 | QE | 370/378 (98%) | 370 (100%) | 0 | 100 | 100 |
| 8 | QG | 370/378 (98%) | 369 (100%) | 1 (0%) | 92 | 97 |
| 8 | QI | 370/378 (98%) | 369 (100%) | 1 (0%) | 92 | 97 |
| 8 | QK | 370/378 (98%) | 368 (100%) | 2 (0%) | 88 | 95 |
| 8 | QM | 370/378 (98%) | 369 (100%) | 1 (0%) | 92 | 97 |
| 8 | QO | 370/378 (98%) | 370 (100%) | 0 | 100 | 100 |
| 8 | RC | 349/378 (92%) | 346 (99%) | 3 (1%) | 78 | 90 |
| 8 | RE | 363/378 (96%) | 363 (100%) | 0 | 100 | 100 |
| 8 | RG | 365/378 (97%) | 365 (100%) | 0 | 100 | 100 |
| 8 | RI | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | RK | 370/378 (98%) | 370 (100%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 8 | RM | 370/378 (98%) | 370 (100%) | 0 | 100 | 100 |
| 8 | RO | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | SE | 362/378 (96%) | 361 (100%) | 1 (0%) | 92 | 97 |
| 8 | SG | 363/378 (96%) | 362 (100%) | 1 (0%) | 92 | 97 |
| 8 | SI | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | SK | 364/378 (96%) | 361 (99%) | 3 (1%) | 81 | 91 |
| 8 | SM | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | SO | 364/378 (96%) | 364 (100%) | 0 | 100 | 100 |
| 8 | TE | 362/378 (96%) | 361 (100%) | 1 (0%) | 92 | 97 |
| 8 | TG | 363/378 (96%) | 363 (100%) | 0 | 100 | 100 |
| 8 | TI | 364/378 (96%) | 364 (100%) | 0 | 100 | 100 |
| 8 | TK | 362/378 (96%) | 360 (99%) | 2 (1%) | 86 | 94 |
| 8 | TM | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | TO | 362/378 (96%) | 362 (100%) | 0 | 100 | 100 |
| 8 | UE | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | UG | 365/378 (97%) | 365 (100%) | 0 | 100 | 100 |
| 8 | UI | 365/378 (97%) | 363 (100%) | 2 (0%) | 88 | 95 |
| 8 | UK | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | UM | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | UO | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | VE | 369/378 (98%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 8 | VG | 366/378 (97%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 8 | VI | 369/378 (98%) | 369 (100%) | 0 | 100 | 100 |
| 8 | VK | 364/378 (96%) | 363 (100%) | 1 (0%) | 92 | 97 |
| 8 | VM | 369/378 (98%) | 367 (100%) | 2 (0%) | 88 | 95 |
| 8 | VO | 364/378 (96%) | 364 (100%) | 0 | 100 | 100 |
| 8 | WE | 369/378 (98%) | 366 (99%) | 3 (1%) | 81 | 91 |
| 8 | WG | 363/378 (96%) | 362 (100%) | 1 (0%) | 92 | 97 |
| 8 | WI | 368/378 (97%) | 367 (100%) | 1 (0%) | 92 | 97 |
| 8 | WK | 363/378 (96%) | 363 (100%) | 0 | 100 | 100 |
| 8 | WM | 369/378 (98%) | 367 (100%) | 2 (0%) | 88 | 95 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 8 | WO | 364/378 (96%) | 364 (100%) | 0 | 100 | 100 |
| 9 | AB | 374/380 (98%) | 372 (100%) | 2 (0%) | 88 | 95 |
| 9 | AD | 374/380 (98%) | 373 (100%) | 1 (0%) | 92 | 97 |
| 9 | AF | 374/380 (98%) | 369 (99%) | 5 (1%) | 69 | 86 |
| 9 | AH | 374/380 (98%) | 372 (100%) | 2 (0%) | 88 | 95 |
| 9 | AJ | 374/380 (98%) | 372 (100%) | 2 (0%) | 88 | 95 |
| 9 | AL | 374/380 (98%) | 373 (100%) | 1 (0%) | 92 | 97 |
| 9 | BB | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 9 | BD | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | BF | 367/380 (97%) | 365 (100%) | 2 (0%) | 88 | 95 |
| 9 | BH | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | BJ | 368/380 (97%) | 365 (99%) | 3 (1%) | 81 | 91 |
| 9 | BL | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | CB | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 9 | CD | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | CF | 367/380 (97%) | 365 (100%) | 2 (0%) | 88 | 95 |
| 9 | CH | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | CJ | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 9 | CL | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | DB | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | DD | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | DF | 366/380 (96%) | 363 (99%) | 3 (1%) | 81 | 91 |
| 9 | DH | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | DJ | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | DL | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | EB | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | ED | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | EF | 366/380 (96%) | 363 (99%) | 3 (1%) | 81 | 91 |
| 9 | EH | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | EJ | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | EL | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 9 | EN | 367/380 (97%) | 367 (100%) | 0 | 100 | 100 |
| 9 | FB | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | FD | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | FF | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | FH | 366/380 (96%) | 363 (99%) | 3 (1%) | 81 | 91 |
| 9 | FJ | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | FL | 366/380 (96%) | 363 (99%) | 3 (1%) | 81 | 91 |
| 9 | FN | 367/380 (97%) | 364 (99%) | 3 (1%) | 81 | 91 |
| 9 | GB | 353/380 (93%) | 351 (99%) | 2 (1%) | 86 | 94 |
| 9 | GD | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | GF | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 9 | GH | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | GJ | 368/380 (97%) | 365 (99%) | 3 (1%) | 81 | 91 |
| 9 | GL | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | GN | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | HB | 367/380 (97%) | 364 (99%) | 3 (1%) | 81 | 91 |
| 9 | HD | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | HF | 367/380 (97%) | 367 (100%) | 0 | 100 | 100 |
| 9 | HH | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | HJ | 367/380 (97%) | 364 (99%) | 3 (1%) | 81 | 91 |
| 9 | HL | 366/380 (96%) | 362 (99%) | 4 (1%) | 73 | 88 |
| 9 | HN | 365/380 (96%) | 363 (100%) | 2 (0%) | 88 | 95 |
| 9 | IB | 353/380 (93%) | 352 (100%) | 1 (0%) | 92 | 97 |
| 9 | ID | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | IF | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 9 | IH | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | IJ | 368/380 (97%) | 367 (100%) | 1 (0%) | 92 | 97 |
| 9 | IL | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | IN | 367/380 (97%) | 364 (99%) | 3 (1%) | 81 | 91 |
| 9 | JB | 366/380 (96%) | 363 (99%) | 3 (1%) | 81 | 91 |
| 9 | JD | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|----------------|------------|----------|-------------|-----|
| 9 | JF | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 9 | JH | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | JJ | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | JL | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | JN | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | KB | 355/380 (93%) | 354 (100%) | 1 (0%) | 92 | 97 |
| 9 | KD | 369/380 (97%) | 367 (100%) | 2 (0%) | 88 | 95 |
| 9 | KF | 366/380 (96%) | 363 (99%) | 3 (1%) | 81 | 91 |
| 9 | KH | 369/380 (97%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 9 | KJ | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | KL | 369/380 (97%) | 367 (100%) | 2 (0%) | 88 | 95 |
| 9 | KN | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | LB | 376/380 (99%) | 374 (100%) | 2 (0%) | 88 | 95 |
| 9 | LD | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | LF | 376/380 (99%) | 374 (100%) | 2 (0%) | 88 | 95 |
| 9 | LH | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | LJ | 379/380 (100%) | 376 (99%) | 3 (1%) | 81 | 91 |
| 9 | LL | 366/380 (96%) | 363 (99%) | 3 (1%) | 81 | 91 |
| 9 | LN | 376/380 (99%) | 375 (100%) | 1 (0%) | 92 | 97 |
| 9 | MB | 368/380 (97%) | 368 (100%) | 0 | 100 | 100 |
| 9 | MD | 370/380 (97%) | 369 (100%) | 1 (0%) | 92 | 97 |
| 9 | MF | 369/380 (97%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 9 | MH | 370/380 (97%) | 369 (100%) | 1 (0%) | 92 | 97 |
| 9 | MJ | 370/380 (97%) | 369 (100%) | 1 (0%) | 92 | 97 |
| 9 | ML | 370/380 (97%) | 367 (99%) | 3 (1%) | 81 | 91 |
| 9 | MN | 368/380 (97%) | 368 (100%) | 0 | 100 | 100 |
| 9 | NB | 367/380 (97%) | 364 (99%) | 3 (1%) | 81 | 91 |
| 9 | ND | 367/380 (97%) | 365 (100%) | 2 (0%) | 88 | 95 |
| 9 | NF | 368/380 (97%) | 364 (99%) | 4 (1%) | 73 | 88 |
| 9 | NH | 367/380 (97%) | 365 (100%) | 2 (0%) | 88 | 95 |
| 9 | NJ | 368/380 (97%) | 364 (99%) | 4 (1%) | 73 | 88 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 9 | NL | 367/380 (97%) | 363 (99%) | 4 (1%) | 73 | 88 |
| 9 | NN | 367/380 (97%) | 365 (100%) | 2 (0%) | 88 | 95 |
| 9 | OB | 369/380 (97%) | 369 (100%) | 0 | 100 | 100 |
| 9 | OD | 368/380 (97%) | 368 (100%) | 0 | 100 | 100 |
| 9 | OF | 370/380 (97%) | 369 (100%) | 1 (0%) | 92 | 97 |
| 9 | OH | 368/380 (97%) | 368 (100%) | 0 | 100 | 100 |
| 9 | OJ | 370/380 (97%) | 369 (100%) | 1 (0%) | 92 | 97 |
| 9 | OL | 368/380 (97%) | 367 (100%) | 1 (0%) | 92 | 97 |
| 9 | ON | 369/380 (97%) | 368 (100%) | 1 (0%) | 92 | 97 |
| 9 | PD | 368/380 (97%) | 368 (100%) | 0 | 100 | 100 |
| 9 | PF | 370/380 (97%) | 370 (100%) | 0 | 100 | 100 |
| 9 | PH | 366/380 (96%) | 363 (99%) | 3 (1%) | 81 | 91 |
| 9 | PJ | 368/380 (97%) | 367 (100%) | 1 (0%) | 92 | 97 |
| 9 | PL | 368/380 (97%) | 367 (100%) | 1 (0%) | 92 | 97 |
| 9 | PN | 368/380 (97%) | 367 (100%) | 1 (0%) | 92 | 97 |
| 9 | QD | 367/380 (97%) | 367 (100%) | 0 | 100 | 100 |
| 9 | QF | 368/380 (97%) | 368 (100%) | 0 | 100 | 100 |
| 9 | QH | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | QJ | 368/380 (97%) | 366 (100%) | 2 (0%) | 88 | 95 |
| 9 | QL | 367/380 (97%) | 367 (100%) | 0 | 100 | 100 |
| 9 | QN | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 9 | RD | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | RF | 368/380 (97%) | 367 (100%) | 1 (0%) | 92 | 97 |
| 9 | RH | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | RJ | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 9 | RL | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | RN | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 9 | SD | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | SF | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | SH | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | SJ | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 9 | SL | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | SN | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | TD | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | TF | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 9 | TH | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | TJ | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | TL | 366/380 (96%) | 363 (99%) | 3 (1%) | 81 | 91 |
| 9 | TN | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | TP | 361/380 (95%) | 360 (100%) | 1 (0%) | 92 | 97 |
| 9 | UD | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | UF | 367/380 (97%) | 364 (99%) | 3 (1%) | 81 | 91 |
| 9 | UH | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | UJ | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 9 | UL | 366/380 (96%) | 361 (99%) | 5 (1%) | 67 | 85 |
| 9 | UN | 367/380 (97%) | 363 (99%) | 4 (1%) | 73 | 88 |
| 9 | UP | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 9 | VD | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | VF | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 9 | VH | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | VJ | 367/380 (97%) | 365 (100%) | 2 (0%) | 88 | 95 |
| 9 | VL | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | VN | 367/380 (97%) | 364 (99%) | 3 (1%) | 81 | 91 |
| 9 | VP | 367/380 (97%) | 364 (99%) | 3 (1%) | 81 | 91 |
| 9 | WD | 366/380 (96%) | 366 (100%) | 0 | 100 | 100 |
| 9 | WF | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | WH | 366/380 (96%) | 365 (100%) | 1 (0%) | 92 | 97 |
| 9 | WJ | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | WL | 366/380 (96%) | 364 (100%) | 2 (0%) | 88 | 95 |
| 9 | WN | 367/380 (97%) | 367 (100%) | 0 | 100 | 100 |
| 9 | WP | 367/380 (97%) | 366 (100%) | 1 (0%) | 92 | 97 |
| 10 | B | 163/455 (36%) | 162 (99%) | 1 (1%) | 86 | 94 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 10 | C | 322/455 (71%) | 320 (99%) | 2 (1%) | 86 | 94 |
| 11 | B0 | 176/388 (45%) | 175 (99%) | 1 (1%) | 86 | 94 |
| 11 | B1 | 353/388 (91%) | 353 (100%) | 0 | 100 | 100 |
| 11 | B2 | 352/388 (91%) | 352 (100%) | 0 | 100 | 100 |
| 11 | B3 | 318/388 (82%) | 318 (100%) | 0 | 100 | 100 |
| 11 | B4 | 45/388 (12%) | 45 (100%) | 0 | 100 | 100 |
| 12 | C0 | 33/446 (7%) | 33 (100%) | 0 | 100 | 100 |
| 12 | C1 | 303/446 (68%) | 302 (100%) | 1 (0%) | 92 | 97 |
| 12 | C2 | 356/446 (80%) | 353 (99%) | 3 (1%) | 81 | 91 |
| 12 | C3 | 357/446 (80%) | 357 (100%) | 0 | 100 | 100 |
| 12 | C4 | 201/446 (45%) | 201 (100%) | 0 | 100 | 100 |
| 13 | D | 163/393 (42%) | 163 (100%) | 0 | 100 | 100 |
| 14 | D0 | 237/387 (61%) | 236 (100%) | 1 (0%) | 91 | 97 |
| 14 | D1 | 355/387 (92%) | 355 (100%) | 0 | 100 | 100 |
| 14 | D2 | 357/387 (92%) | 356 (100%) | 1 (0%) | 92 | 97 |
| 14 | D3 | 285/387 (74%) | 285 (100%) | 0 | 100 | 100 |
| 15 | E | 246/266 (92%) | 246 (100%) | 0 | 100 | 100 |
| 15 | F | 246/266 (92%) | 246 (100%) | 0 | 100 | 100 |
| 16 | F0 | 146/199 (73%) | 146 (100%) | 0 | 100 | 100 |
| 16 | F1 | 149/199 (75%) | 149 (100%) | 0 | 100 | 100 |
| 16 | F3 | 146/199 (73%) | 146 (100%) | 0 | 100 | 100 |
| 16 | F4 | 149/199 (75%) | 149 (100%) | 0 | 100 | 100 |
| 16 | F6 | 146/199 (73%) | 146 (100%) | 0 | 100 | 100 |
| 16 | F7 | 149/199 (75%) | 148 (99%) | 1 (1%) | 84 | 93 |
| 16 | G0 | 148/199 (74%) | 148 (100%) | 0 | 100 | 100 |
| 16 | G1 | 147/199 (74%) | 146 (99%) | 1 (1%) | 84 | 93 |
| 16 | G3 | 146/199 (73%) | 146 (100%) | 0 | 100 | 100 |
| 16 | G4 | 149/199 (75%) | 148 (99%) | 1 (1%) | 84 | 93 |
| 16 | G6 | 146/199 (73%) | 145 (99%) | 1 (1%) | 84 | 93 |
| 16 | G7 | 149/199 (75%) | 148 (99%) | 1 (1%) | 84 | 93 |
| 16 | H0 | 146/199 (73%) | 146 (100%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 16 | H1 | 149/199 (75%) | 149 (100%) | 0 | 100 | 100 |
| 17 | G | 88/115 (76%) | 87 (99%) | 1 (1%) | 73 | 88 |
| 18 | H | 66/235 (28%) | 66 (100%) | 0 | 100 | 100 |
| 18 | I | 106/235 (45%) | 106 (100%) | 0 | 100 | 100 |
| 18 | J | 106/235 (45%) | 106 (100%) | 0 | 100 | 100 |
| 18 | K | 106/235 (45%) | 105 (99%) | 1 (1%) | 78 | 90 |
| 18 | L | 106/235 (45%) | 105 (99%) | 1 (1%) | 78 | 90 |
| 18 | M | 106/235 (45%) | 106 (100%) | 0 | 100 | 100 |
| 18 | N | 106/235 (45%) | 105 (99%) | 1 (1%) | 78 | 90 |
| 19 | I1 | 86/139 (62%) | 84 (98%) | 2 (2%) | 50 | 76 |
| 20 | J1 | 75/252 (30%) | 75 (100%) | 0 | 100 | 100 |
| 20 | J2 | 200/252 (79%) | 199 (100%) | 1 (0%) | 88 | 95 |
| 20 | J3 | 200/252 (79%) | 199 (100%) | 1 (0%) | 88 | 95 |
| 20 | J4 | 182/252 (72%) | 180 (99%) | 2 (1%) | 73 | 88 |
| 20 | J5 | 58/252 (23%) | 58 (100%) | 0 | 100 | 100 |
| 21 | K1 | 105/123 (85%) | 104 (99%) | 1 (1%) | 76 | 88 |
| 22 | L1 | 113/131 (86%) | 113 (100%) | 0 | 100 | 100 |
| 22 | L2 | 82/131 (63%) | 82 (100%) | 0 | 100 | 100 |
| 23 | M1 | 87/180 (48%) | 87 (100%) | 0 | 100 | 100 |
| 23 | M2 | 86/180 (48%) | 86 (100%) | 0 | 100 | 100 |
| 23 | M3 | 87/180 (48%) | 87 (100%) | 0 | 100 | 100 |
| 23 | M4 | 87/180 (48%) | 86 (99%) | 1 (1%) | 73 | 88 |
| 24 | O | 21/342 (6%) | 21 (100%) | 0 | 100 | 100 |
| 24 | P | 331/342 (97%) | 331 (100%) | 0 | 100 | 100 |
| 24 | Q | 37/342 (11%) | 36 (97%) | 1 (3%) | 44 | 73 |
| 24 | R | 194/342 (57%) | 194 (100%) | 0 | 100 | 100 |
| 24 | S | 150/342 (44%) | 150 (100%) | 0 | 100 | 100 |
| 25 | T | 439/577 (76%) | 438 (100%) | 1 (0%) | 93 | 98 |
| 25 | U | 440/577 (76%) | 439 (100%) | 1 (0%) | 93 | 98 |
| 25 | V | 440/577 (76%) | 440 (100%) | 0 | 100 | 100 |
| 26 | W | 561/688 (82%) | 559 (100%) | 2 (0%) | 91 | 97 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------|------------|----------|-------------|-----|
| 26 | X | 645/688 (94%) | 643 (100%) | 2 (0%) | 92 | 97 |
| 26 | Y | 645/688 (94%) | 643 (100%) | 2 (0%) | 92 | 97 |
| 26 | Z | 471/688 (68%) | 469 (100%) | 2 (0%) | 91 | 97 |
| 27 | XA | 174/180 (97%) | 174 (100%) | 0 | 100 | 100 |
| 27 | XB | 174/180 (97%) | 173 (99%) | 1 (1%) | 86 | 94 |
| 27 | XC | 174/180 (97%) | 173 (99%) | 1 (1%) | 86 | 94 |
| 27 | XD | 174/180 (97%) | 174 (100%) | 0 | 100 | 100 |
| 27 | XE | 174/180 (97%) | 173 (99%) | 1 (1%) | 86 | 94 |
| 27 | XF | 174/180 (97%) | 174 (100%) | 0 | 100 | 100 |
| 27 | XG | 174/180 (97%) | 174 (100%) | 0 | 100 | 100 |
| 28 | YB | 192/227 (85%) | 192 (100%) | 0 | 100 | 100 |
| 28 | YC | 192/227 (85%) | 192 (100%) | 0 | 100 | 100 |
| 28 | YD | 192/227 (85%) | 192 (100%) | 0 | 100 | 100 |
| 28 | YE | 192/227 (85%) | 192 (100%) | 0 | 100 | 100 |
| 28 | YF | 192/227 (85%) | 192 (100%) | 0 | 100 | 100 |
| 28 | YG | 192/227 (85%) | 192 (100%) | 0 | 100 | 100 |
| 29 | a | 162/495 (33%) | 161 (99%) | 1 (1%) | 86 | 94 |
| 29 | b | 302/495 (61%) | 302 (100%) | 0 | 100 | 100 |
| 29 | c | 263/495 (53%) | 261 (99%) | 2 (1%) | 81 | 91 |
| 29 | d | 189/495 (38%) | 188 (100%) | 1 (0%) | 88 | 95 |
| 30 | e | 514/523 (98%) | 514 (100%) | 0 | 100 | 100 |
| 30 | f | 514/523 (98%) | 513 (100%) | 1 (0%) | 93 | 98 |
| 30 | g | 514/523 (98%) | 512 (100%) | 2 (0%) | 91 | 97 |
| 31 | h | 133/233 (57%) | 132 (99%) | 1 (1%) | 81 | 91 |
| 31 | i | 228/233 (98%) | 228 (100%) | 0 | 100 | 100 |
| 31 | j | 226/233 (97%) | 225 (100%) | 1 (0%) | 91 | 97 |
| 31 | k | 228/233 (98%) | 228 (100%) | 0 | 100 | 100 |
| 32 | l | 100/153 (65%) | 100 (100%) | 0 | 100 | 100 |
| 32 | m | 100/153 (65%) | 100 (100%) | 0 | 100 | 100 |
| 32 | n | 100/153 (65%) | 100 (100%) | 0 | 100 | 100 |
| 33 | o | 366/495 (74%) | 362 (99%) | 4 (1%) | 73 | 88 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|---------------------|---------------|----------|-------------|-----|
| 33 | o1 | 32/495 (6%) | 32 (100%) | 0 | 100 | 100 |
| 33 | p | 134/495 (27%) | 132 (98%) | 2 (2%) | 65 | 84 |
| 34 | q | 100/153 (65%) | 100 (100%) | 0 | 100 | 100 |
| 34 | r | 100/153 (65%) | 100 (100%) | 0 | 100 | 100 |
| 34 | s | 100/153 (65%) | 100 (100%) | 0 | 100 | 100 |
| 35 | y | 58/117 (50%) | 58 (100%) | 0 | 100 | 100 |
| 35 | z | 98/117 (84%) | 98 (100%) | 0 | 100 | 100 |
| All | All | 134531/150776 (89%) | 134112 (100%) | 419 (0%) | 92 | 97 |

5 of 419 residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 9 | NB | 274 | THR |
| 8 | PK | 221 | ARG |
| 27 | XE | 121 | MET |
| 9 | ND | 285 | THR |
| 8 | NK | 279 | GLU |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 252 such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 21 | K1 | 18 | GLN |
| 9 | UP | 292 | GLN |
| 9 | MJ | 298 | ASN |
| 8 | UO | 102 | ASN |
| 9 | WH | 204 | ASN |

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 451 ligands modelled in this entry, 149 are monoatomic - leaving 302 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 36 | GTP | PO | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.59 | 7 (21%) |
| 36 | GTP | KE | 501 | - | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.63 | 7 (21%) |
| 36 | GTP | KO | 501 | 37 | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.67 | 7 (21%) |
| 38 | GDP | PL | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | DM | 501 | 37 | 26,34,34 | 1.10 | 2 (7%) | 32,54,54 | 1.68 | 6 (18%) |
| 38 | GDP | AB | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.41 | 4 (13%) |
| 36 | GTP | RK | 501 | 37 | 26,34,34 | 1.20 | 2 (7%) | 32,54,54 | 1.67 | 7 (21%) |
| 36 | GTP | TG | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.61 | 7 (21%) |
| 38 | GDP | DH | 502 | - | 24,30,30 | 0.98 | 1 (4%) | 30,47,47 | 1.29 | 4 (13%) |
| 38 | GDP | BD | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 38 | GDP | GF | 502 | - | 24,30,30 | 0.92 | 1 (4%) | 30,47,47 | 1.29 | 4 (13%) |
| 38 | GDP | DL | 502 | - | 24,30,30 | 0.97 | 1 (4%) | 30,47,47 | 1.29 | 4 (13%) |
| 36 | GTP | QO | 501 | 37 | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.64 | 7 (21%) |
| 38 | GDP | WF | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.31 | 4 (13%) |
| 36 | GTP | II | 501 | 37 | 26,34,34 | 1.13 | 2 (7%) | 32,54,54 | 1.64 | 7 (21%) |
| 38 | GDP | LN | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.38 | 4 (13%) |
| 36 | GTP | IO | 501 | 37 | 26,34,34 | 1.13 | 2 (7%) | 32,54,54 | 1.63 | 7 (21%) |
| 36 | GTP | GI | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.55 | 7 (21%) |
| 36 | GTP | RG | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.58 | 7 (21%) |
| 38 | GDP | MD | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.33 | 4 (13%) |
| 38 | GDP | RJ | 502 | - | 24,30,30 | 0.98 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 38 | GDP | WL | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 36 | GTP | AG | 501 | 37 | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.55 | 7 (21%) |
| 36 | GTP | TO | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.55 | 7 (21%) |
| 36 | GTP | KI | 501 | - | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.62 | 7 (21%) |
| 38 | GDP | TJ | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.31 | 4 (13%) |
| 38 | GDP | WJ | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.32 | 4 (13%) |
| 38 | GDP | BB | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.37 | 4 (13%) |
| 36 | GTP | OI | 501 | - | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.71 | 6 (18%) |
| 38 | GDP | TF | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.29 | 4 (13%) |
| 38 | GDP | TP | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 36 | GTP | OM | 501 | 37 | 26,34,34 | 1.19 | 2 (7%) | 32,54,54 | 1.58 | 7 (21%) |
| 36 | GTP | HC | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.51 | 7 (21%) |
| 38 | GDP | IF | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 38 | GDP | RF | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.34 | 5 (16%) |
| 36 | GTP | CI | 501 | 37 | 26,34,34 | 1.13 | 2 (7%) | 32,54,54 | 1.66 | 6 (18%) |
| 36 | GTP | DE | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.55 | 6 (18%) |
| 38 | GDP | JJ | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.33 | 4 (13%) |
| 38 | GDP | CB | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.39 | 4 (13%) |
| 36 | GTP | OC | 501 | 37 | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.70 | 7 (21%) |
| 38 | GDP | DD | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.28 | 4 (13%) |
| 36 | GTP | AA | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.53 | 7 (21%) |
| 36 | GTP | PC | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.59 | 6 (18%) |
| 36 | GTP | HI | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.68 | 7 (21%) |
| 36 | GTP | WG | 501 | 37 | 26,34,34 | 1.13 | 2 (7%) | 32,54,54 | 1.69 | 6 (18%) |
| 38 | GDP | HL | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | PJ | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | JN | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.33 | 4 (13%) |
| 36 | GTP | PE | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.56 | 7 (21%) |
| 36 | GTP | HM | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.55 | 7 (21%) |
| 36 | GTP | AI | 501 | 37 | 26,34,34 | 1.20 | 2 (7%) | 32,54,54 | 1.53 | 7 (21%) |
| 38 | GDP | BJ | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.39 | 4 (13%) |
| 36 | GTP | VE | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.62 | 7 (21%) |
| 36 | GTP | WO | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.55 | 6 (18%) |
| 36 | GTP | GM | 501 | 37 | 26,34,34 | 1.13 | 2 (7%) | 32,54,54 | 1.57 | 6 (18%) |
| 38 | GDP | JL | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 38 | GDP | WN | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.31 | 4 (13%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 38 | GDP | IB | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | PK | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.50 | 7 (21%) |
| 38 | GDP | UN | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.33 | 4 (13%) |
| 36 | GTP | VO | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.61 | 7 (21%) |
| 38 | GDP | EH | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.30 | 4 (13%) |
| 36 | GTP | HG | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.60 | 7 (21%) |
| 36 | GTP | RM | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.59 | 7 (21%) |
| 38 | GDP | JF | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.31 | 4 (13%) |
| 36 | GTP | GE | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.53 | 7 (21%) |
| 36 | GTP | CA | 501 | 37 | 26,34,34 | 1.12 | 2 (7%) | 32,54,54 | 1.58 | 6 (18%) |
| 36 | GTP | OK | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.53 | 6 (18%) |
| 38 | GDP | ML | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.32 | 4 (13%) |
| 38 | GDP | SH | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.32 | 5 (16%) |
| 38 | GDP | UD | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | VN | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 38 | GDP | KJ | 502 | - | 24,30,30 | 0.97 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 36 | GTP | SI | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.47 | 7 (21%) |
| 36 | GTP | LM | 501 | - | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.51 | 7 (21%) |
| 38 | GDP | JD | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 36 | GTP | KK | 501 | - | 26,34,34 | 1.20 | 2 (7%) | 32,54,54 | 1.63 | 7 (21%) |
| 38 | GDP | FN | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 5 (16%) |
| 38 | GDP | NH | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 36 | GTP | DK | 501 | 37 | 26,34,34 | 1.12 | 2 (7%) | 32,54,54 | 1.69 | 6 (18%) |
| 36 | GTP | AC | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.53 | 7 (21%) |
| 36 | GTP | LI | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.57 | 7 (21%) |
| 36 | GTP | NK | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.58 | 7 (21%) |
| 38 | GDP | KN | 502 | - | 24,30,30 | 0.97 | 1 (4%) | 30,47,47 | 1.42 | 4 (13%) |
| 36 | GTP | NI | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.56 | 7 (21%) |
| 38 | GDP | LF | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 36 | GTP | MI | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.59 | 7 (21%) |
| 38 | GDP | BF | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.40 | 4 (13%) |
| 38 | GDP | OF | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 38 | GDP | PN | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | SD | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.36 | 5 (16%) |
| 36 | GTP | SK | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.46 | 7 (21%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 36 | GTP | VK | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.63 | 7 (21%) |
| 38 | GDP | SL | 502 | - | 24,30,30 | 0.92 | 1 (4%) | 30,47,47 | 1.35 | 5 (16%) |
| 38 | GDP | RD | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.37 | 5 (16%) |
| 36 | GTP | MG | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.57 | 7 (21%) |
| 36 | GTP | SG | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.52 | 7 (21%) |
| 36 | GTP | DA | 501 | 37 | 26,34,34 | 1.10 | 2 (7%) | 32,54,54 | 1.53 | 6 (18%) |
| 38 | GDP | PD | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 36 | GTP | VG | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.60 | 7 (21%) |
| 38 | GDP | QD | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 38 | GDP | SF | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.25 | 4 (13%) |
| 36 | GTP | EK | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.59 | 7 (21%) |
| 36 | GTP | IC | 501 | 37 | 26,34,34 | 1.13 | 2 (7%) | 32,54,54 | 1.56 | 7 (21%) |
| 36 | GTP | WE | 501 | 37 | 26,34,34 | 1.12 | 2 (7%) | 32,54,54 | 1.55 | 6 (18%) |
| 36 | GTP | NC | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.59 | 7 (21%) |
| 38 | GDP | WH | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.32 | 4 (13%) |
| 36 | GTP | IG | 501 | 37 | 26,34,34 | 1.12 | 2 (7%) | 32,54,54 | 1.63 | 6 (18%) |
| 38 | GDP | MJ | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 38 | GDP | KD | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | TN | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.32 | 4 (13%) |
| 38 | GDP | QL | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | MM | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.56 | 7 (21%) |
| 36 | GTP | JC | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.60 | 6 (18%) |
| 36 | GTP | SO | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.49 | 7 (21%) |
| 38 | GDP | GN | 502 | - | 24,30,30 | 0.97 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 38 | GDP | VH | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.33 | 4 (13%) |
| 38 | GDP | DB | 502 | - | 24,30,30 | 0.97 | 1 (4%) | 30,47,47 | 1.28 | 4 (13%) |
| 36 | GTP | CE | 501 | 37 | 26,34,34 | 1.13 | 2 (7%) | 32,54,54 | 1.57 | 7 (21%) |
| 38 | GDP | LB | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.37 | 4 (13%) |
| 36 | GTP | RI | 501 | 37 | 26,34,34 | 1.19 | 2 (7%) | 32,54,54 | 1.65 | 7 (21%) |
| 38 | GDP | EN | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.32 | 4 (13%) |
| 38 | GDP | AJ | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.44 | 4 (13%) |
| 36 | GTP | RO | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.54 | 7 (21%) |
| 36 | GTP | IE | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.62 | 7 (21%) |
| 38 | GDP | NF | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.39 | 4 (13%) |
| 38 | GDP | FH | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.33 | 5 (16%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 38 | GDP | IL | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 38 | GDP | SN | 502 | - | 24,30,30 | 0.92 | 1 (4%) | 30,47,47 | 1.34 | 5 (16%) |
| 38 | GDP | GD | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 36 | GTP | SM | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.48 | 7 (21%) |
| 36 | GTP | GG | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.53 | 7 (21%) |
| 38 | GDP | MB | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.39 | 4 (13%) |
| 38 | GDP | OD | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.37 | 4 (13%) |
| 36 | GTP | LE | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.63 | 7 (21%) |
| 36 | GTP | BI | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.60 | 7 (21%) |
| 36 | GTP | DG | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.63 | 6 (18%) |
| 36 | GTP | NM | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.52 | 7 (21%) |
| 38 | GDP | HD | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 38 | GDP | KH | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.31 | 4 (13%) |
| 36 | GTP | SE | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.54 | 7 (21%) |
| 38 | GDP | MF | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.32 | 4 (13%) |
| 38 | GDP | EB | 502 | - | 24,30,30 | 0.97 | 1 (4%) | 30,47,47 | 1.32 | 4 (13%) |
| 36 | GTP | IM | 501 | 37 | 26,34,34 | 1.12 | 2 (7%) | 32,54,54 | 1.63 | 6 (18%) |
| 38 | GDP | FF | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.33 | 4 (13%) |
| 36 | GTP | JM | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.61 | 7 (21%) |
| 38 | GDP | IN | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | GH | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | BM | 501 | 37 | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.61 | 7 (21%) |
| 36 | GTP | DC | 501 | 37 | 26,34,34 | 1.13 | 2 (7%) | 32,54,54 | 1.60 | 6 (18%) |
| 38 | GDP | AD | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.38 | 4 (13%) |
| 38 | GDP | AF | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.40 | 4 (13%) |
| 38 | GDP | MH | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.29 | 4 (13%) |
| 38 | GDP | ND | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | QF | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 36 | GTP | LG | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.60 | 7 (21%) |
| 38 | GDP | KL | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 36 | GTP | MK | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.58 | 7 (21%) |
| 36 | GTP | FE | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.54 | 7 (21%) |
| 38 | GDP | RL | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.32 | 4 (13%) |
| 36 | GTP | TM | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.52 | 7 (21%) |
| 36 | GTP | QC | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.51 | 7 (21%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 36 | GTP | OO | 501 | 37 | 26,34,34 | 1.19 | 2 (7%) | 32,54,54 | 1.65 | 7 (21%) |
| 38 | GDP | RH | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.31 | 5 (16%) |
| 38 | GDP | VL | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | OG | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.55 | 7 (21%) |
| 38 | GDP | CF | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.32 | 4 (13%) |
| 36 | GTP | MC | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.55 | 7 (21%) |
| 38 | GDP | TH | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 36 | GTP | FK | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.42 | 6 (18%) |
| 36 | GTP | TI | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.49 | 7 (21%) |
| 38 | GDP | GB | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 38 | GDP | VJ | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.37 | 4 (13%) |
| 38 | GDP | TL | 502 | - | 24,30,30 | 0.92 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | CM | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.63 | 7 (21%) |
| 36 | GTP | PG | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.61 | 7 (21%) |
| 38 | GDP | AH | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.39 | 4 (13%) |
| 38 | GDP | UF | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | RC | 501 | - | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.56 | 7 (21%) |
| 38 | GDP | LD | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | AL | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.40 | 4 (13%) |
| 38 | GDP | CD | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | VP | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | BC | 501 | 37 | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.61 | 7 (21%) |
| 36 | GTP | PM | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.63 | 7 (21%) |
| 36 | GTP | FI | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.44 | 6 (18%) |
| 38 | GDP | KB | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.39 | 4 (13%) |
| 38 | GDP | WP | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.32 | 4 (13%) |
| 36 | GTP | BA | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.61 | 7 (21%) |
| 36 | GTP | QI | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.61 | 7 (21%) |
| 36 | GTP | AK | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.53 | 7 (21%) |
| 38 | GDP | QJ | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | HJ | 502 | - | 24,30,30 | 0.97 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | BE | 501 | 37 | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.59 | 7 (21%) |
| 38 | GDP | NN | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.39 | 4 (13%) |
| 36 | GTP | QM | 501 | 37 | 26,34,34 | 1.19 | 2 (7%) | 32,54,54 | 1.56 | 7 (21%) |
| 36 | GTP | HO | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.58 | 7 (21%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 36 | GTP | TK | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.56 | 7 (21%) |
| 38 | GDP | DJ | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.31 | 4 (13%) |
| 36 | GTP | ME | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.54 | 7 (21%) |
| 38 | GDP | OB | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.42 | 4 (13%) |
| 38 | GDP | QN | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 36 | GTP | WI | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.64 | 6 (18%) |
| 38 | GDP | NB | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.39 | 4 (13%) |
| 36 | GTP | LC | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.62 | 7 (21%) |
| 36 | GTP | GC | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.49 | 7 (21%) |
| 36 | GTP | QE | 501 | 37 | 26,34,34 | 1.20 | 2 (7%) | 32,54,54 | 1.58 | 7 (21%) |
| 36 | GTP | VM | 501 | 37 | 26,34,34 | 1.13 | 2 (7%) | 32,54,54 | 1.53 | 7 (21%) |
| 36 | GTP | UO | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.59 | 7 (21%) |
| 36 | GTP | NG | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.60 | 8 (25%) |
| 38 | GDP | GL | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 38 | GDP | IJ | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.37 | 4 (13%) |
| 38 | GDP | EJ | 502 | - | 24,30,30 | 0.97 | 1 (4%) | 30,47,47 | 1.26 | 4 (13%) |
| 36 | GTP | BK | 501 | 37 | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.55 | 7 (21%) |
| 38 | GDP | EF | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.34 | 5 (16%) |
| 36 | GTP | RE | 501 | - | 26,34,34 | 1.20 | 2 (7%) | 32,54,54 | 1.64 | 7 (21%) |
| 36 | GTP | LK | 501 | 37 | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.62 | 7 (21%) |
| 38 | GDP | ON | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | UJ | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 36 | GTP | KM | 501 | 37 | 26,34,34 | 1.20 | 2 (7%) | 32,54,54 | 1.65 | 7 (21%) |
| 38 | GDP | JH | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 38 | GDP | IH | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.37 | 4 (13%) |
| 38 | GDP | CL | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 38 | GDP | UH | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 36 | GTP | UK | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.61 | 7 (21%) |
| 36 | GTP | JG | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.65 | 7 (21%) |
| 38 | GDP | CH | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.30 | 4 (13%) |
| 38 | GDP | ID | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | LH | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.30 | 4 (13%) |
| 36 | GTP | KG | 501 | - | 26,34,34 | 1.19 | 2 (7%) | 32,54,54 | 1.63 | 7 (21%) |
| 36 | GTP | EE | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.54 | 7 (21%) |
| 38 | GDP | NJ | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 38 | GDP | ED | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 38 | GDP | UL | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.33 | 4 (13%) |
| 36 | GTP | JK | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.58 | 7 (21%) |
| 36 | GTP | EC | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.55 | 7 (21%) |
| 38 | GDP | VD | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.32 | 4 (13%) |
| 36 | GTP | FM | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.47 | 7 (21%) |
| 38 | GDP | NL | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.38 | 4 (13%) |
| 38 | GDP | CJ | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.37 | 4 (13%) |
| 36 | GTP | BG | 501 | 37 | 26,34,34 | 1.19 | 2 (7%) | 32,54,54 | 1.58 | 7 (21%) |
| 36 | GTP | EM | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.59 | 7 (21%) |
| 38 | GDP | BH | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.38 | 4 (13%) |
| 36 | GTP | CG | 501 | 37 | 26,34,34 | 1.13 | 2 (7%) | 32,54,54 | 1.62 | 7 (21%) |
| 36 | GTP | KC | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.59 | 7 (21%) |
| 36 | GTP | NE | 501 | 37 | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.58 | 7 (21%) |
| 36 | GTP | AM | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.55 | 7 (21%) |
| 38 | GDP | PF | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | UE | 501 | 37 | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.62 | 7 (21%) |
| 36 | GTP | CK | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.64 | 7 (21%) |
| 36 | GTP | GK | 501 | 37 | 26,34,34 | 1.13 | 2 (7%) | 32,54,54 | 1.53 | 7 (21%) |
| 38 | GDP | UP | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 38 | GDP | HB | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 38 | GDP | OH | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 36 | GTP | IK | 501 | 37 | 26,34,34 | 1.13 | 2 (7%) | 32,54,54 | 1.63 | 7 (21%) |
| 38 | GDP | OJ | 502 | - | 24,30,30 | 0.97 | 1 (4%) | 30,47,47 | 1.33 | 4 (13%) |
| 38 | GDP | EL | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.25 | 4 (13%) |
| 36 | GTP | JE | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.57 | 7 (21%) |
| 36 | GTP | WM | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.53 | 6 (18%) |
| 38 | GDP | LL | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | VI | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.58 | 7 (21%) |
| 38 | GDP | PH | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | SJ | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.37 | 5 (16%) |
| 36 | GTP | QK | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.52 | 6 (18%) |
| 38 | GDP | HF | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | HE | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.59 | 7 (21%) |
| 38 | GDP | BL | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.37 | 4 (13%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 36 | GTP | UG | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.62 | 7 (21%) |
| 36 | GTP | FG | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.54 | 7 (21%) |
| 36 | GTP | HK | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.60 | 7 (21%) |
| 36 | GTP | EI | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.58 | 7 (21%) |
| 36 | GTP | AE | 501 | 37 | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.57 | 7 (21%) |
| 36 | GTP | PI | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.61 | 7 (21%) |
| 36 | GTP | UM | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.51 | 7 (21%) |
| 38 | GDP | FD | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.35 | 5 (16%) |
| 38 | GDP | JB | 502 | - | 24,30,30 | 0.96 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 38 | GDP | DF | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.31 | 4 (13%) |
| 38 | GDP | FB | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 38 | GDP | FJ | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.31 | 4 (13%) |
| 36 | GTP | QG | 501 | 37 | 26,34,34 | 1.18 | 2 (7%) | 32,54,54 | 1.60 | 7 (21%) |
| 38 | GDP | TD | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.36 | 4 (13%) |
| 38 | GDP | MN | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.38 | 4 (13%) |
| 38 | GDP | QH | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.33 | 4 (13%) |
| 38 | GDP | HH | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.31 | 4 (13%) |
| 38 | GDP | RN | 502 | - | 24,30,30 | 0.97 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | EG | 501 | 37 | 26,34,34 | 1.16 | 2 (7%) | 32,54,54 | 1.57 | 7 (21%) |
| 36 | GTP | TE | 501 | 37 | 26,34,34 | 1.12 | 2 (7%) | 32,54,54 | 1.56 | 6 (18%) |
| 36 | GTP | WK | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.63 | 6 (18%) |
| 38 | GDP | KF | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.38 | 4 (13%) |
| 38 | GDP | VF | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 36 | GTP | OE | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.58 | 7 (21%) |
| 38 | GDP | FL | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.31 | 5 (16%) |
| 38 | GDP | WD | 502 | - | 24,30,30 | 0.93 | 1 (4%) | 30,47,47 | 1.31 | 4 (13%) |
| 38 | GDP | LJ | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.41 | 4 (13%) |
| 36 | GTP | CC | 501 | 37 | 26,34,34 | 1.14 | 2 (7%) | 32,54,54 | 1.64 | 7 (21%) |
| 38 | GDP | GJ | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.34 | 4 (13%) |
| 36 | GTP | UI | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.53 | 7 (21%) |
| 38 | GDP | HN | 502 | - | 24,30,30 | 0.95 | 1 (4%) | 30,47,47 | 1.33 | 4 (13%) |
| 36 | GTP | FC | 501 | 37 | 26,34,34 | 1.15 | 2 (7%) | 32,54,54 | 1.50 | 7 (21%) |
| 38 | GDP | OL | 502 | - | 24,30,30 | 0.94 | 1 (4%) | 30,47,47 | 1.35 | 4 (13%) |
| 36 | GTP | JI | 501 | 37 | 26,34,34 | 1.17 | 2 (7%) | 32,54,54 | 1.67 | 7 (21%) |
| 36 | GTP | DI | 501 | 37 | 26,34,34 | 1.11 | 2 (7%) | 32,54,54 | 1.69 | 6 (18%) |

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|------------|---------|
| 36 | GTP | PO | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | KE | 501 | - | - | 7/18/38/38 | 0/3/3/3 |
| 36 | GTP | KO | 501 | 37 | - | 7/18/38/38 | 0/3/3/3 |
| 38 | GDP | PL | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | DM | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 38 | GDP | AB | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | RK | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 36 | GTP | TG | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | DH | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | BD | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | GF | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | DL | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | QO | 501 | 37 | - | 8/18/38/38 | 0/3/3/3 |
| 38 | GDP | WF | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | II | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | LN | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 36 | GTP | IO | 501 | 37 | - | 6/18/38/38 | 0/3/3/3 |
| 36 | GTP | GI | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | RG | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 38 | GDP | MD | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | RJ | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | WL | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | AG | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | TO | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | KI | 501 | - | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | TJ | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | WJ | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | BB | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | OI | 501 | - | - | 3/18/38/38 | 0/3/3/3 |
| 38 | GDP | TF | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | TP | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | OM | 501 | 37 | - | 7/18/38/38 | 0/3/3/3 |
| 36 | GTP | HC | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|------------|---------|
| 38 | GDP | IF | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | RF | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | CI | 501 | 37 | - | 8/18/38/38 | 0/3/3/3 |
| 36 | GTP | DE | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 38 | GDP | JJ | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | CB | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | OC | 501 | 37 | - | 6/18/38/38 | 0/3/3/3 |
| 38 | GDP | DD | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | AA | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | PC | 501 | 37 | - | 8/18/38/38 | 0/3/3/3 |
| 36 | GTP | HI | 501 | 37 | - | 8/18/38/38 | 0/3/3/3 |
| 36 | GTP | WG | 501 | 37 | - | 7/18/38/38 | 0/3/3/3 |
| 38 | GDP | HL | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | PJ | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | JN | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | PE | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | HM | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | AI | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | BJ | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 36 | GTP | VE | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | WO | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 36 | GTP | GM | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | JL | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | WN | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | IB | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | PK | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | UN | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | VO | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | EH | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | HG | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | RM | 501 | 37 | - | 6/18/38/38 | 0/3/3/3 |
| 38 | GDP | JF | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | GE | 501 | 37 | - | 6/18/38/38 | 0/3/3/3 |
| 36 | GTP | CA | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | OK | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | ML | 502 | - | - | 4/12/32/32 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|------------|---------|
| 38 | GDP | SH | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 38 | GDP | UD | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | VN | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | KJ | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 36 | GTP | SI | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | LM | 501 | - | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | JD | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | KK | 501 | - | - | 8/18/38/38 | 0/3/3/3 |
| 38 | GDP | FN | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 38 | GDP | NH | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | DK | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 36 | GTP | AC | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | LI | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | NK | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | KN | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 36 | GTP | NI | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | LF | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | MI | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | BF | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | OF | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | PN | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | SD | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 36 | GTP | SK | 501 | 37 | - | 6/18/38/38 | 0/3/3/3 |
| 36 | GTP | VK | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | SL | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 38 | GDP | RD | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | MG | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | SG | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | DA | 501 | 37 | - | 9/18/38/38 | 0/3/3/3 |
| 38 | GDP | PD | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 36 | GTP | VG | 501 | 37 | - | 8/18/38/38 | 0/3/3/3 |
| 38 | GDP | QD | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 38 | GDP | SF | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 36 | GTP | EK | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | IC | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|------------|---------|
| 36 | GTP | WE | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | NC | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | WH | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | IG | 501 | 37 | - | 7/18/38/38 | 0/3/3/3 |
| 38 | GDP | MJ | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | KD | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | TN | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 38 | GDP | QL | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 36 | GTP | MM | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | JC | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | SO | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 38 | GDP | GN | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | VH | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 38 | GDP | DB | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 36 | GTP | CE | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | LB | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | RI | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 38 | GDP | EN | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | AJ | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | RO | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | IE | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | NF | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | FH | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | IL | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | SN | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | GD | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 36 | GTP | SM | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | GG | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | MB | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | OD | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | LE | 501 | 37 | - | 9/18/38/38 | 0/3/3/3 |
| 36 | GTP | BI | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | DG | 501 | 37 | - | 8/18/38/38 | 0/3/3/3 |
| 36 | GTP | NM | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | HD | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | KH | 502 | - | - | 0/12/32/32 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|------------|---------|
| 36 | GTP | SE | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | MF | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | EB | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 36 | GTP | IM | 501 | 37 | - | 8/18/38/38 | 0/3/3/3 |
| 38 | GDP | FF | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | JM | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | IN | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | GH | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | BM | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | DC | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | AD | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | AF | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | MH | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | ND | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 38 | GDP | QF | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | LG | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | KL | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | MK | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | FE | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | RL | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 36 | GTP | TM | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 36 | GTP | QC | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 36 | GTP | OO | 501 | 37 | - | 7/18/38/38 | 0/3/3/3 |
| 38 | GDP | RH | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 38 | GDP | VL | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | OG | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | CF | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | MC | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | TH | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 36 | GTP | FK | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | TI | 501 | 37 | - | 2/18/38/38 | 0/3/3/3 |
| 38 | GDP | GB | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | VJ | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | TL | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 36 | GTP | CM | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 36 | GTP | PG | 501 | 37 | - | 7/18/38/38 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|------------|---------|
| 38 | GDP | AH | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | UF | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | RC | 501 | - | - | 6/18/38/38 | 0/3/3/3 |
| 38 | GDP | LD | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 38 | GDP | AL | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | CD | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | VP | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | BC | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | PM | 501 | 37 | - | 8/18/38/38 | 0/3/3/3 |
| 36 | GTP | FI | 501 | 37 | - | 6/18/38/38 | 0/3/3/3 |
| 38 | GDP | KB | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | WP | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 36 | GTP | BA | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | QI | 501 | 37 | - | 6/18/38/38 | 0/3/3/3 |
| 36 | GTP | AK | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | QJ | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | HJ | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | BE | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | NN | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | QM | 501 | 37 | - | 8/18/38/38 | 0/3/3/3 |
| 36 | GTP | HO | 501 | 37 | - | 9/18/38/38 | 0/3/3/3 |
| 36 | GTP | TK | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | DJ | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | ME | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | OB | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 38 | GDP | QN | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 36 | GTP | WI | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 38 | GDP | NB | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | LC | 501 | 37 | - | 7/18/38/38 | 0/3/3/3 |
| 36 | GTP | GC | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | QE | 501 | 37 | - | 9/18/38/38 | 0/3/3/3 |
| 36 | GTP | VM | 501 | 37 | - | 7/18/38/38 | 0/3/3/3 |
| 36 | GTP | UO | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | NG | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | GL | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 38 | GDP | IJ | 502 | - | - | 1/12/32/32 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|------------|---------|
| 38 | GDP | EJ | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | BK | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | EF | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 36 | GTP | RE | 501 | - | - | 3/18/38/38 | 0/3/3/3 |
| 36 | GTP | LK | 501 | 37 | - | 6/18/38/38 | 0/3/3/3 |
| 38 | GDP | ON | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | UJ | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 36 | GTP | KM | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | JH | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | IH | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | CL | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | UH | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | UK | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 36 | GTP | JG | 501 | 37 | - | 2/18/38/38 | 0/3/3/3 |
| 38 | GDP | CH | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | ID | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | LH | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 36 | GTP | KG | 501 | - | - | 6/18/38/38 | 0/3/3/3 |
| 36 | GTP | EE | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | NJ | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | ED | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | UL | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | JK | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | EC | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | VD | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 36 | GTP | FM | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | NL | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | CJ | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | BG | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | EM | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | BH | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 36 | GTP | CG | 501 | 37 | - | 6/18/38/38 | 0/3/3/3 |
| 36 | GTP | KC | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | NE | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | AM | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | PF | 502 | - | - | 3/12/32/32 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|-------------|---------|
| 36 | GTP | UE | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | CK | 501 | 37 | - | 10/18/38/38 | 0/3/3/3 |
| 36 | GTP | GK | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | UP | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | HB | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | OH | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | IK | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | OJ | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 38 | GDP | EL | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | JE | 501 | 37 | - | 2/18/38/38 | 0/3/3/3 |
| 36 | GTP | WM | 501 | 37 | - | 8/18/38/38 | 0/3/3/3 |
| 38 | GDP | LL | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 36 | GTP | VI | 501 | 37 | - | 6/18/38/38 | 0/3/3/3 |
| 38 | GDP | PH | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | SJ | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 36 | GTP | QK | 501 | 37 | - | 9/18/38/38 | 0/3/3/3 |
| 38 | GDP | HF | 502 | - | - | 0/12/32/32 | 0/3/3/3 |
| 36 | GTP | HE | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | BL | 502 | - | - | 2/12/32/32 | 0/3/3/3 |
| 36 | GTP | UG | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | FG | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | HK | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 36 | GTP | EI | 501 | 37 | - | 6/18/38/38 | 0/3/3/3 |
| 36 | GTP | AE | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 36 | GTP | PI | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |
| 36 | GTP | UM | 501 | 37 | - | 8/18/38/38 | 0/3/3/3 |
| 38 | GDP | FD | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 38 | GDP | JB | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | DF | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | FB | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | FJ | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | QG | 501 | 37 | - | 6/18/38/38 | 0/3/3/3 |
| 38 | GDP | TD | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | MN | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 38 | GDP | QH | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 38 | GDP | HH | 502 | - | - | 0/12/32/32 | 0/3/3/3 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|------------|---------|
| 38 | GDP | RN | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | EG | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | TE | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 36 | GTP | WK | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | KF | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | VF | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | OE | 501 | 37 | - | 4/18/38/38 | 0/3/3/3 |
| 38 | GDP | FL | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 38 | GDP | WD | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 38 | GDP | LJ | 502 | - | - | 3/12/32/32 | 0/3/3/3 |
| 36 | GTP | CC | 501 | 37 | - | 8/18/38/38 | 0/3/3/3 |
| 38 | GDP | GJ | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 36 | GTP | UI | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | HN | 502 | - | - | 1/12/32/32 | 0/3/3/3 |
| 36 | GTP | FC | 501 | 37 | - | 5/18/38/38 | 0/3/3/3 |
| 38 | GDP | OL | 502 | - | - | 4/12/32/32 | 0/3/3/3 |
| 36 | GTP | JI | 501 | 37 | - | 2/18/38/38 | 0/3/3/3 |
| 36 | GTP | DI | 501 | 37 | - | 3/18/38/38 | 0/3/3/3 |

The worst 5 of 451 bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 36 | RK | 501 | GTP | C5-C6 | -4.37 | 1.38 | 1.47 |
| 36 | RE | 501 | GTP | C5-C6 | -4.34 | 1.38 | 1.47 |
| 36 | QE | 501 | GTP | C5-C6 | -4.29 | 1.38 | 1.47 |
| 36 | BG | 501 | GTP | C5-C6 | -4.28 | 1.38 | 1.47 |
| 36 | RI | 501 | GTP | C5-C6 | -4.28 | 1.38 | 1.47 |

The worst 5 of 1643 bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 38 | AB | 502 | GDP | PA-O3A-PB | -4.58 | 117.11 | 132.83 |
| 38 | AJ | 502 | GDP | PA-O3A-PB | -4.56 | 117.17 | 132.83 |
| 38 | OB | 502 | GDP | PA-O3A-PB | -4.54 | 117.26 | 132.83 |
| 36 | DM | 501 | GTP | PB-O3B-PG | -4.49 | 117.42 | 132.83 |
| 38 | AF | 502 | GDP | PA-O3A-PB | -4.47 | 117.50 | 132.83 |

There are no chirality outliers.

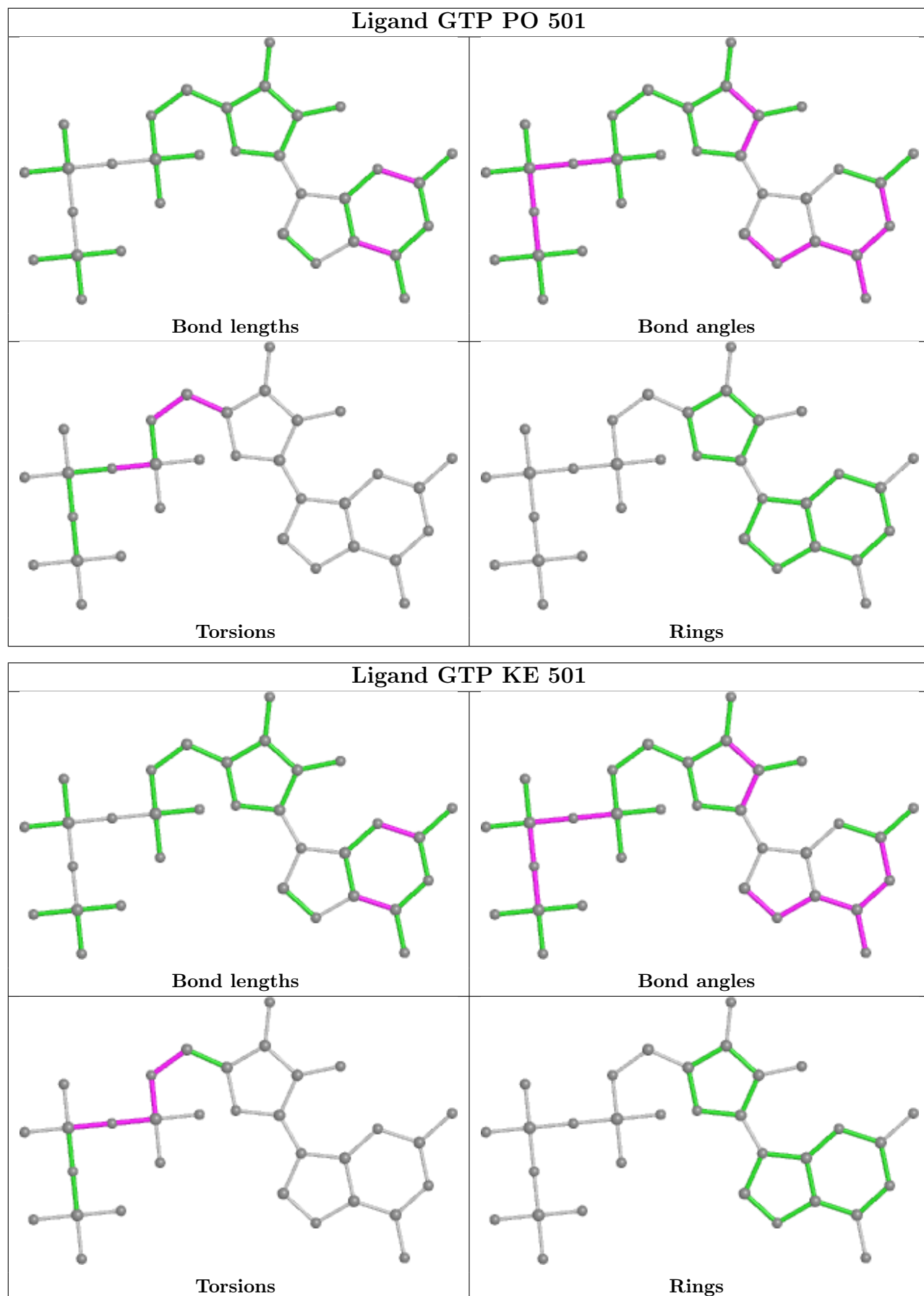
5 of 1035 torsion outliers are listed below:

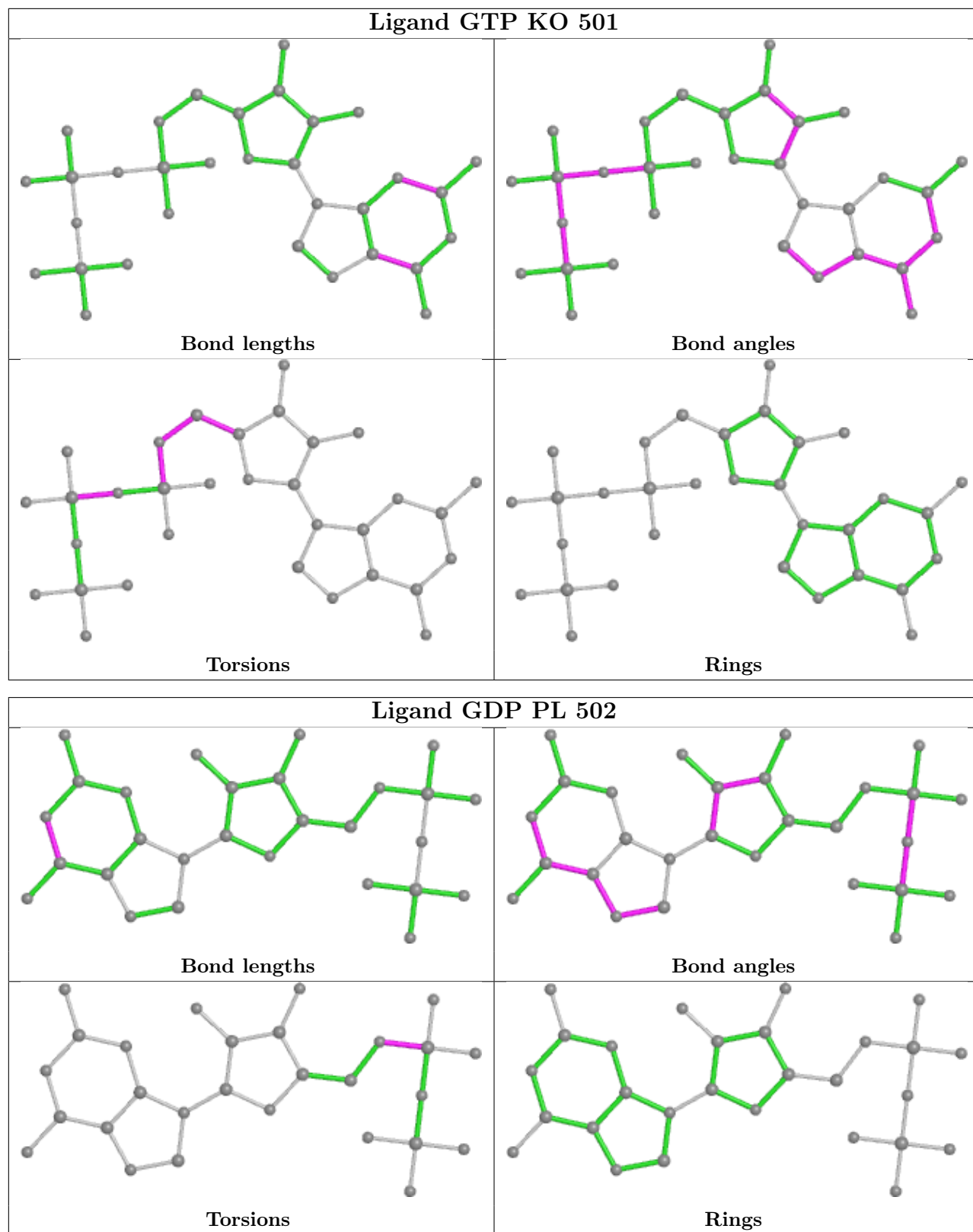
| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|----------------|
| 36 | AE | 501 | GTP | PB-O3A-PA-O5' |
| 36 | AG | 501 | GTP | C5'-O5'-PA-O1A |
| 36 | AK | 501 | GTP | C5'-O5'-PA-O3A |
| 36 | AK | 501 | GTP | C5'-O5'-PA-O1A |
| 36 | AM | 501 | GTP | PB-O3A-PA-O5' |

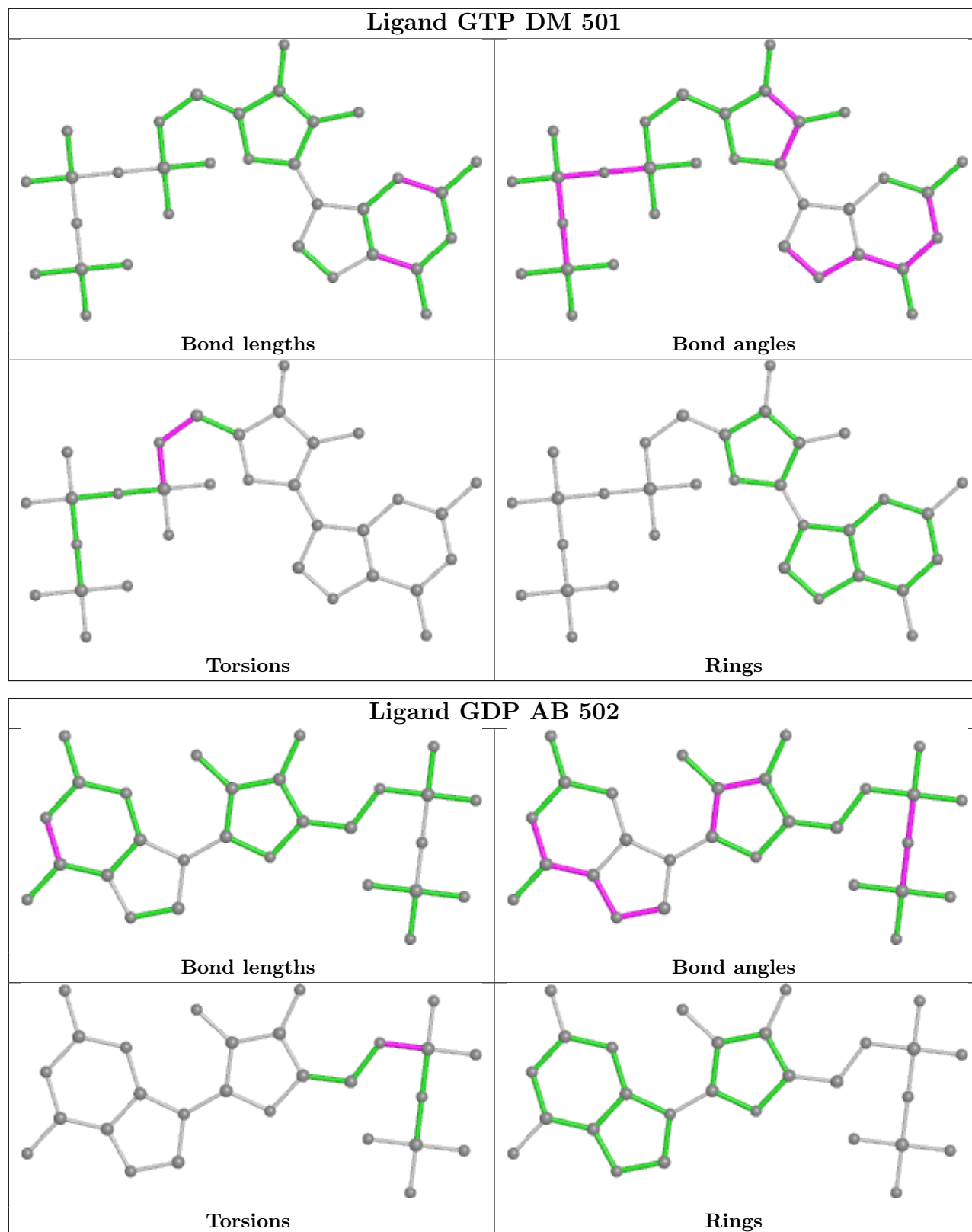
There are no ring outliers.

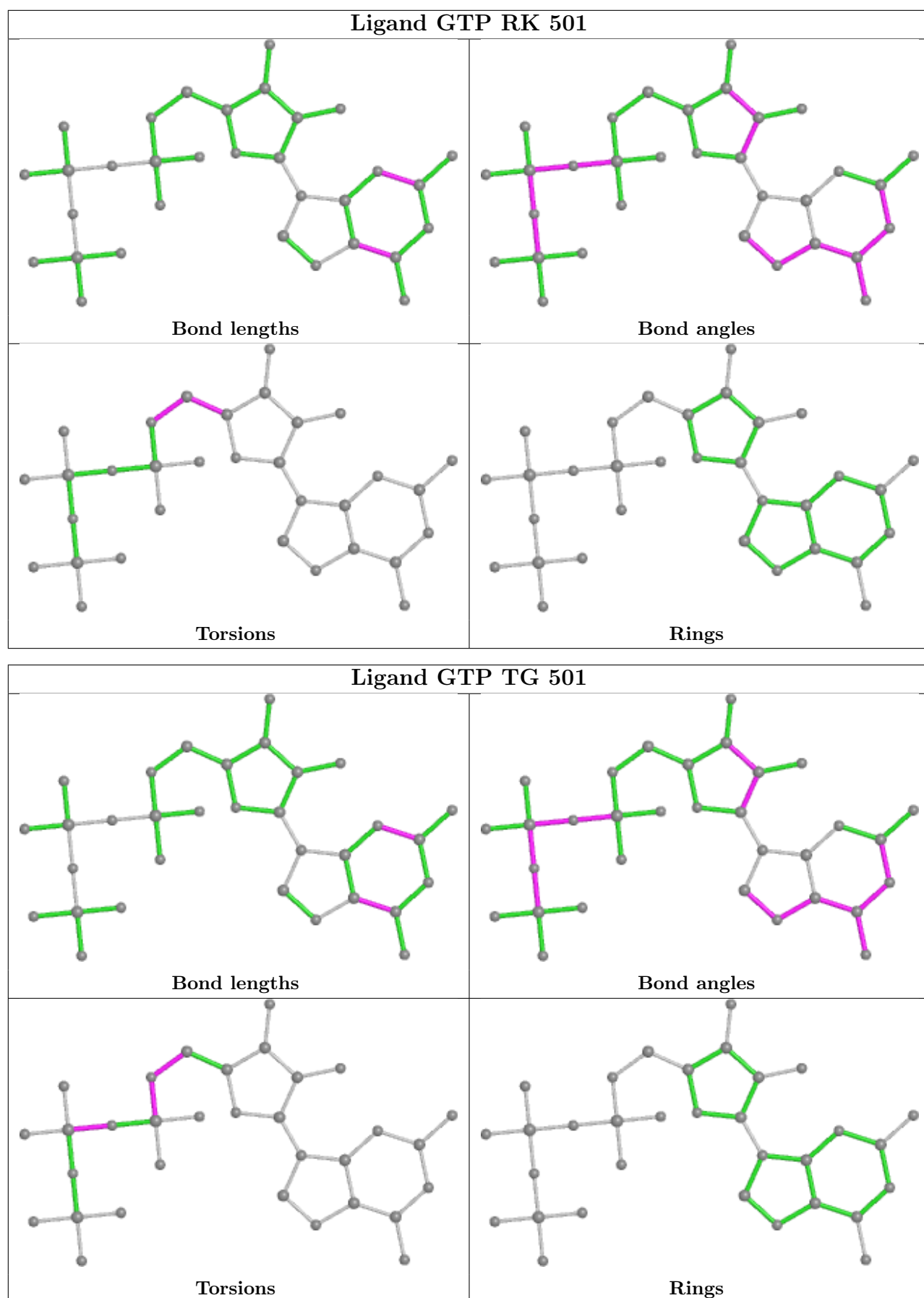
No monomer is involved in short contacts.

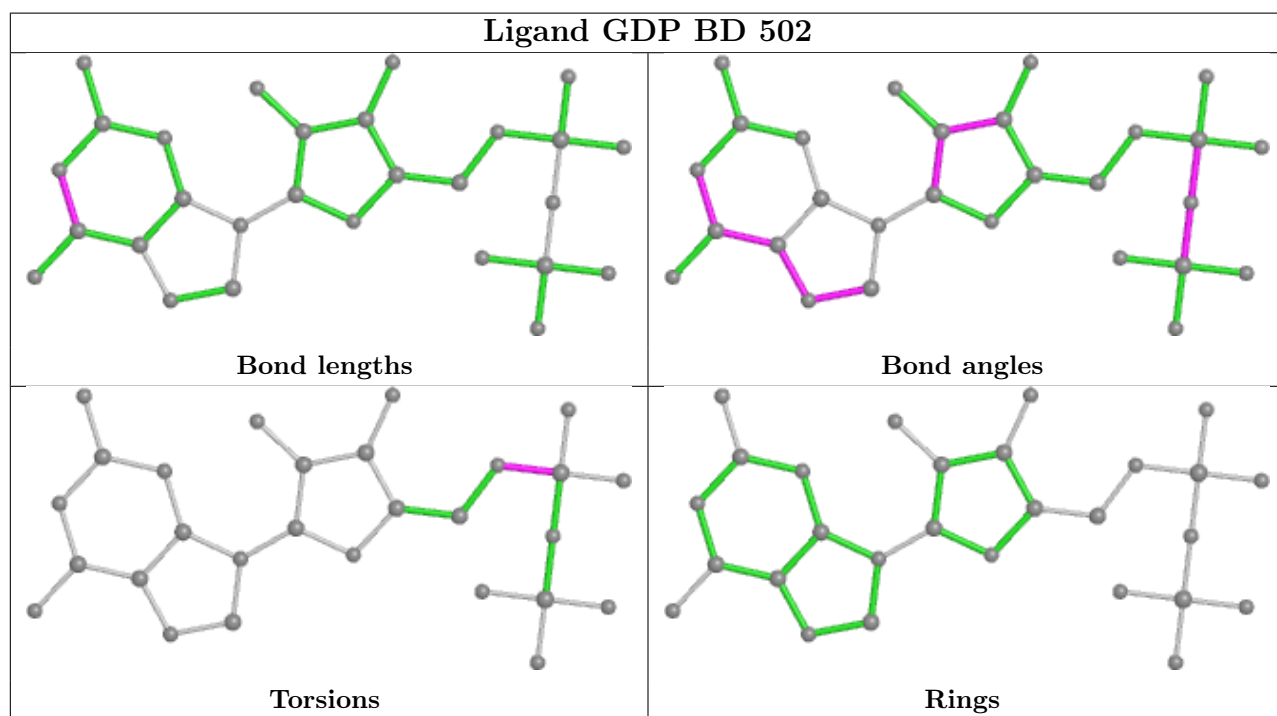
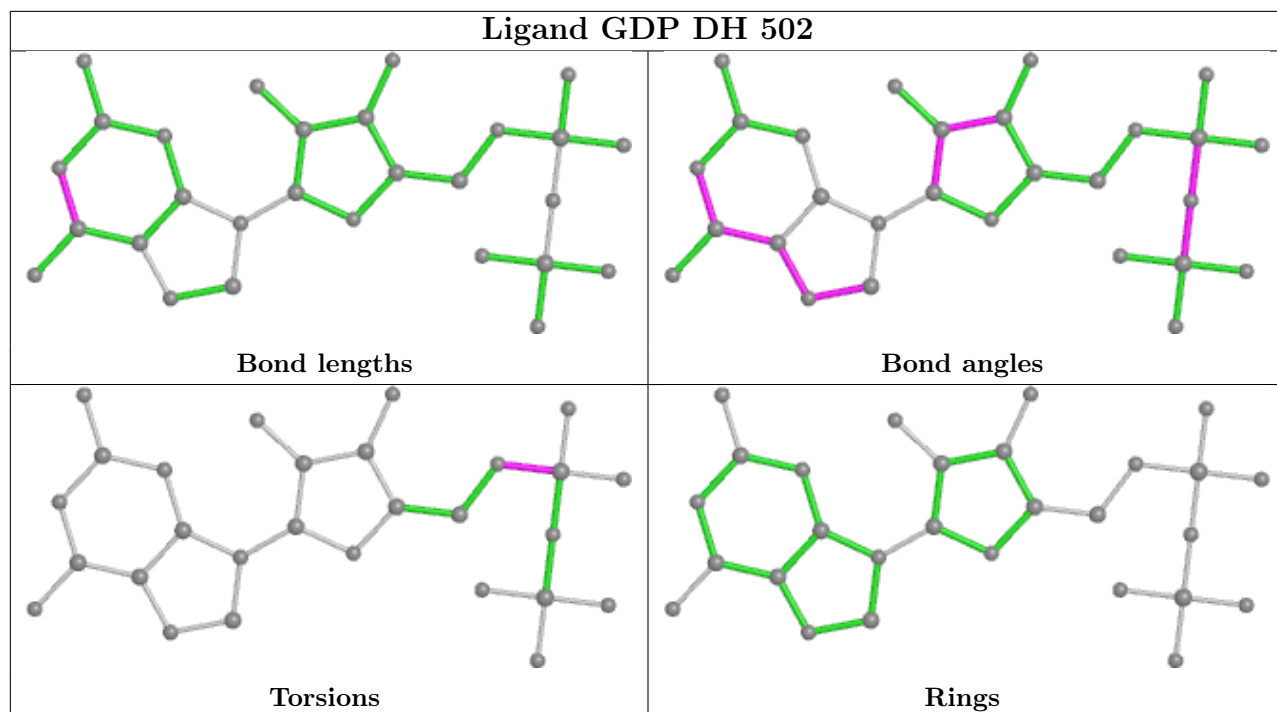
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

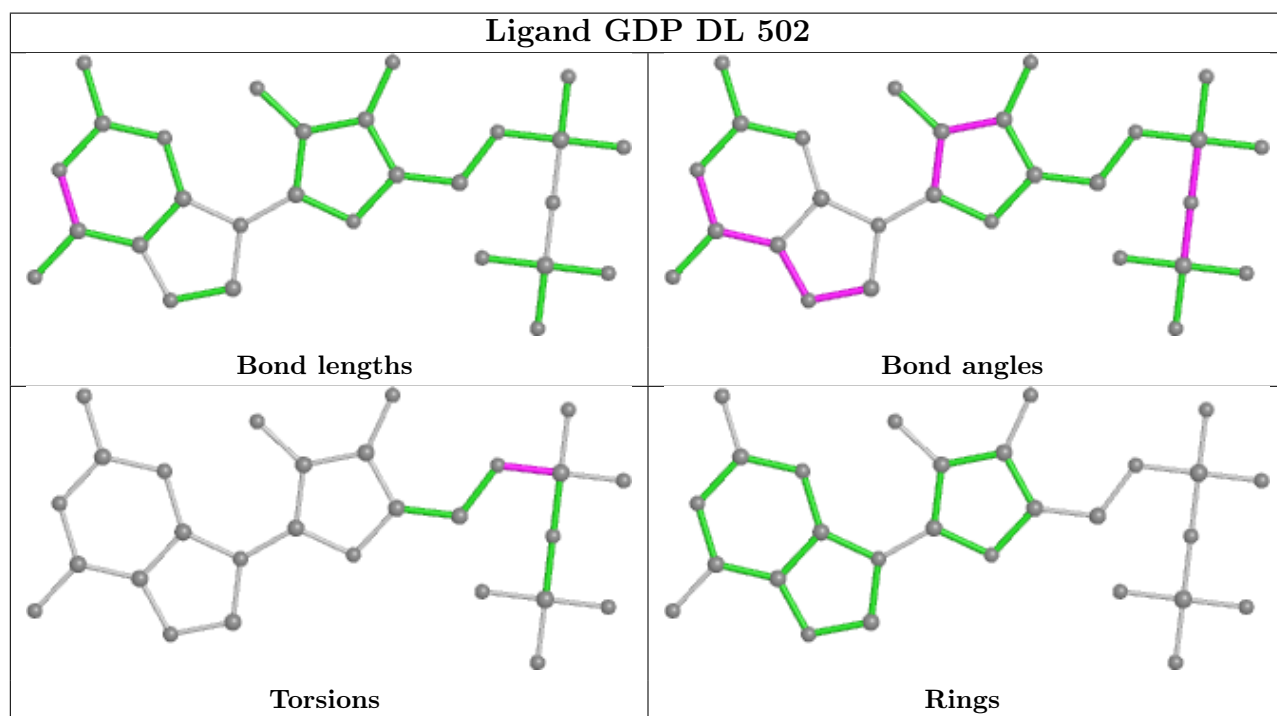
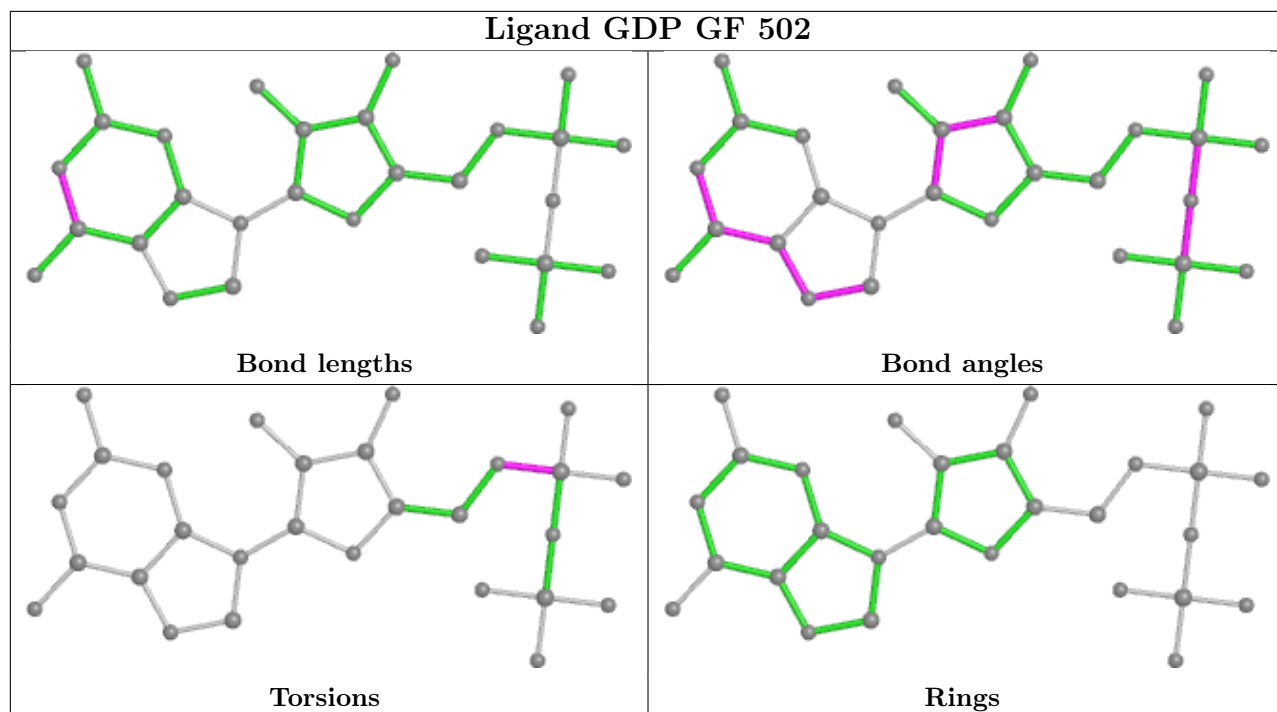


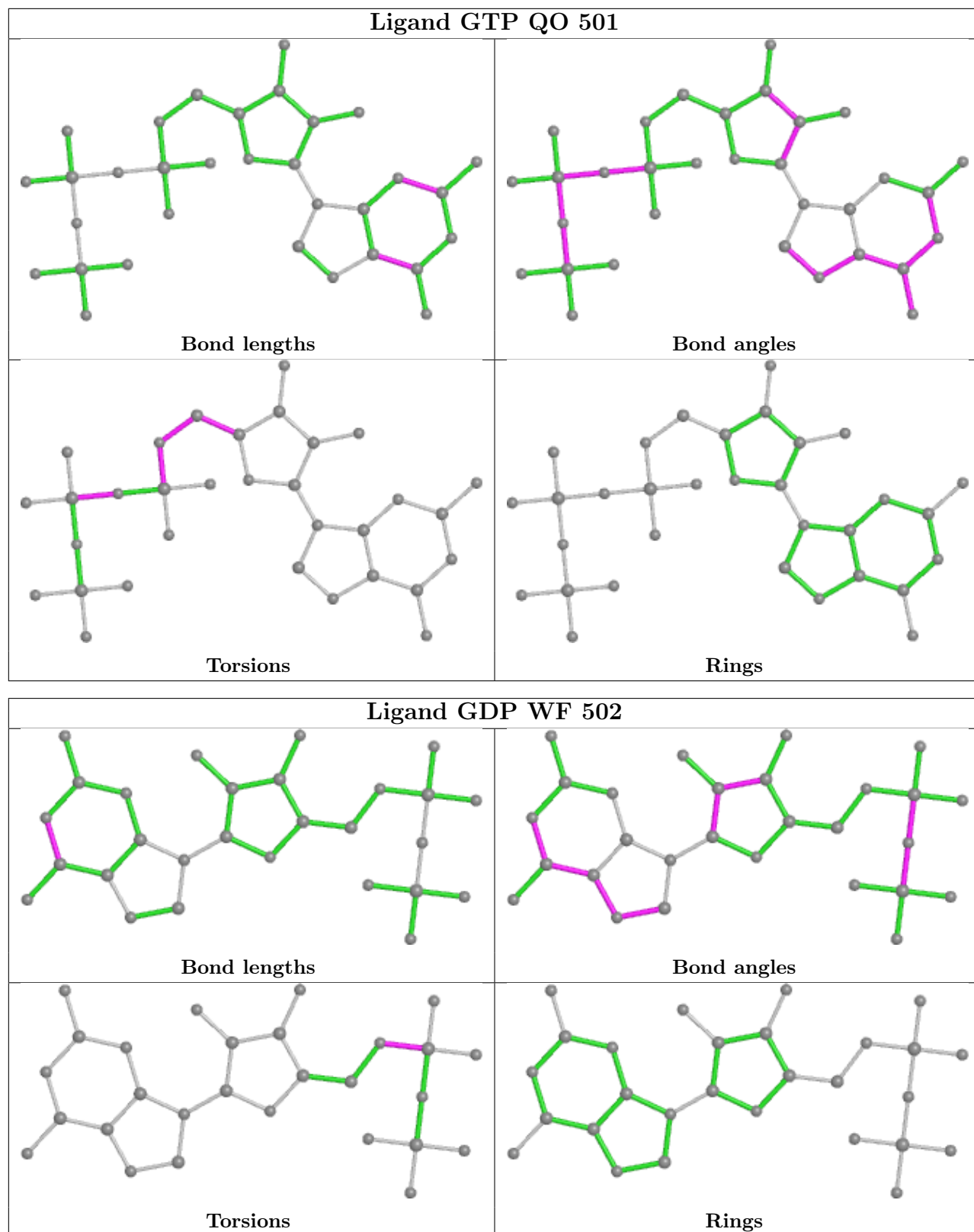


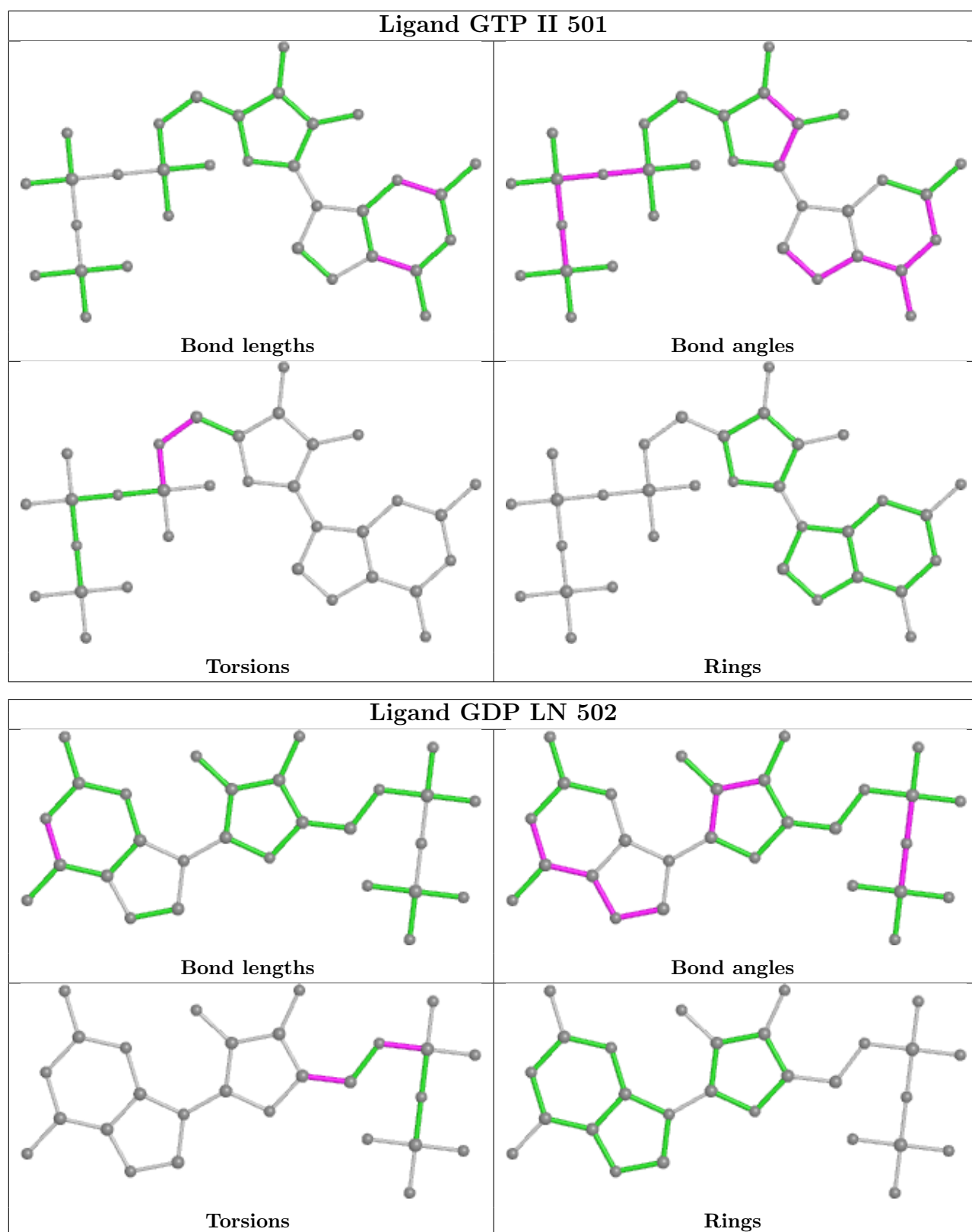


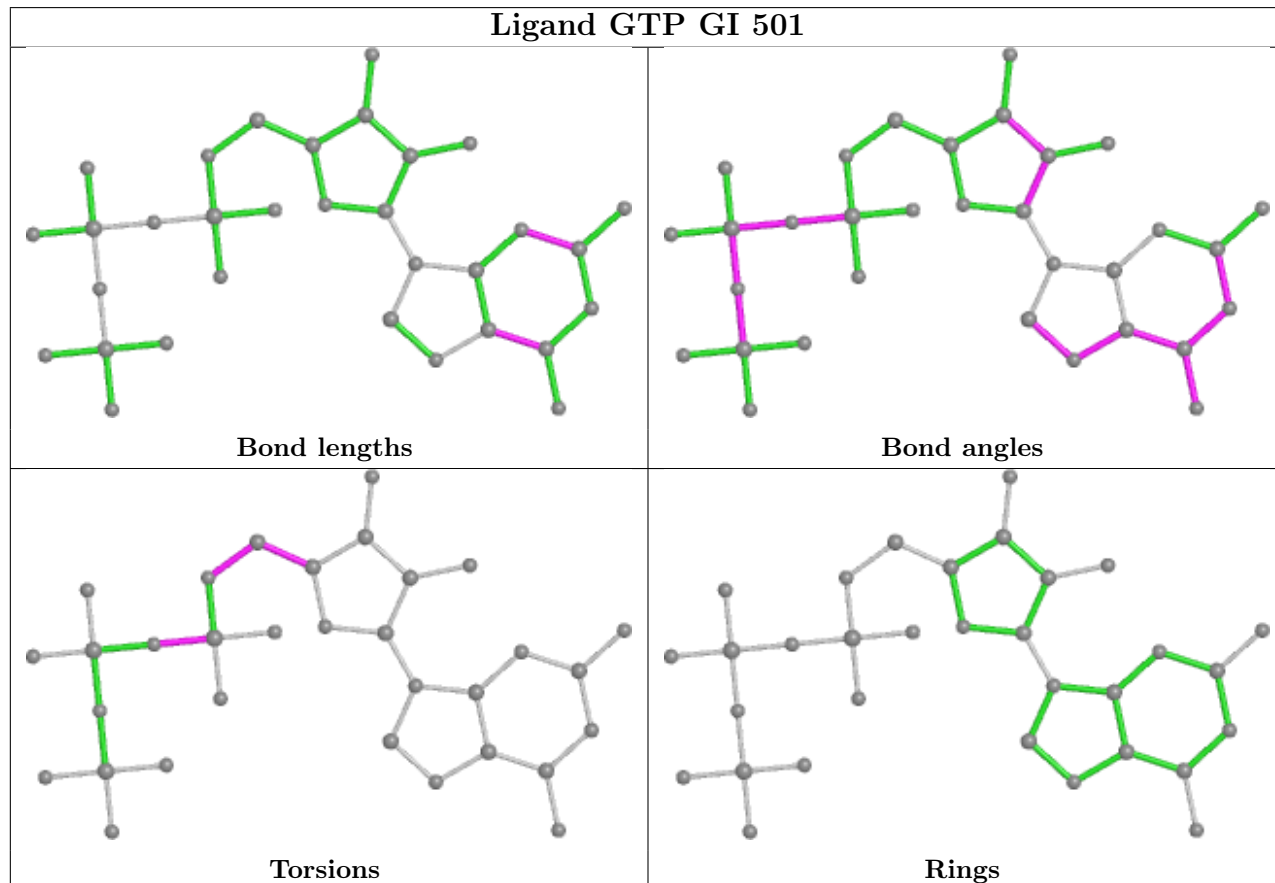
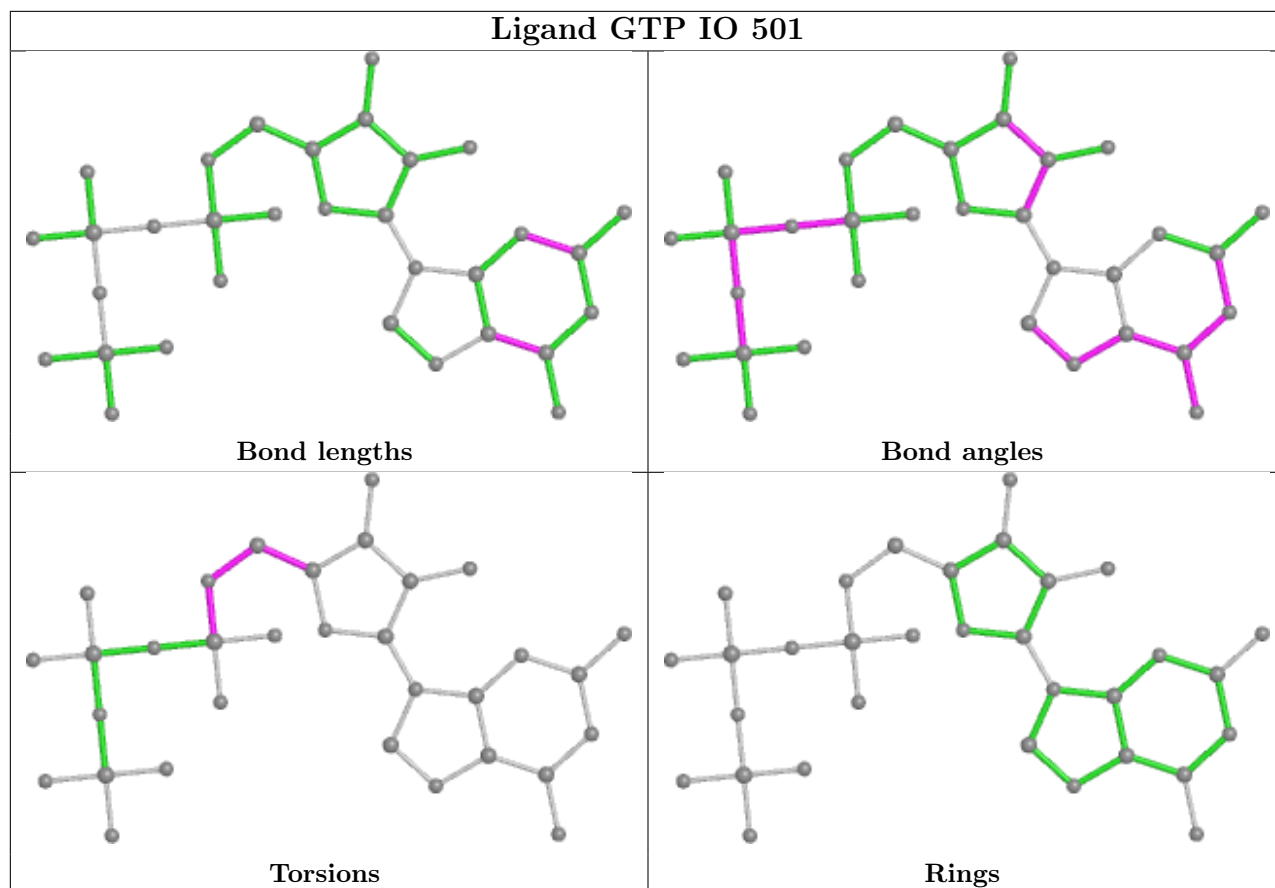


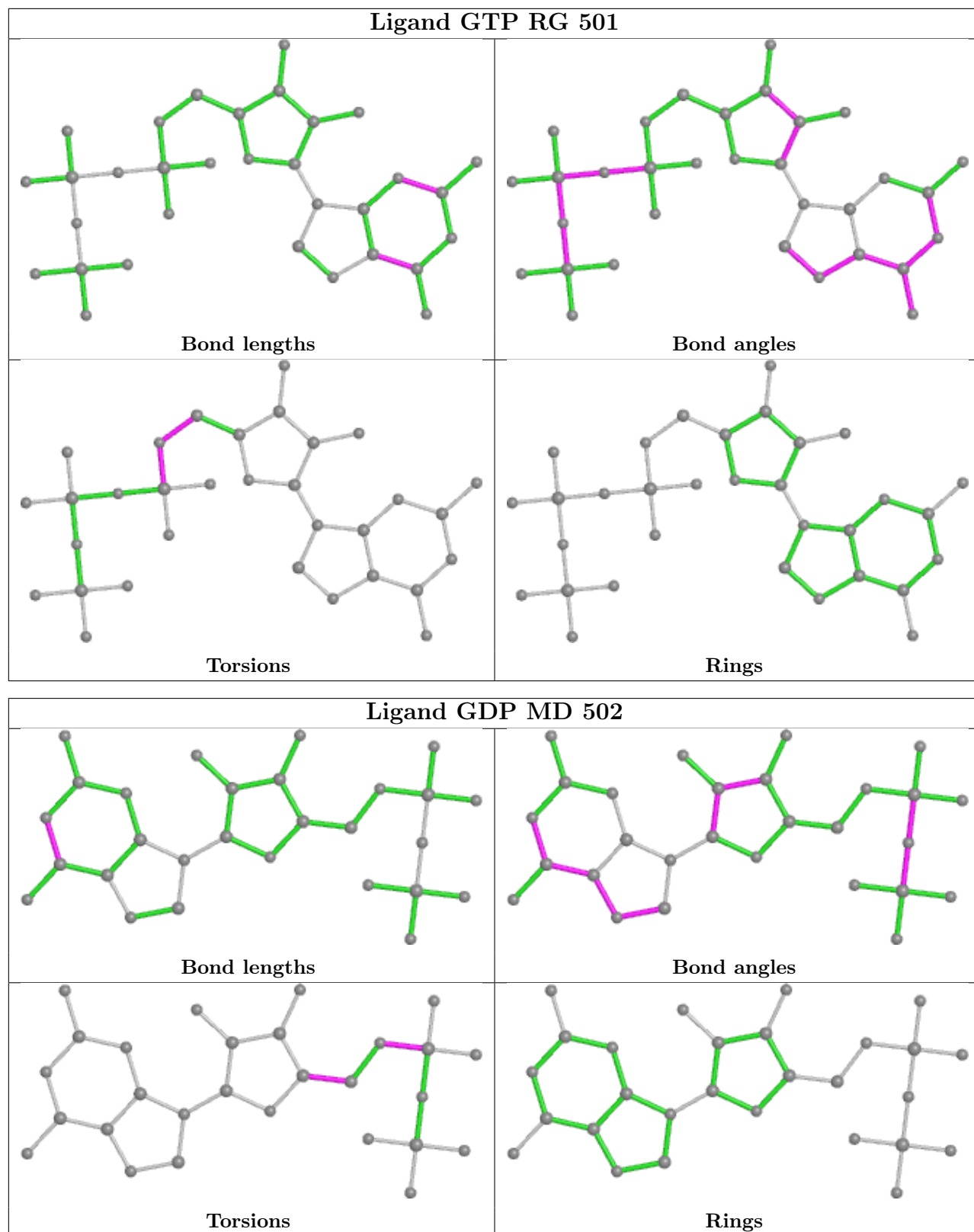


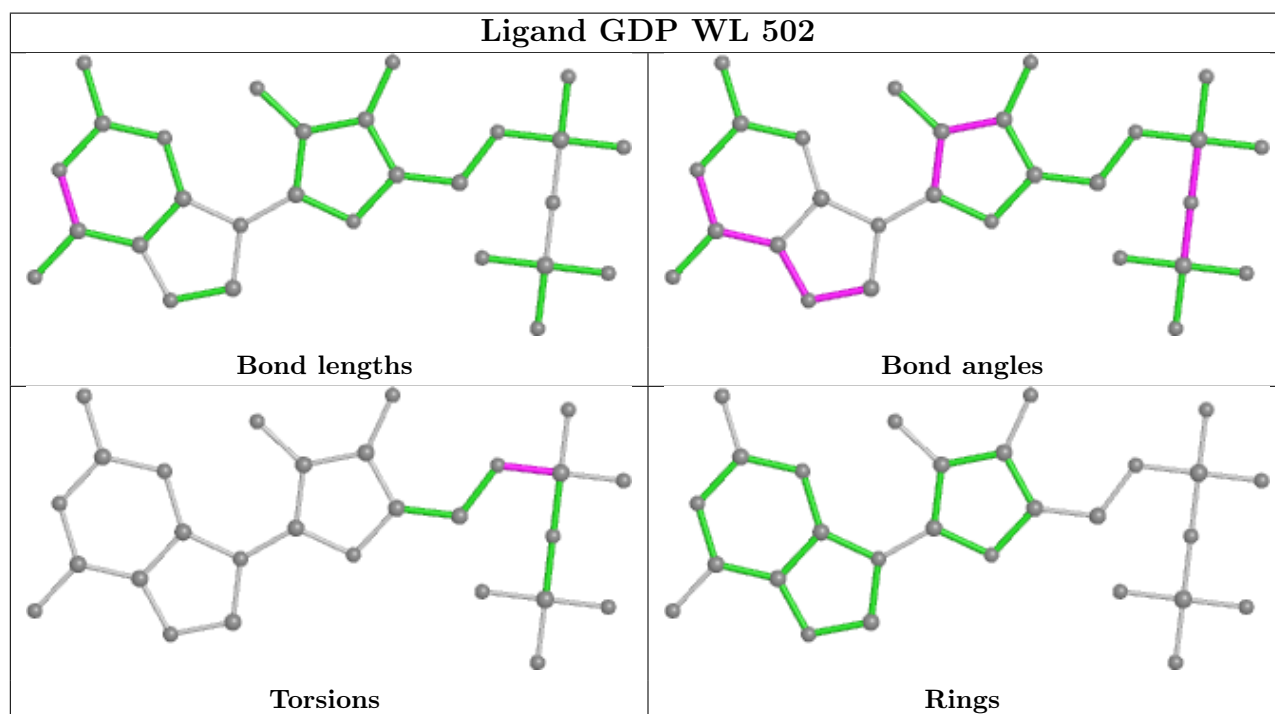
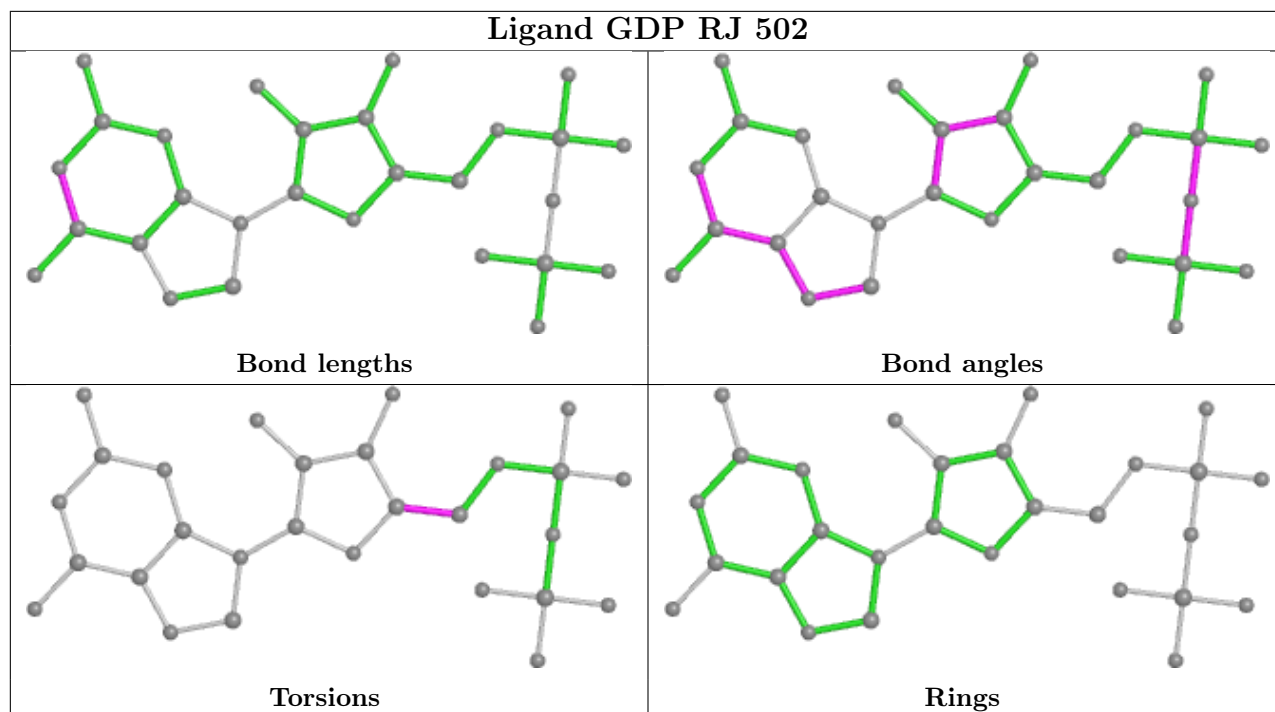


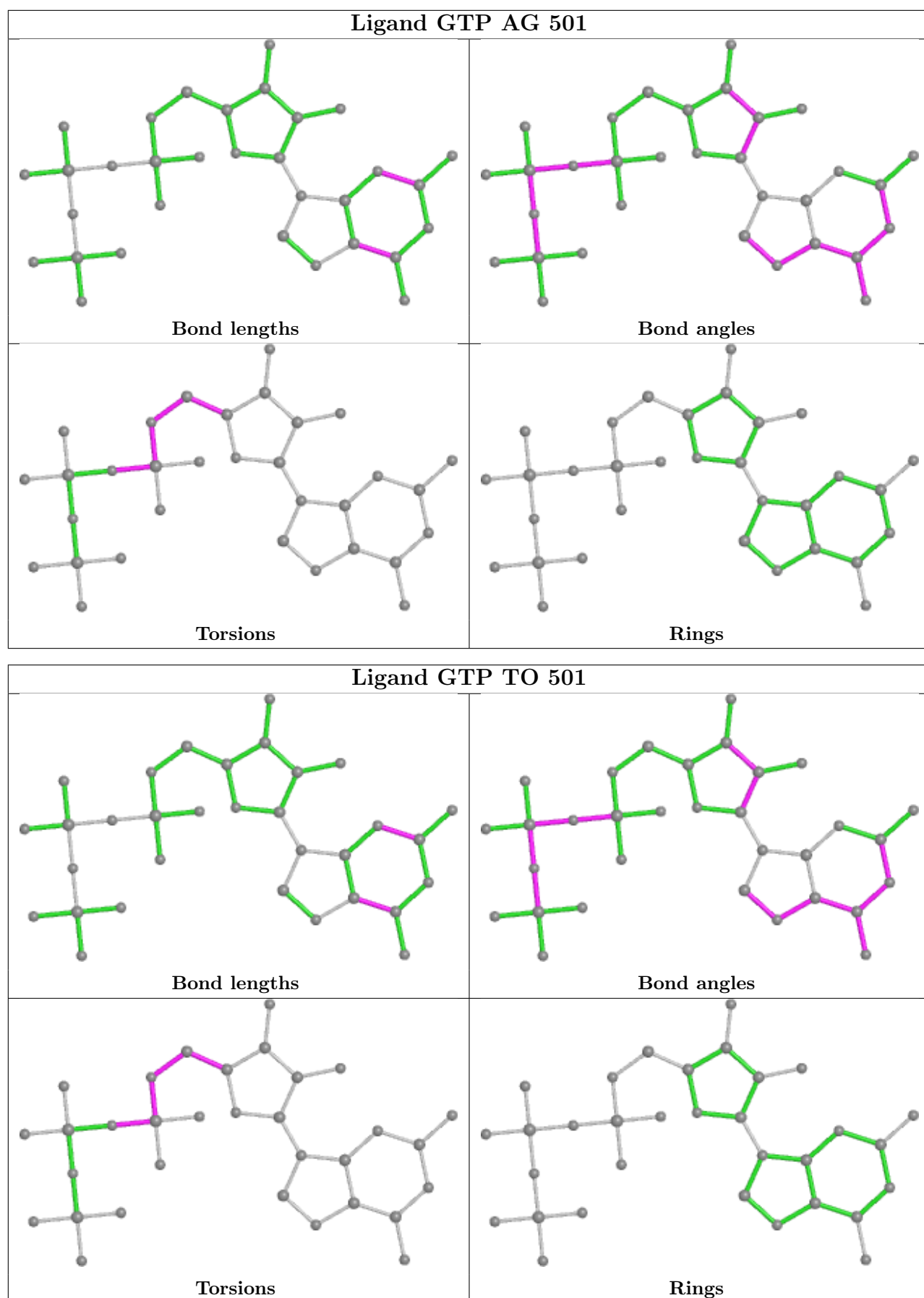


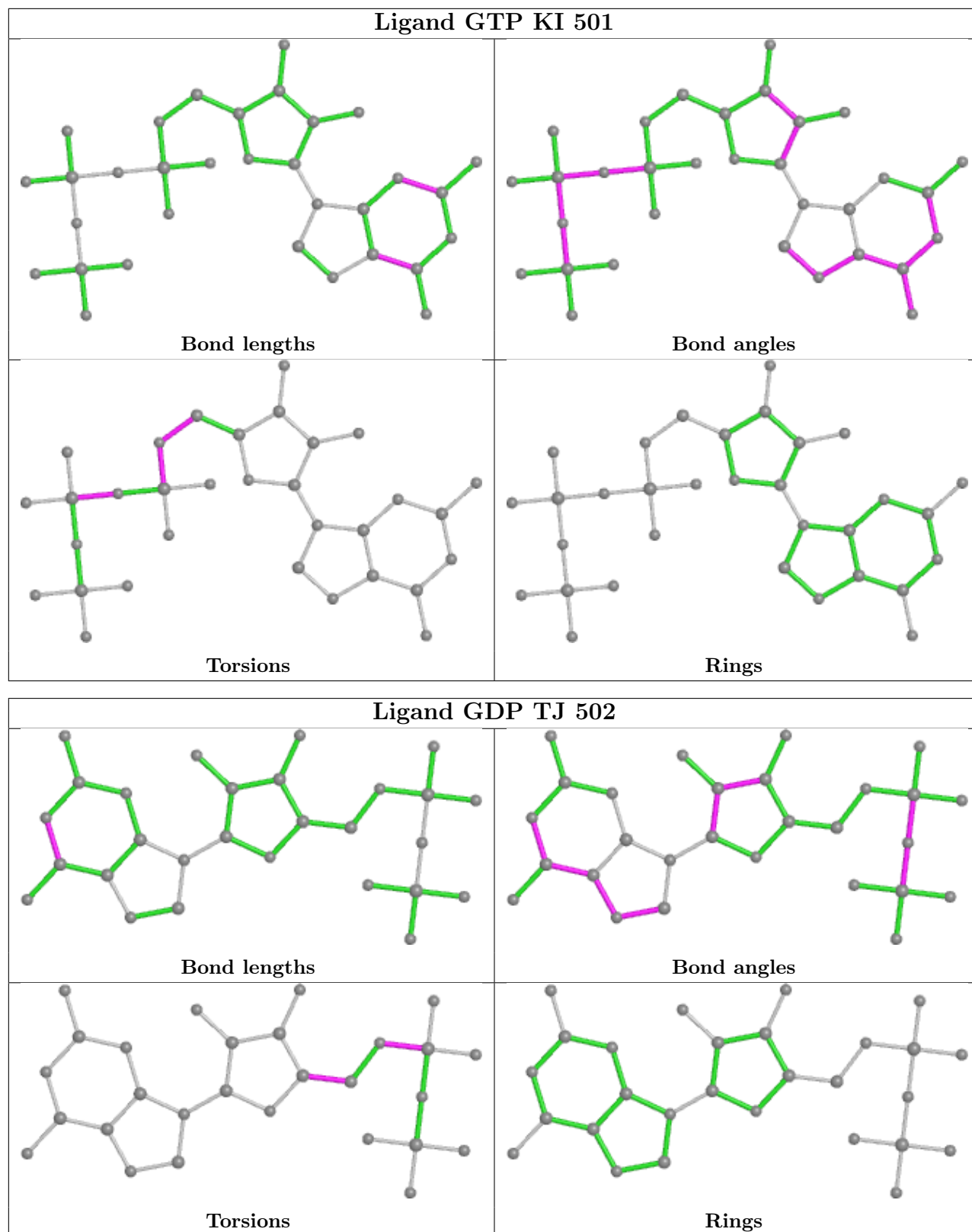


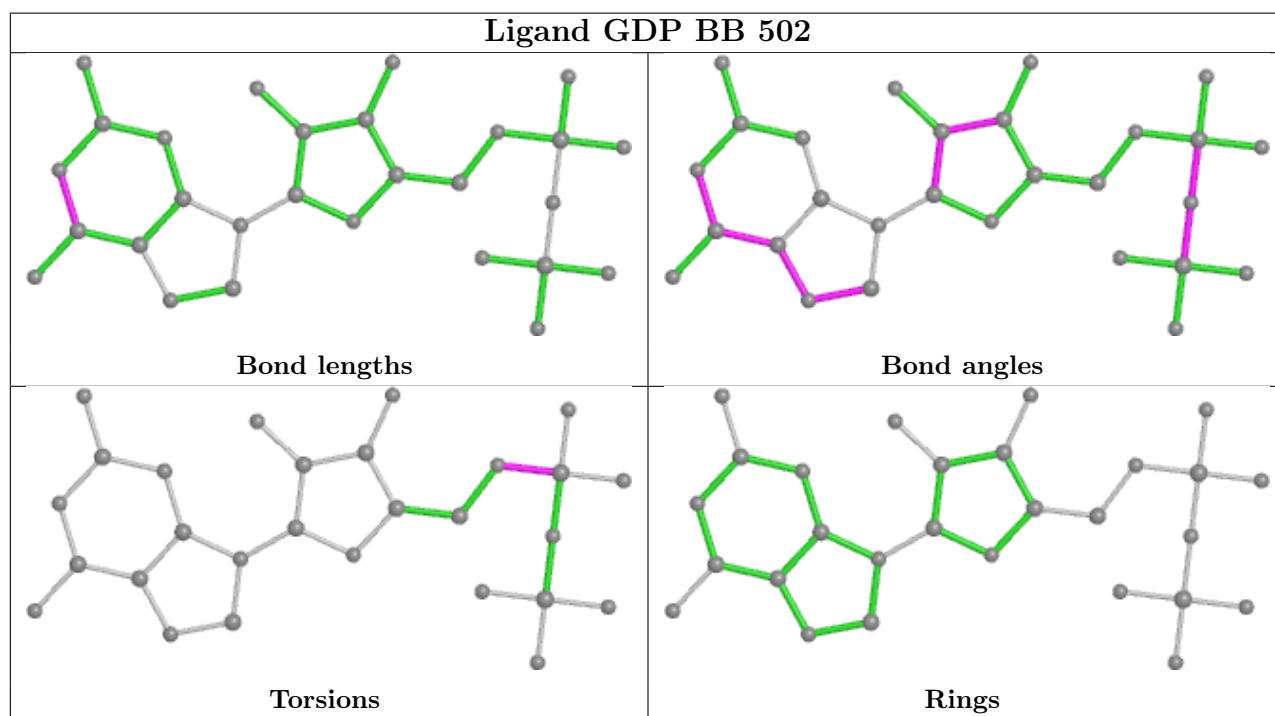
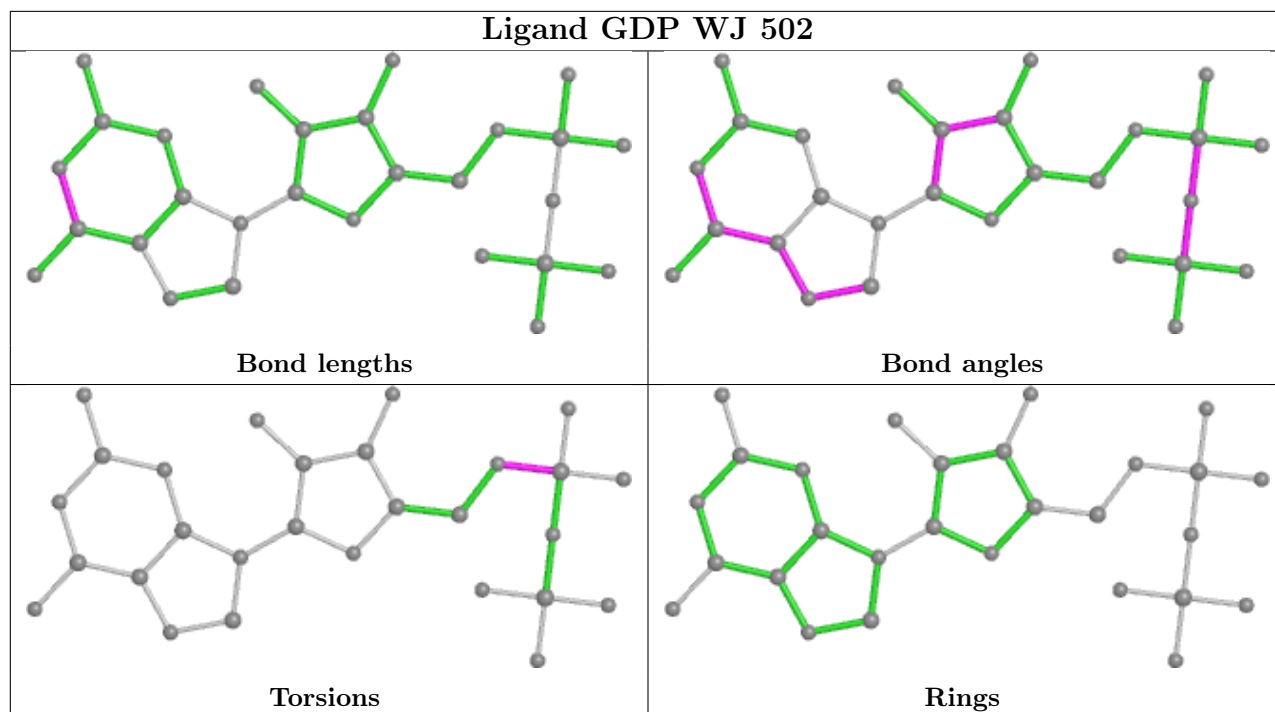


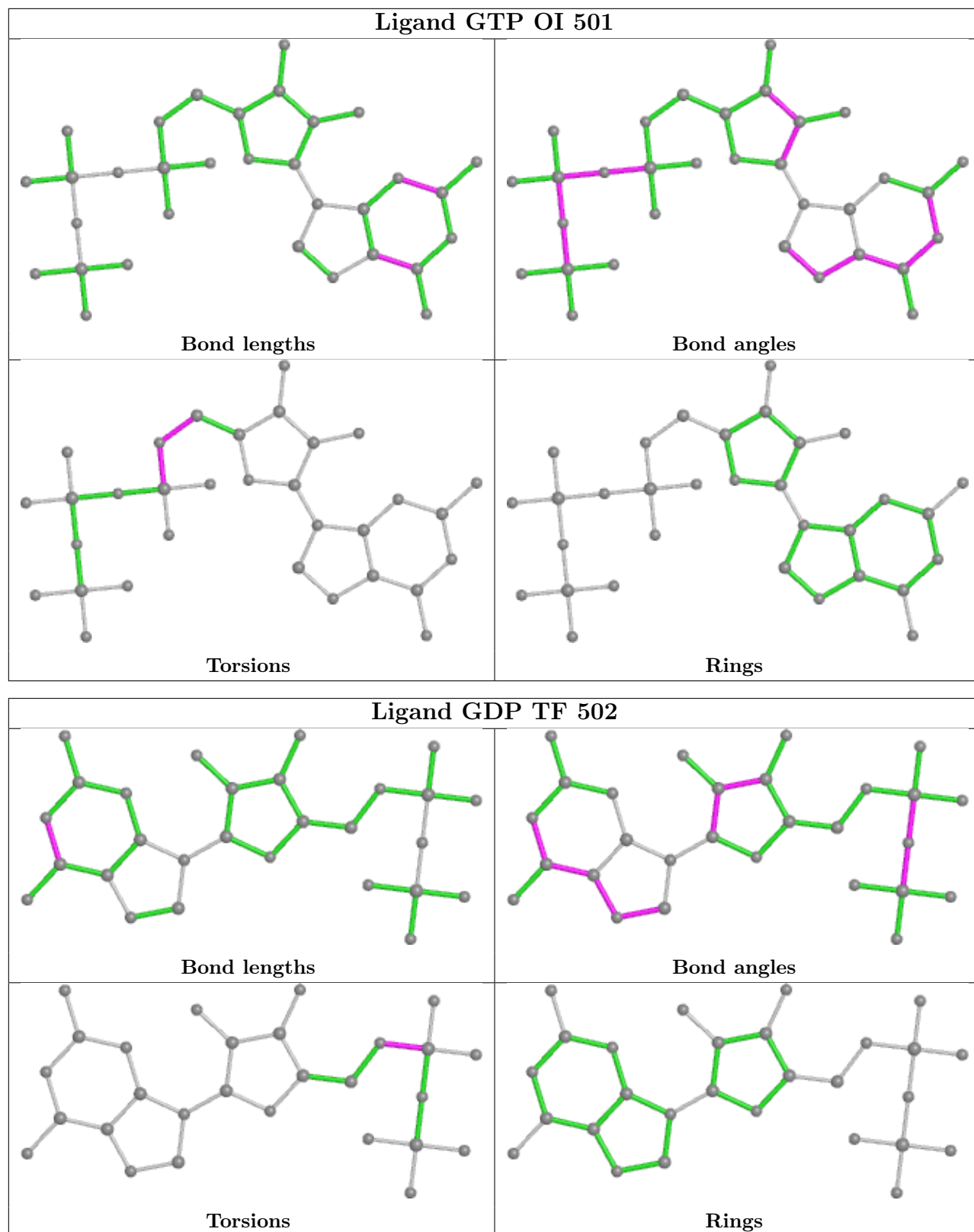


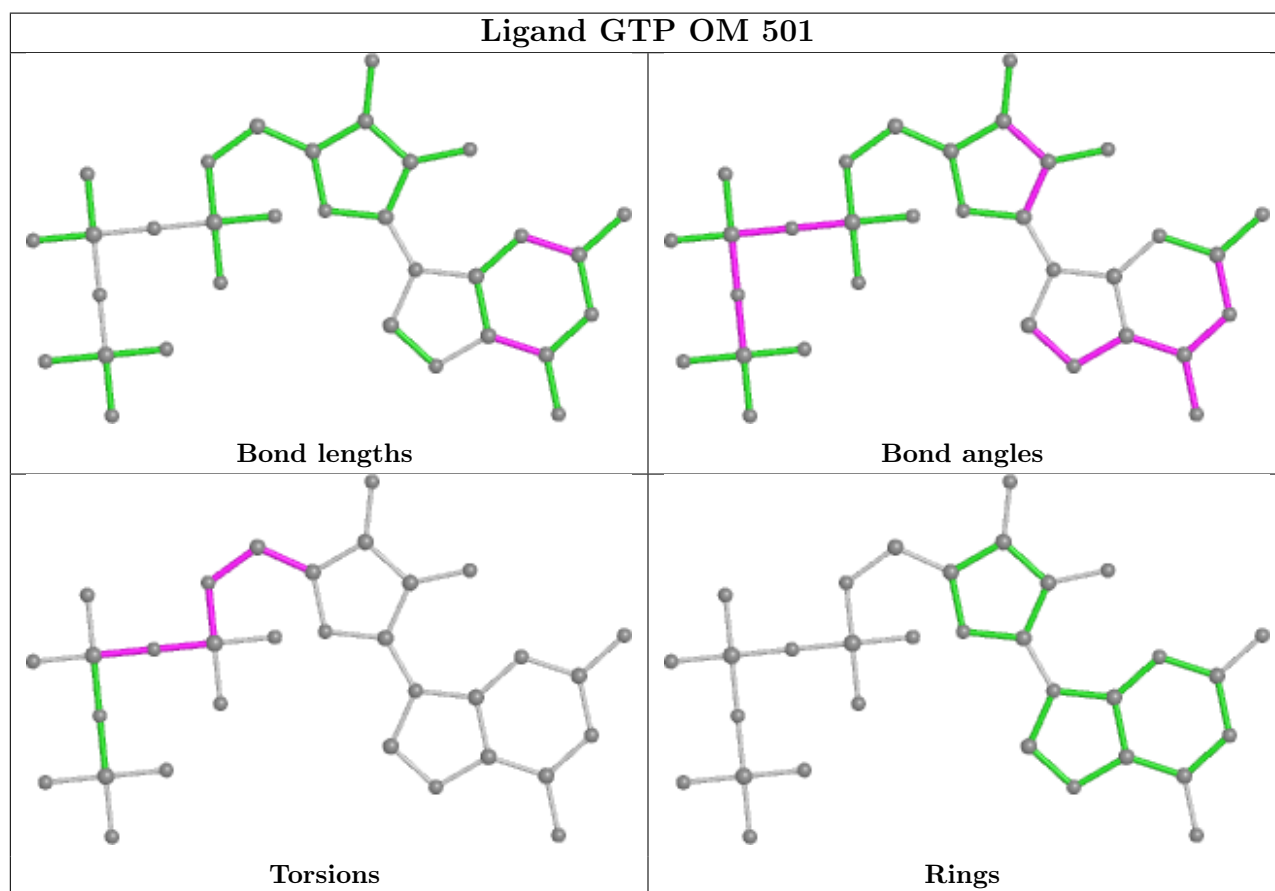
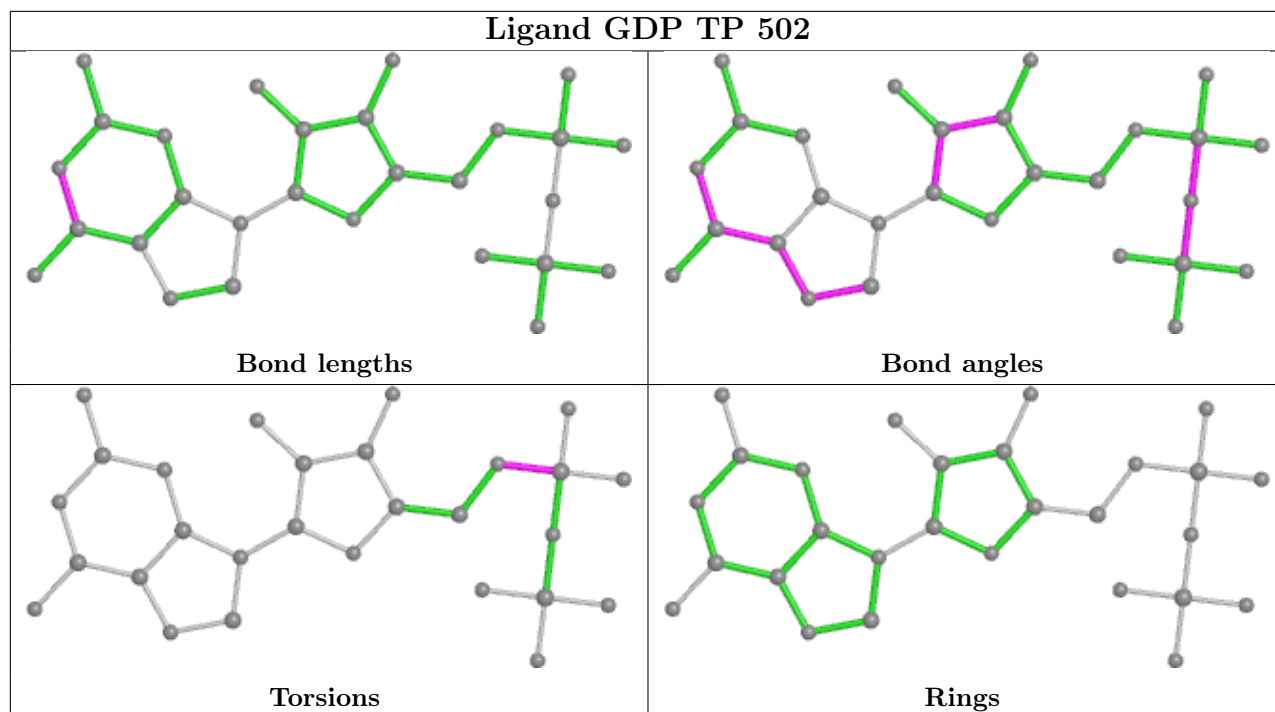


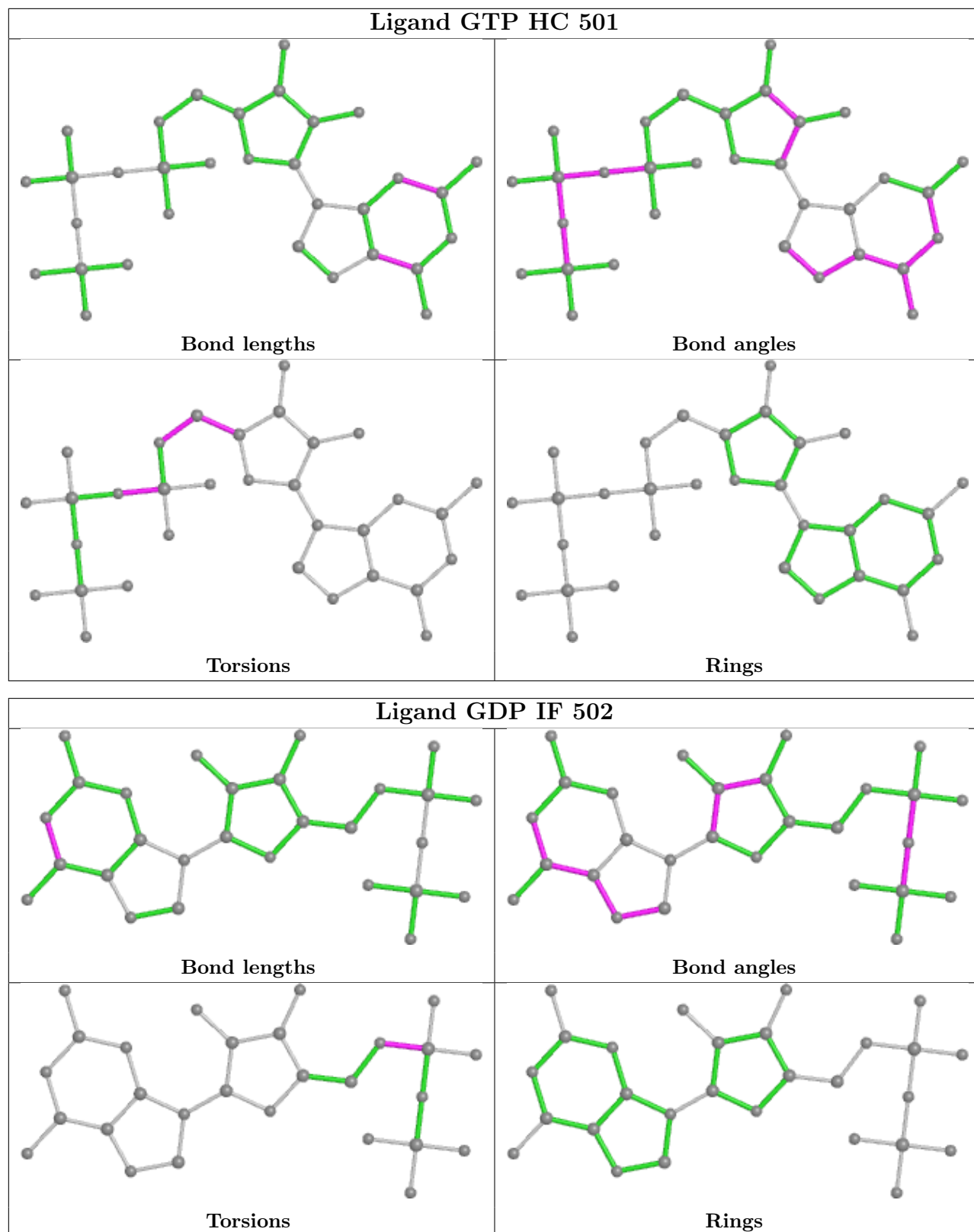


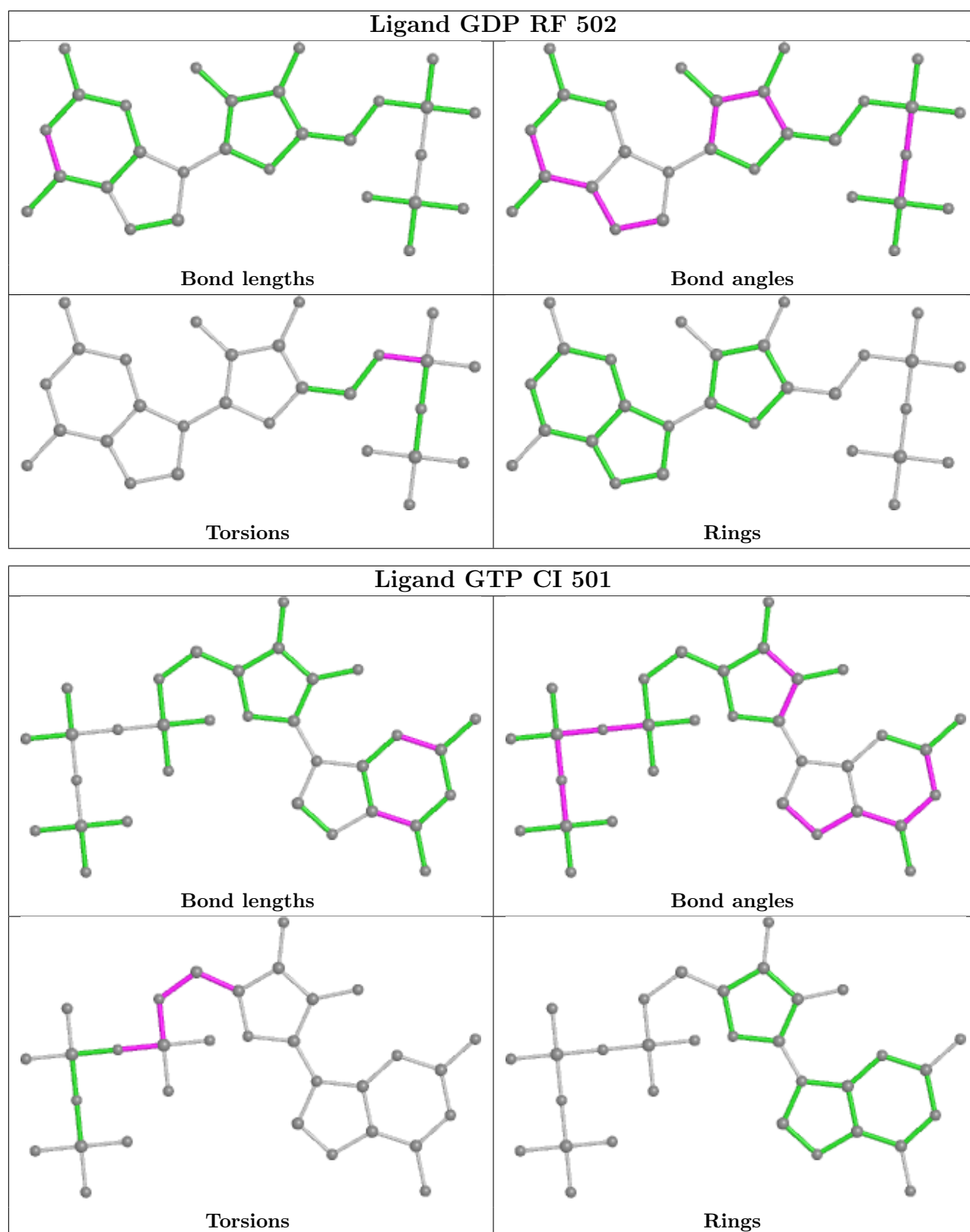


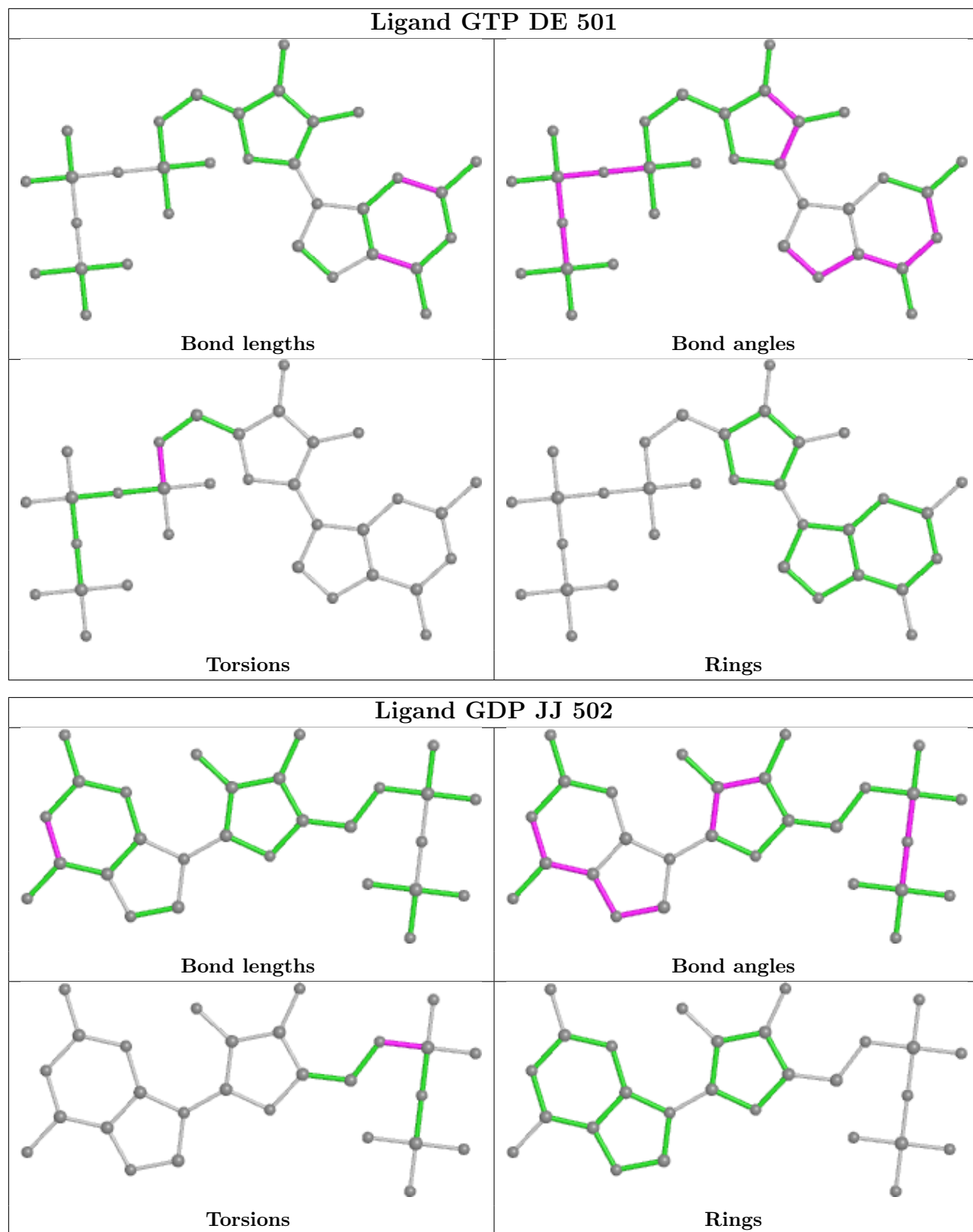


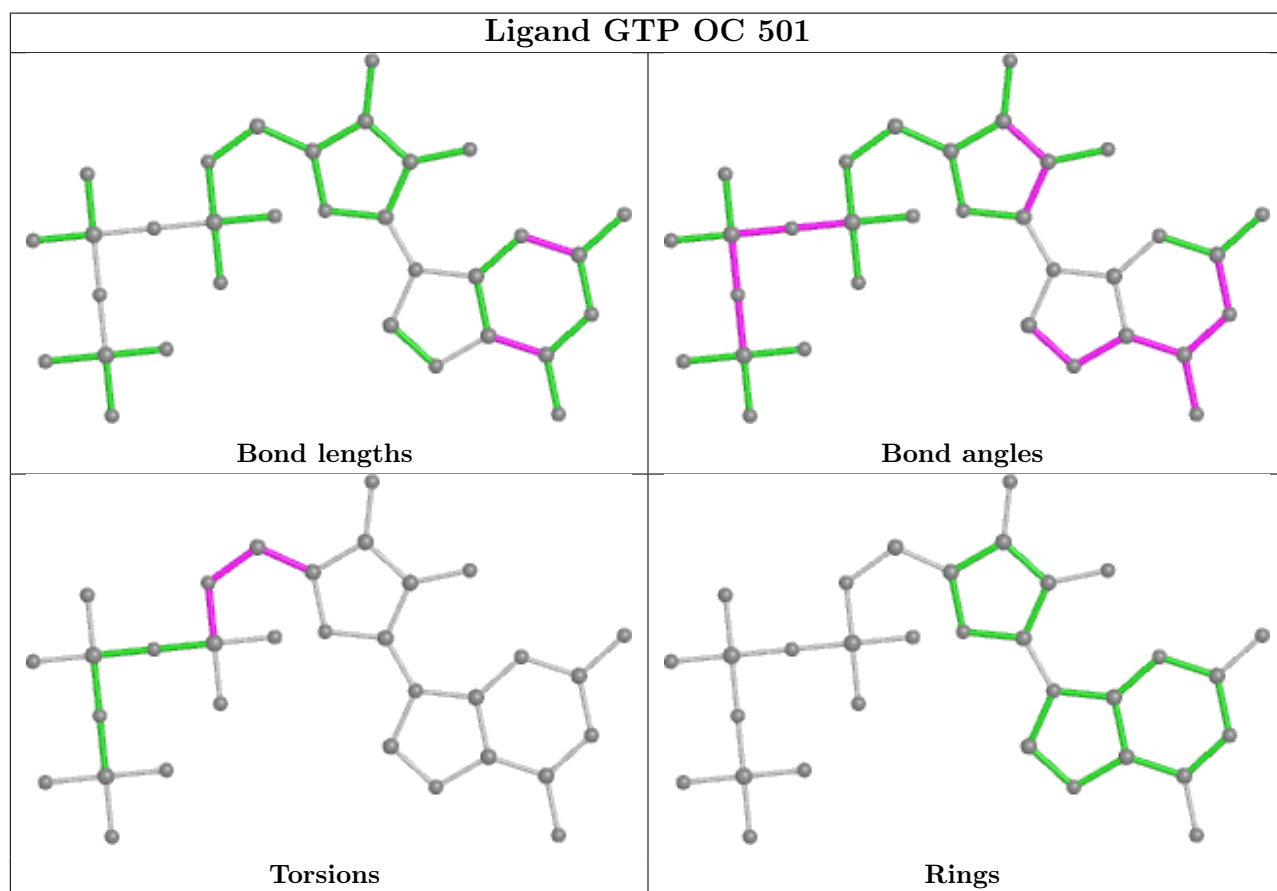
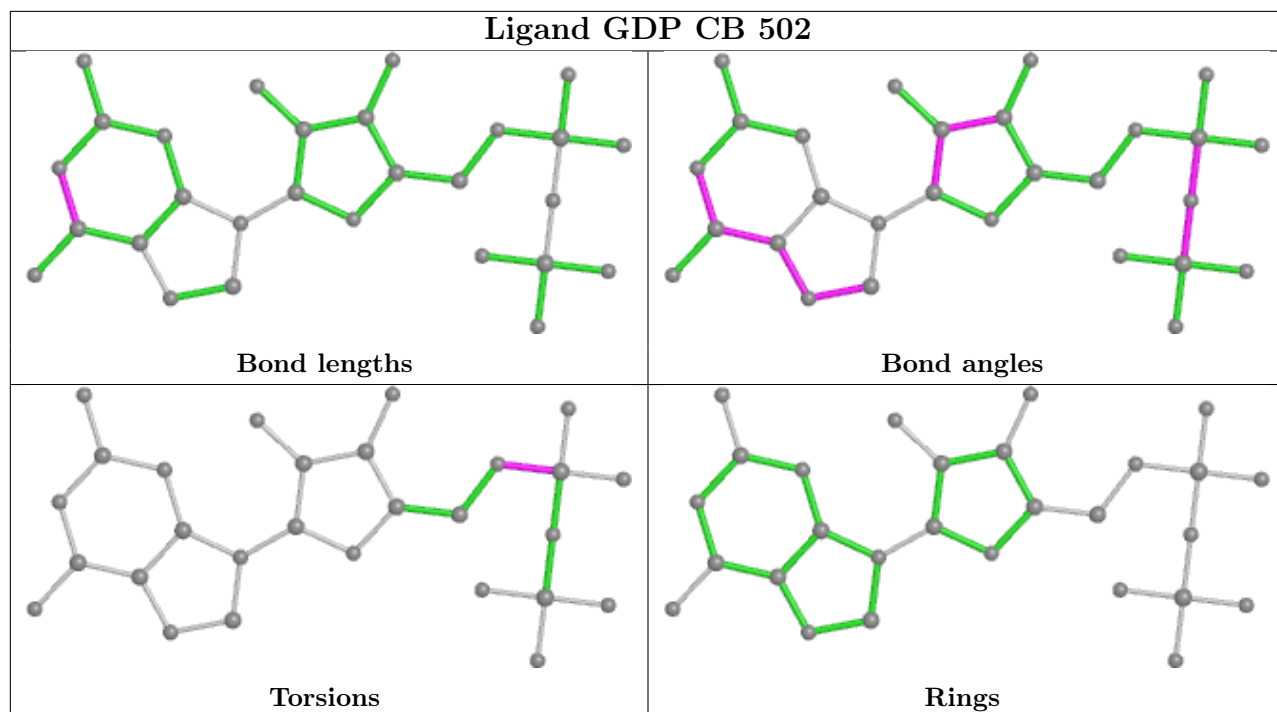


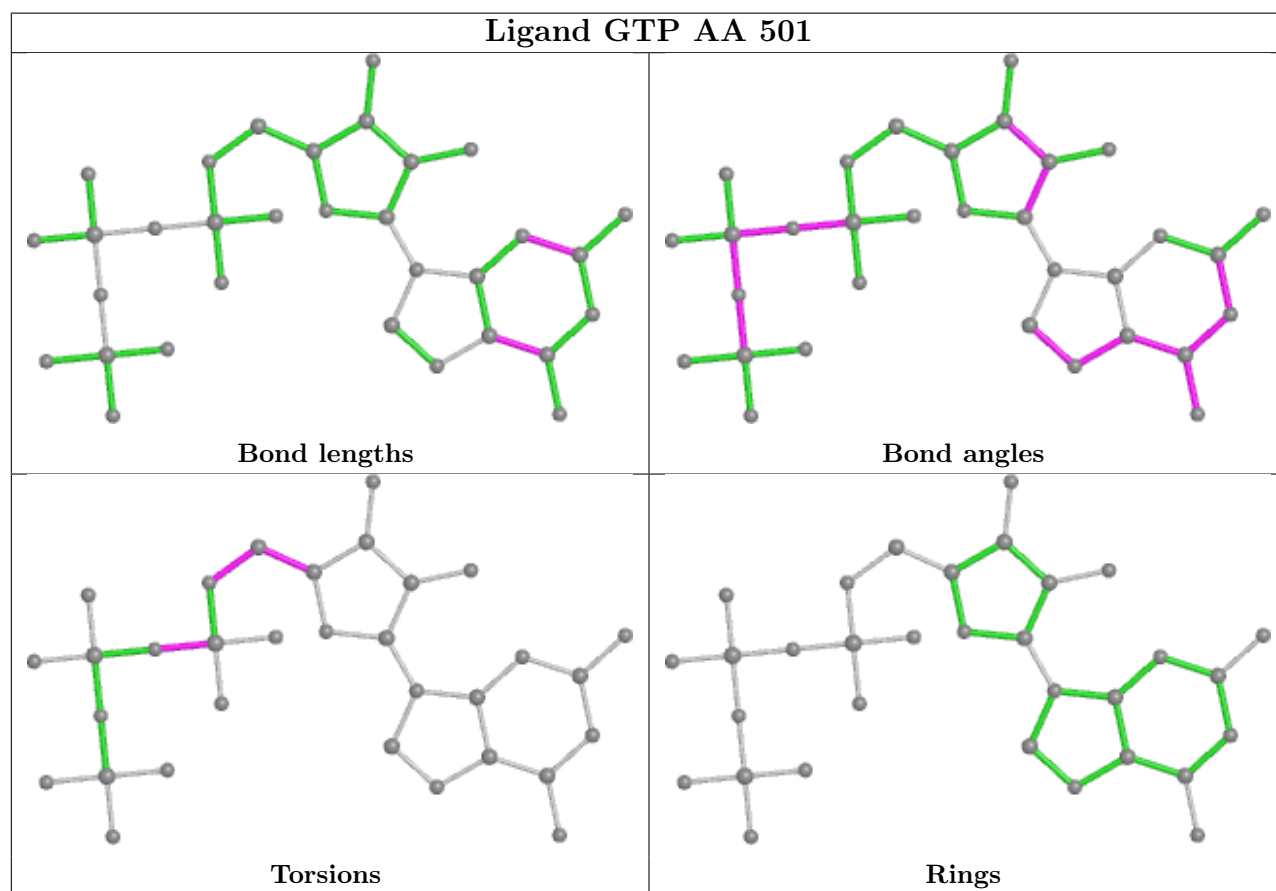
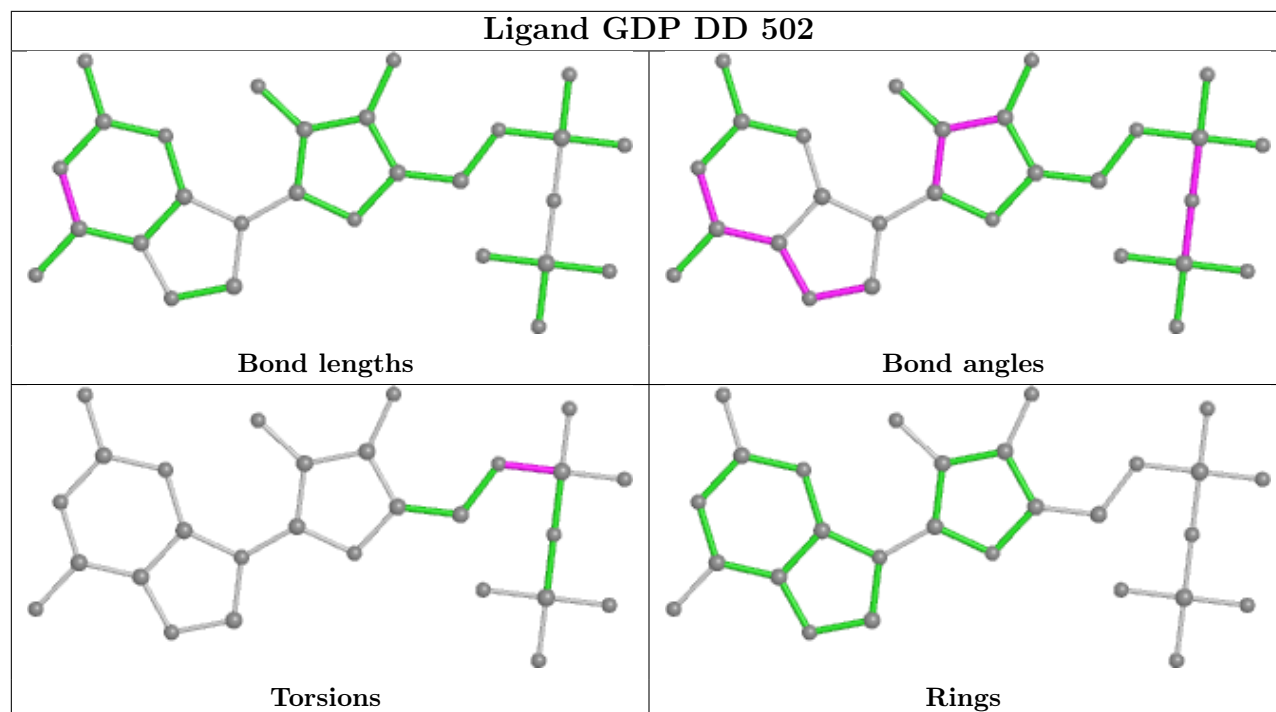


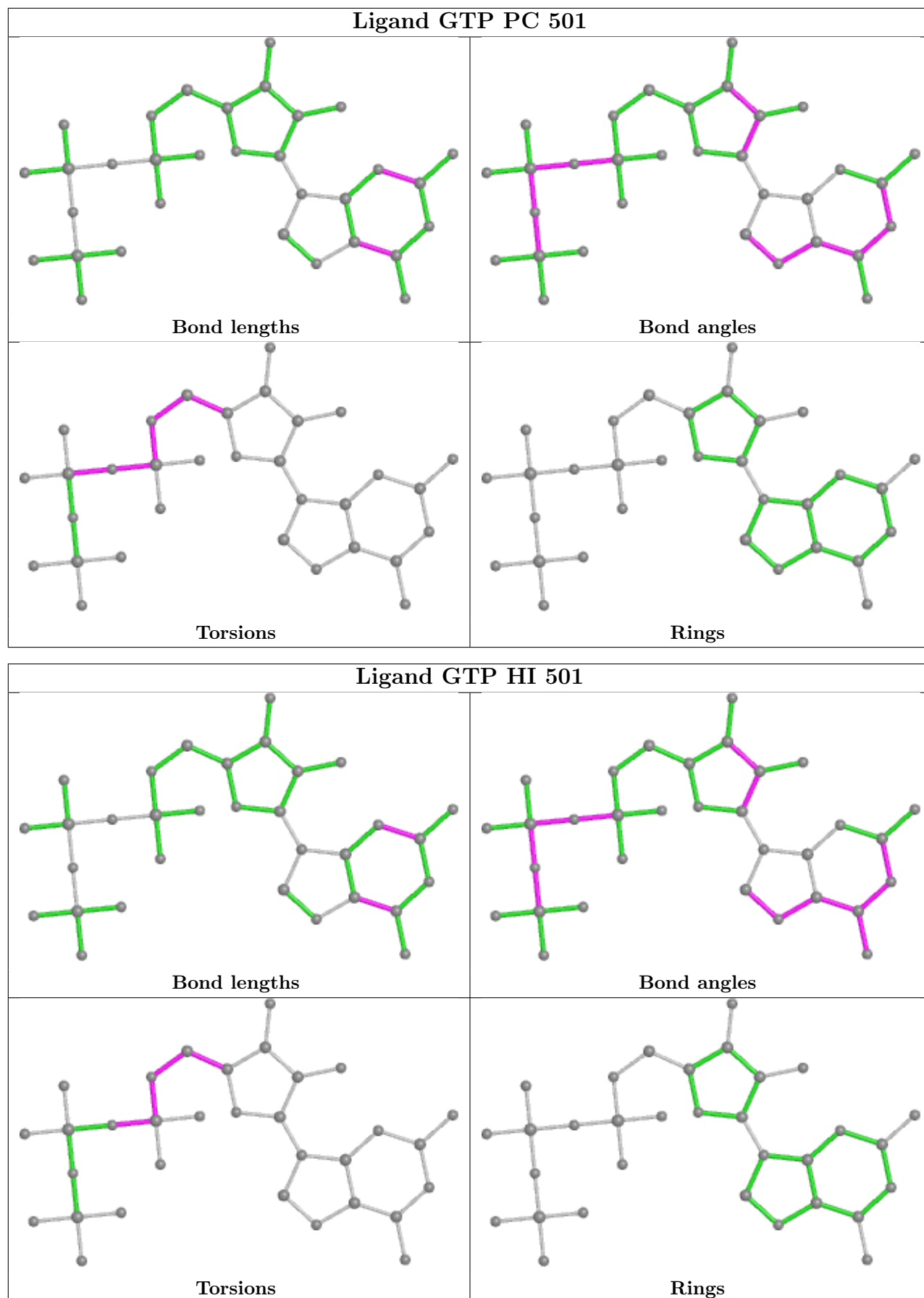


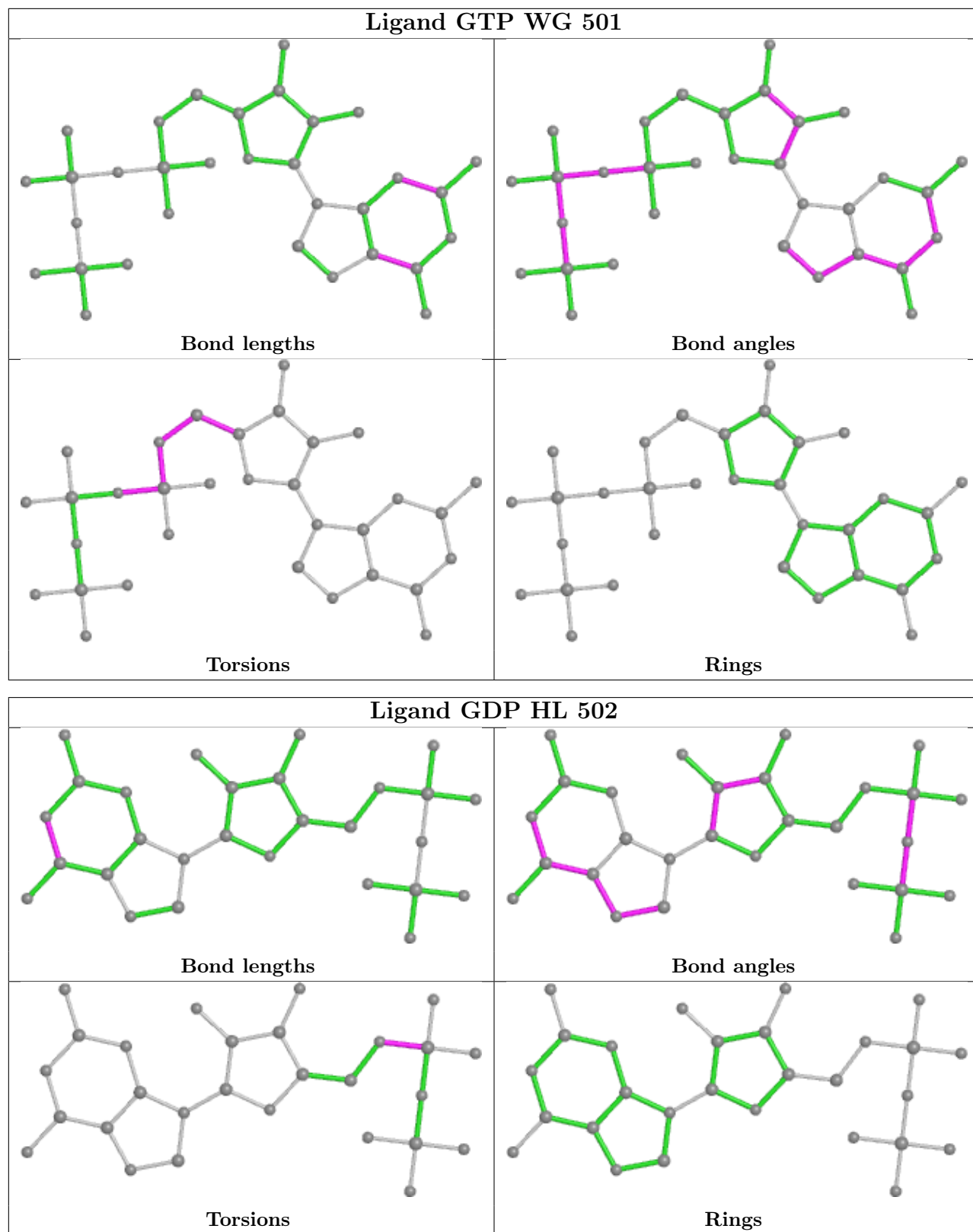


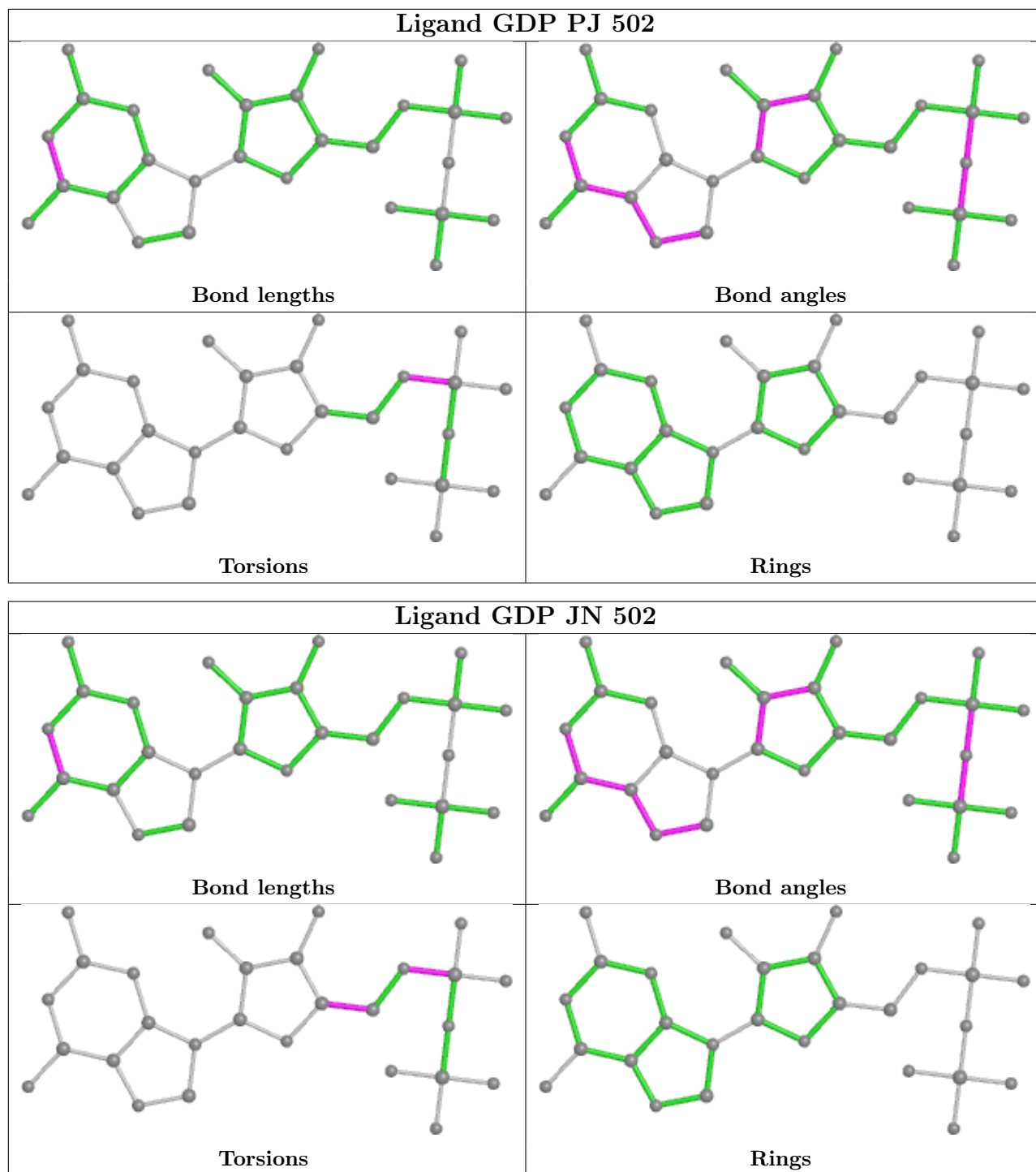


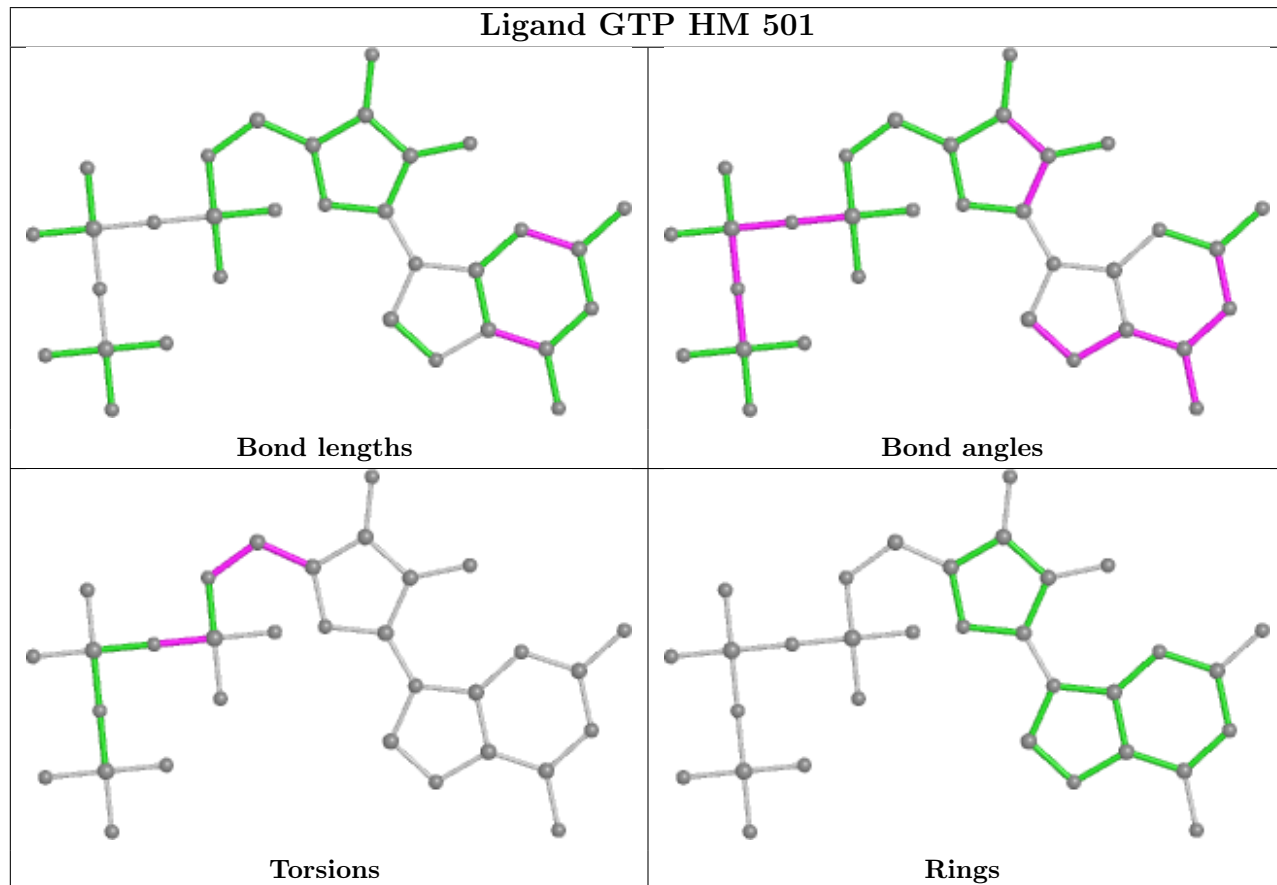
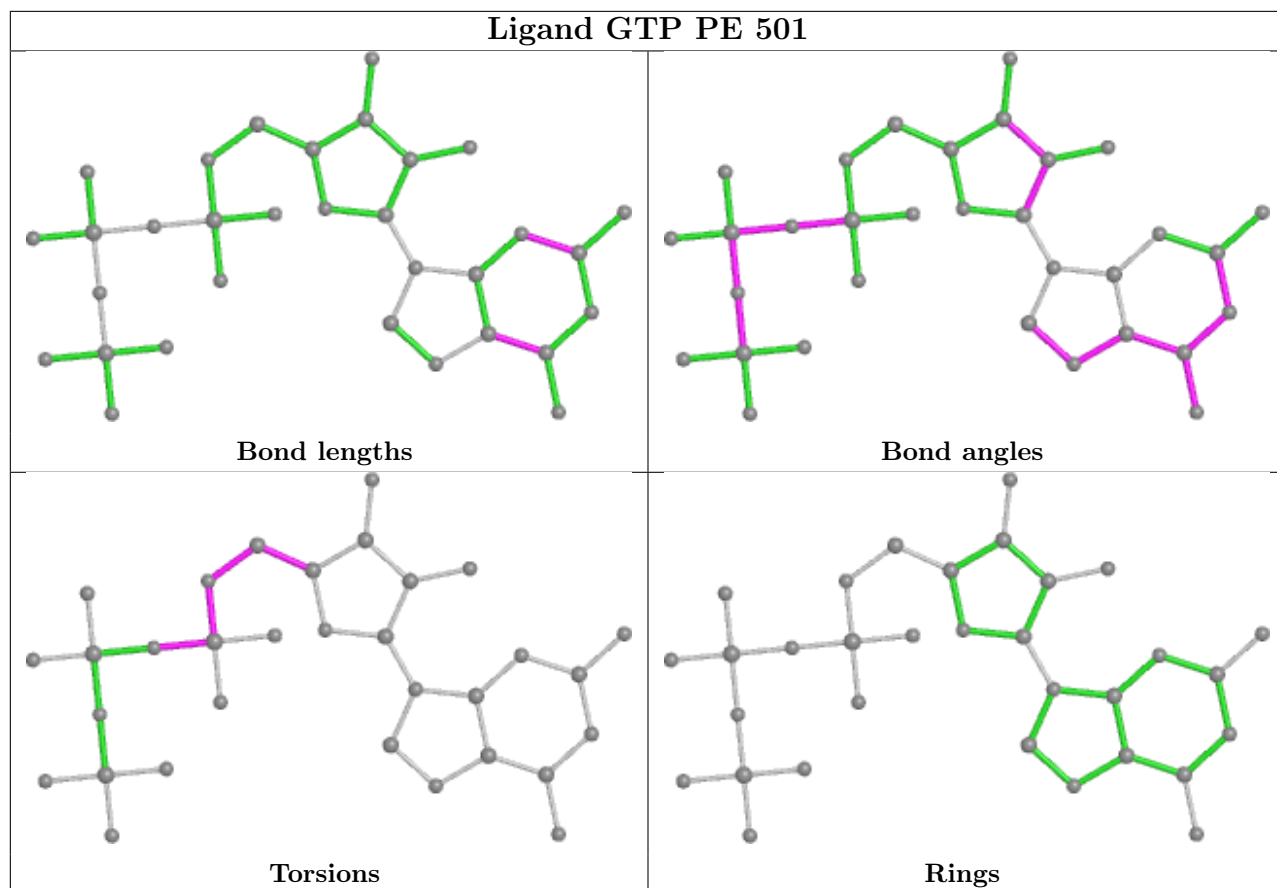


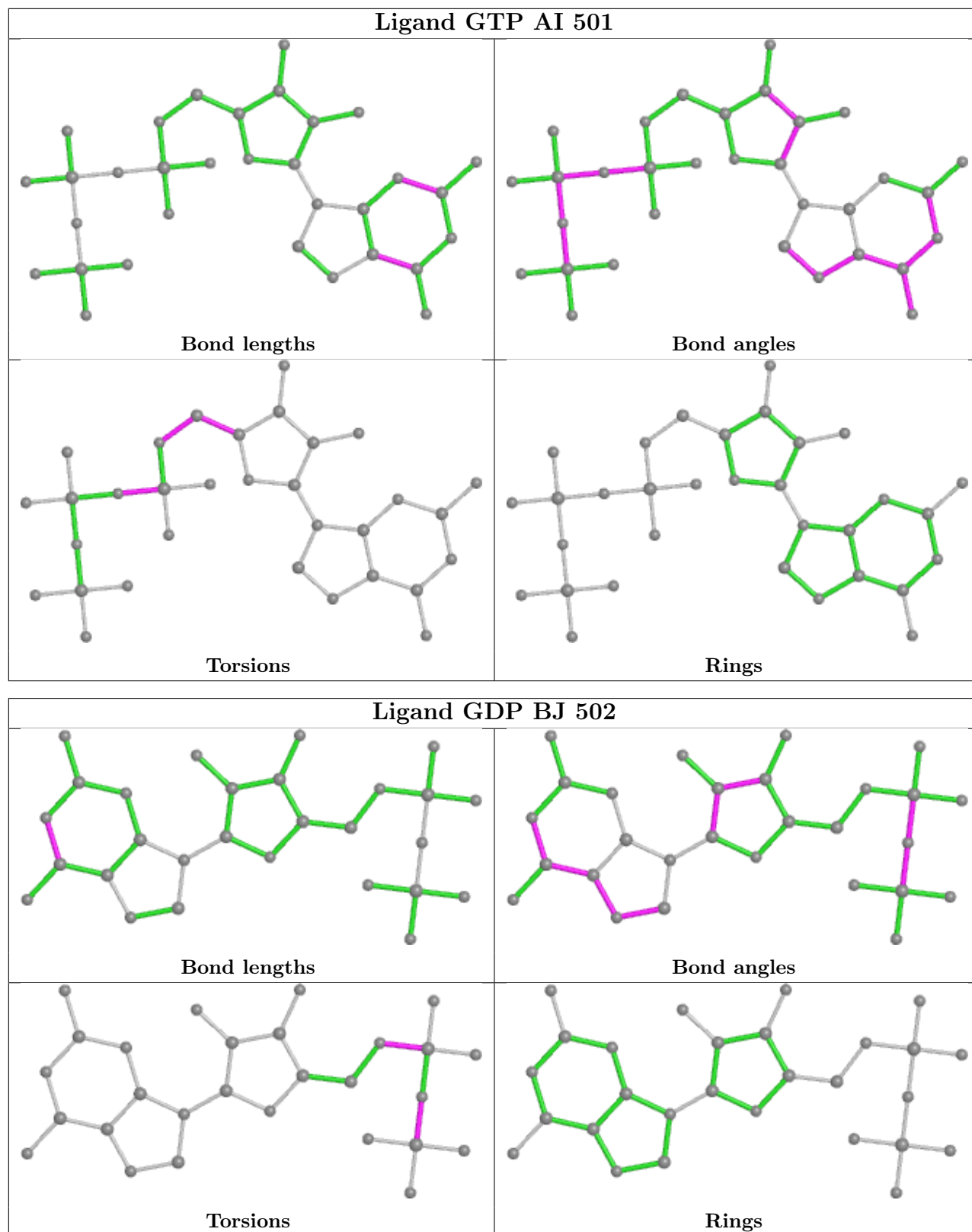


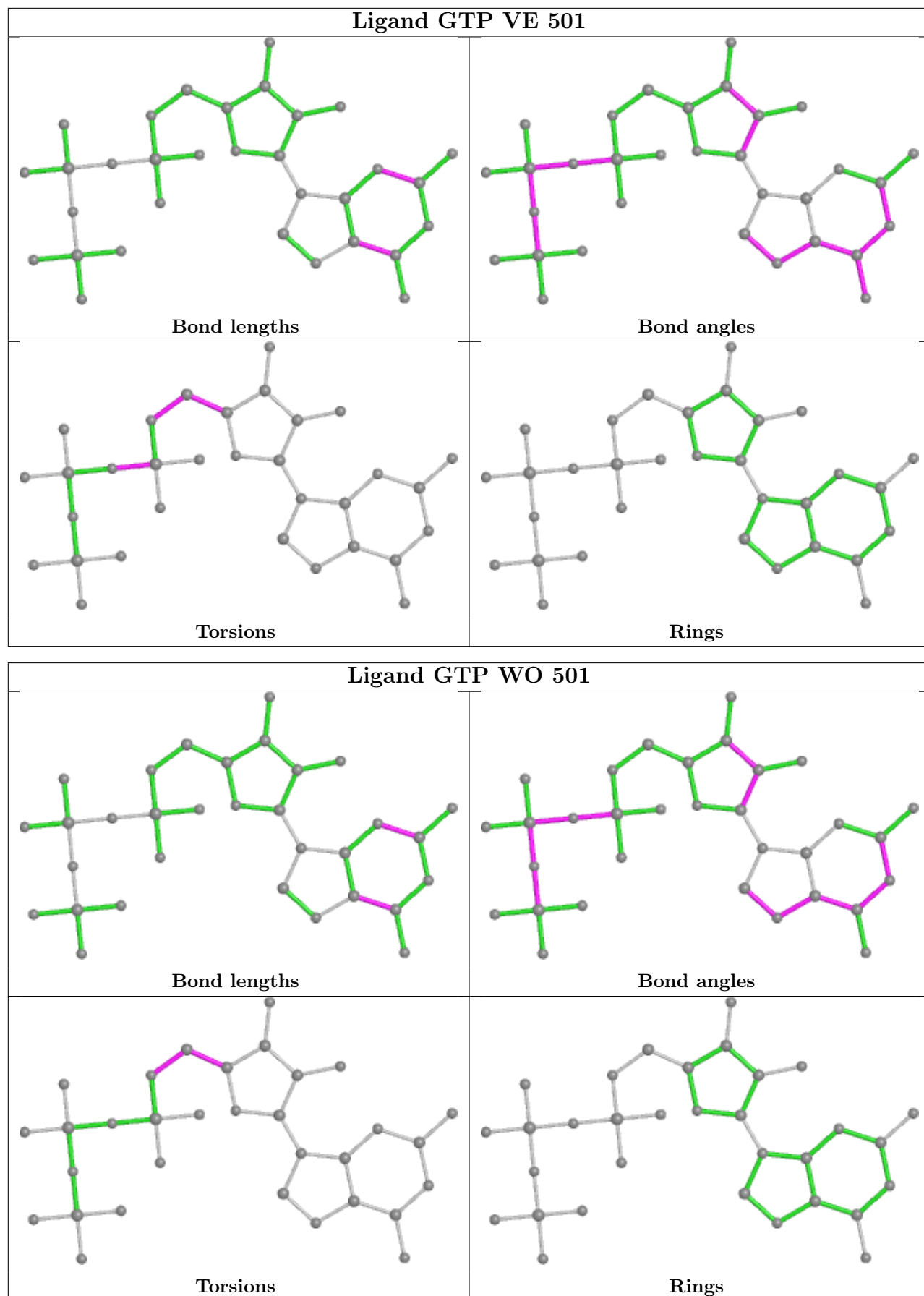


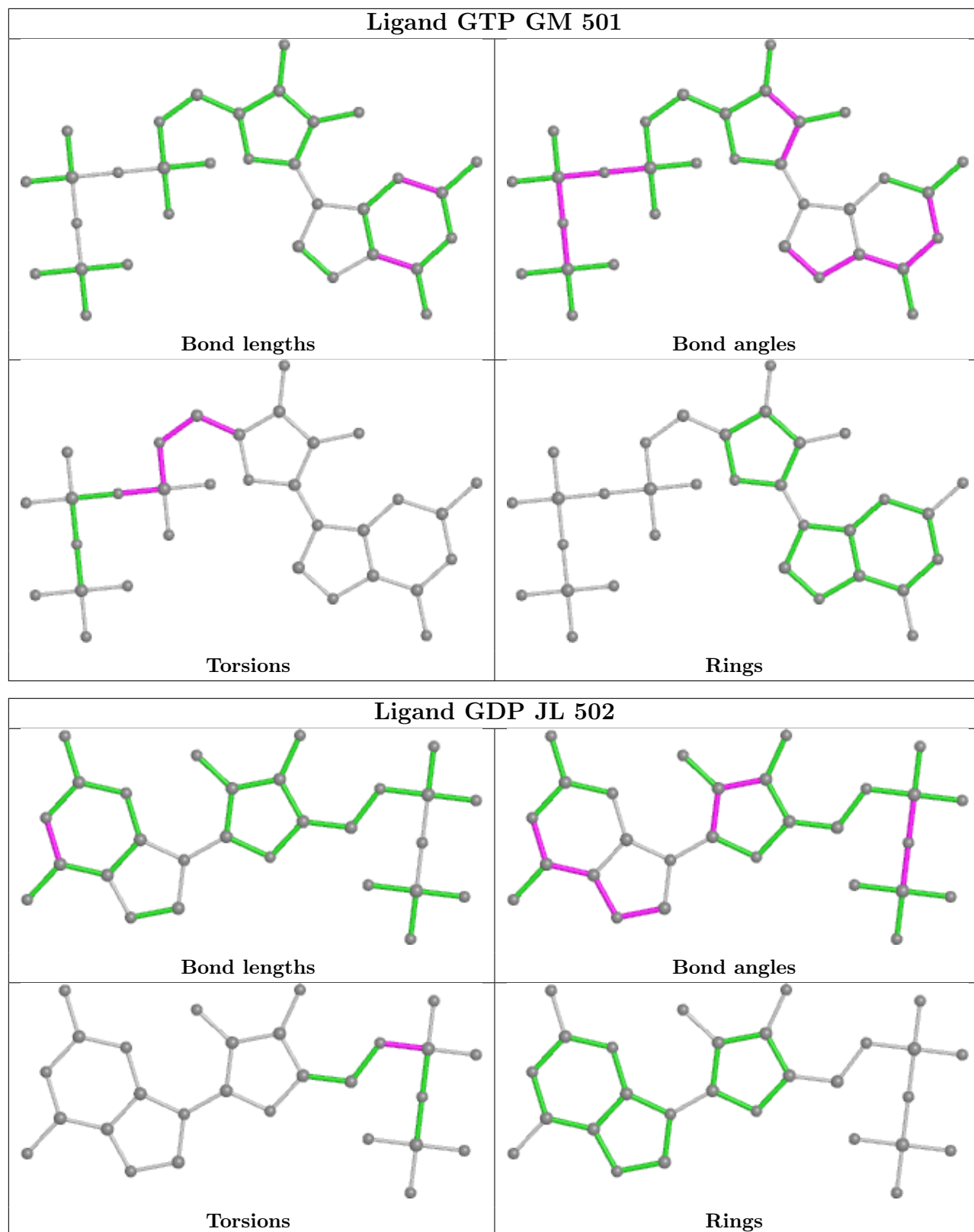


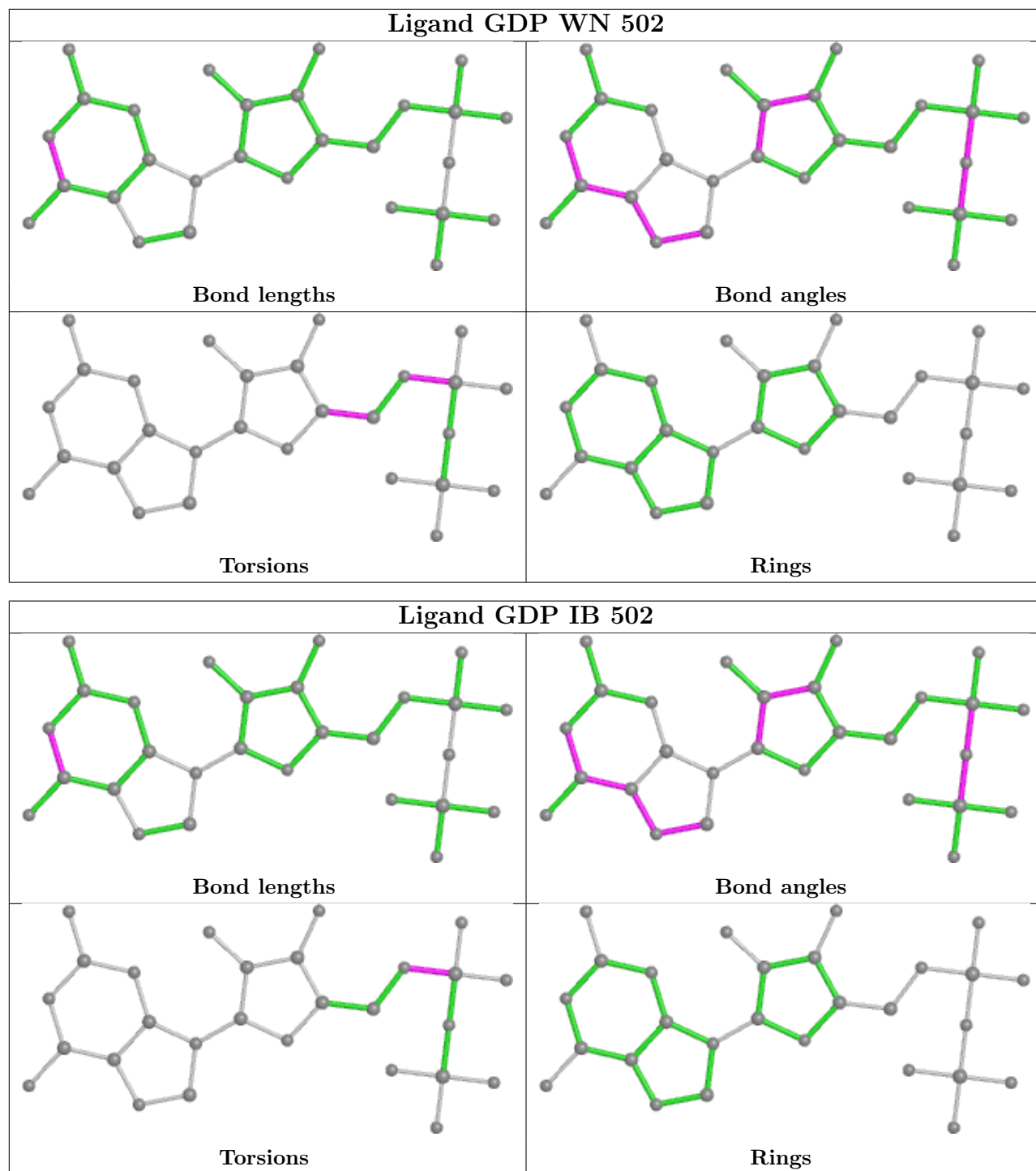


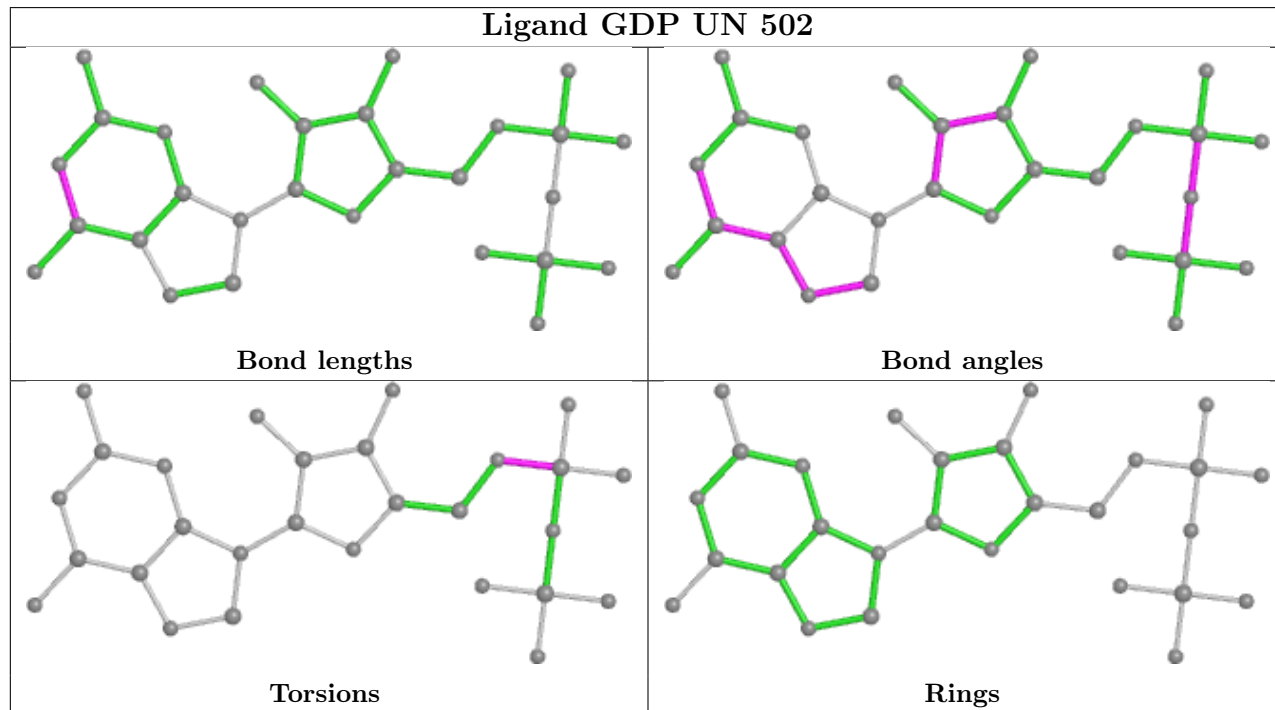
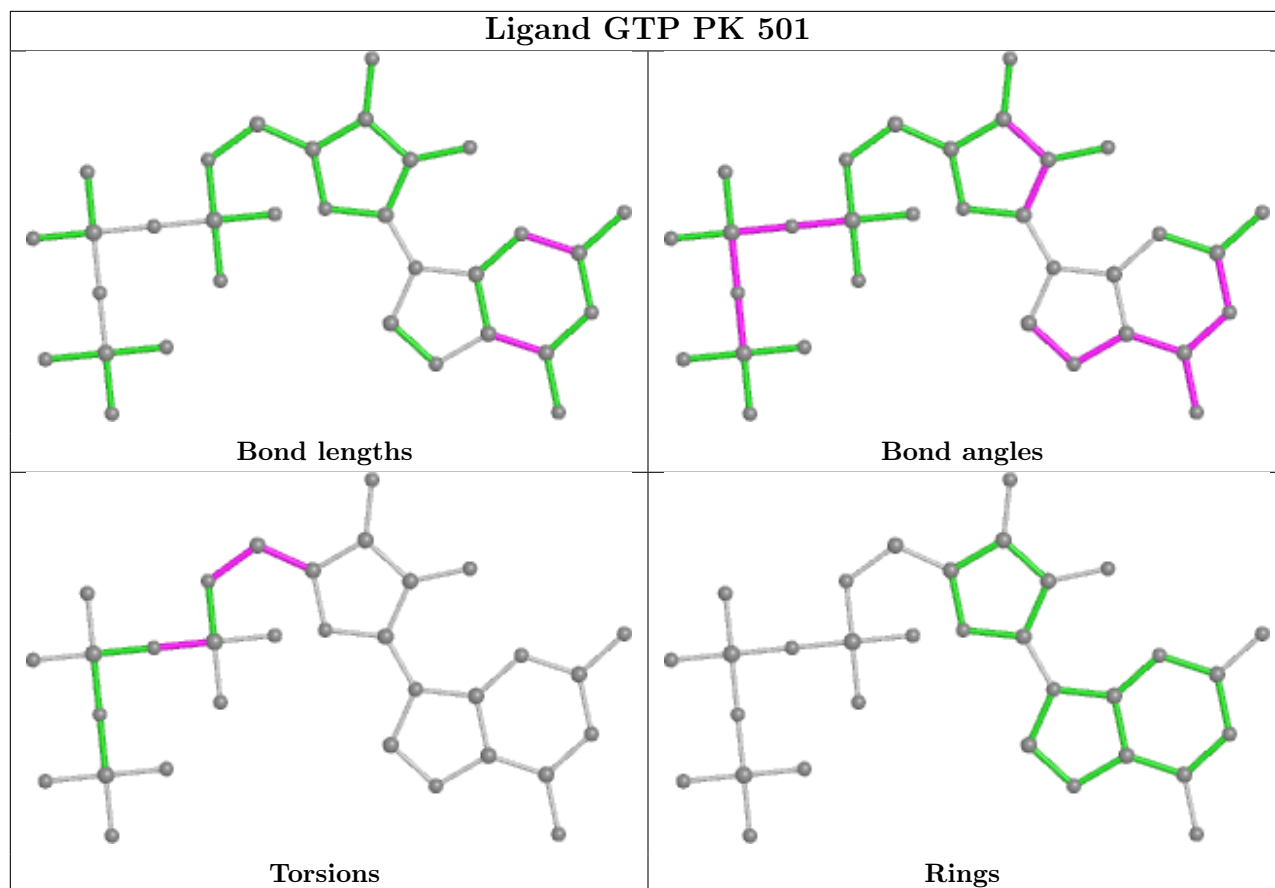


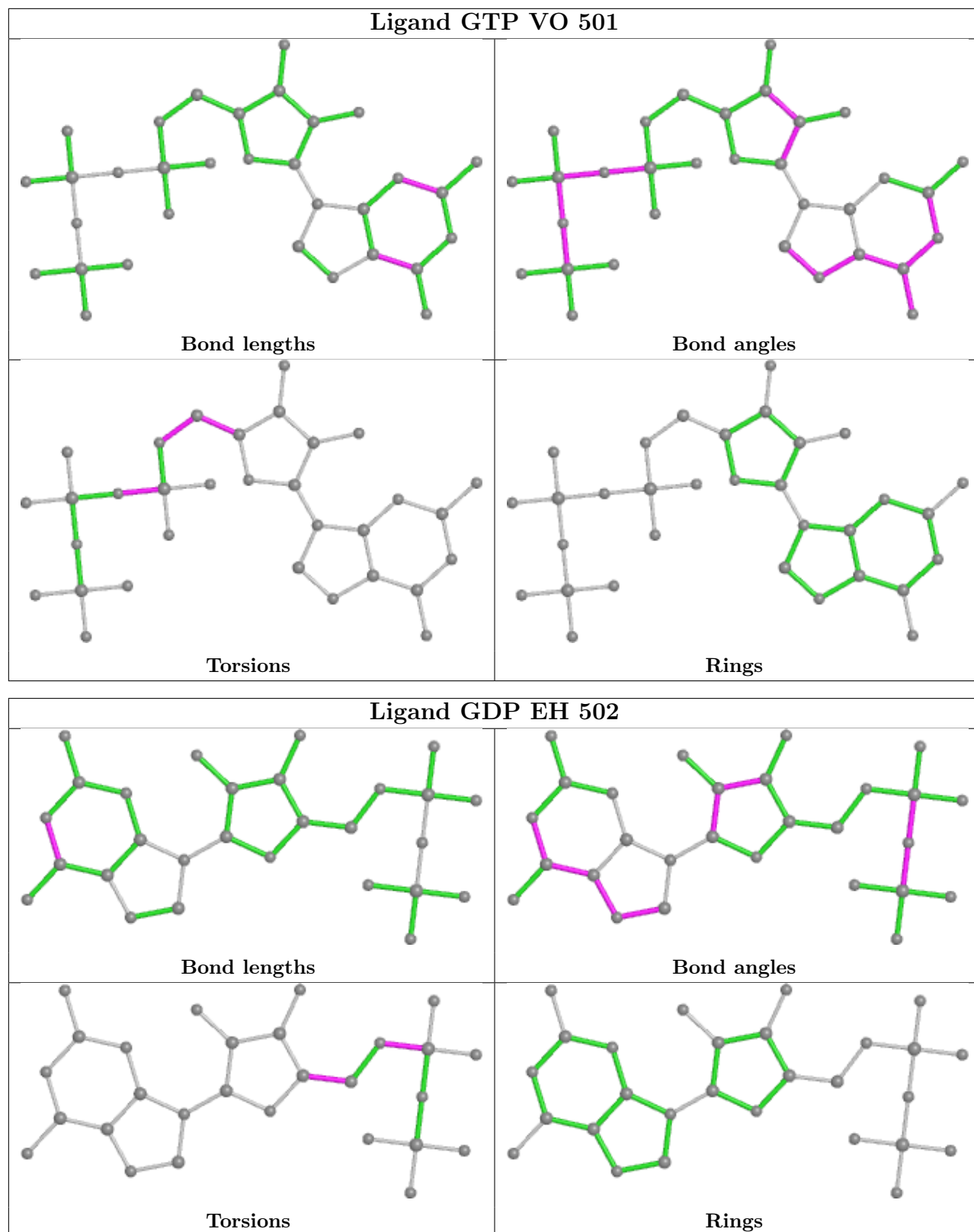


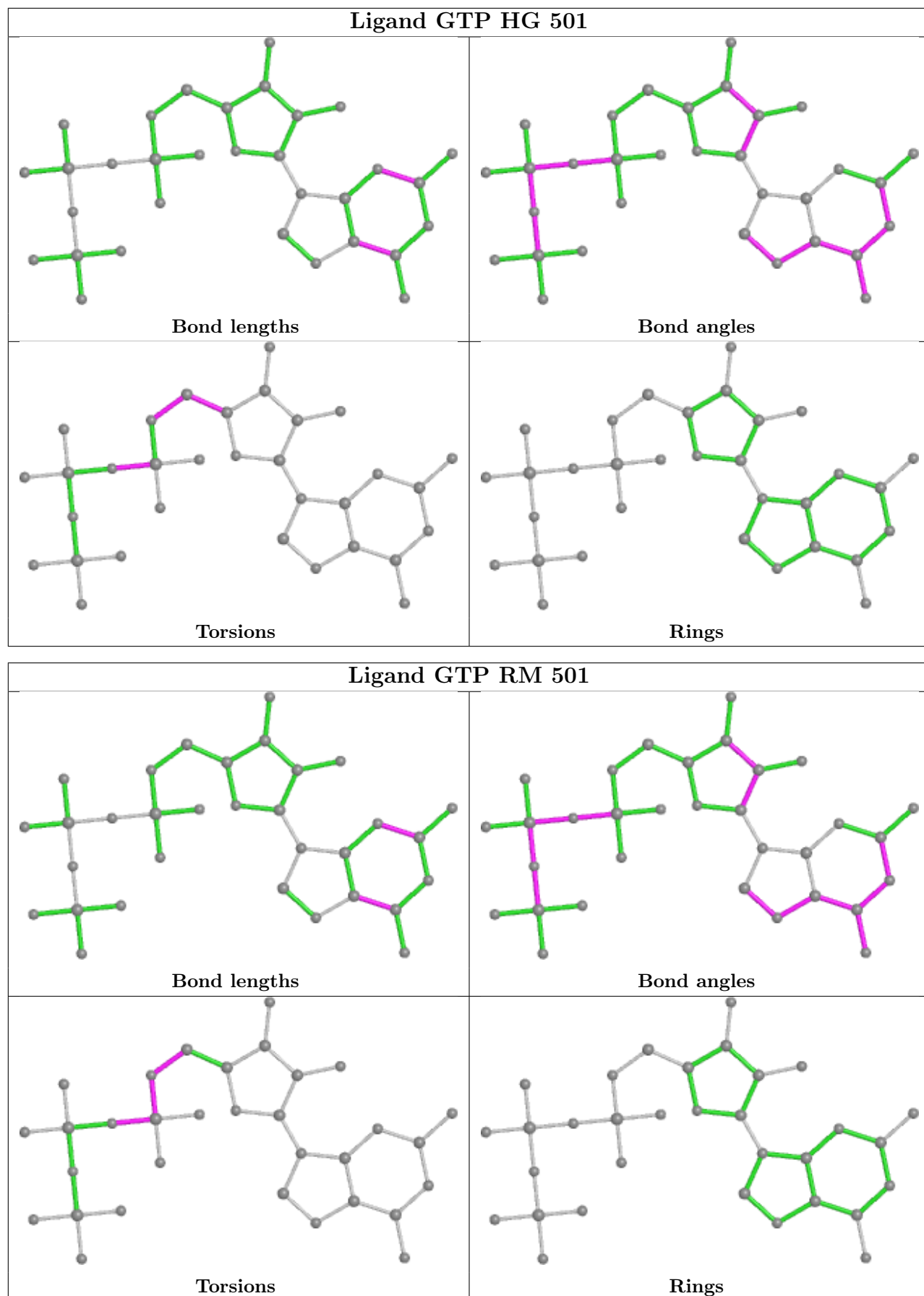


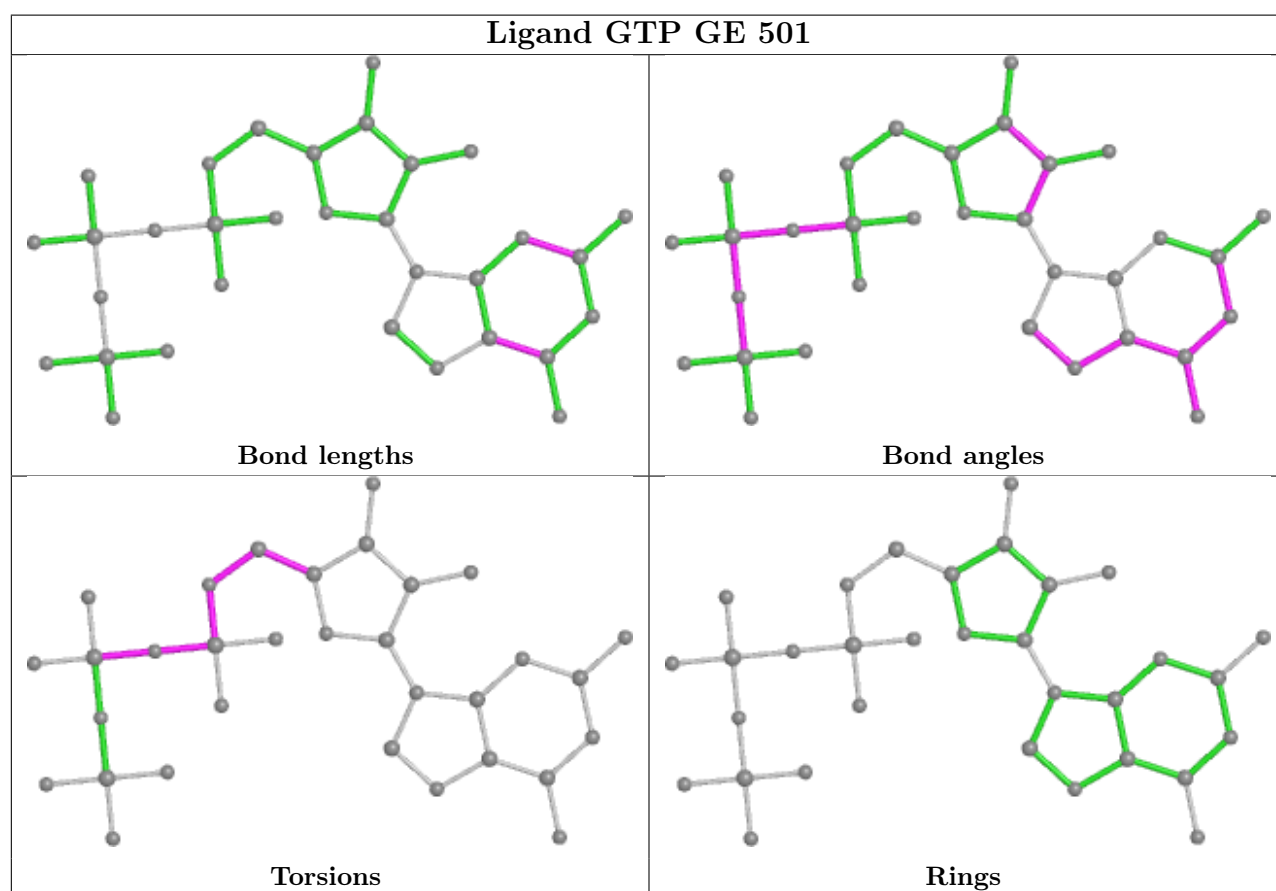
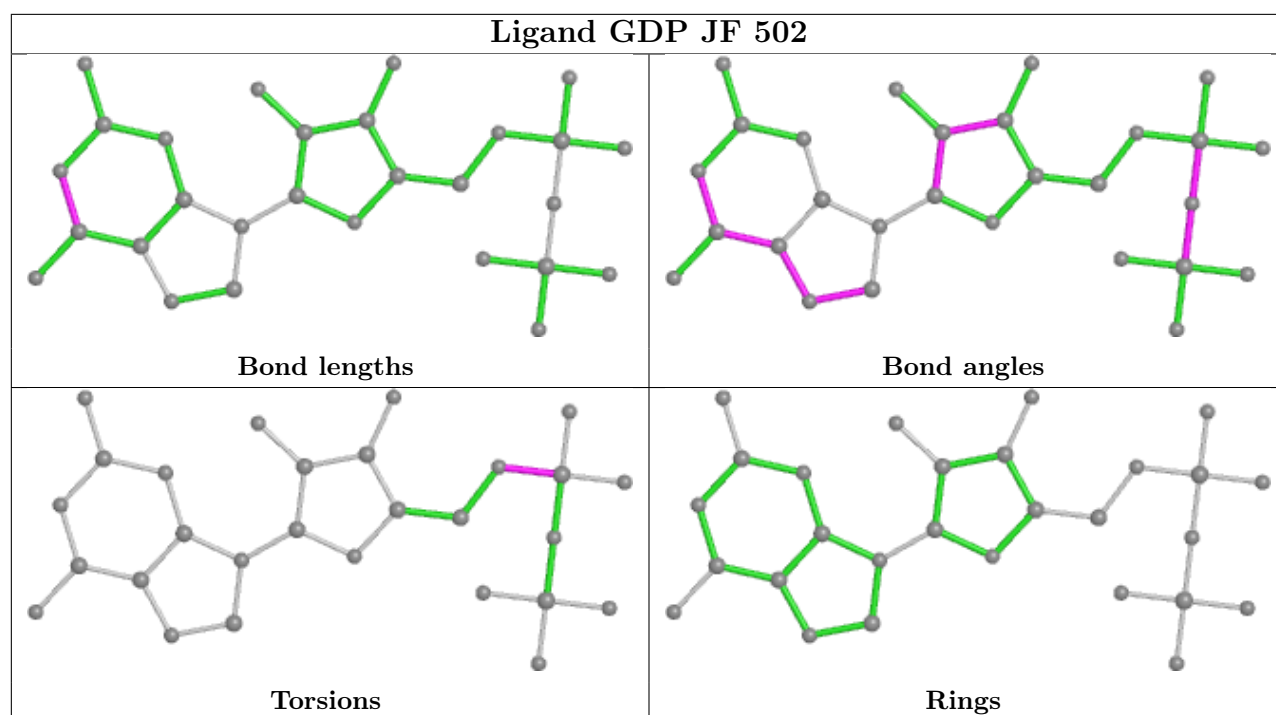


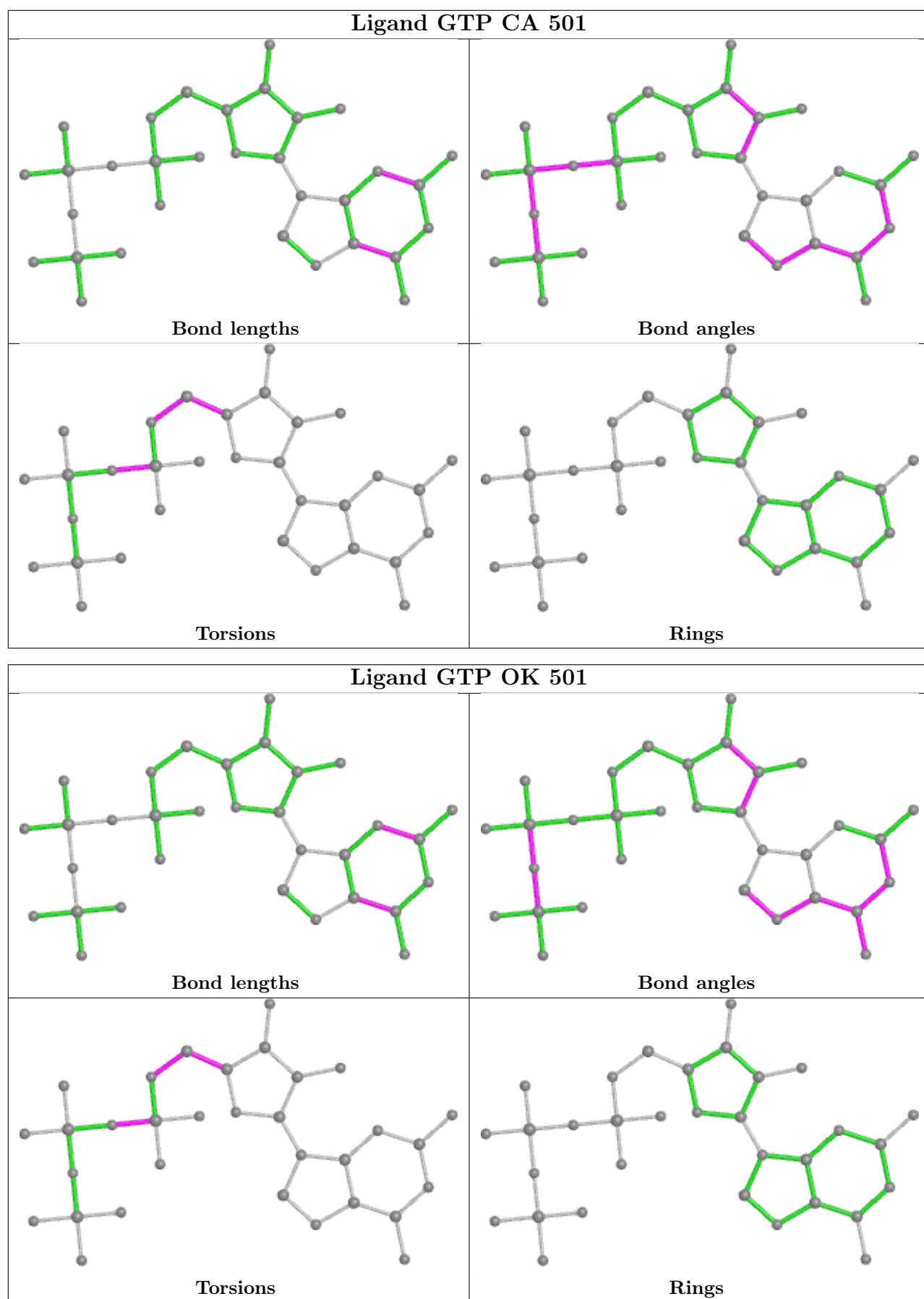


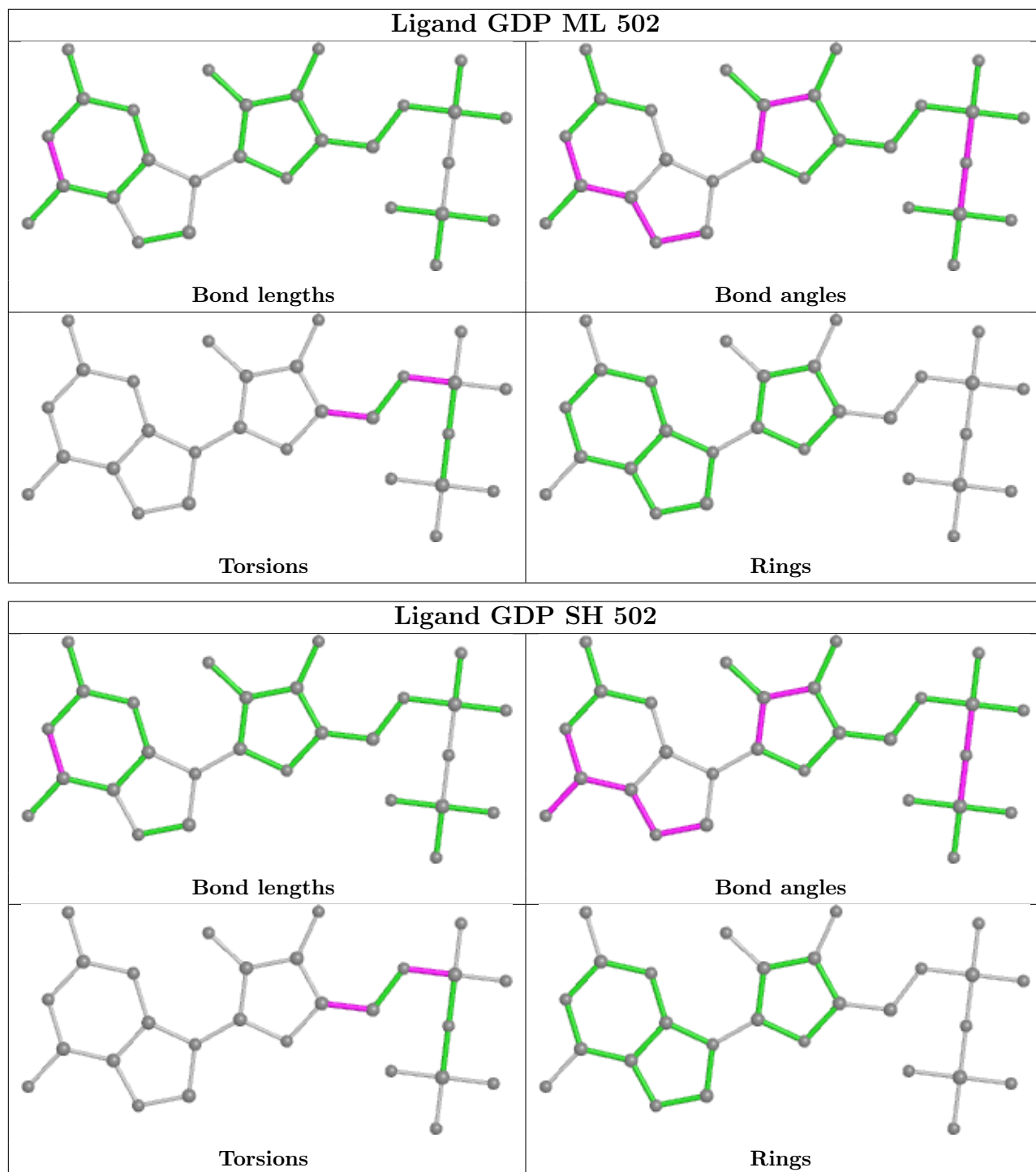


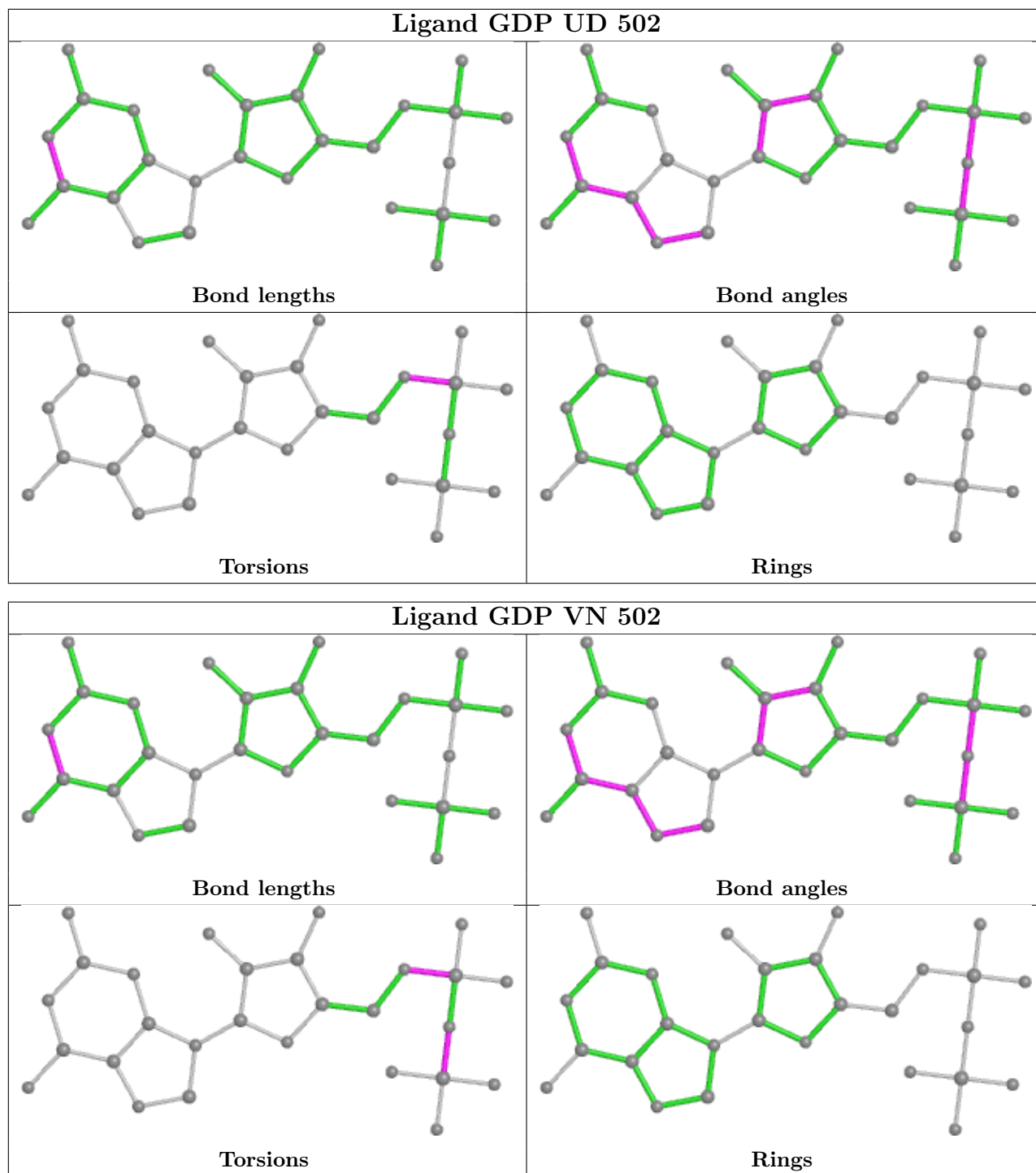


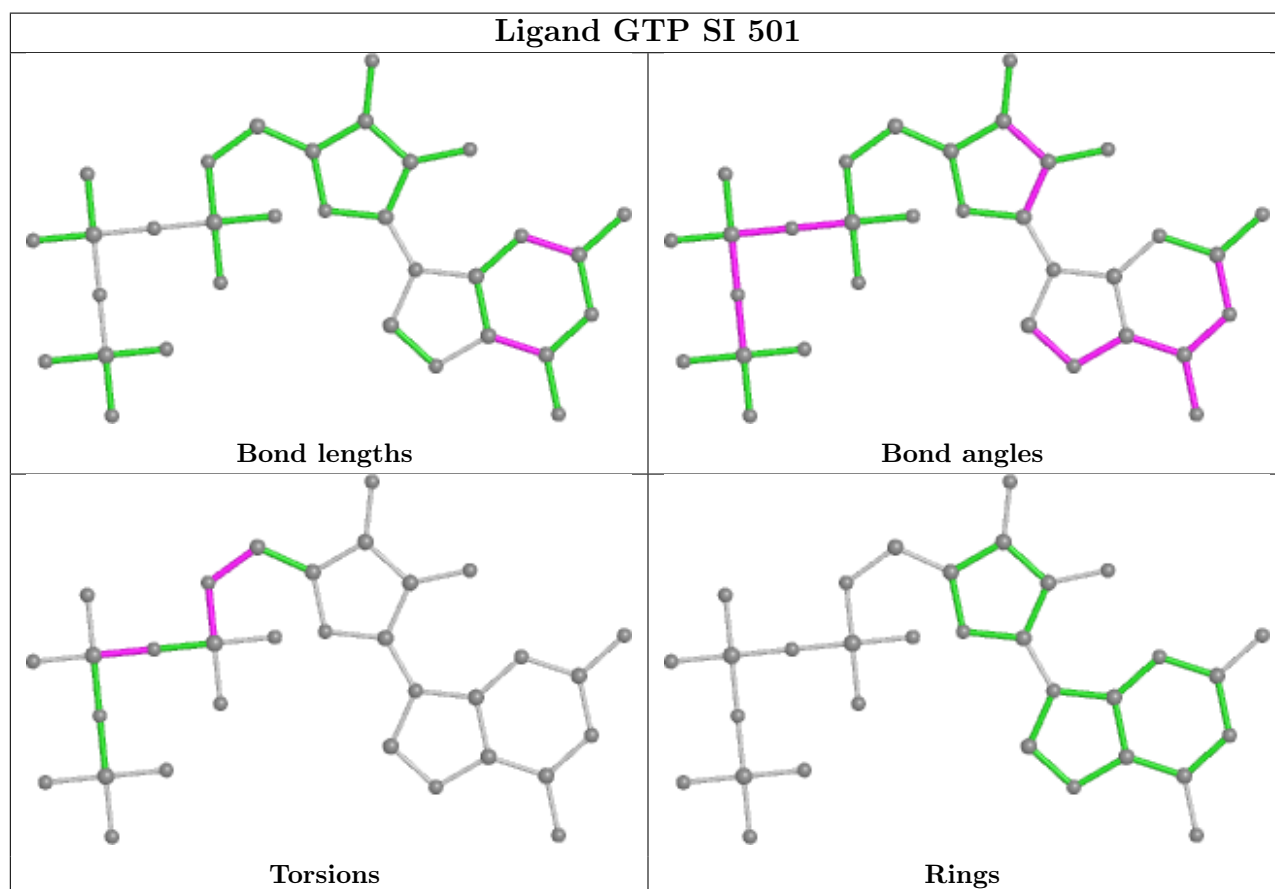
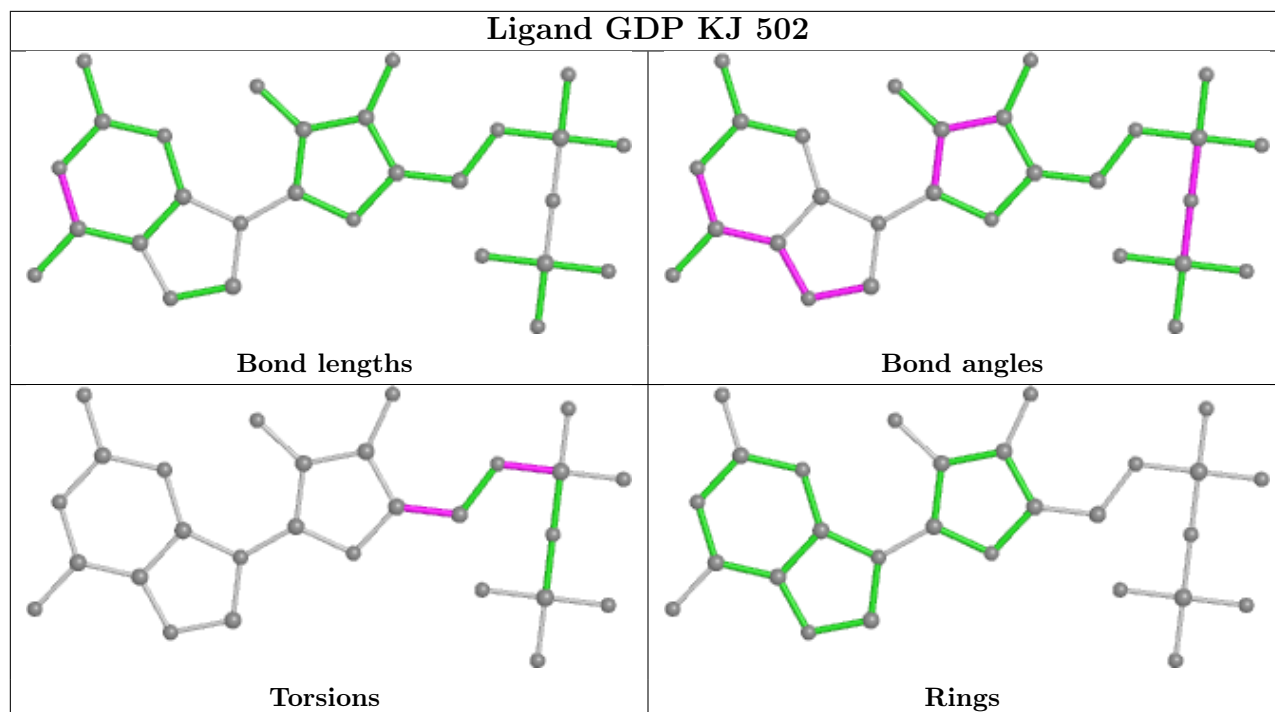


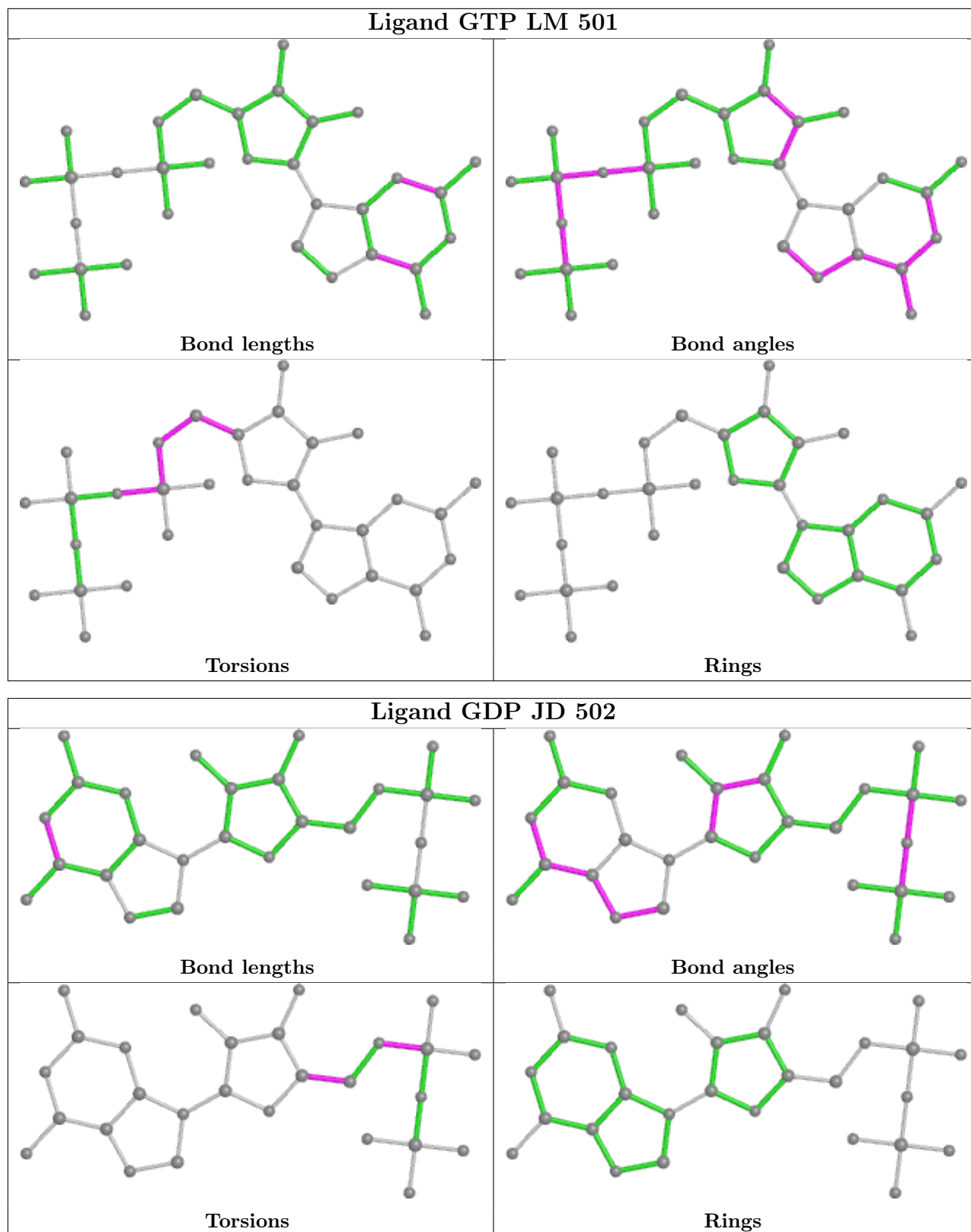


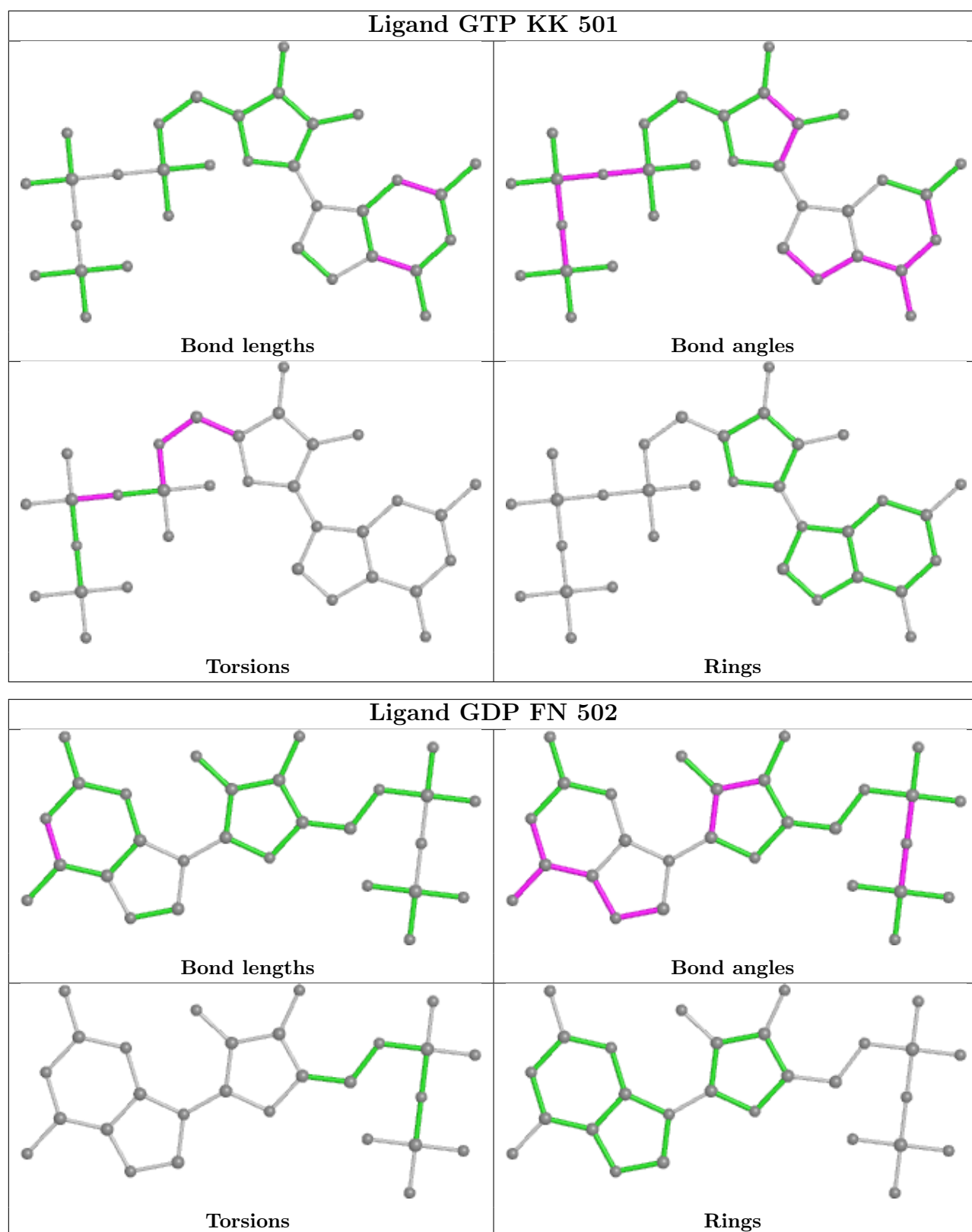


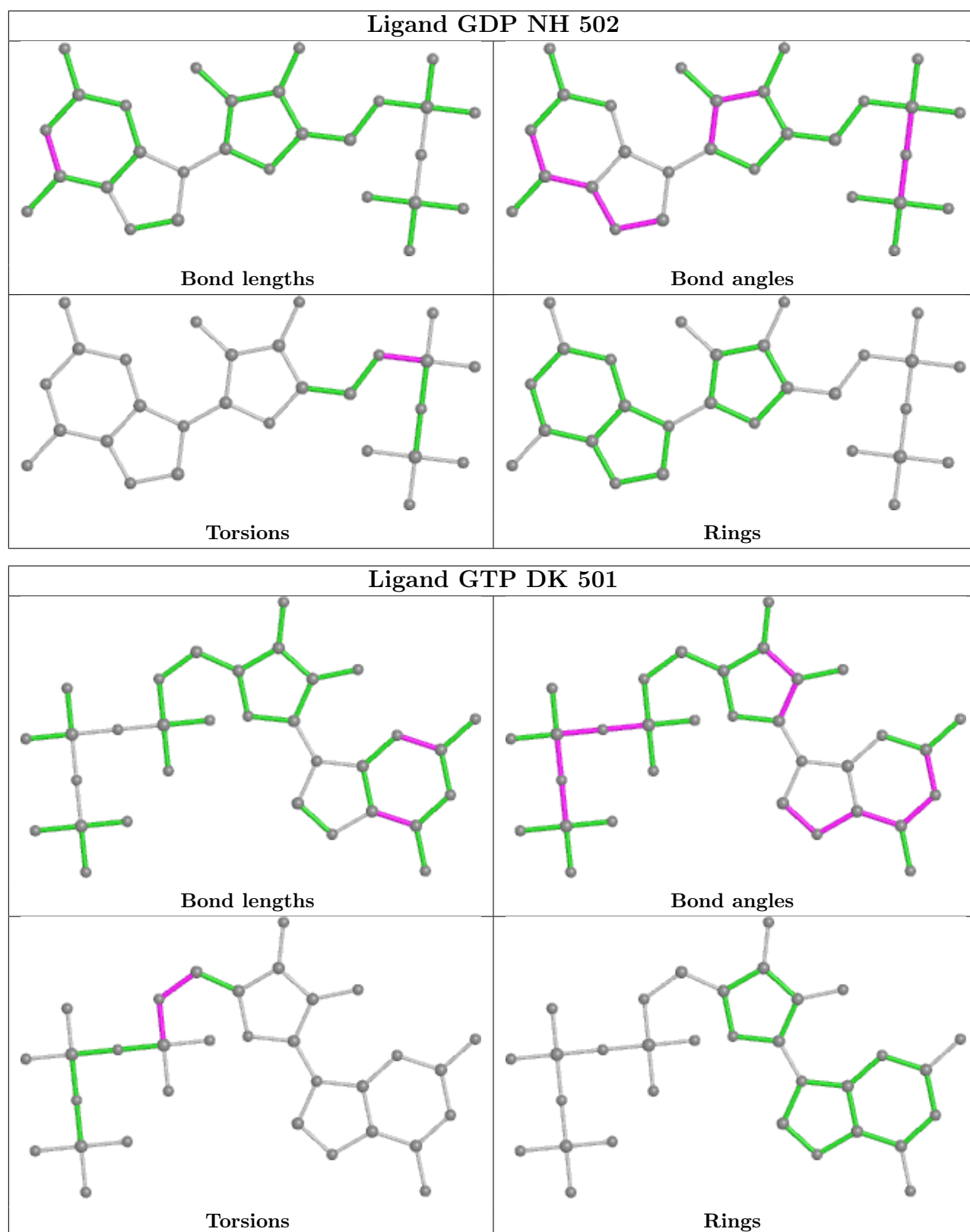


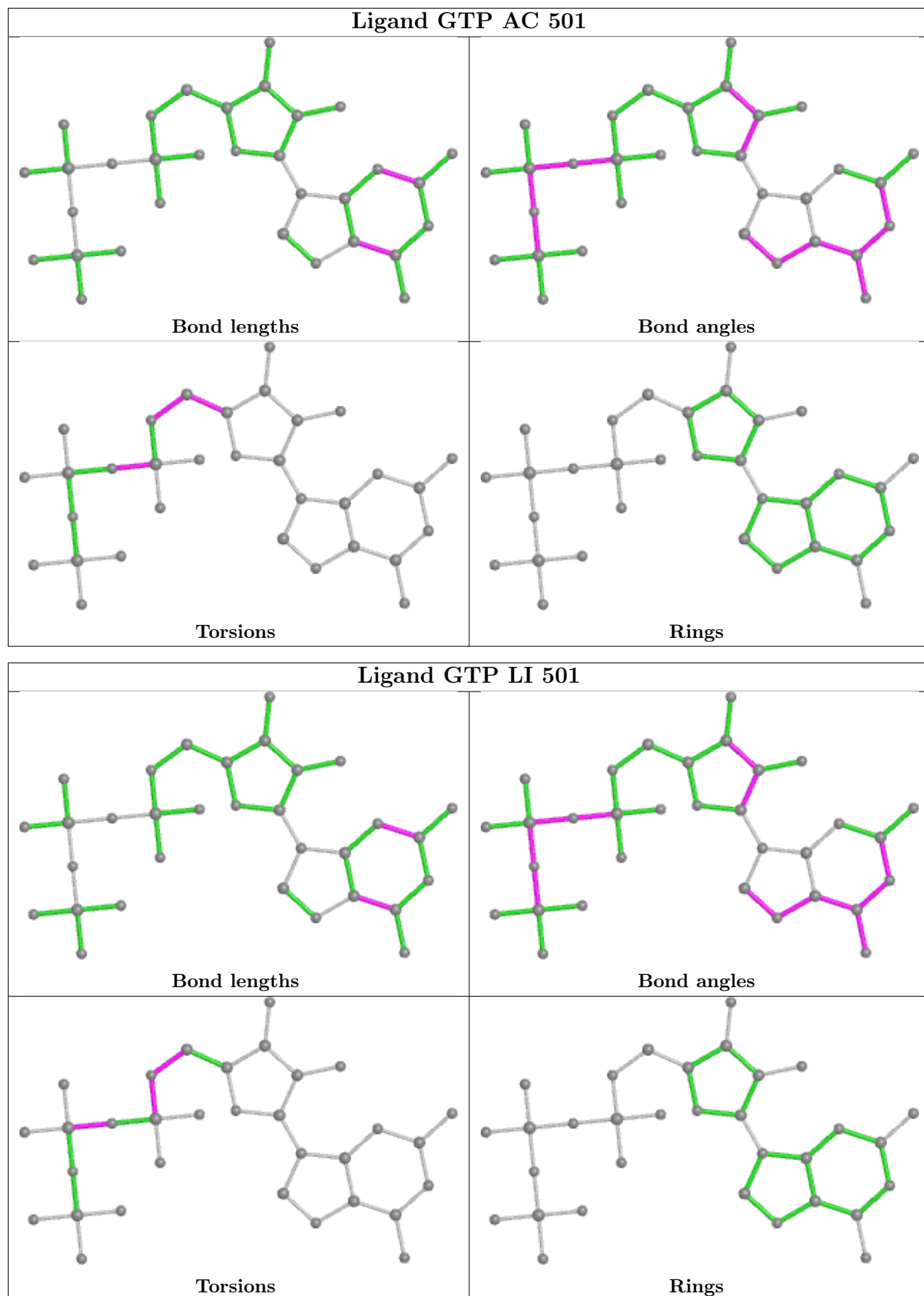


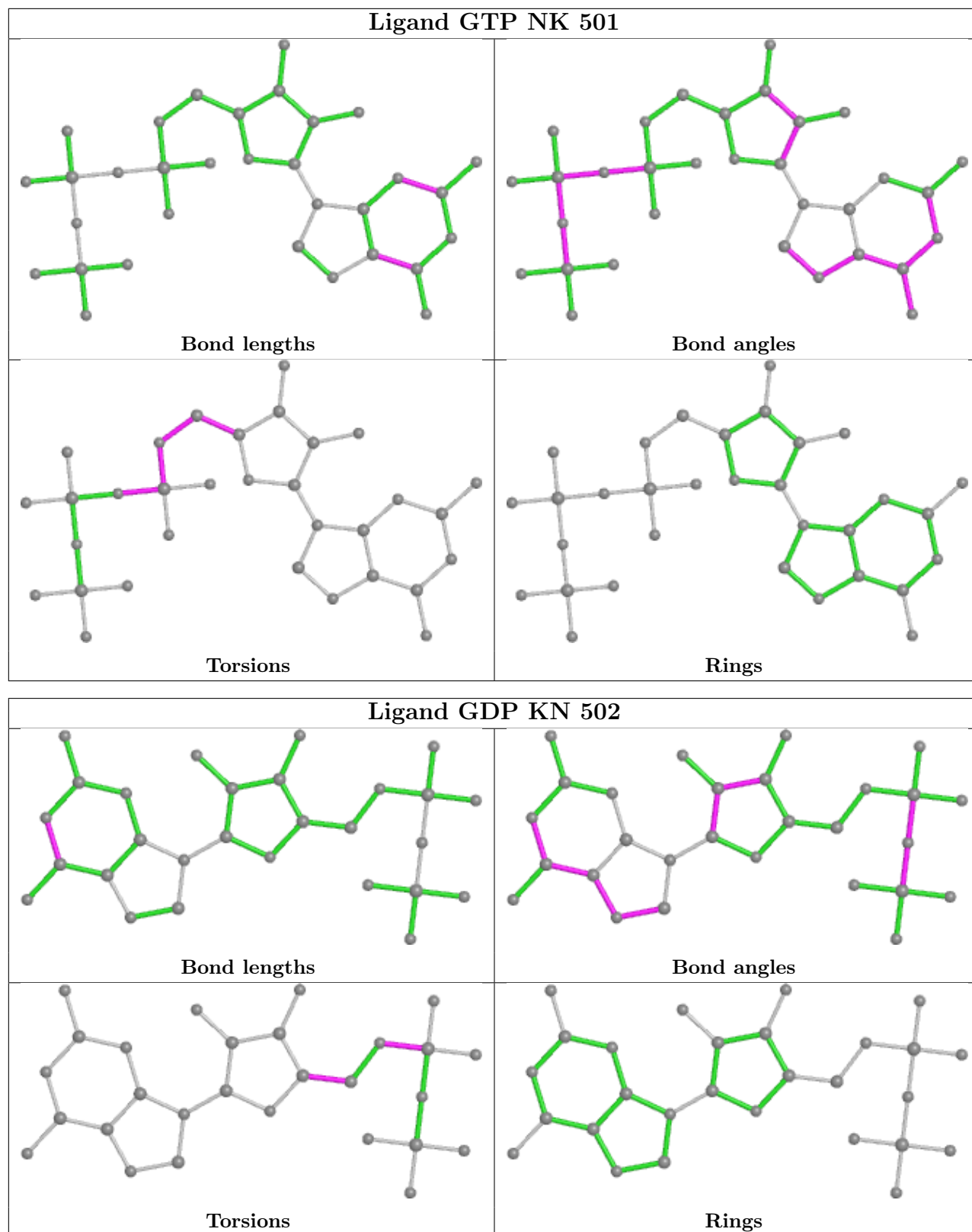


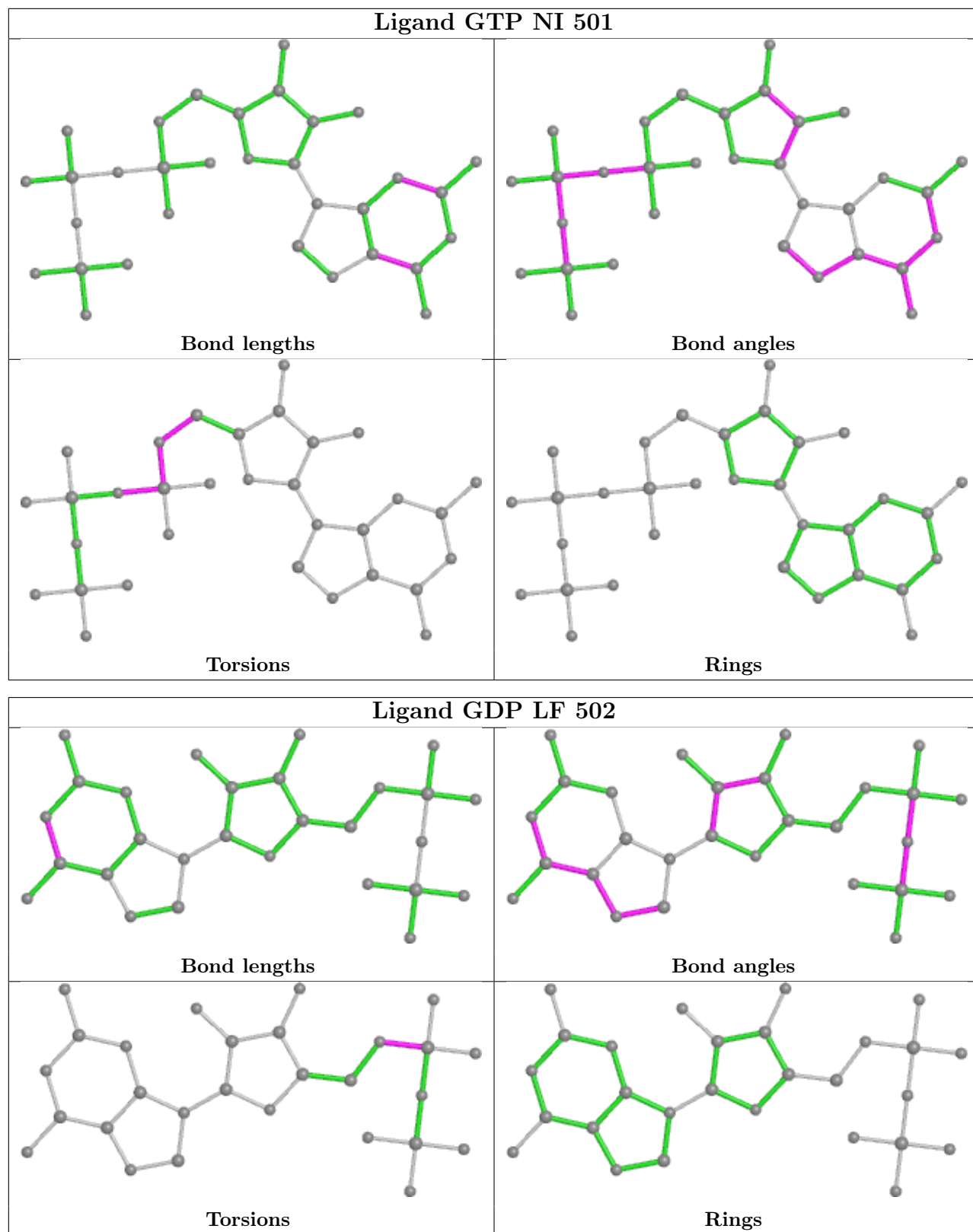


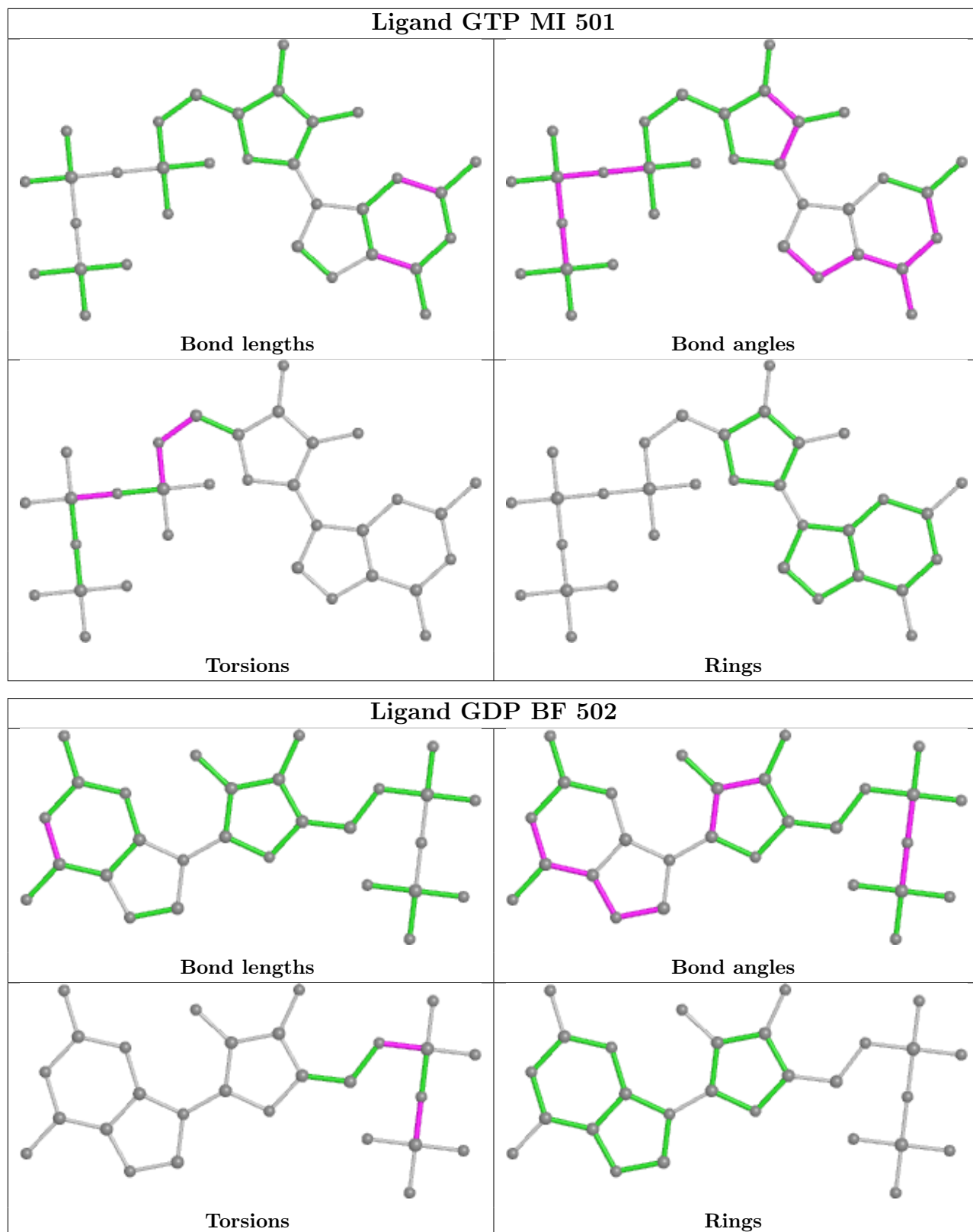


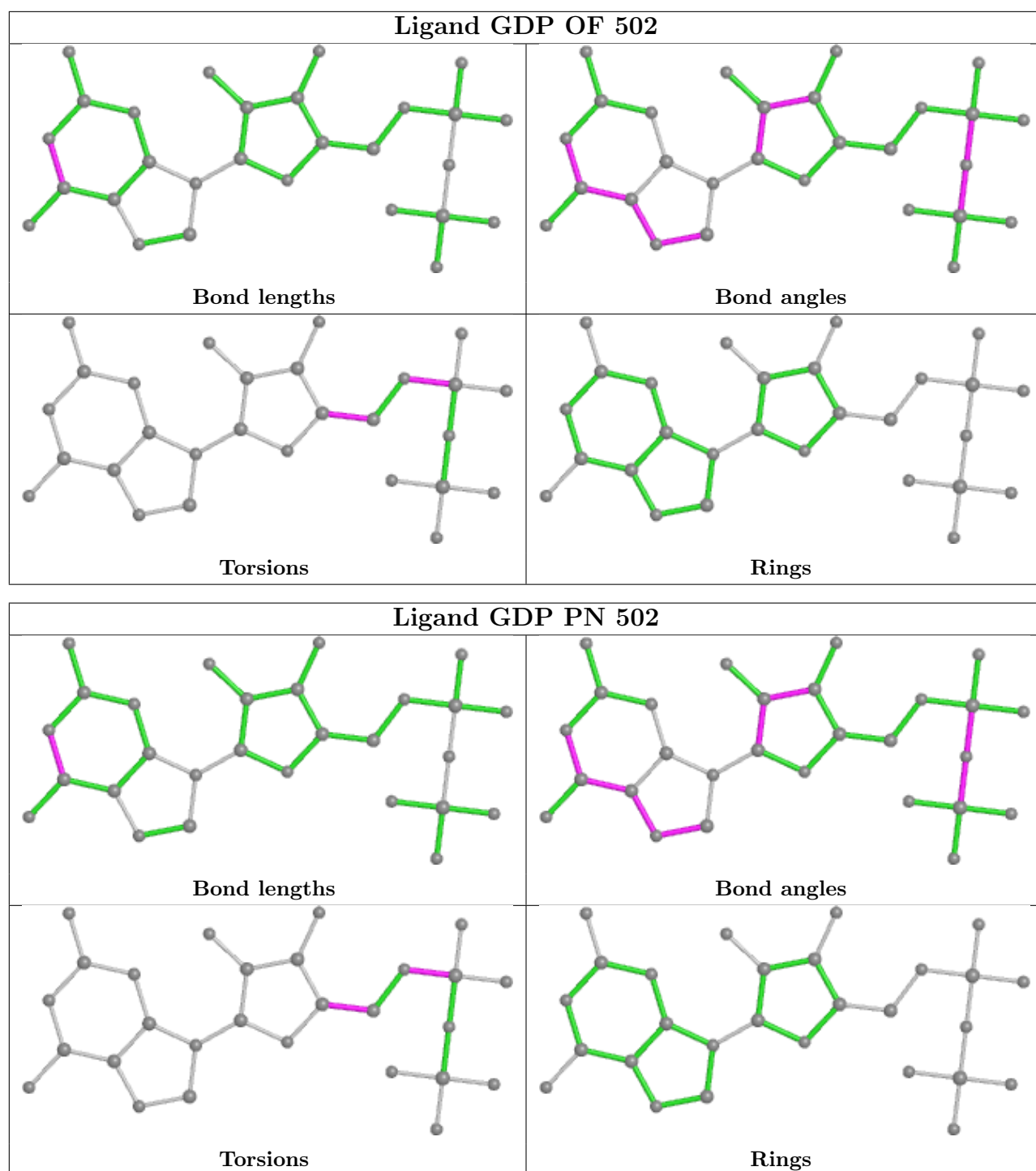


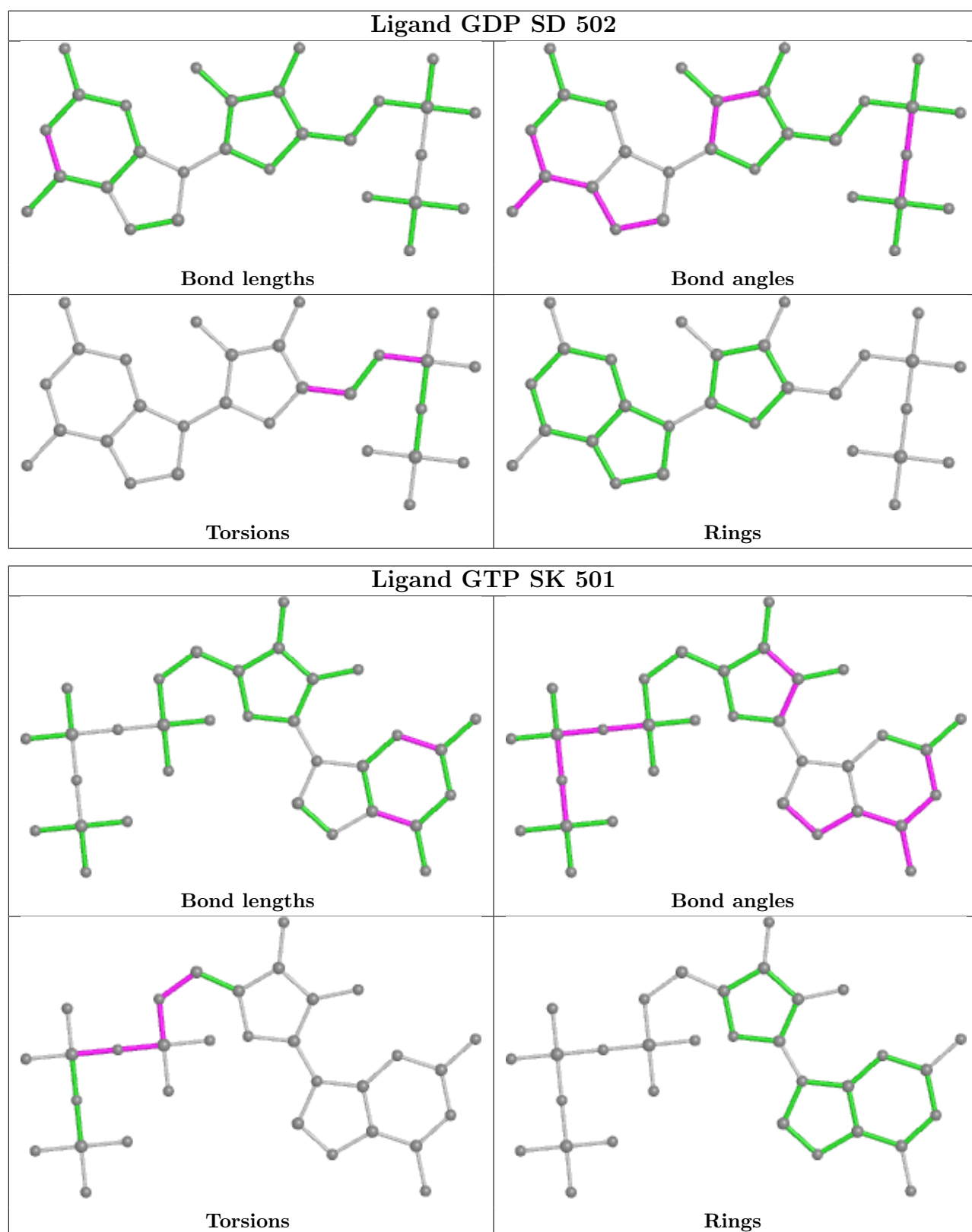


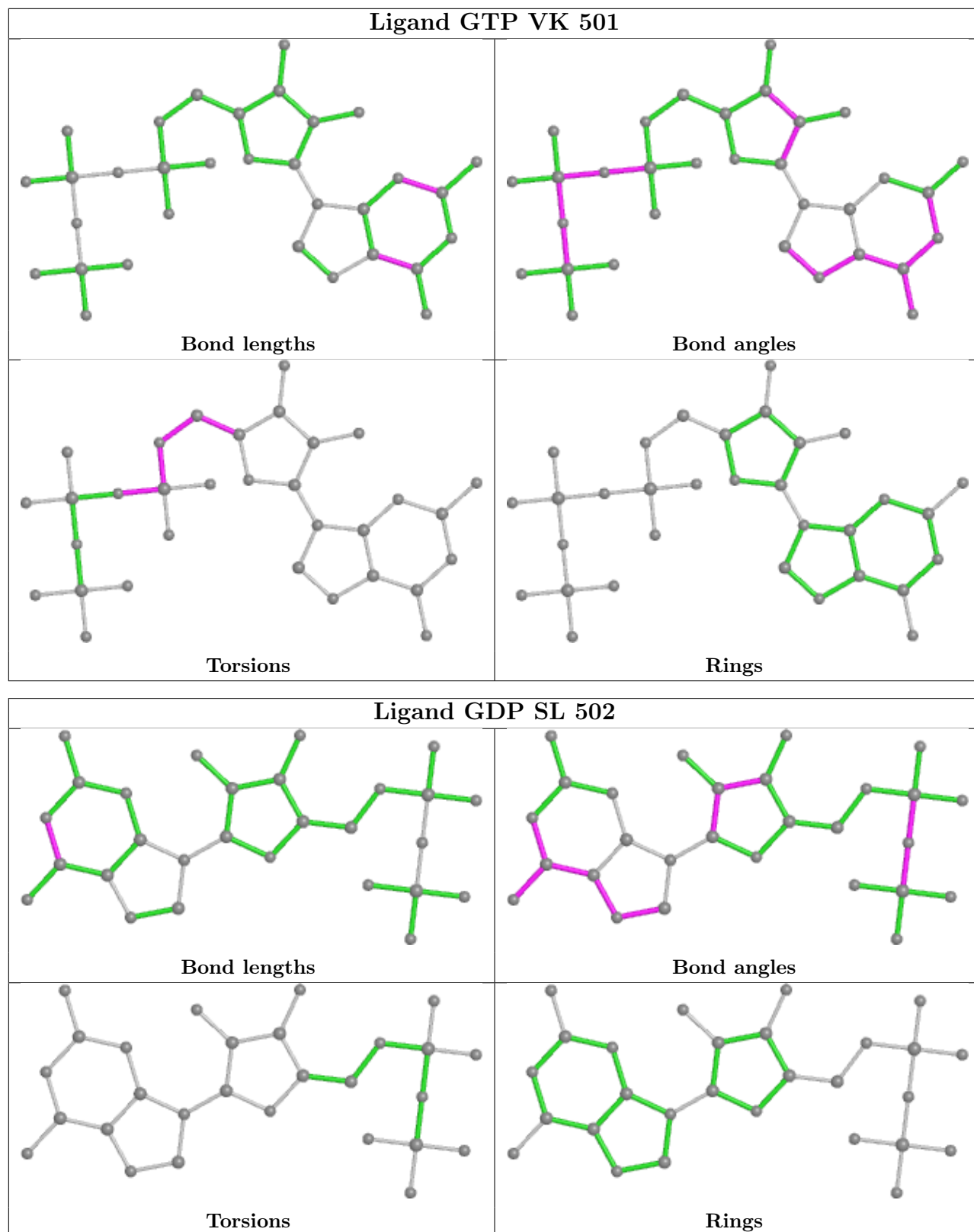


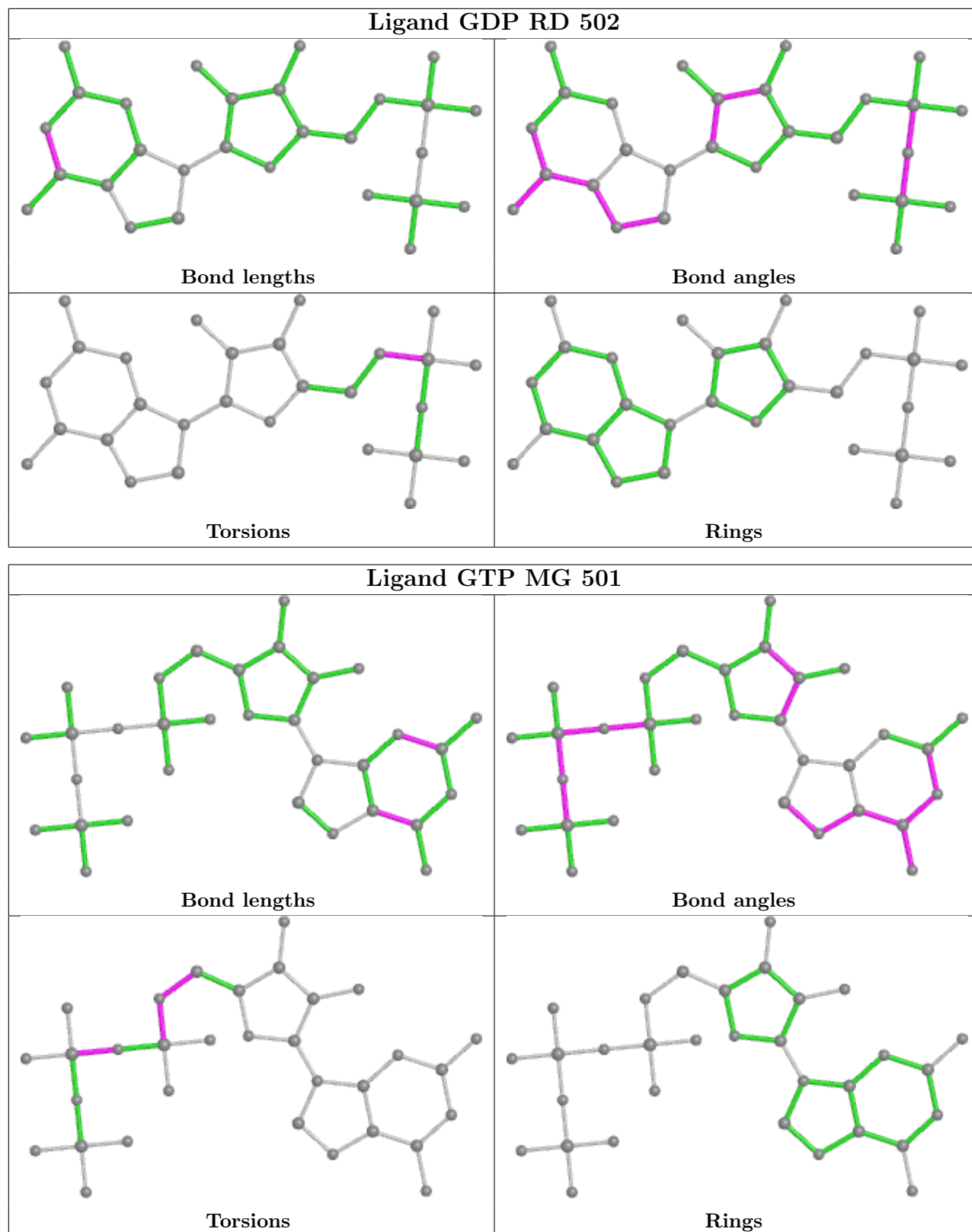


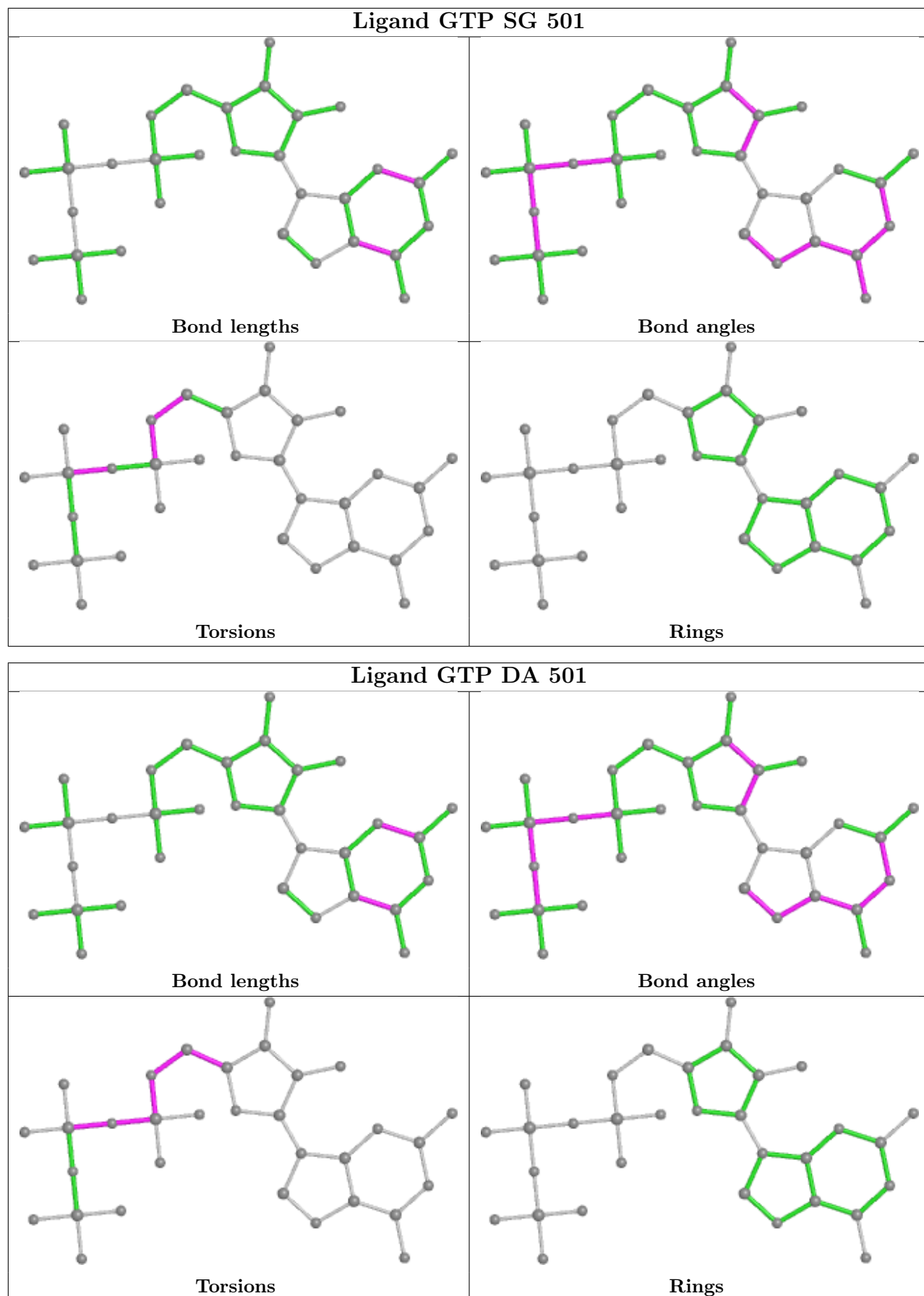


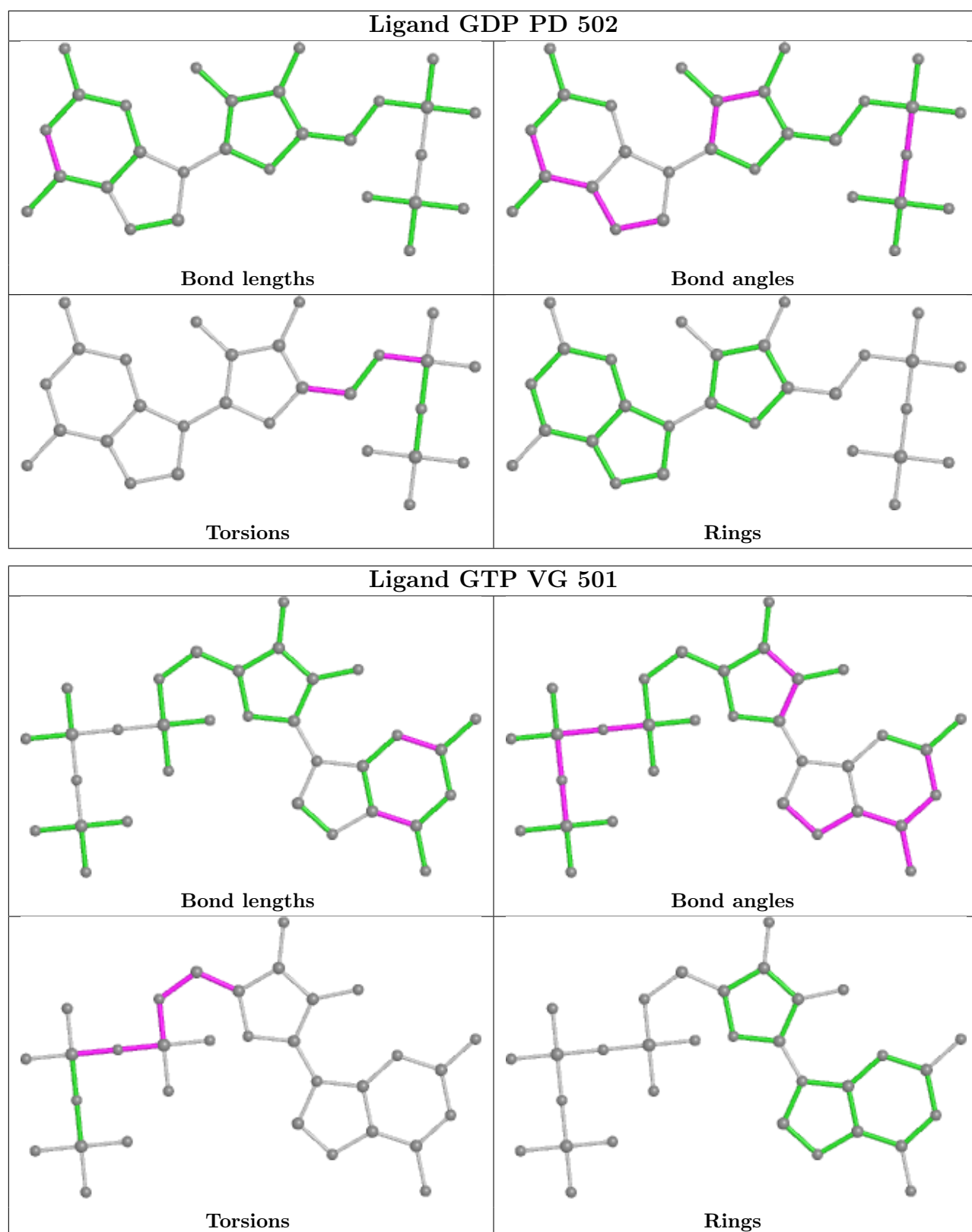


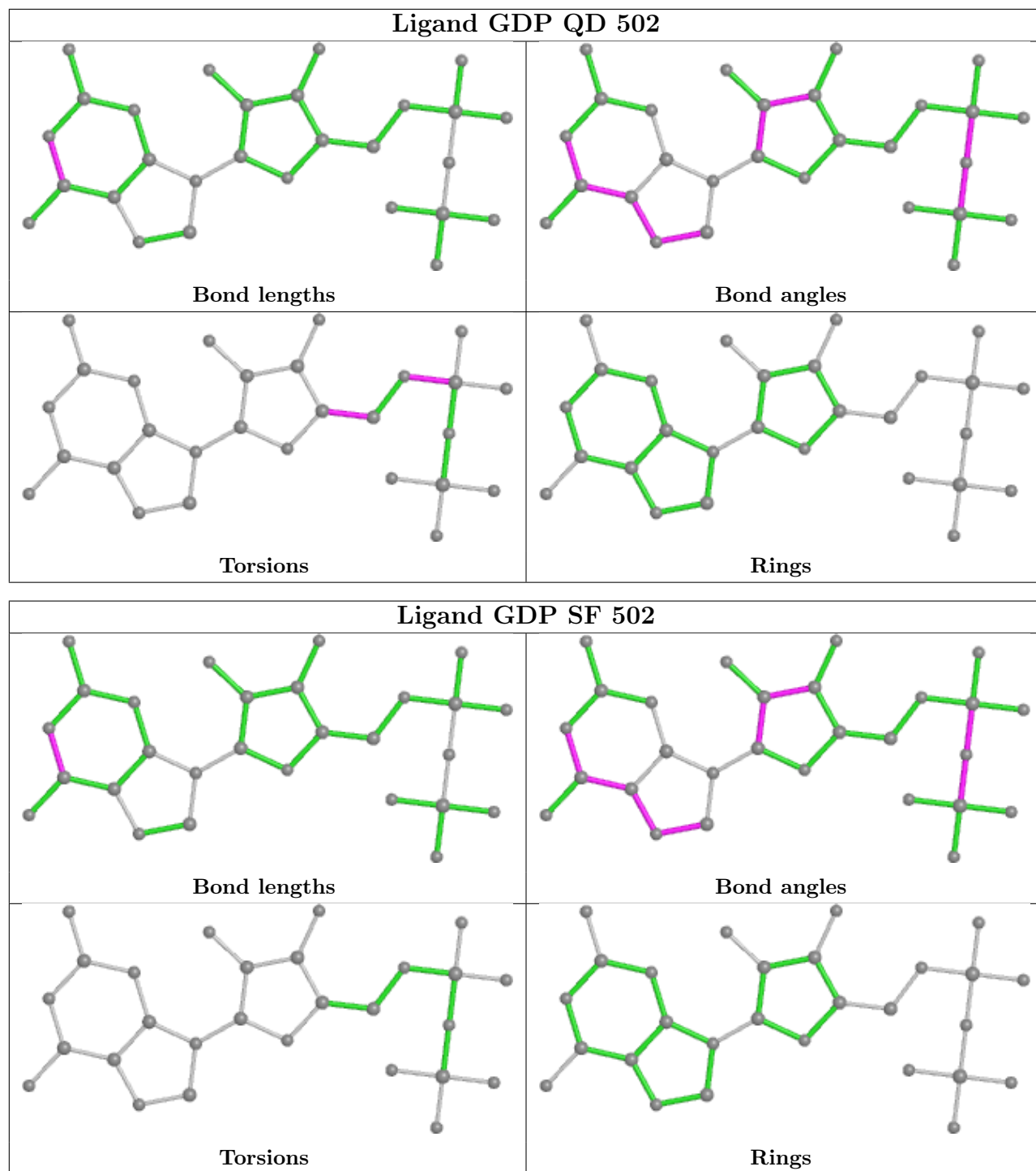


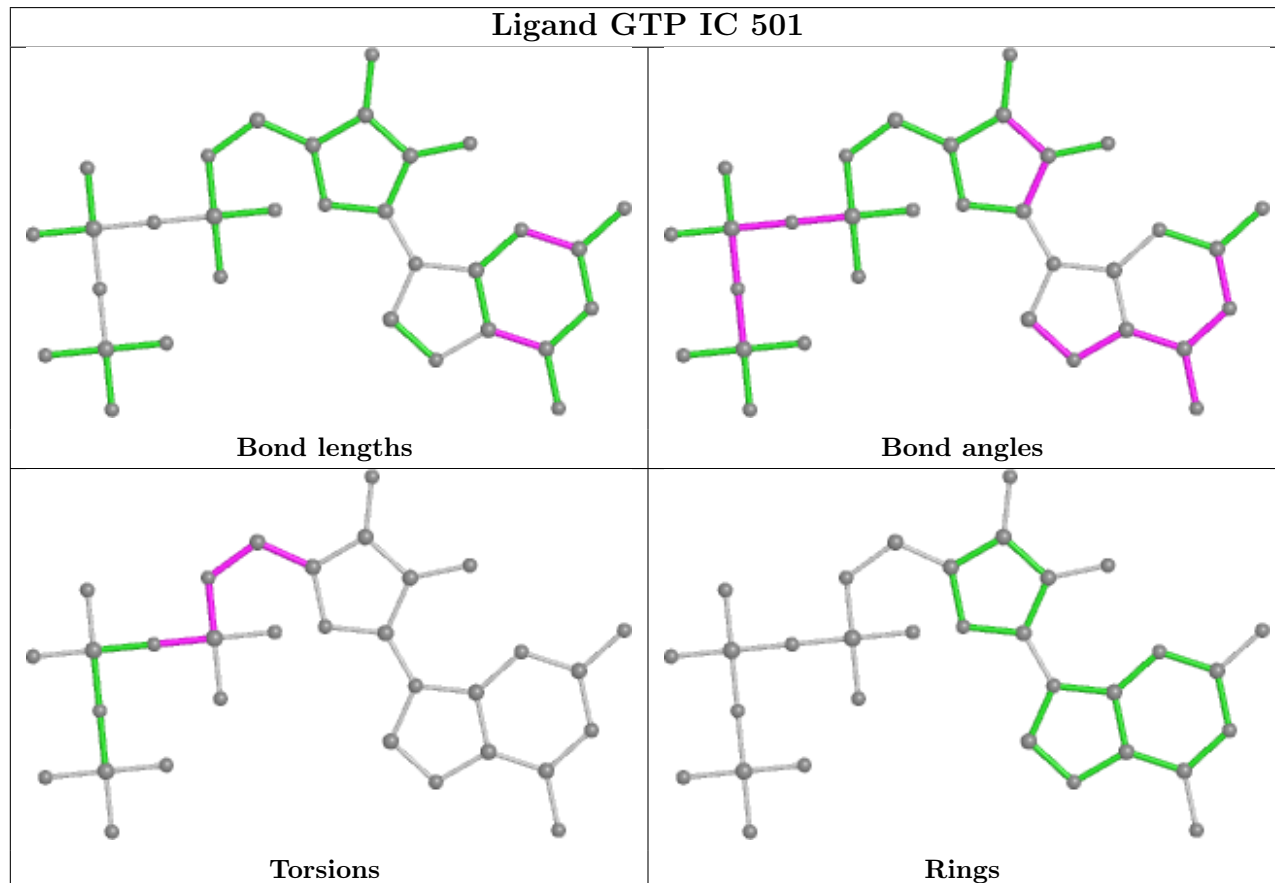
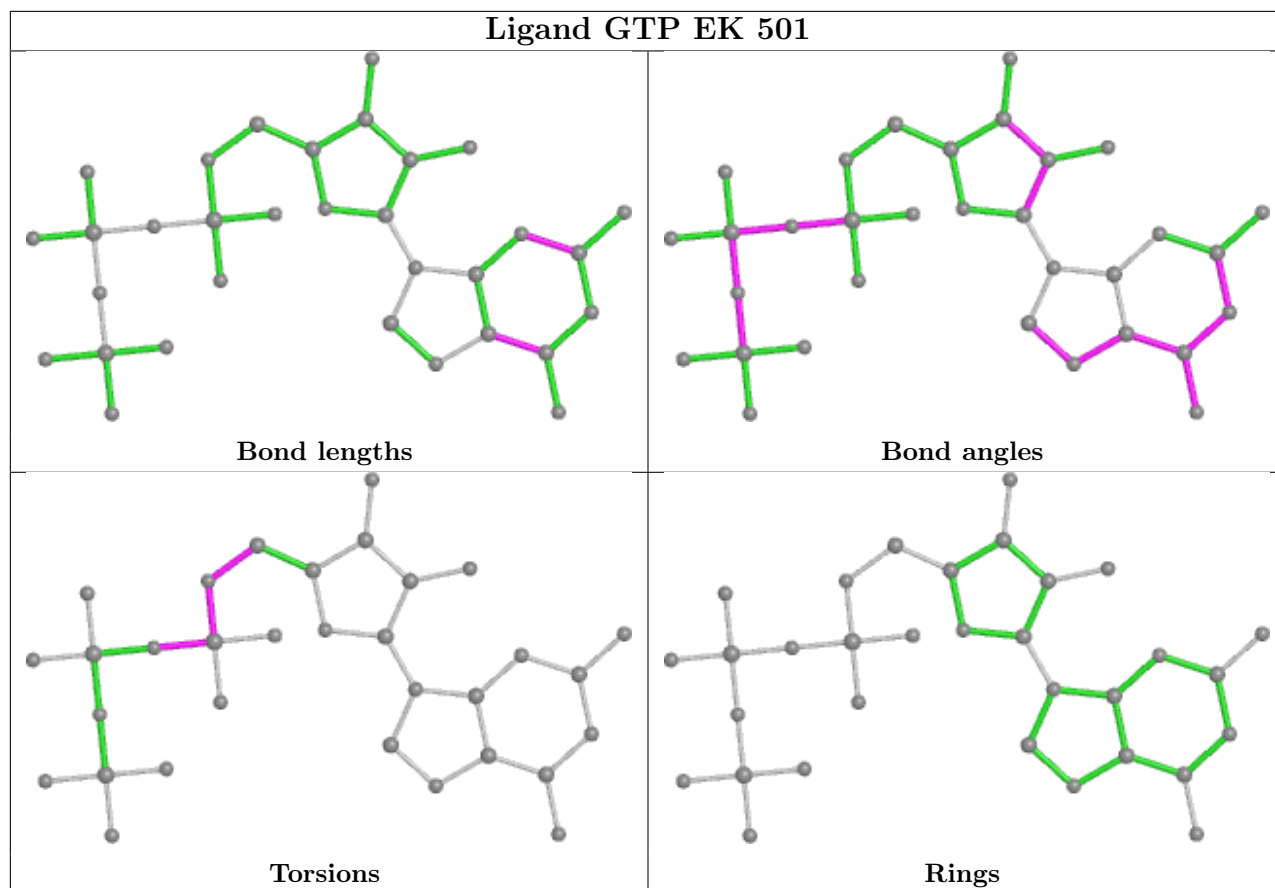


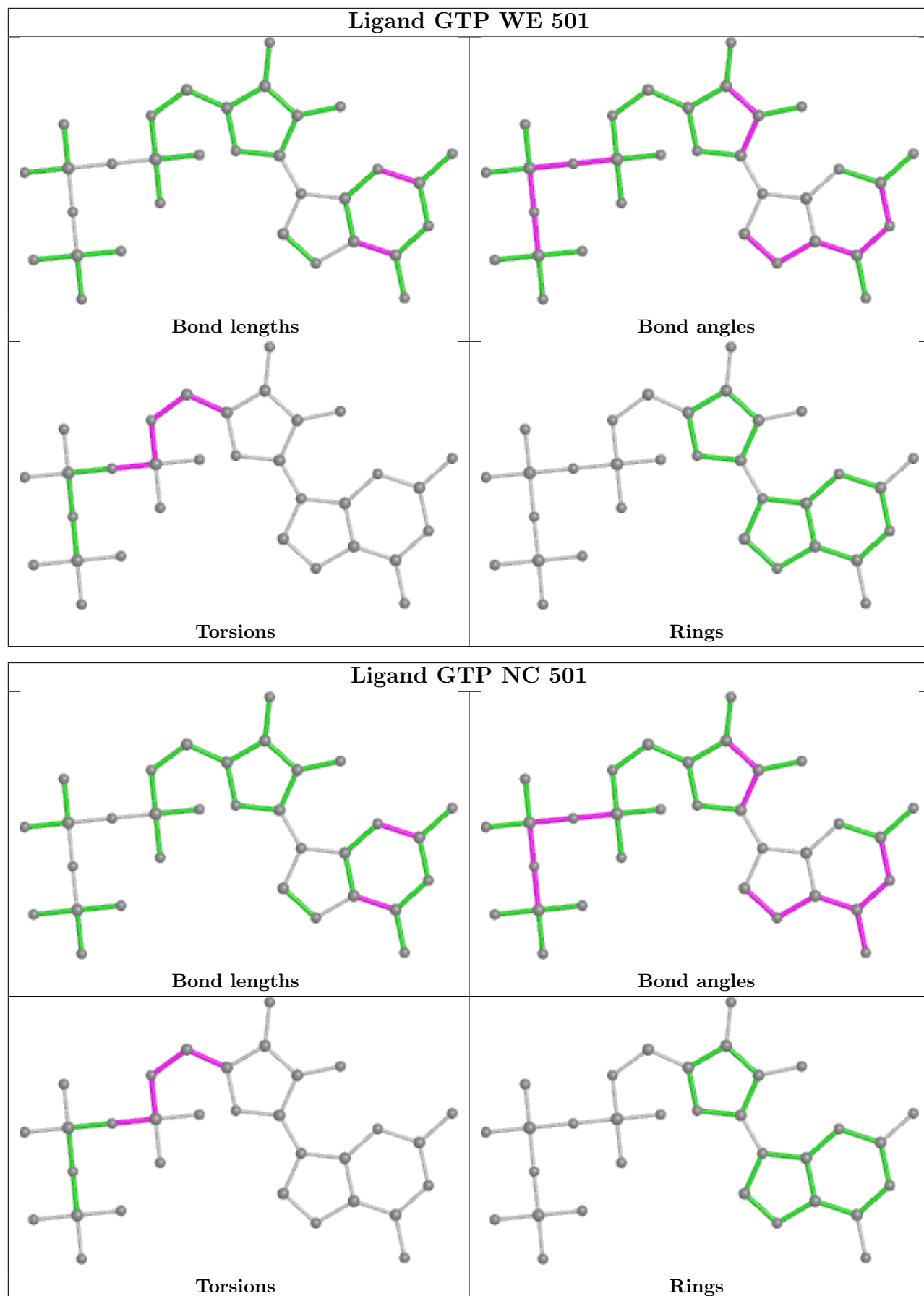


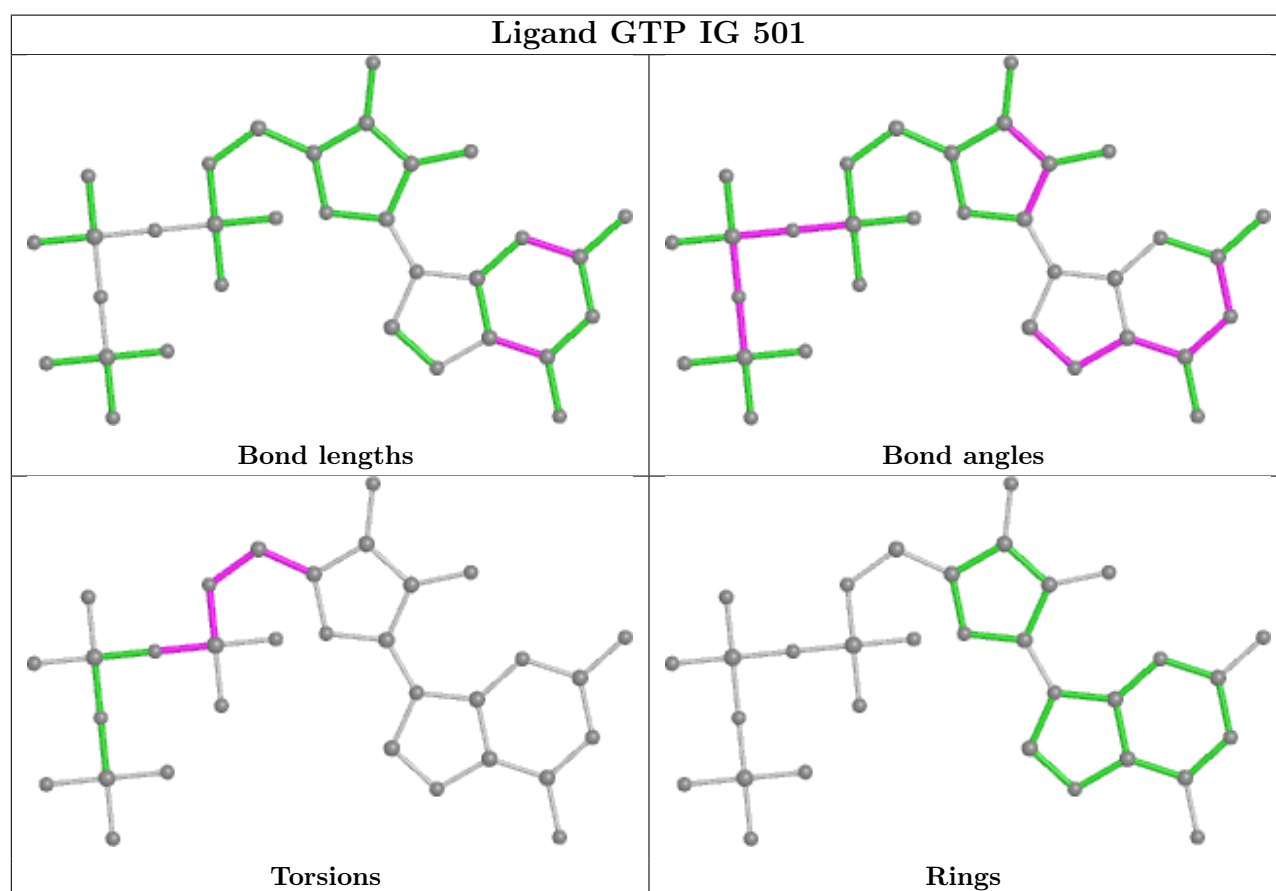
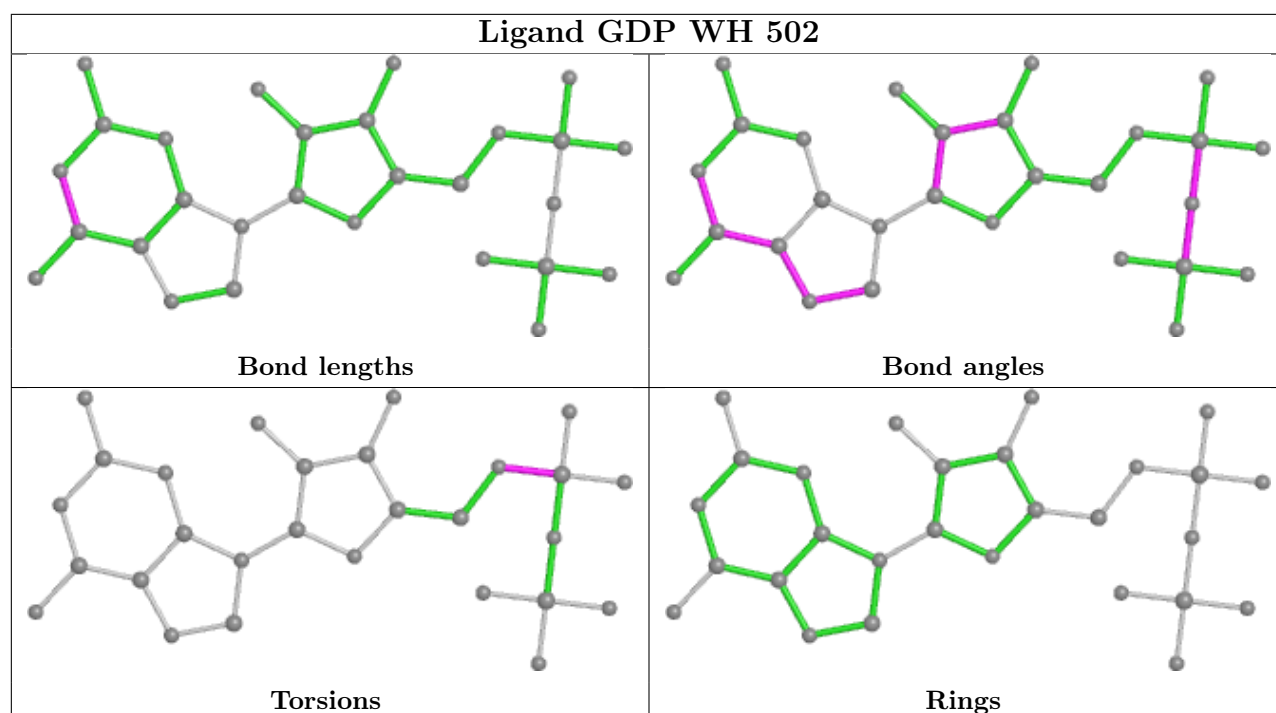


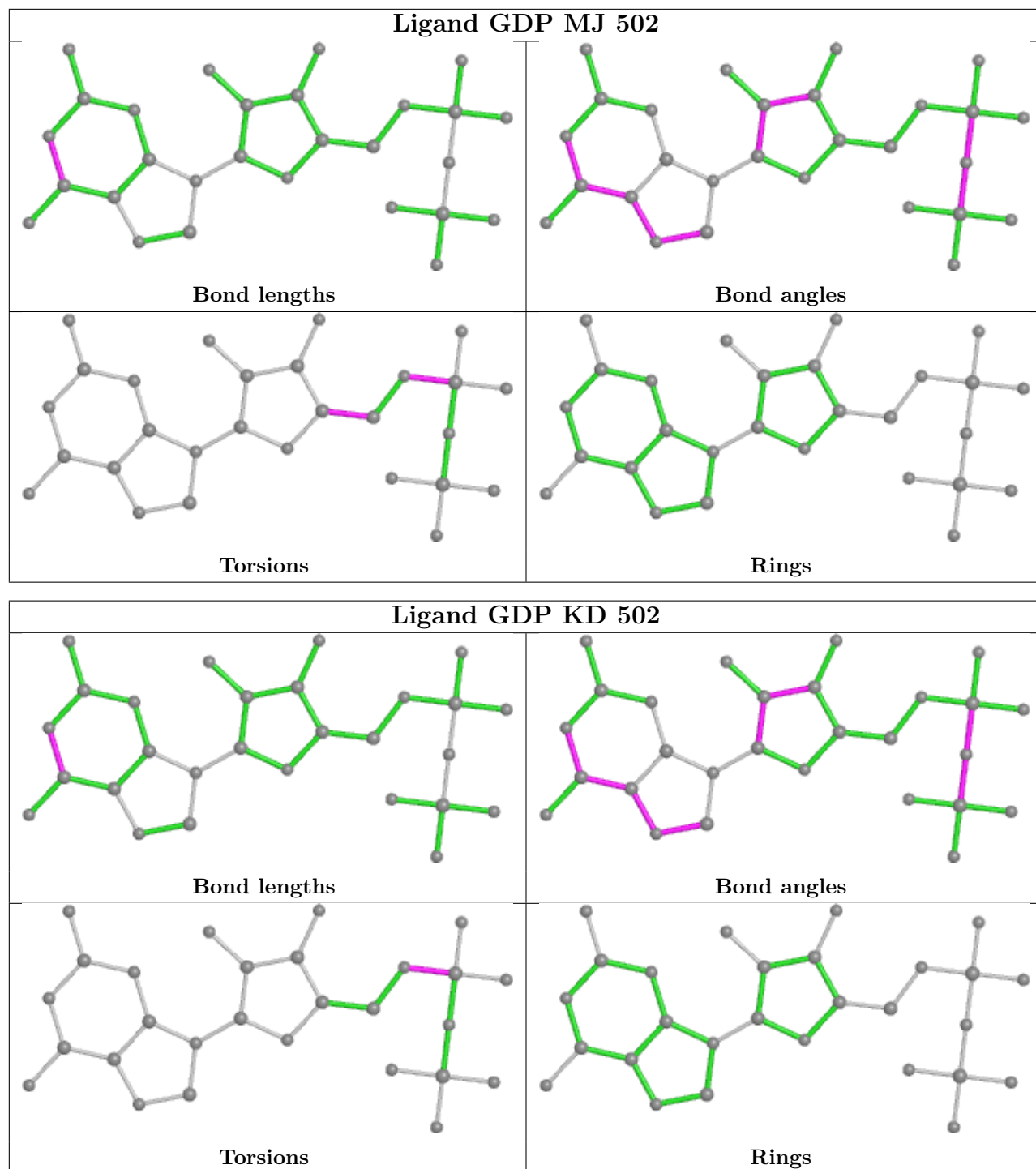


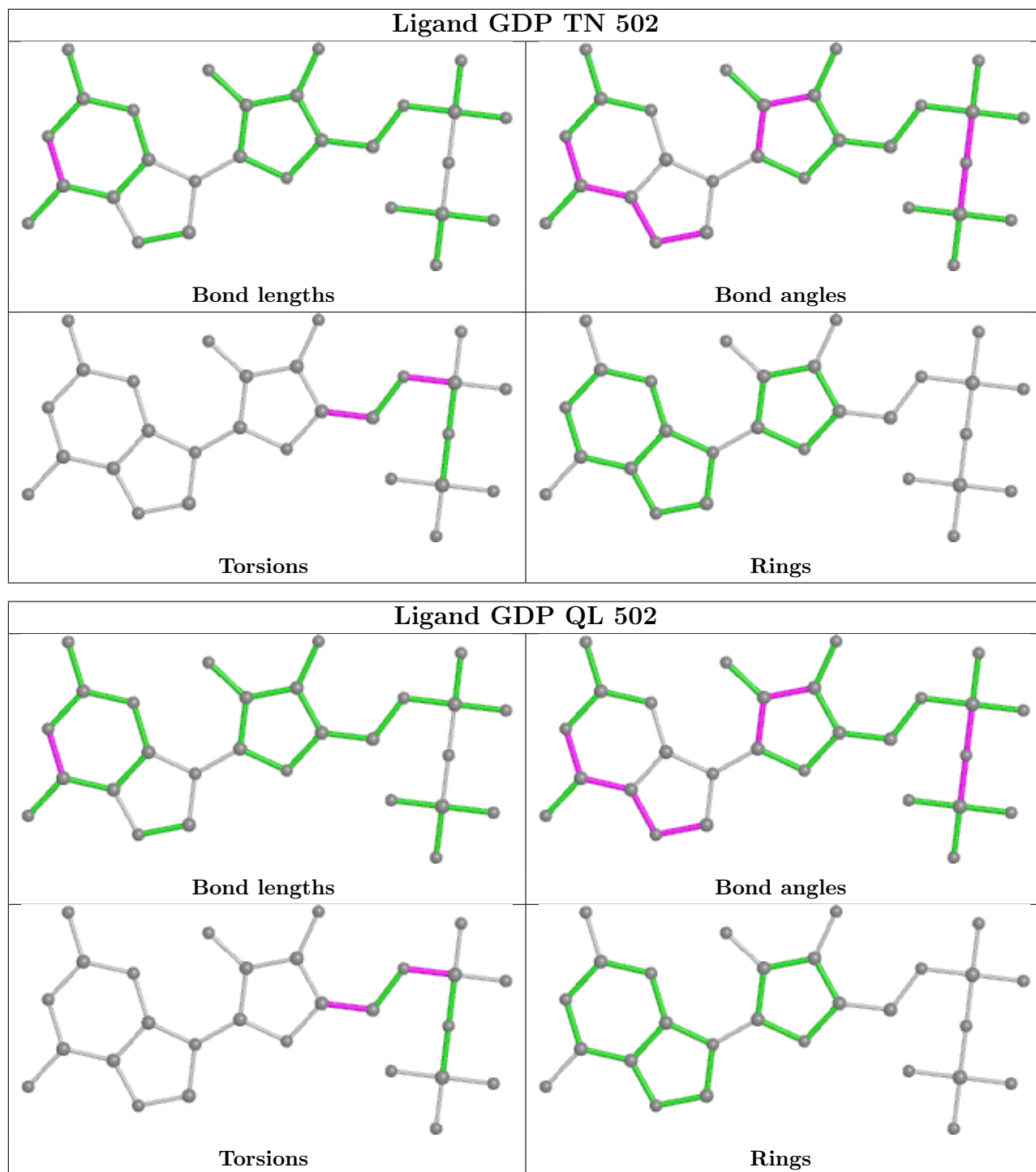


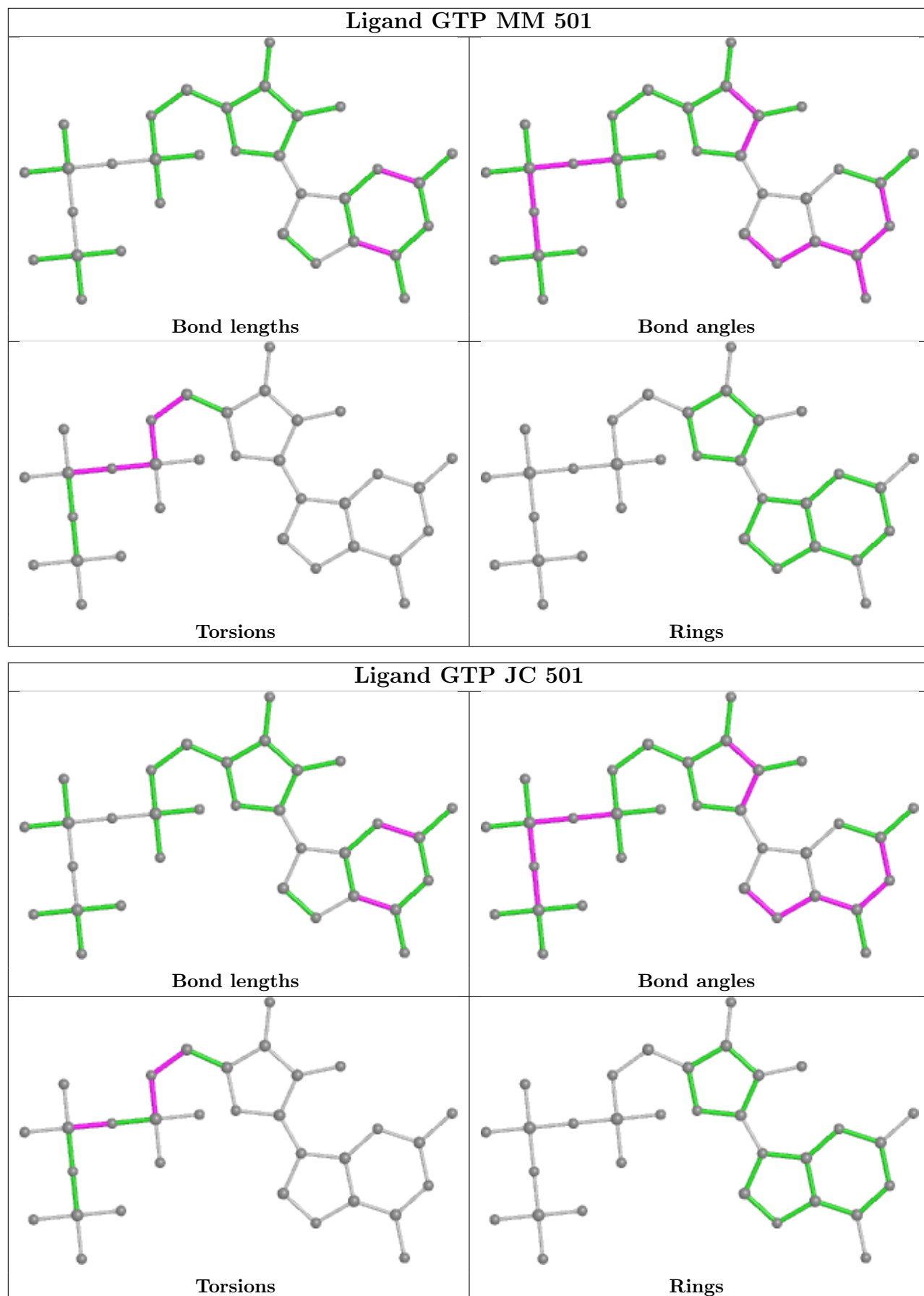


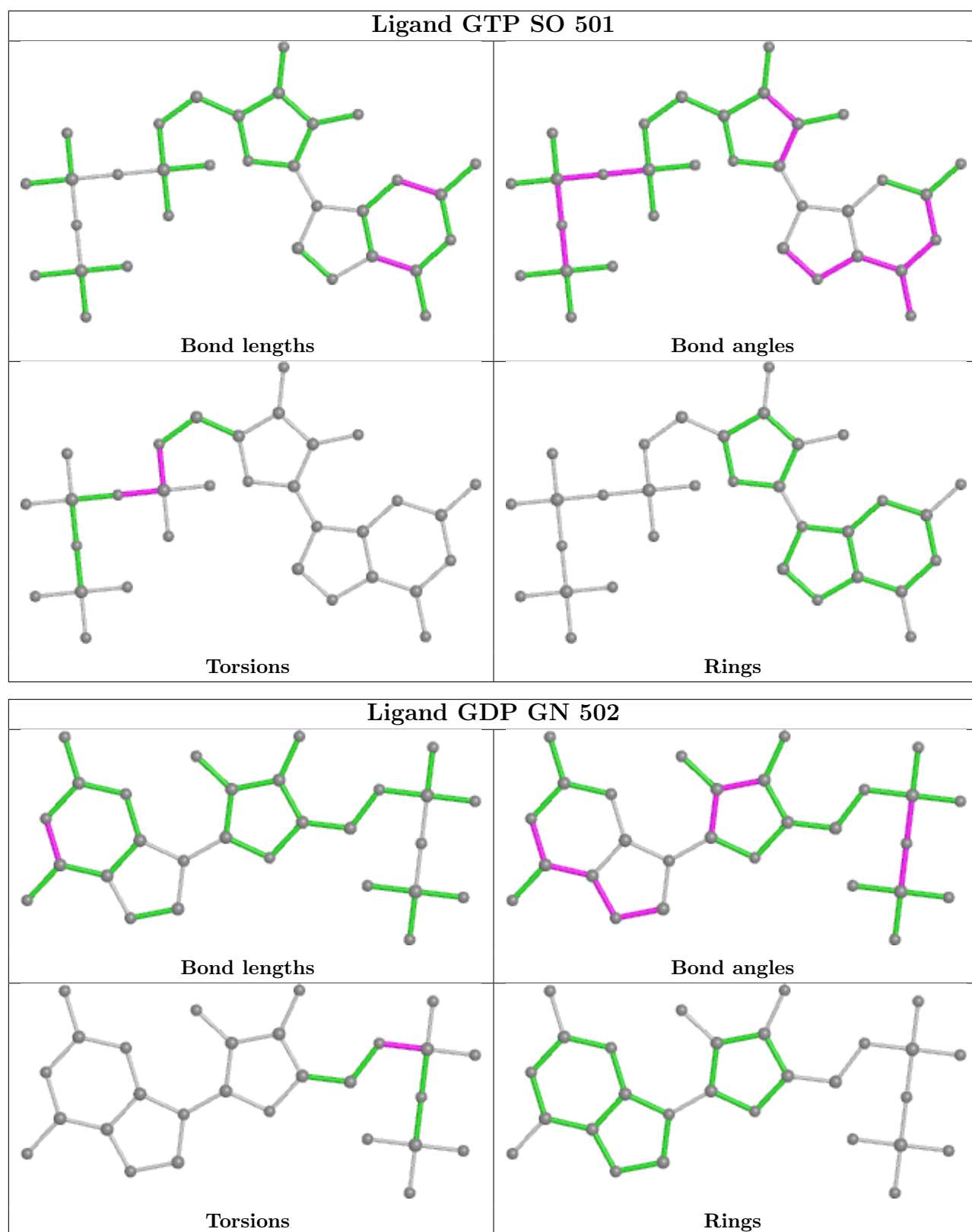


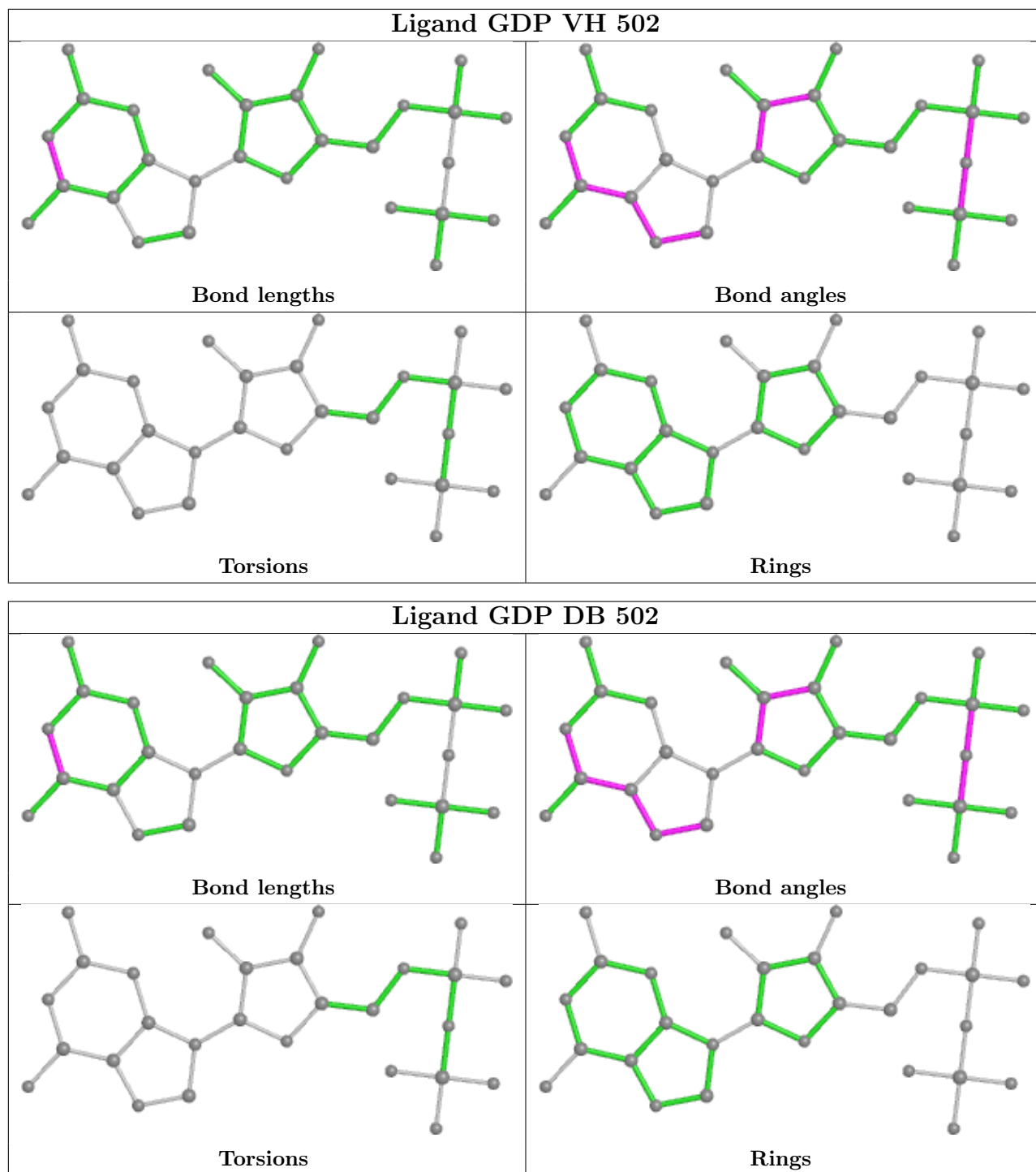


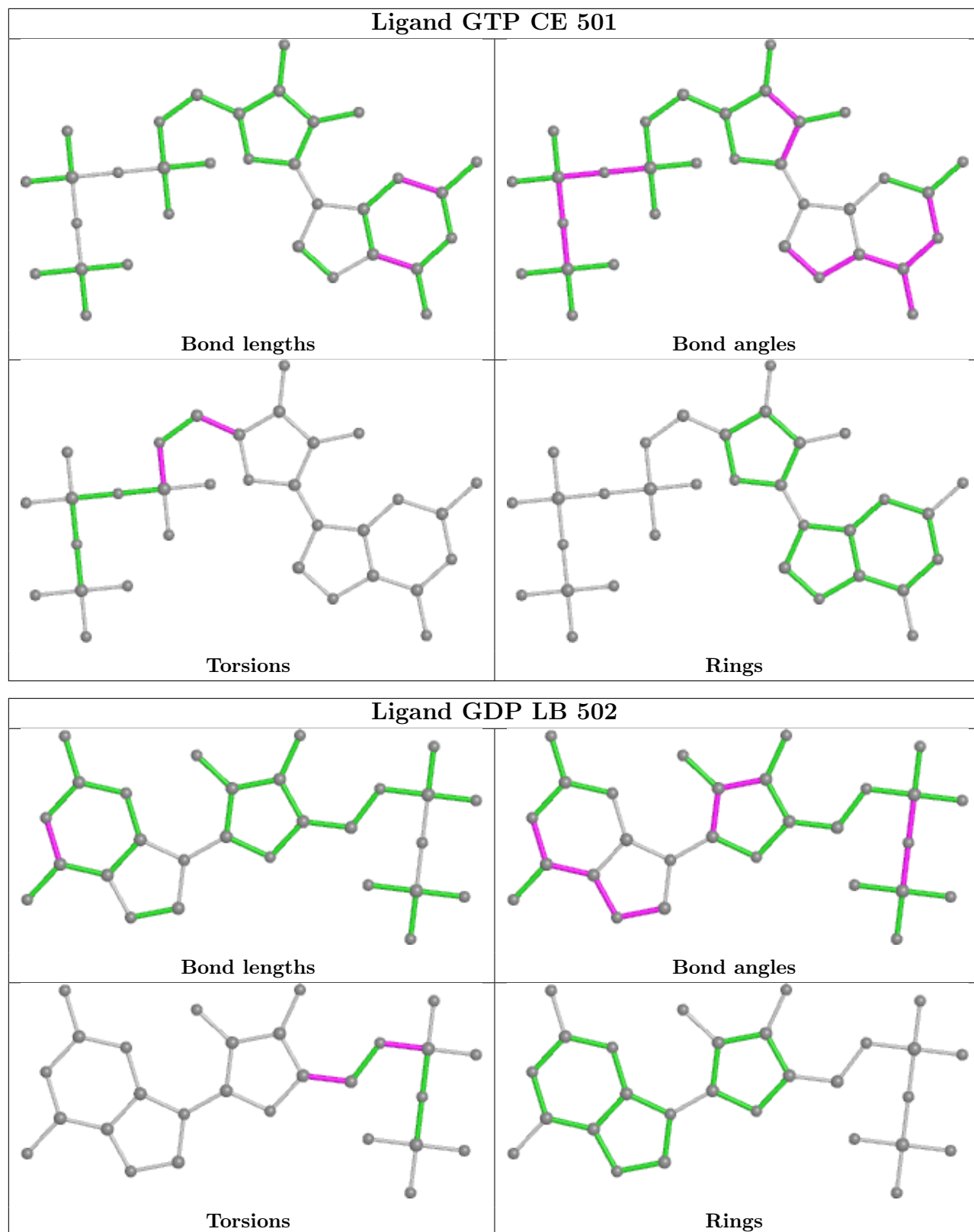


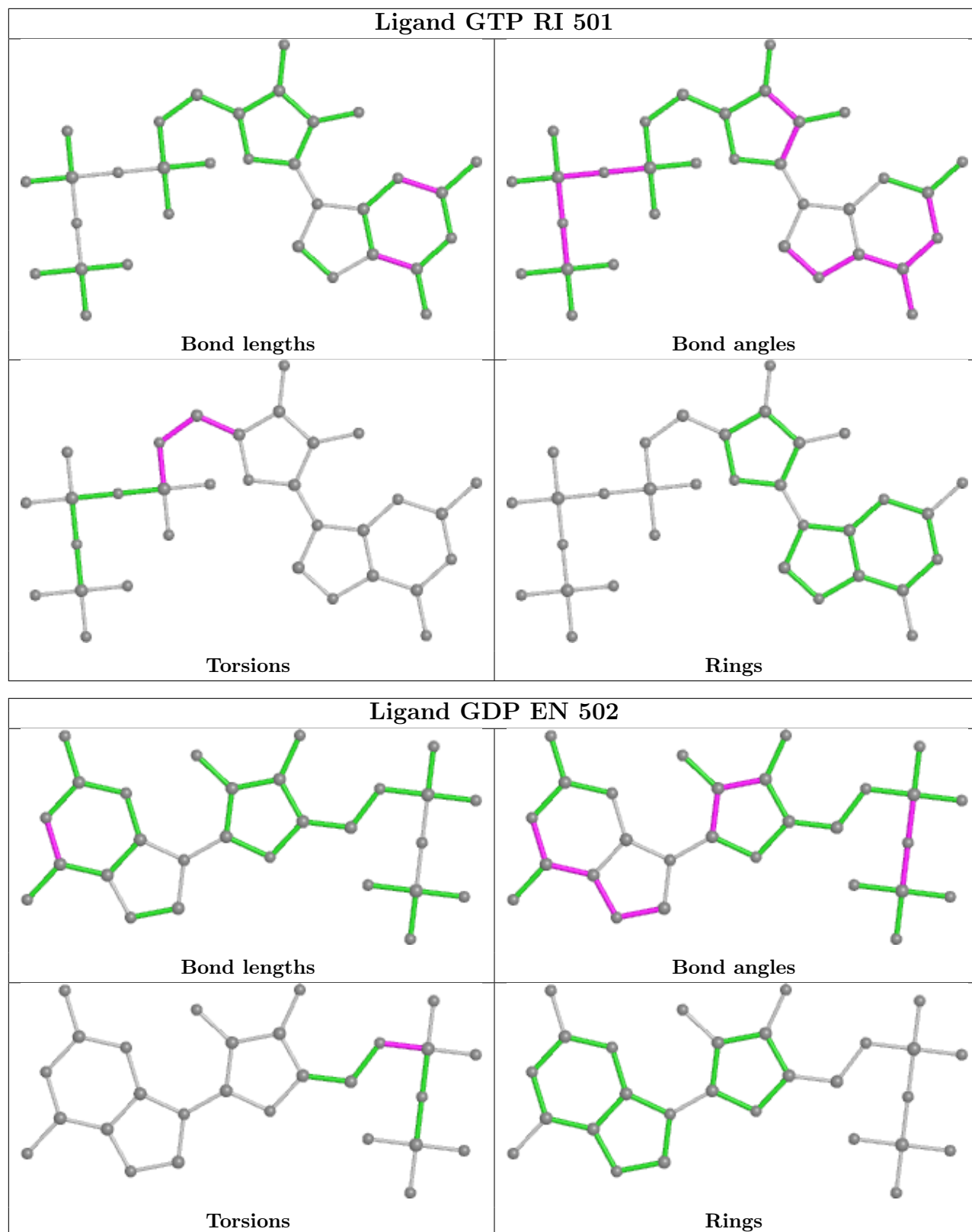


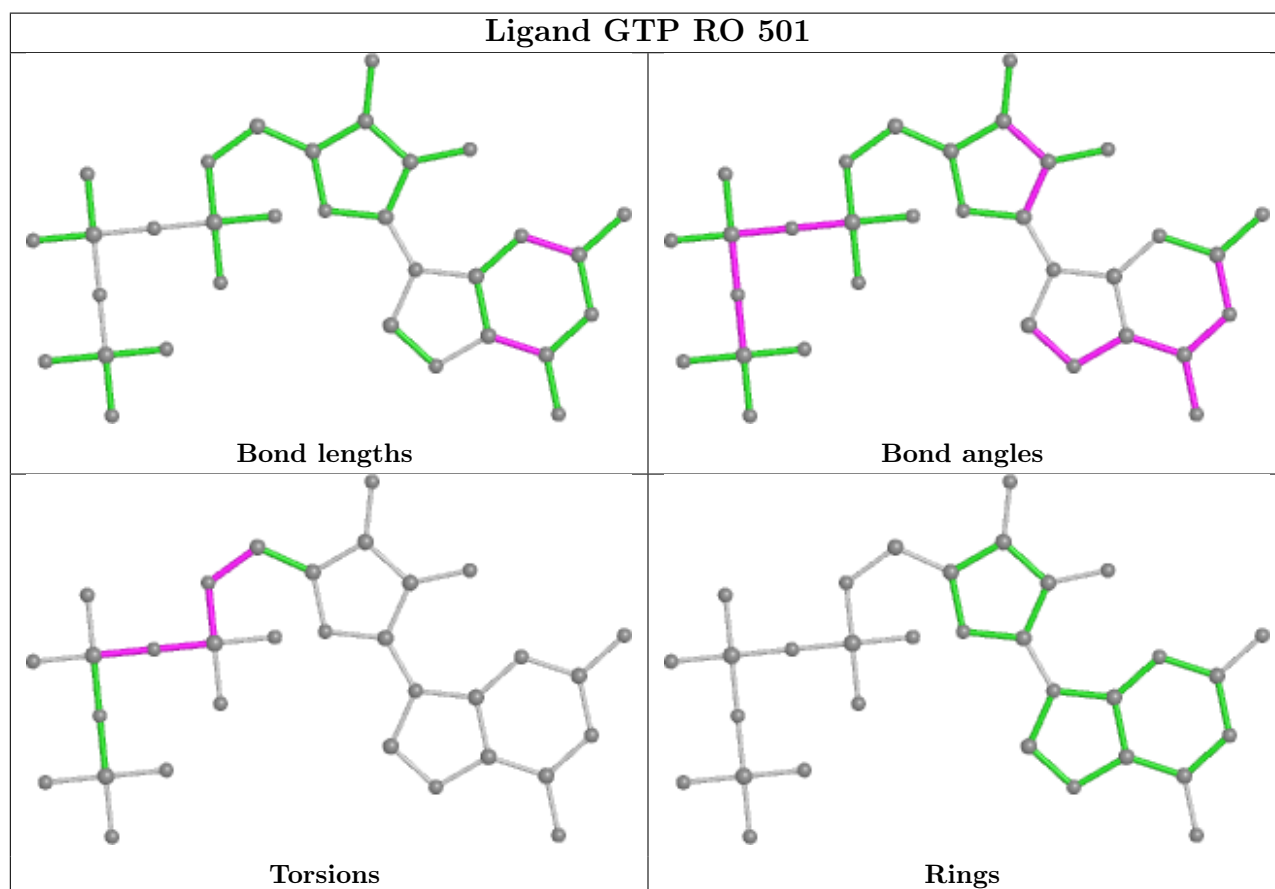
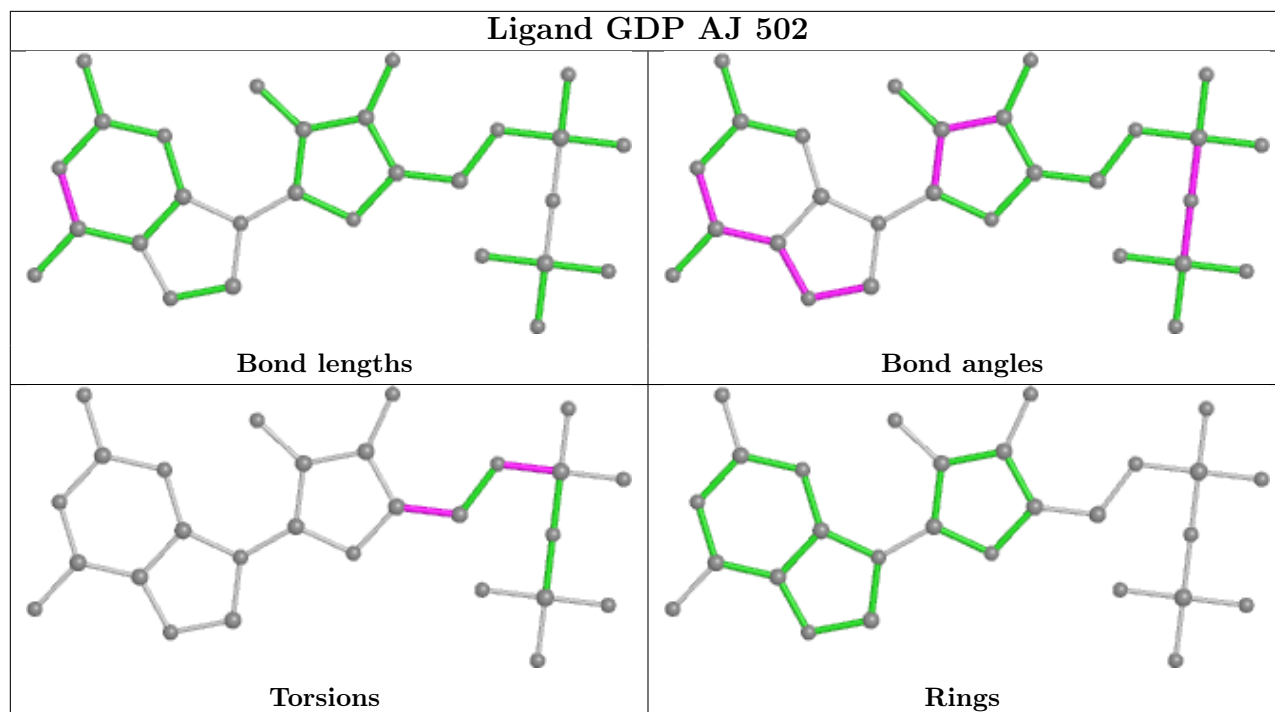


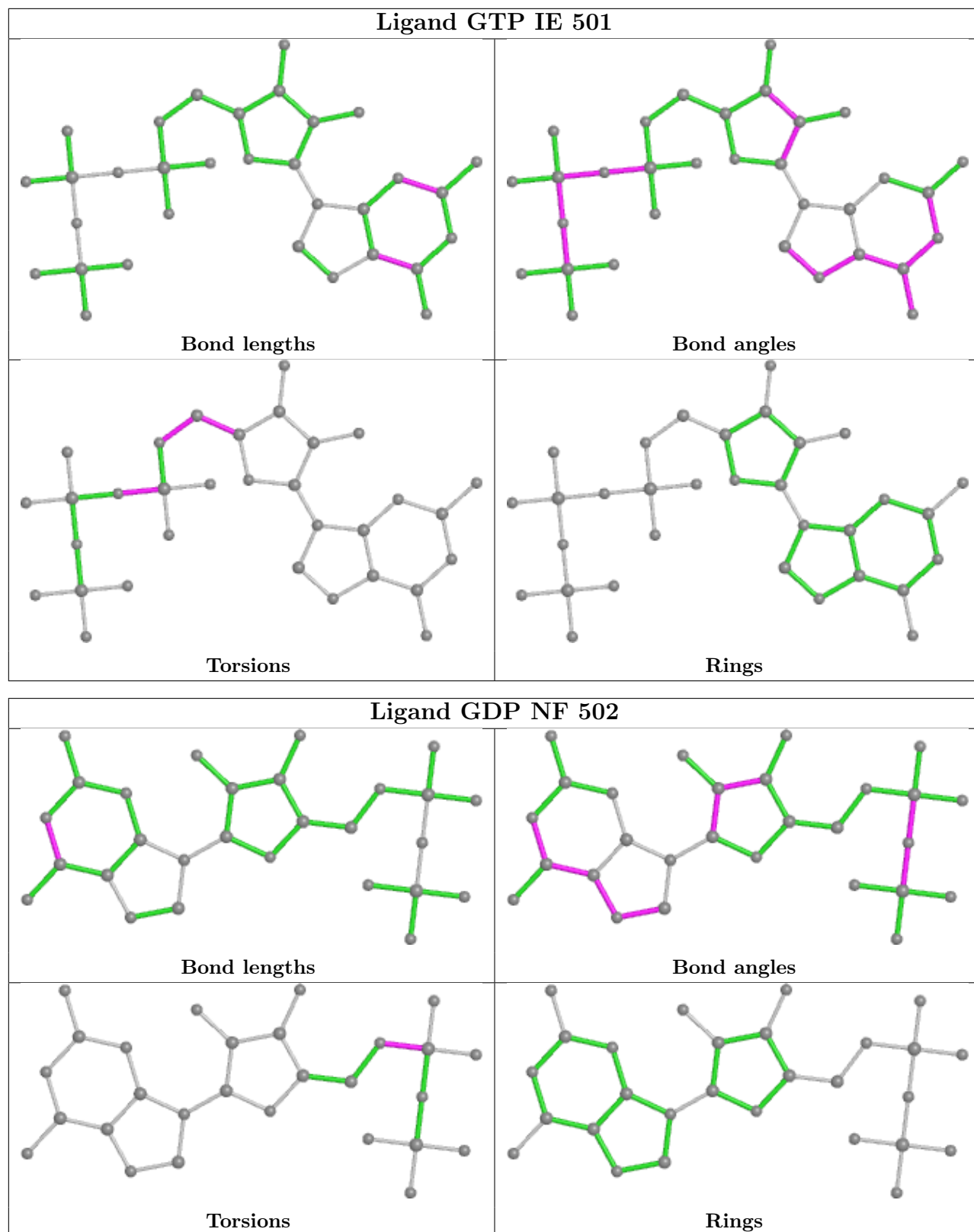


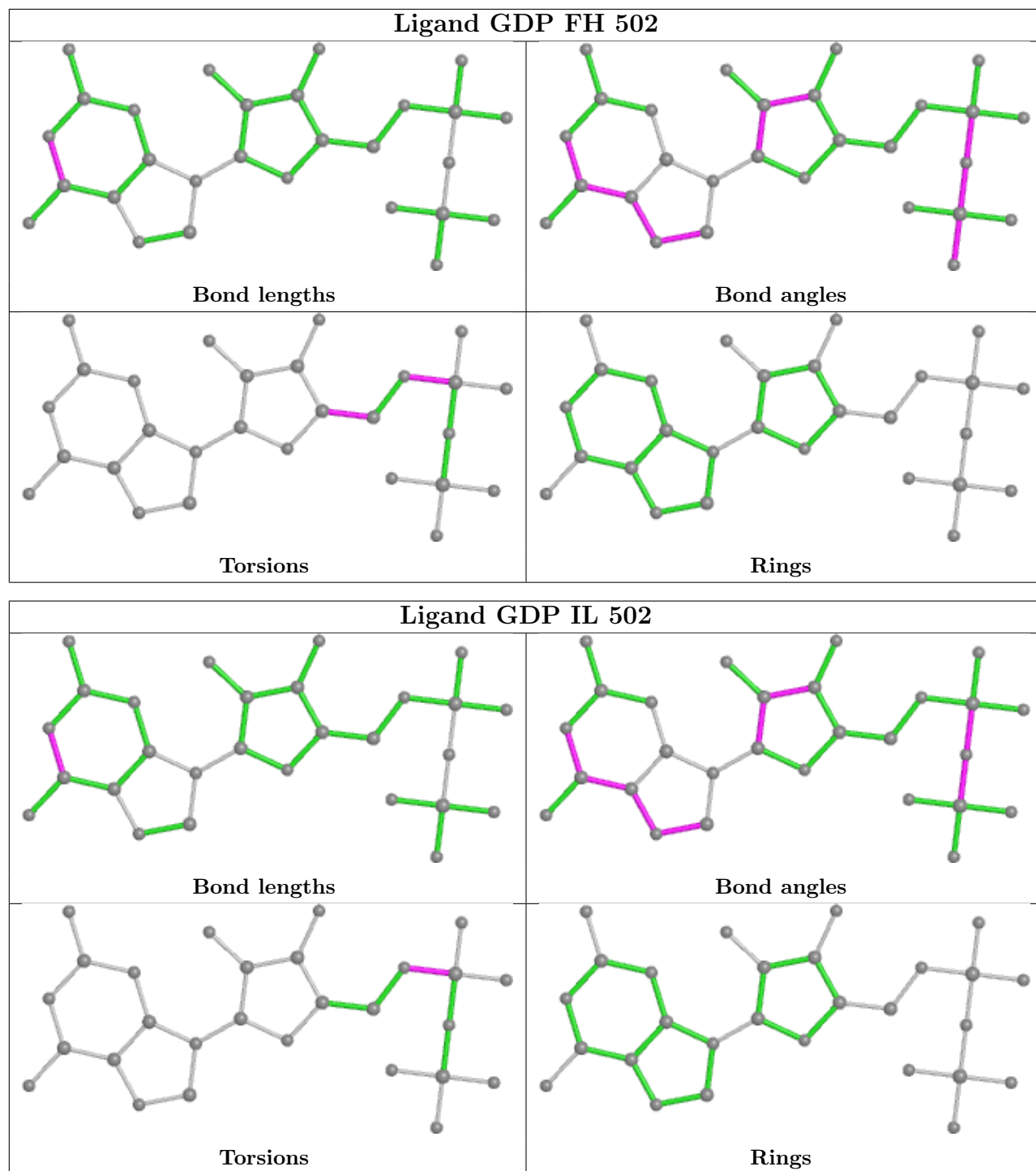


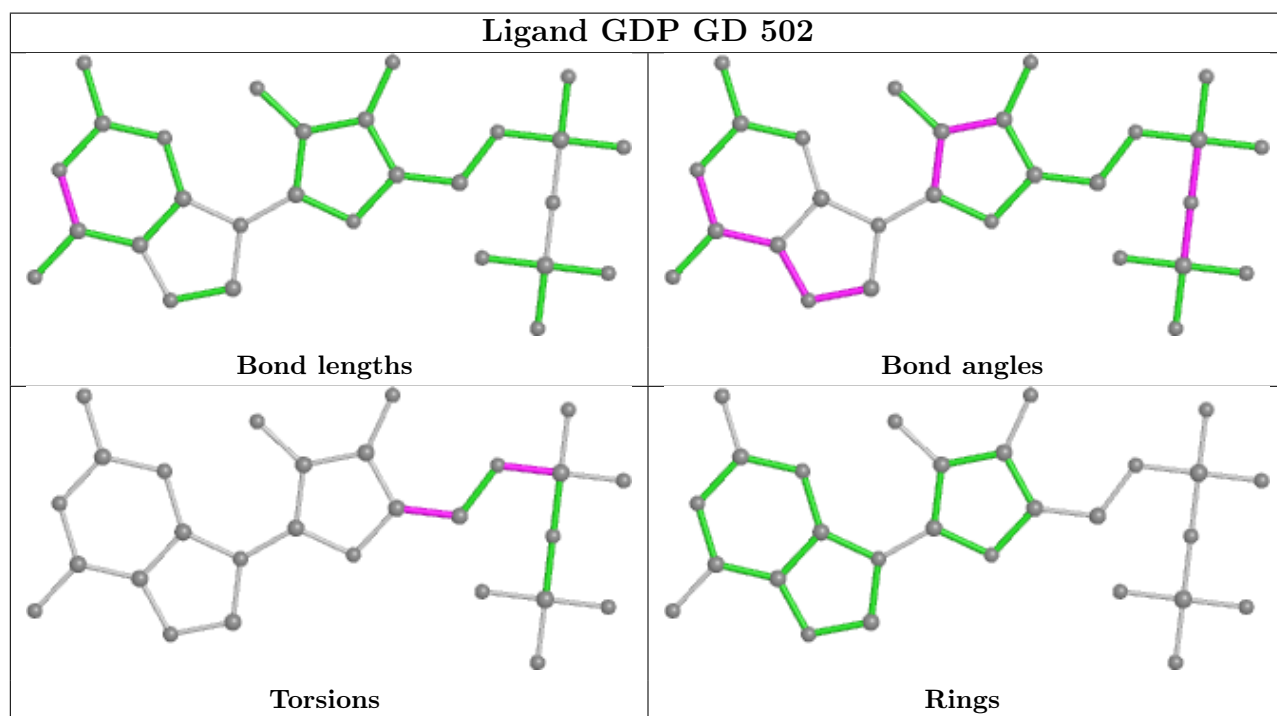
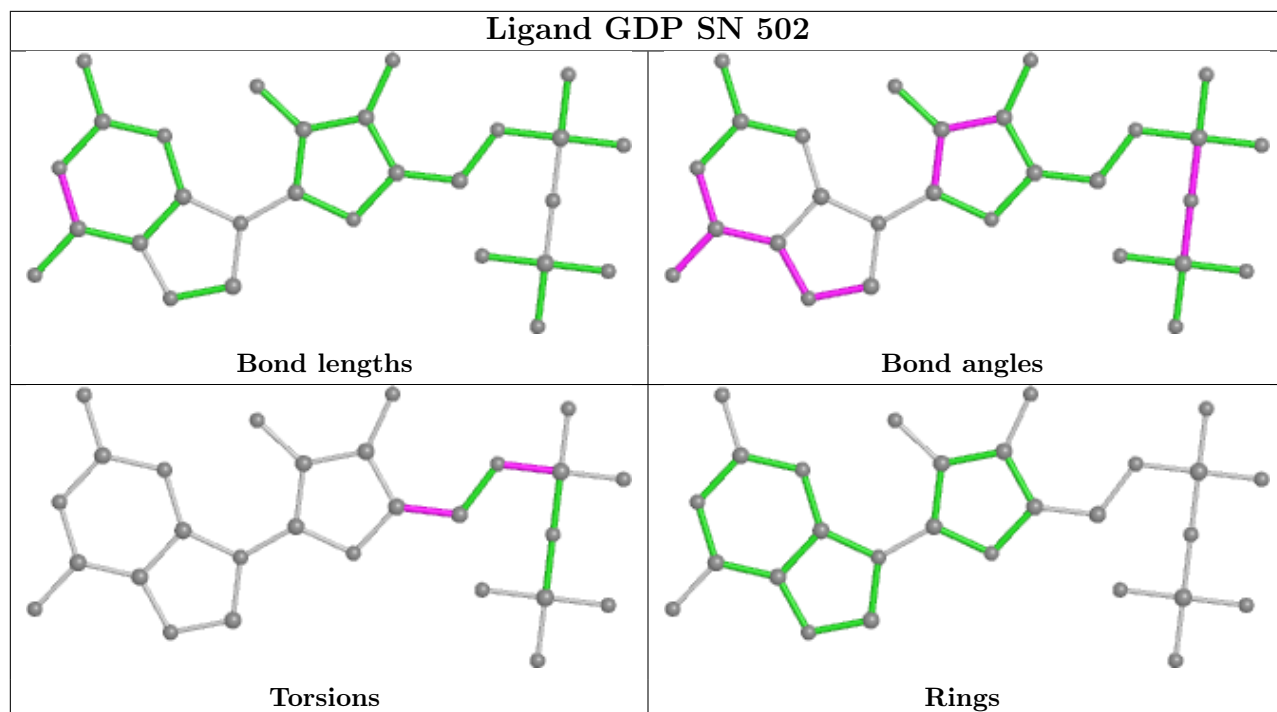


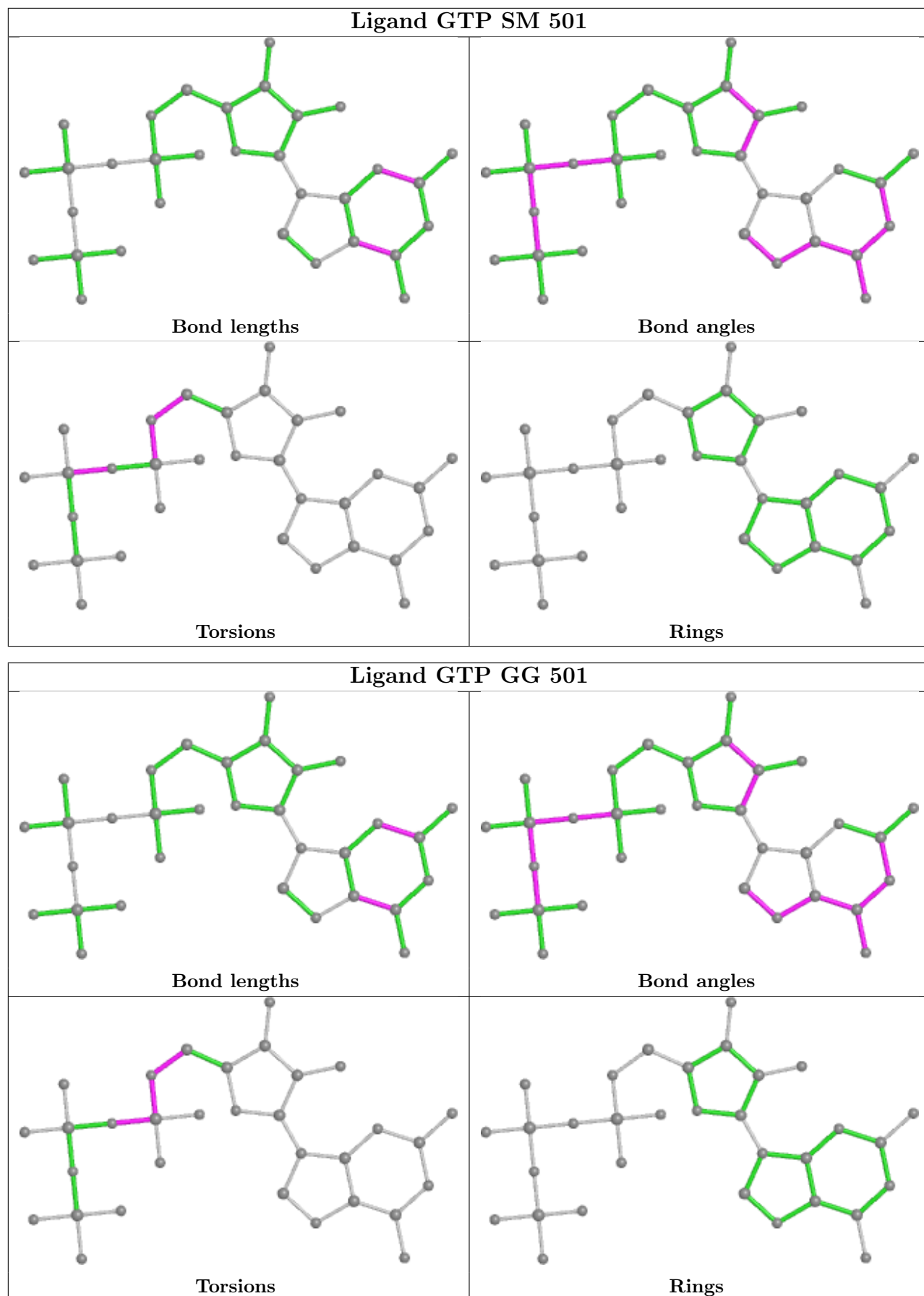


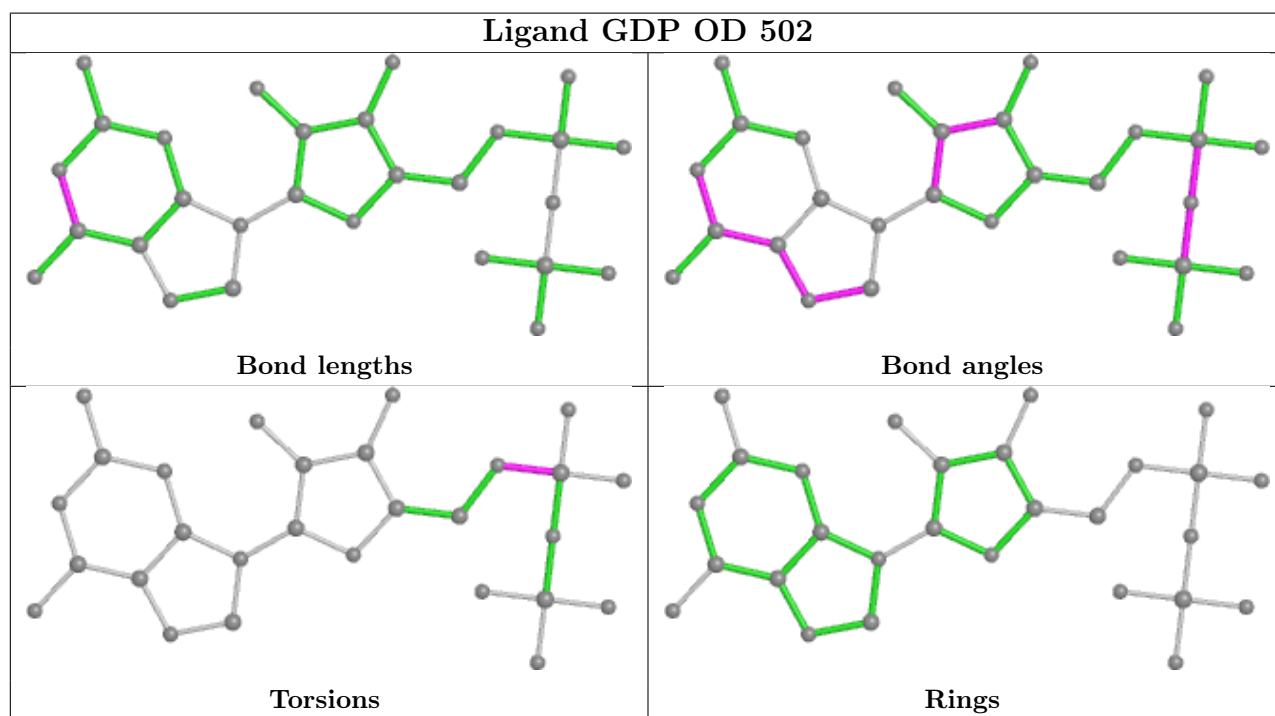
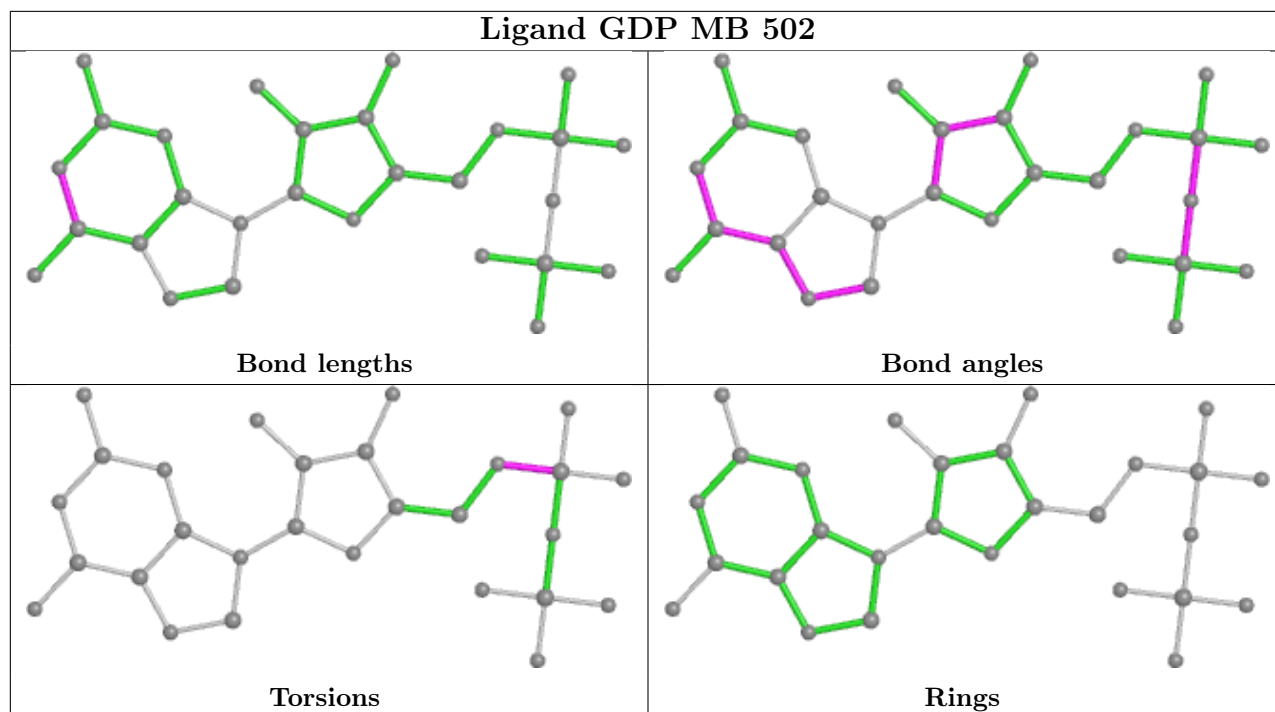


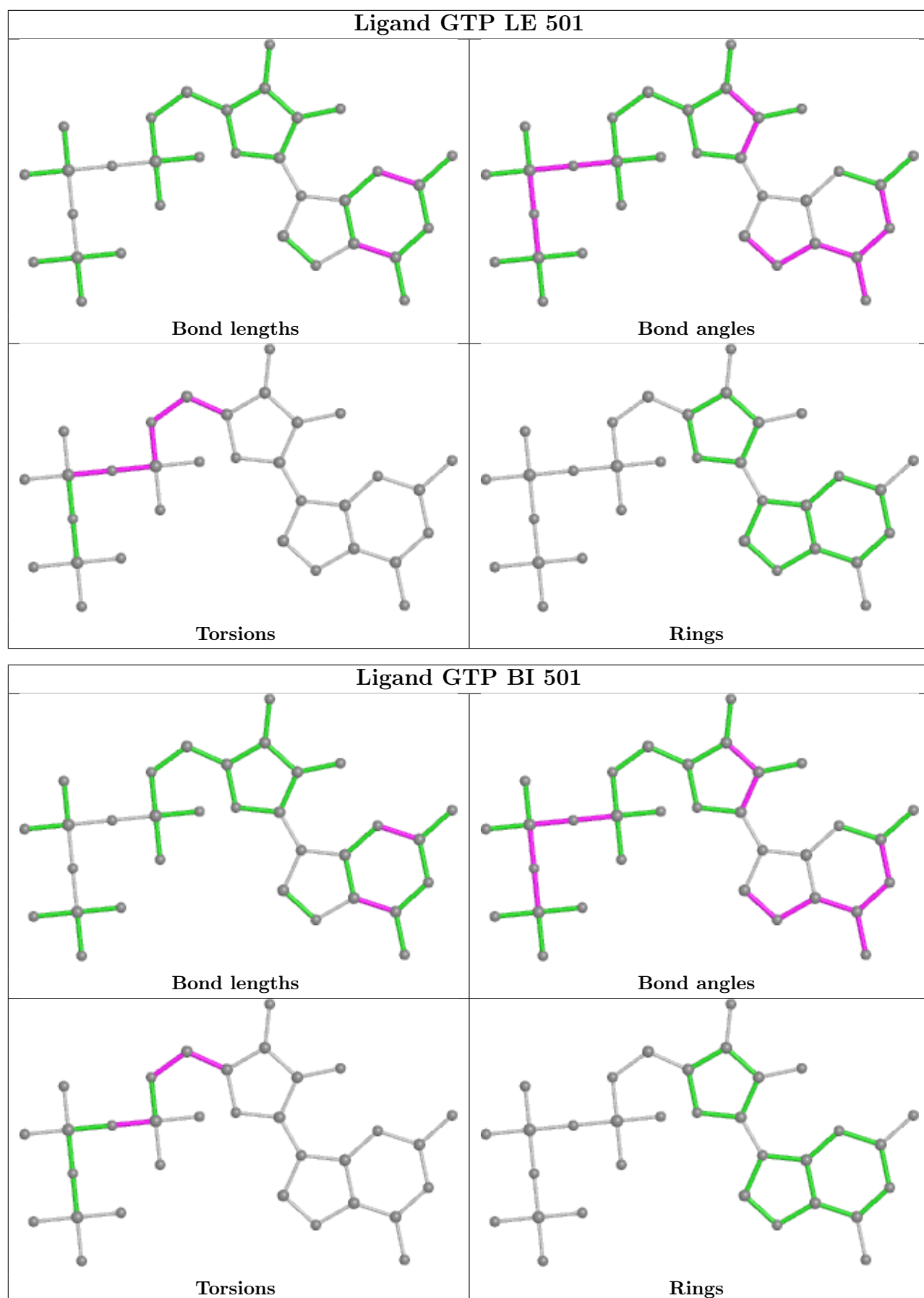


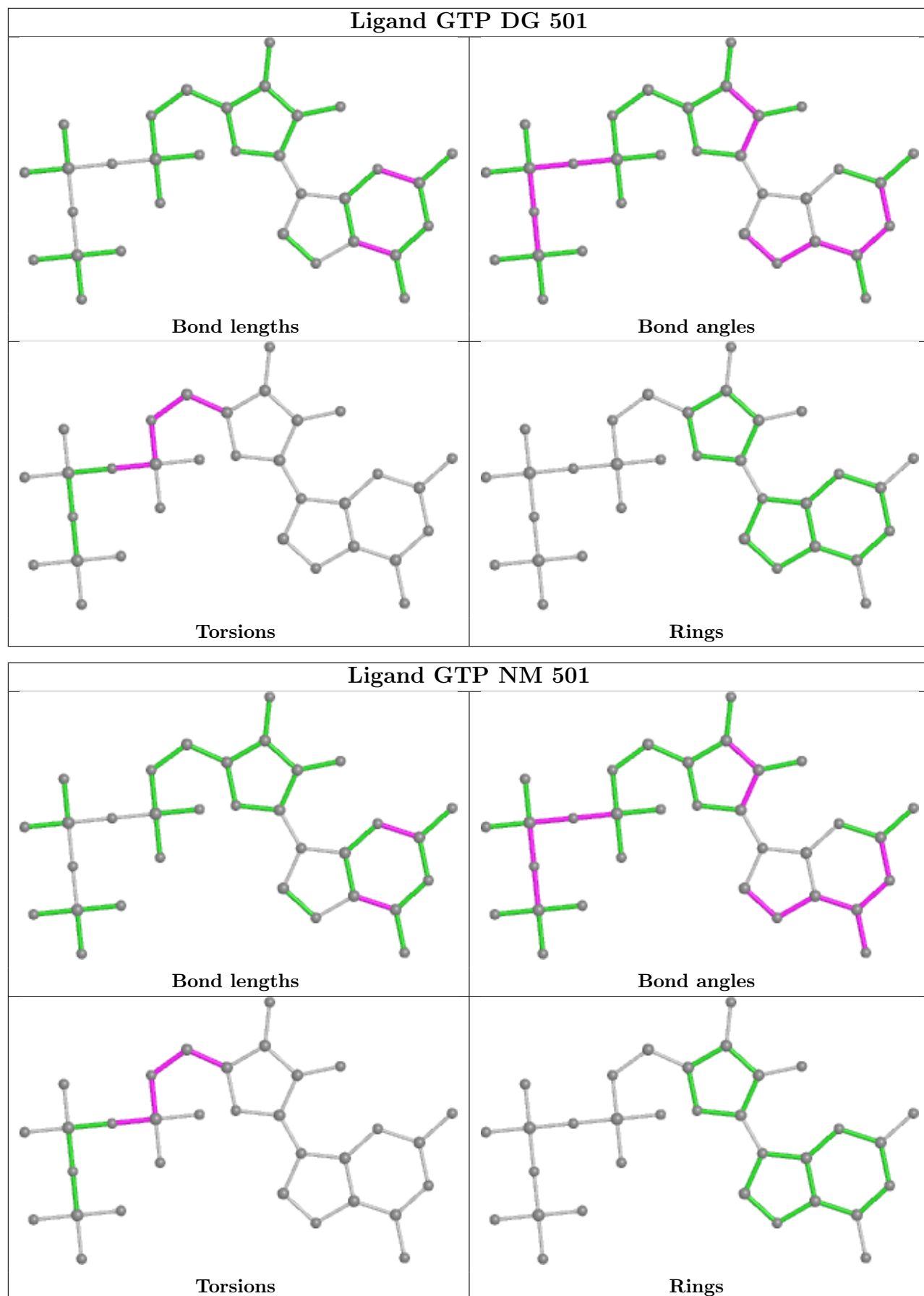


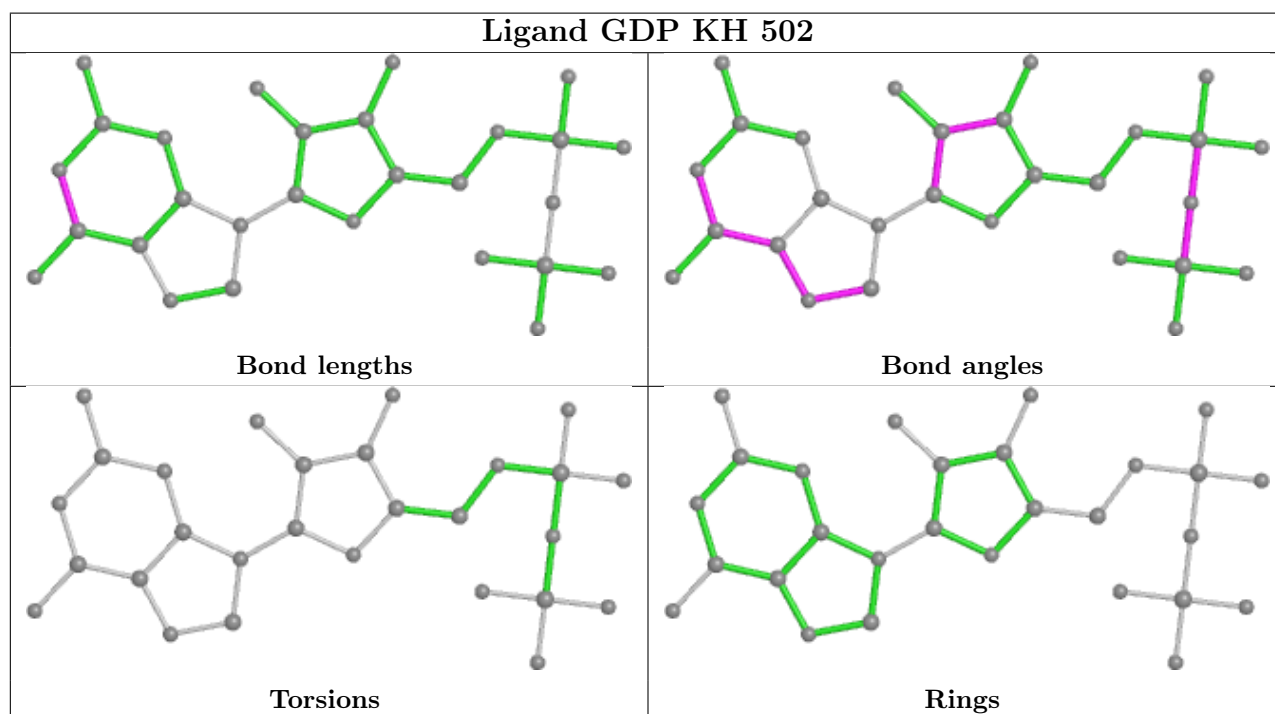
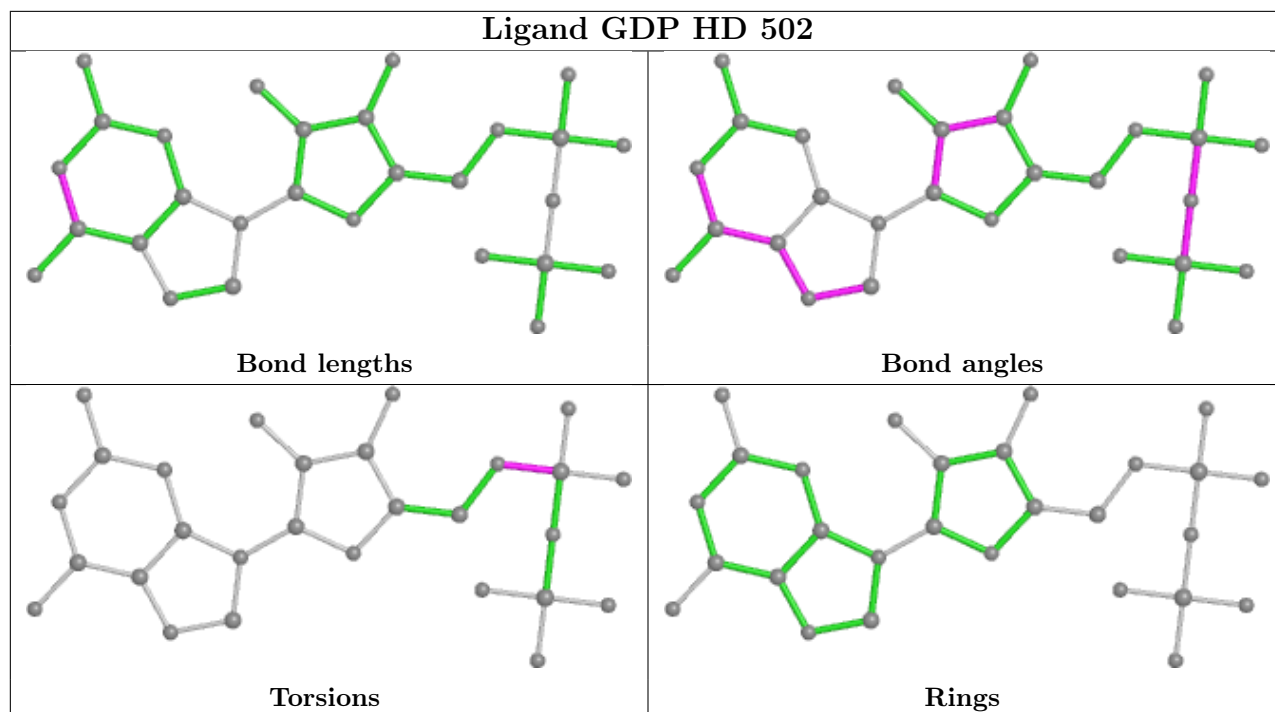


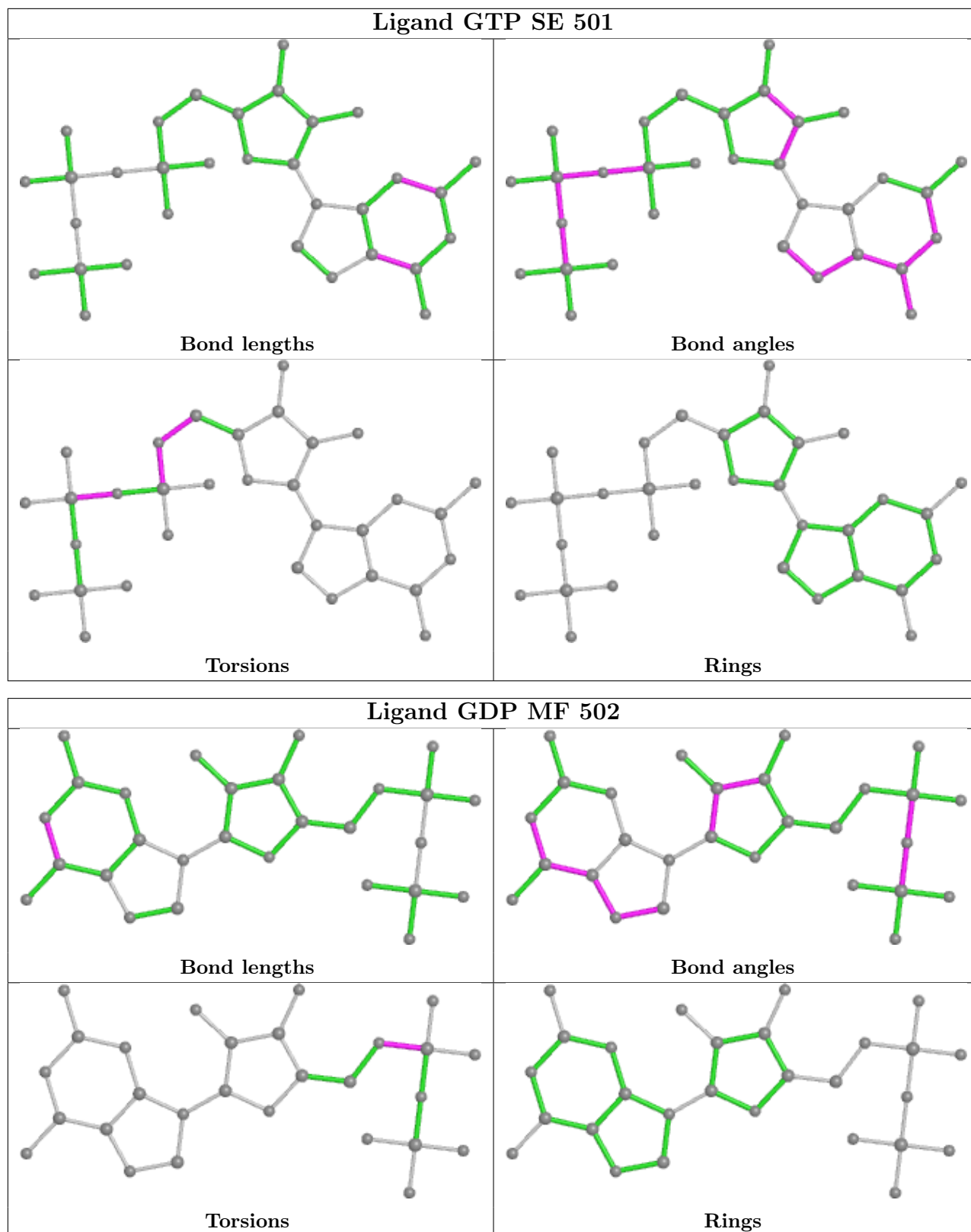


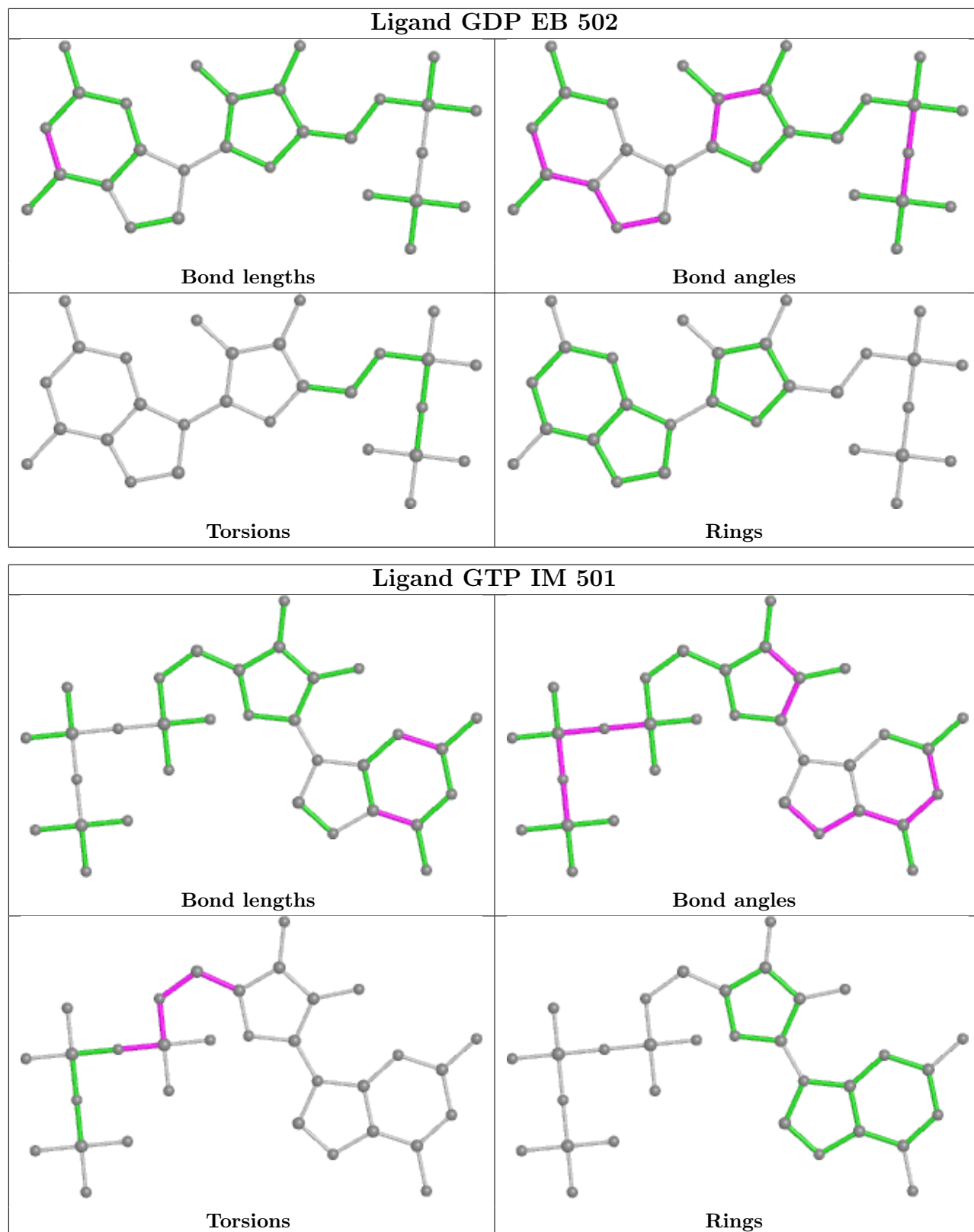


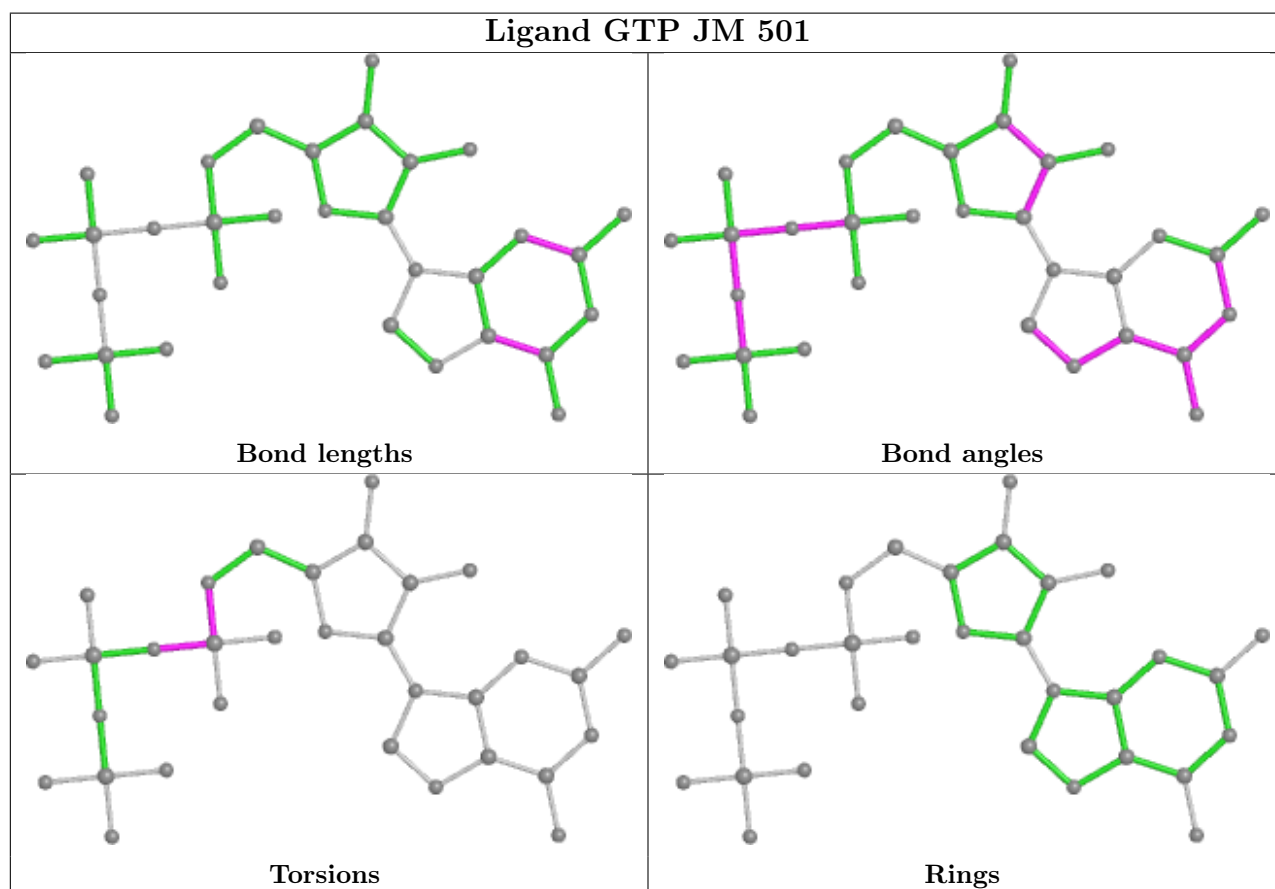
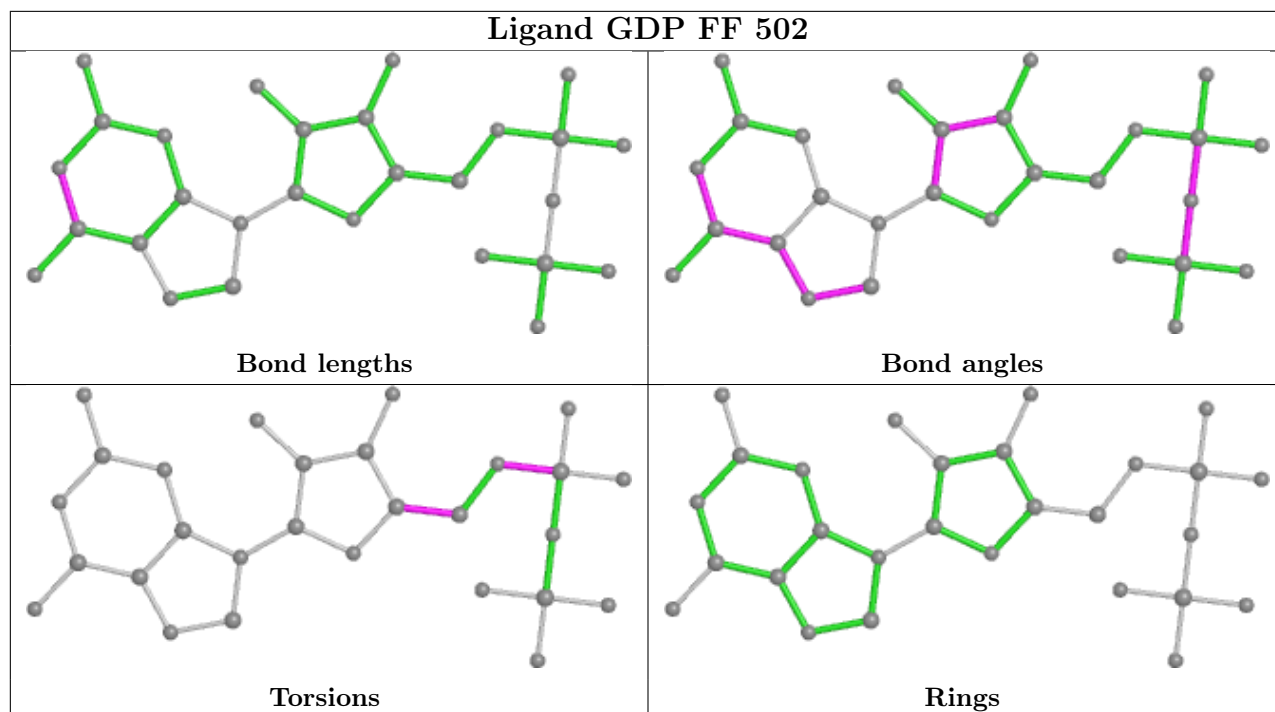


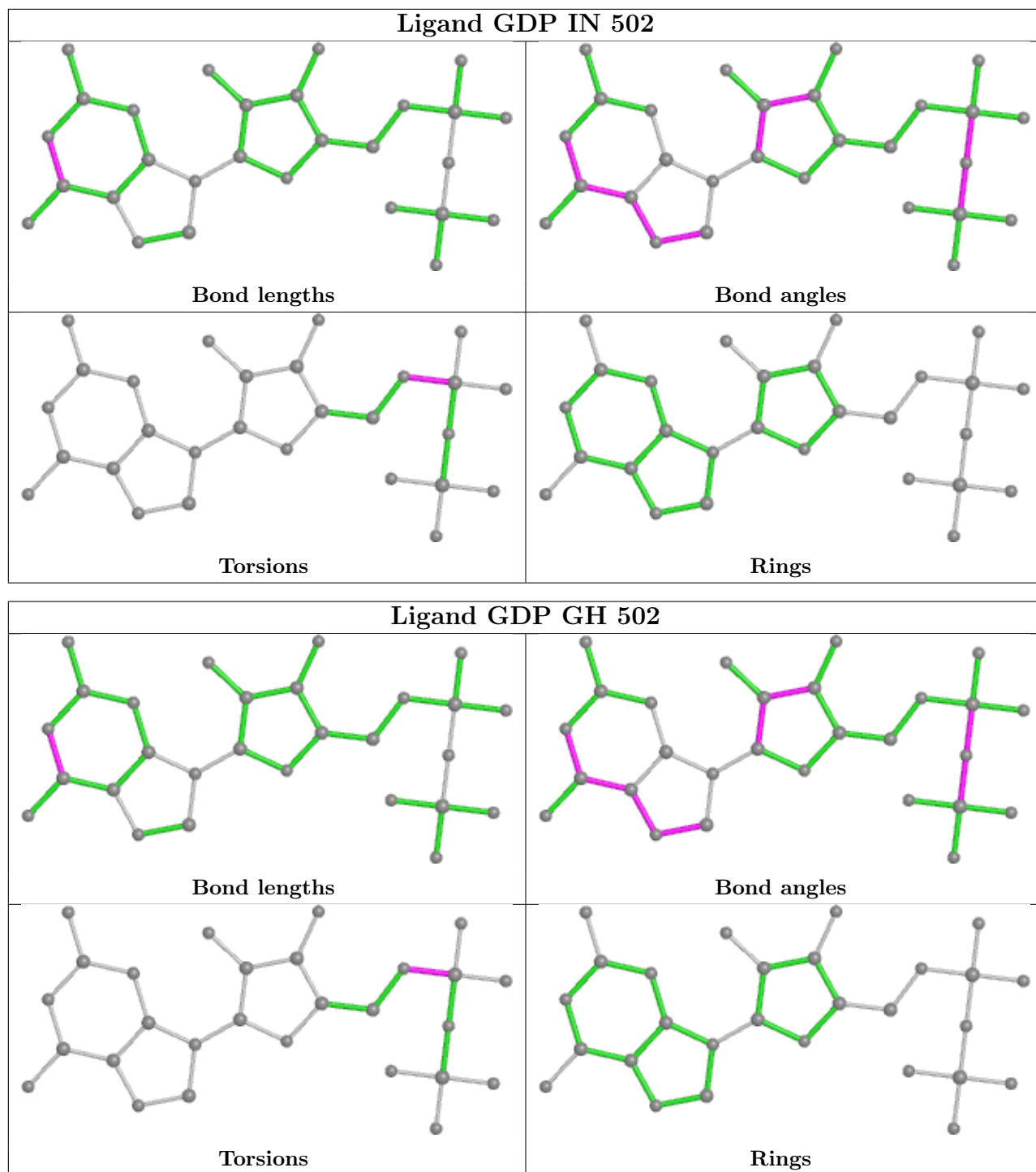


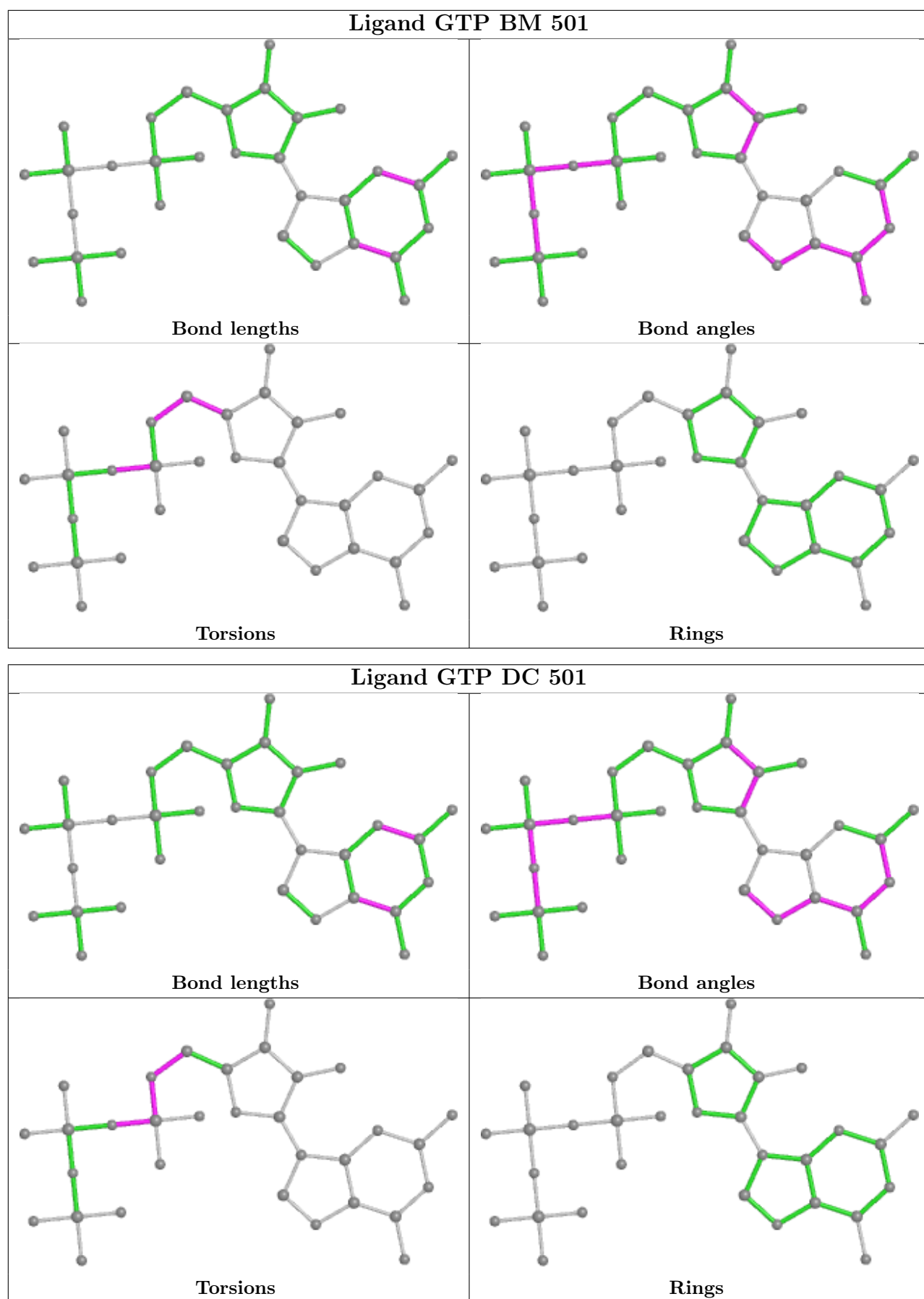


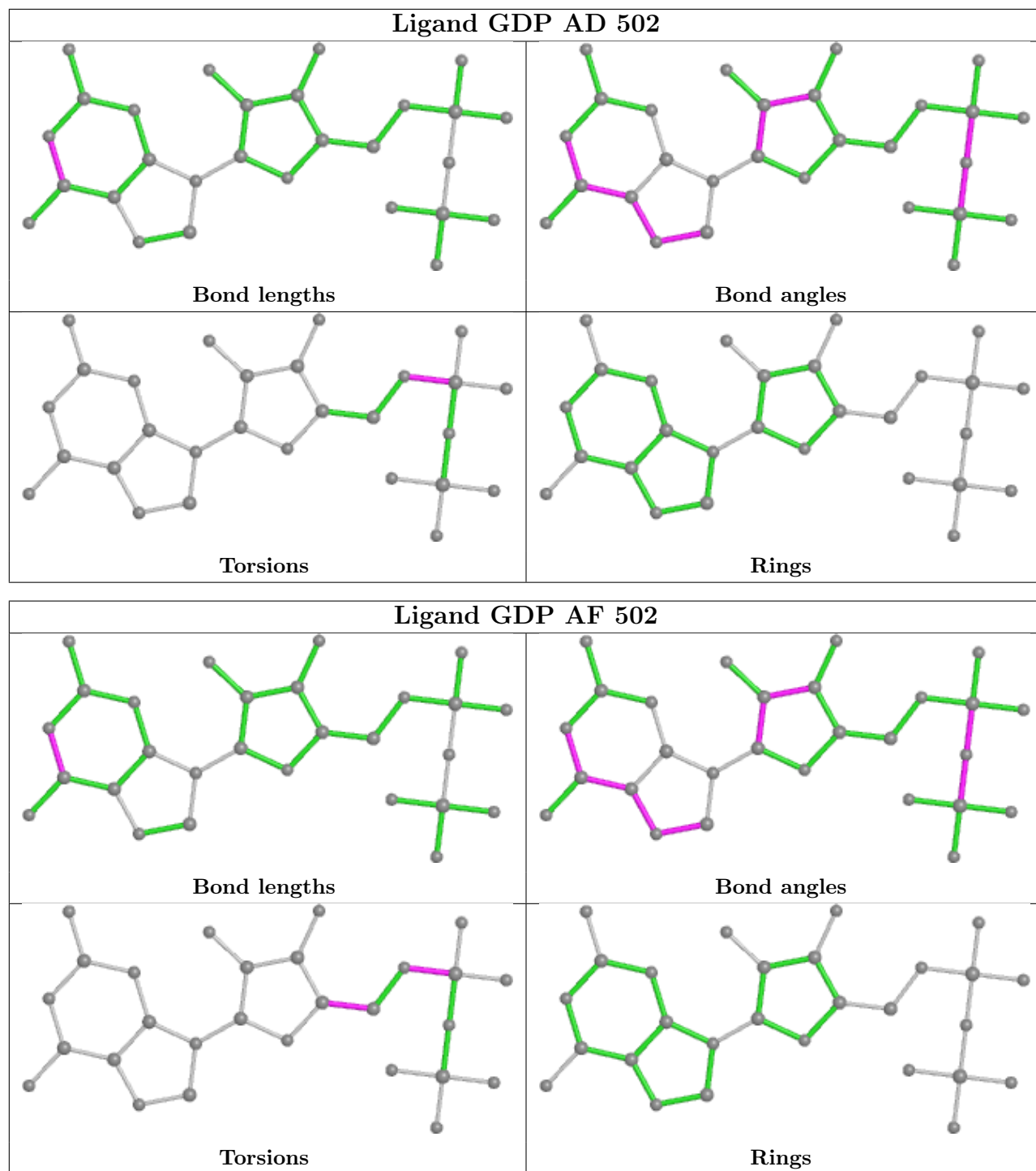


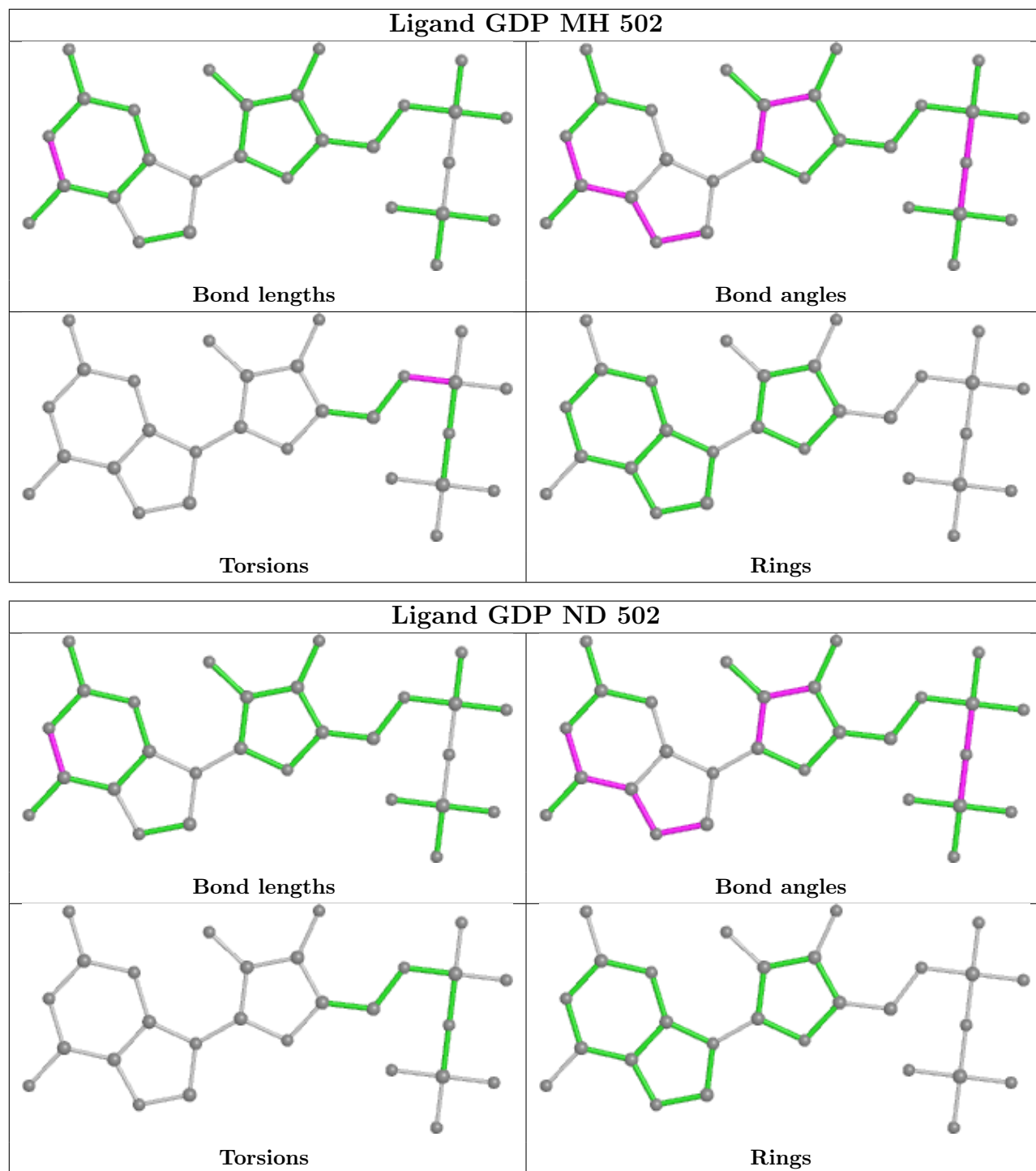


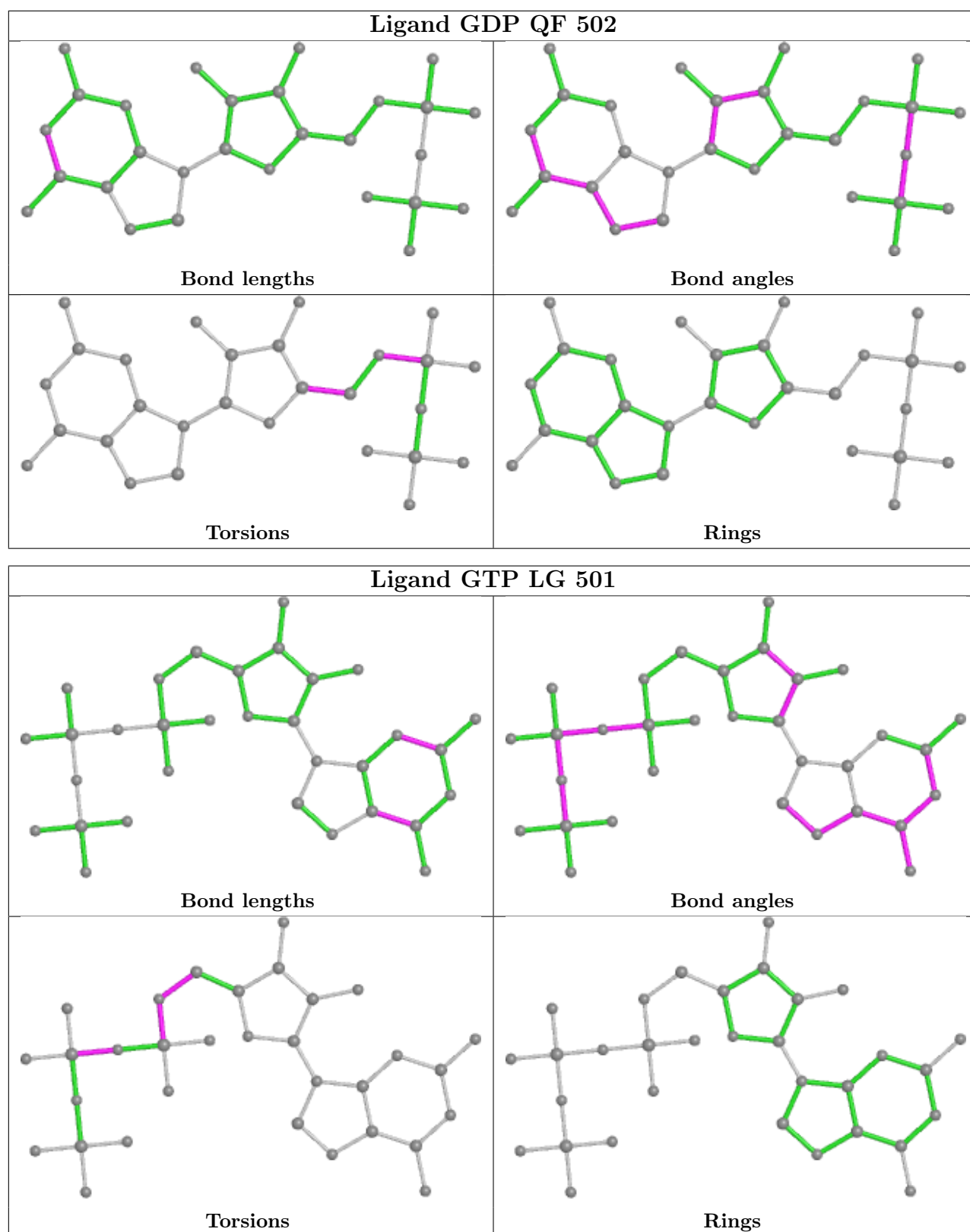


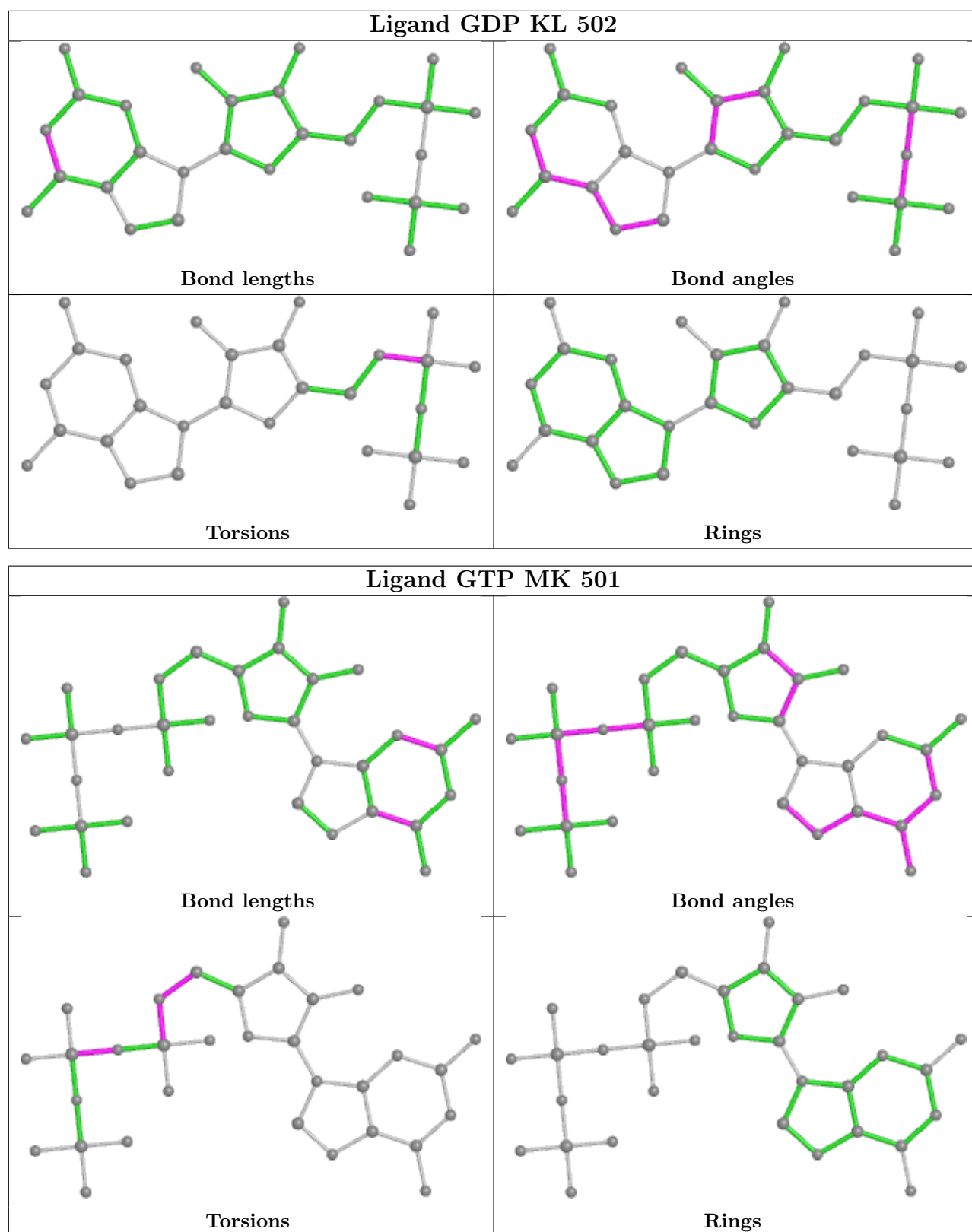


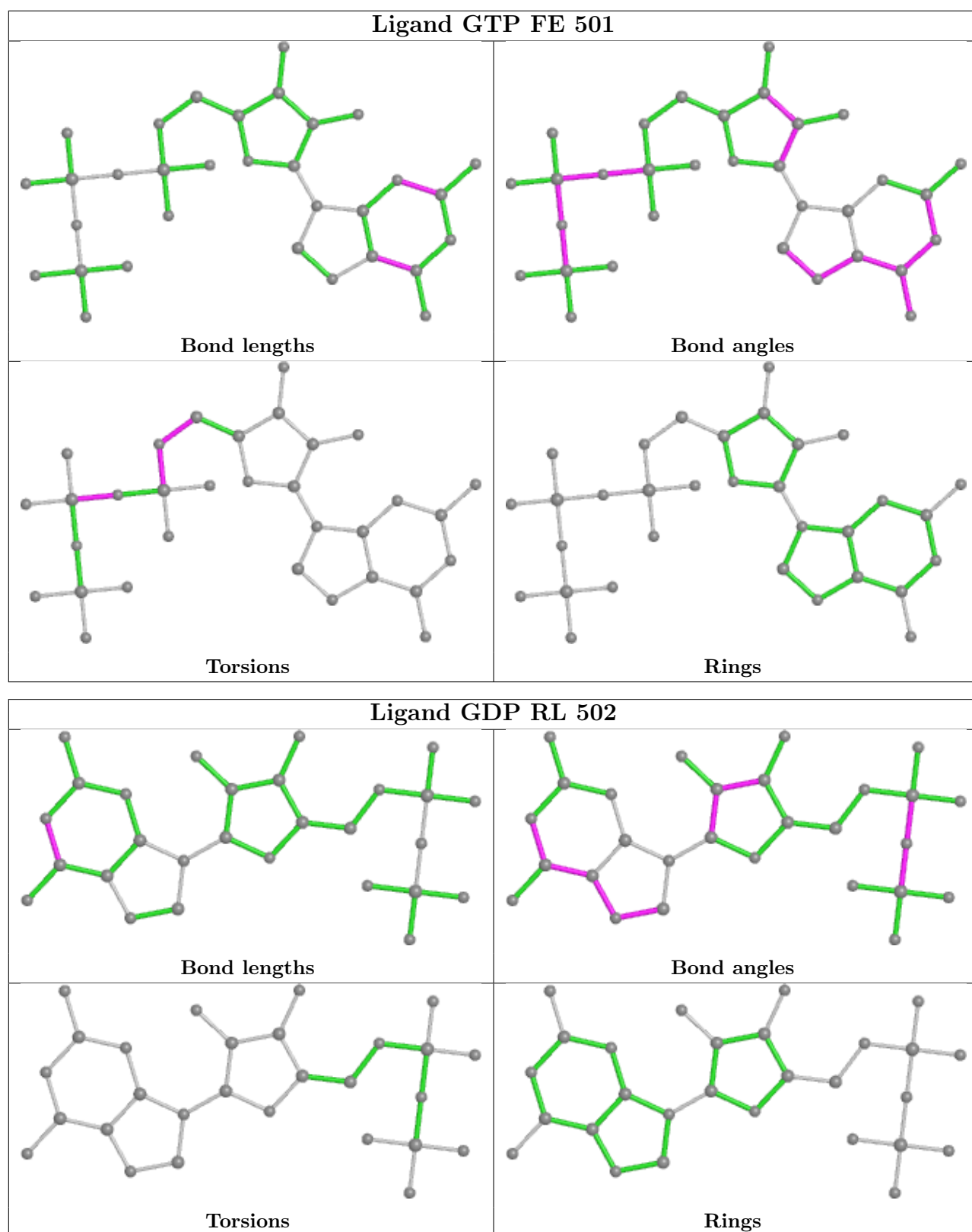


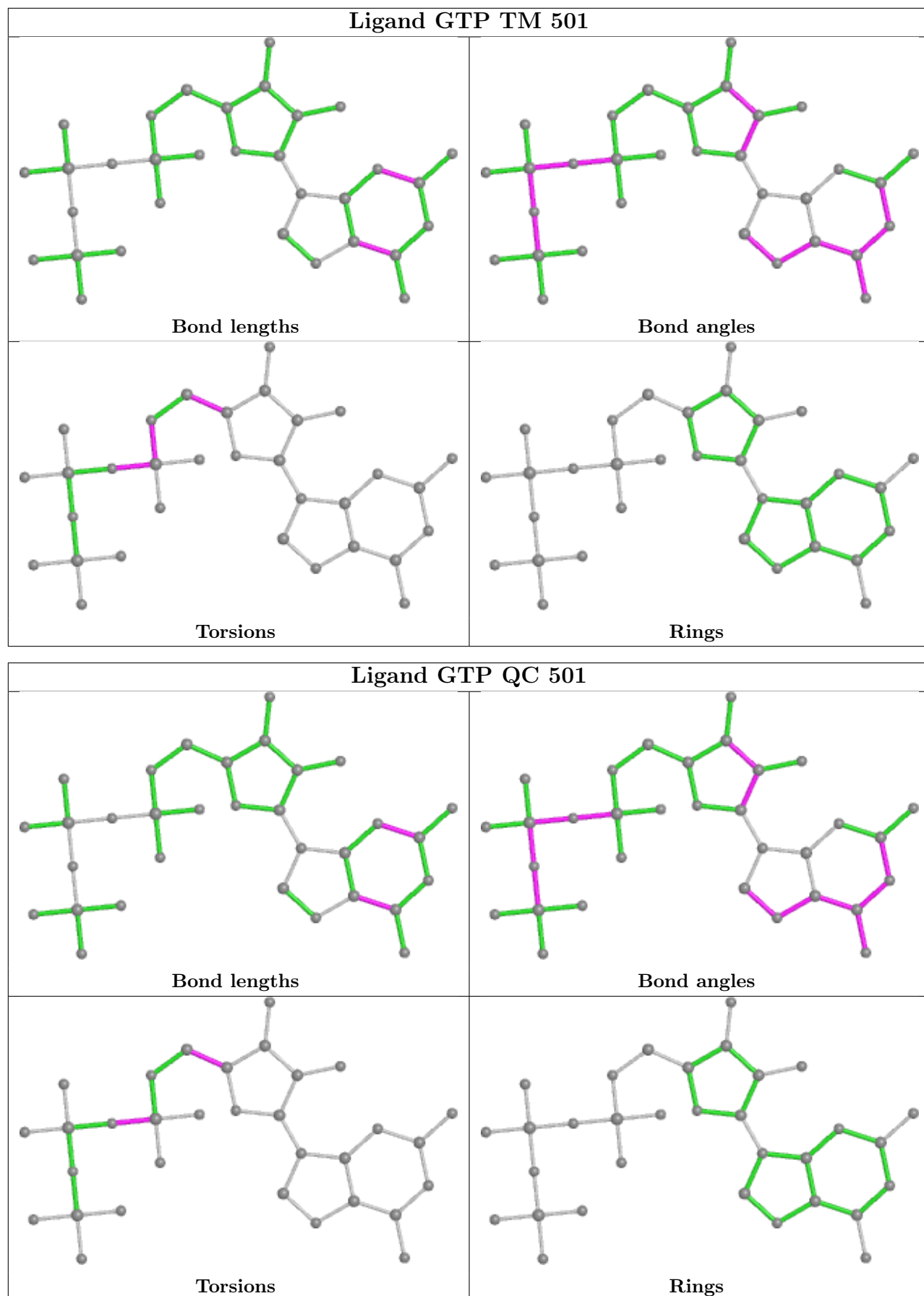


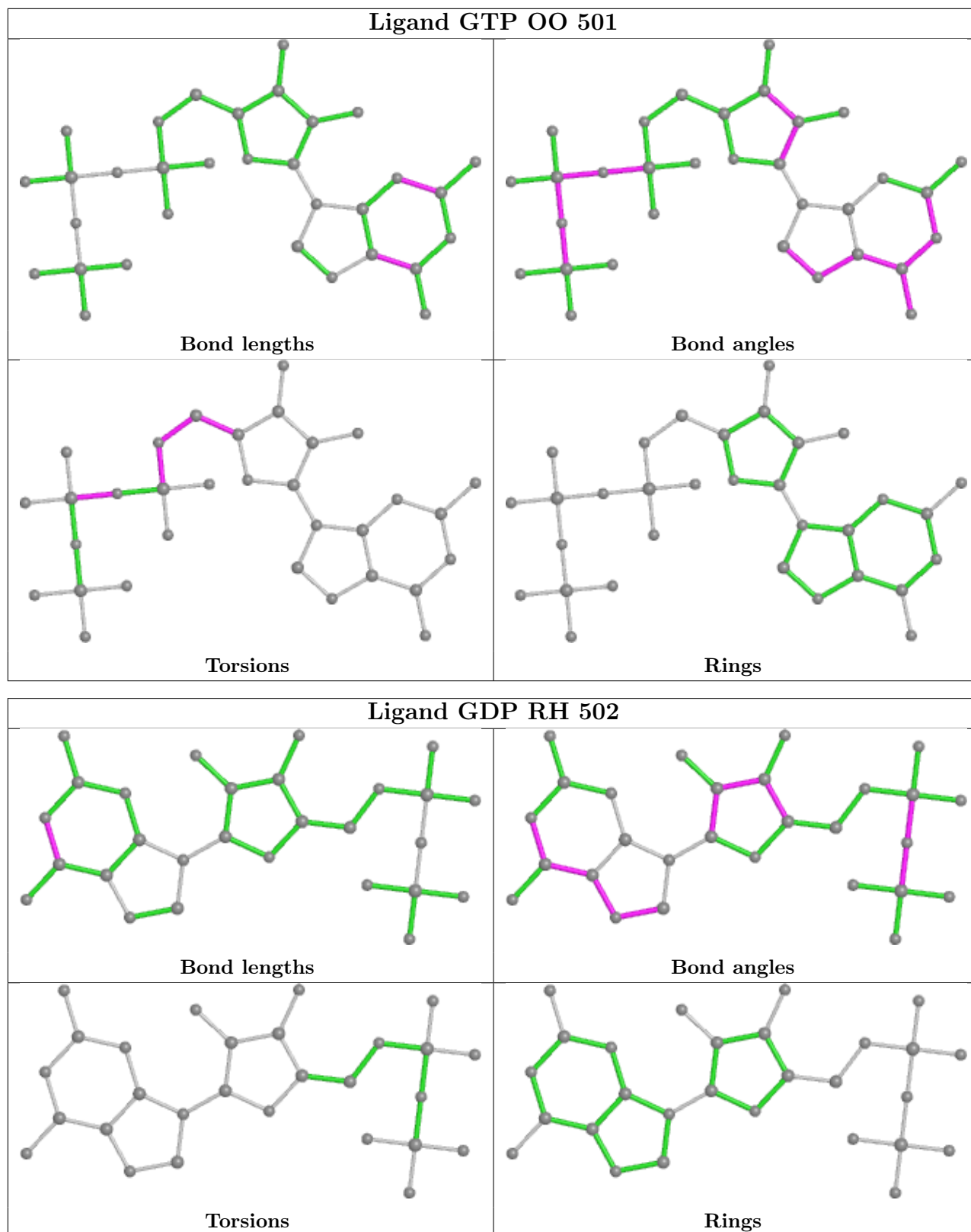


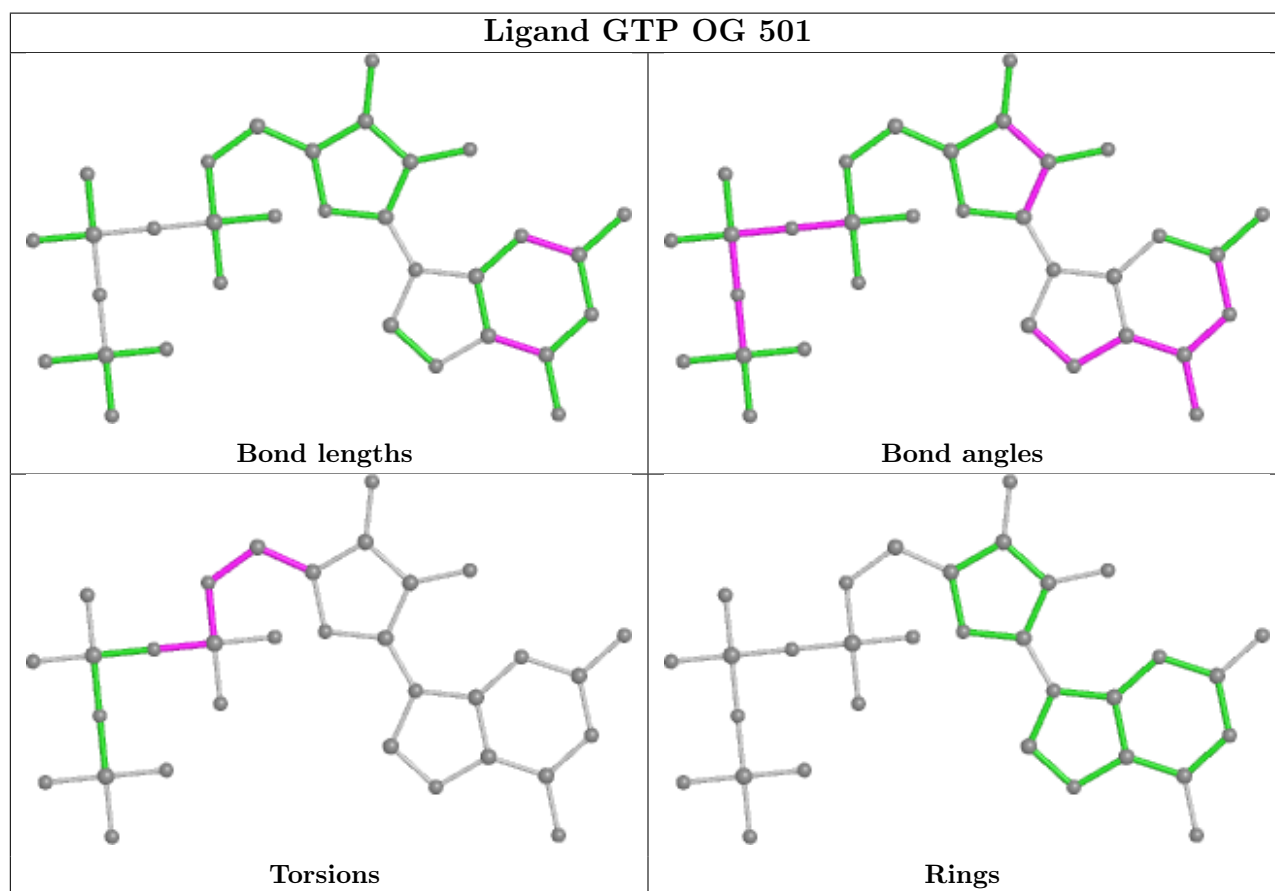
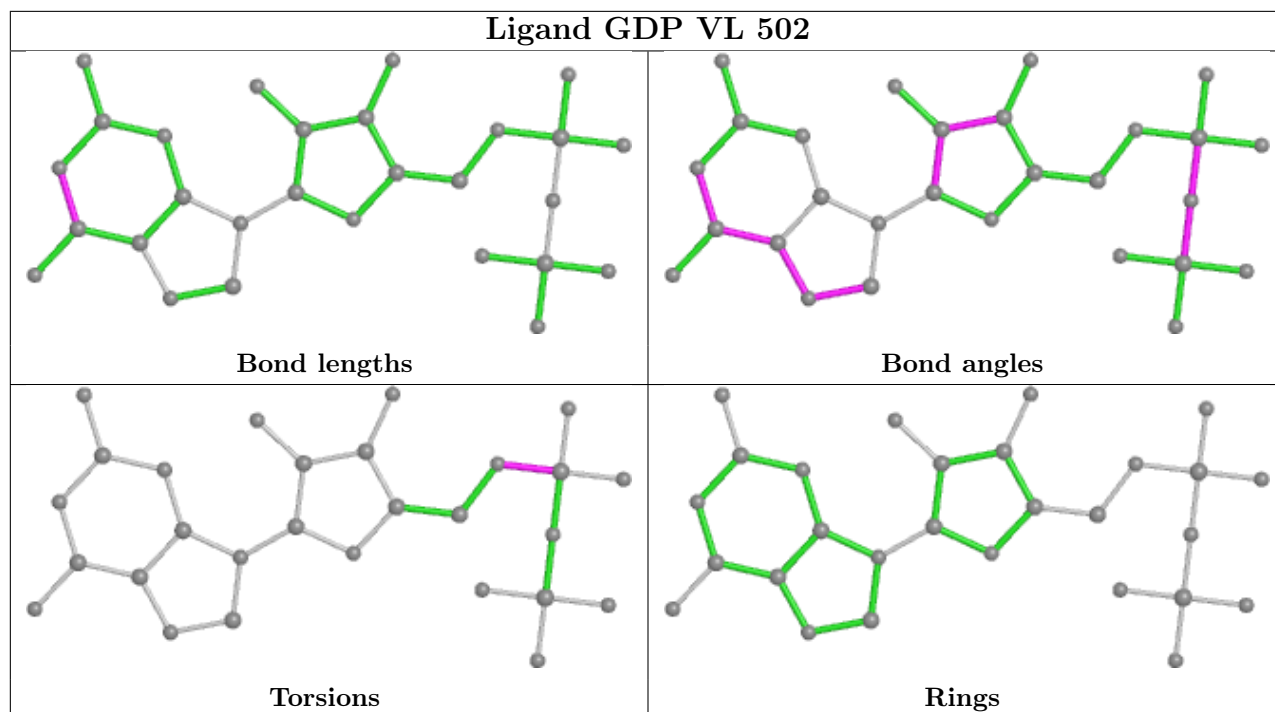


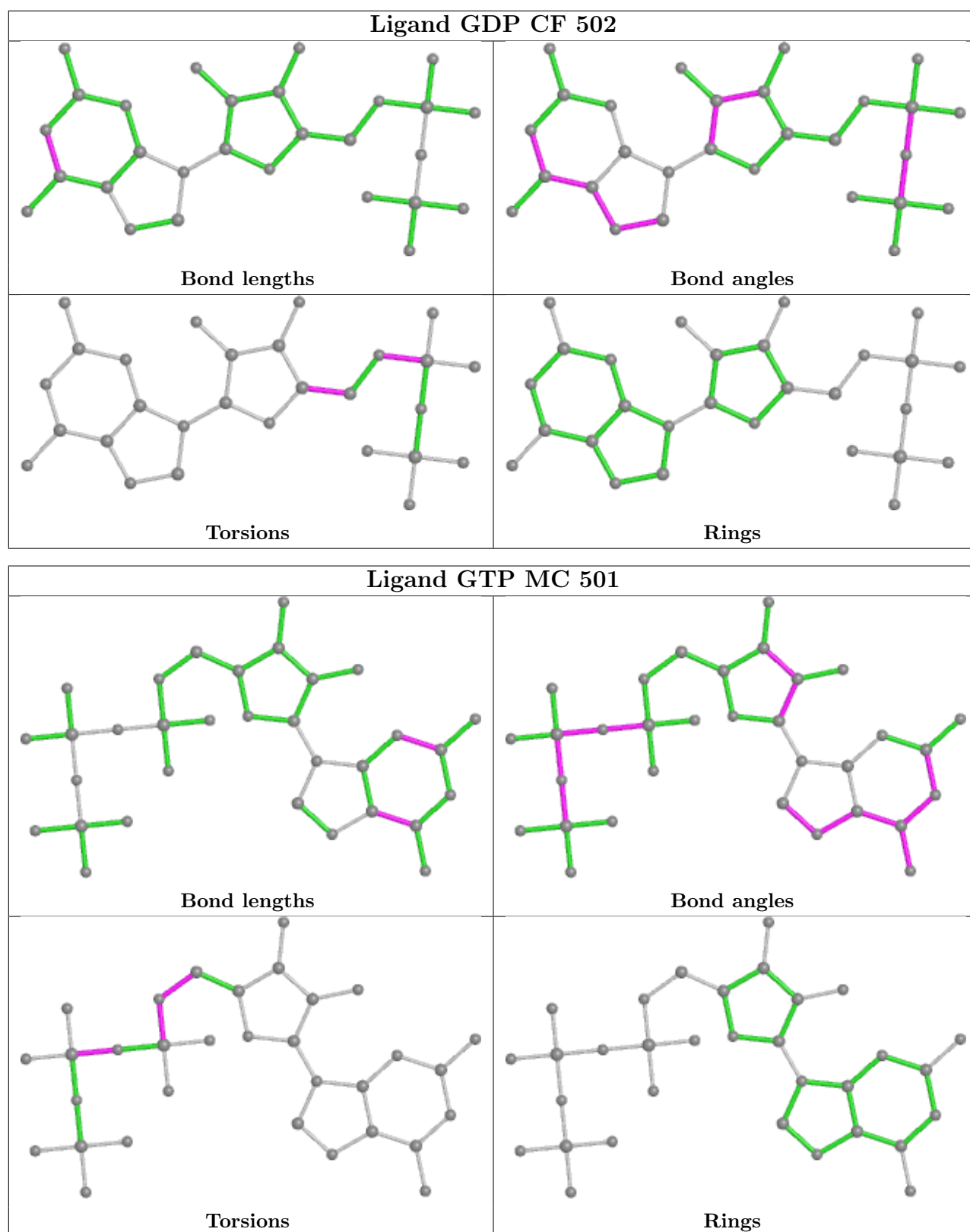


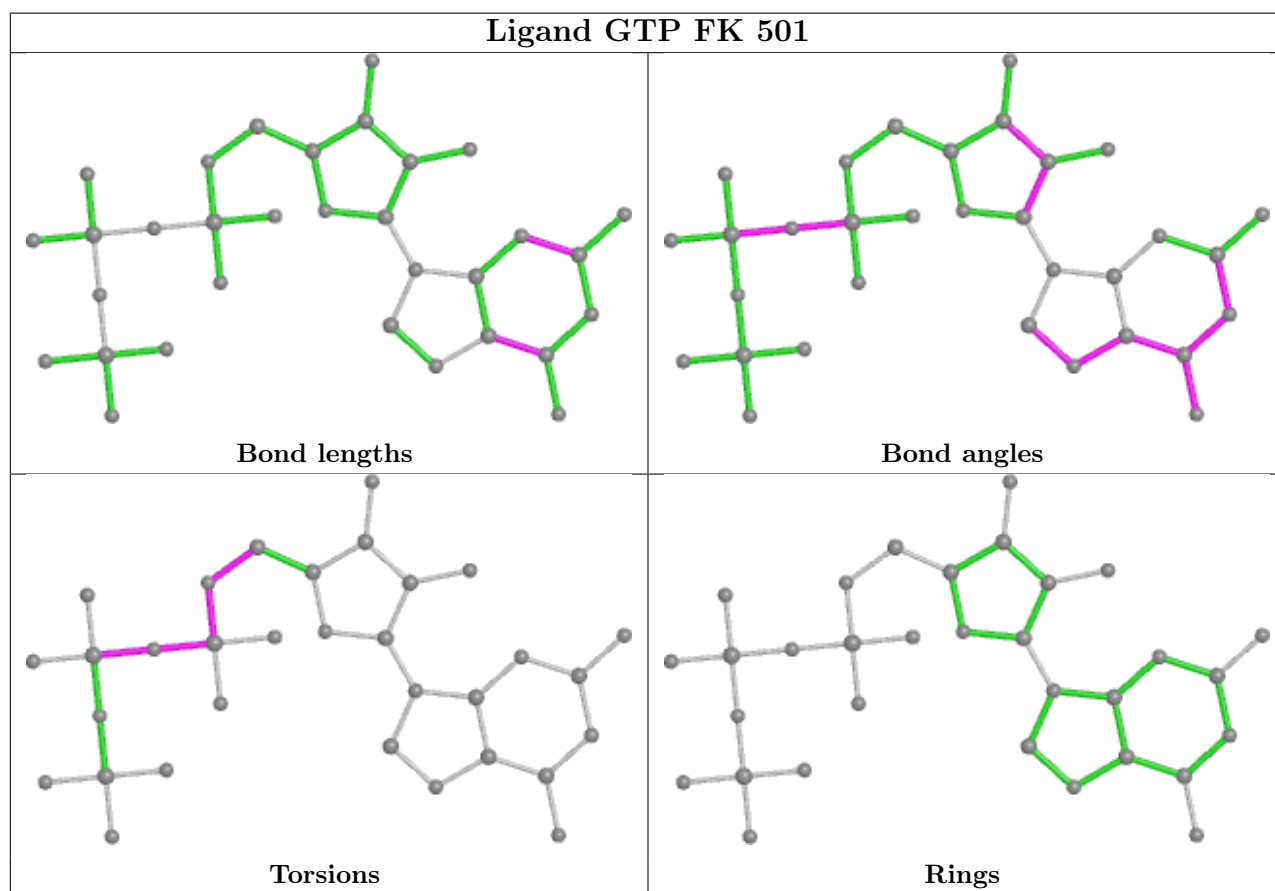
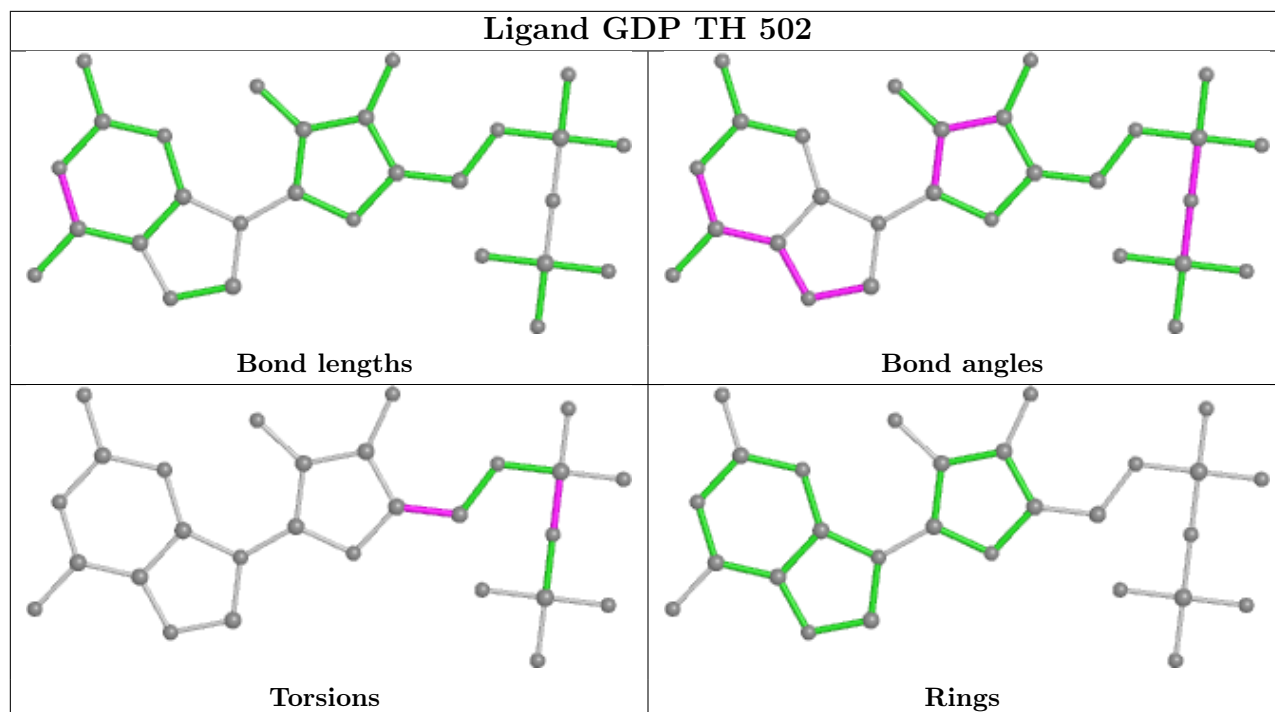


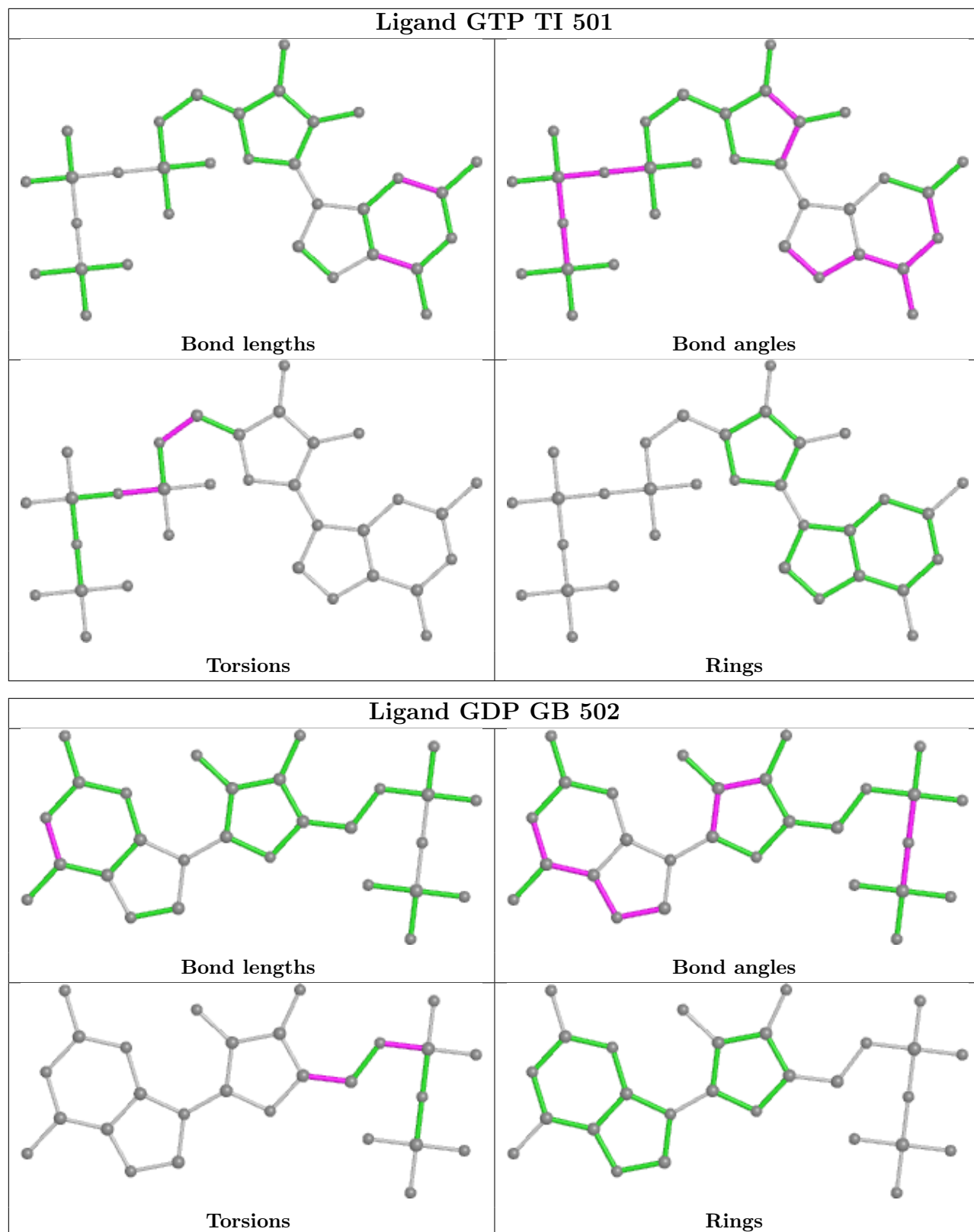


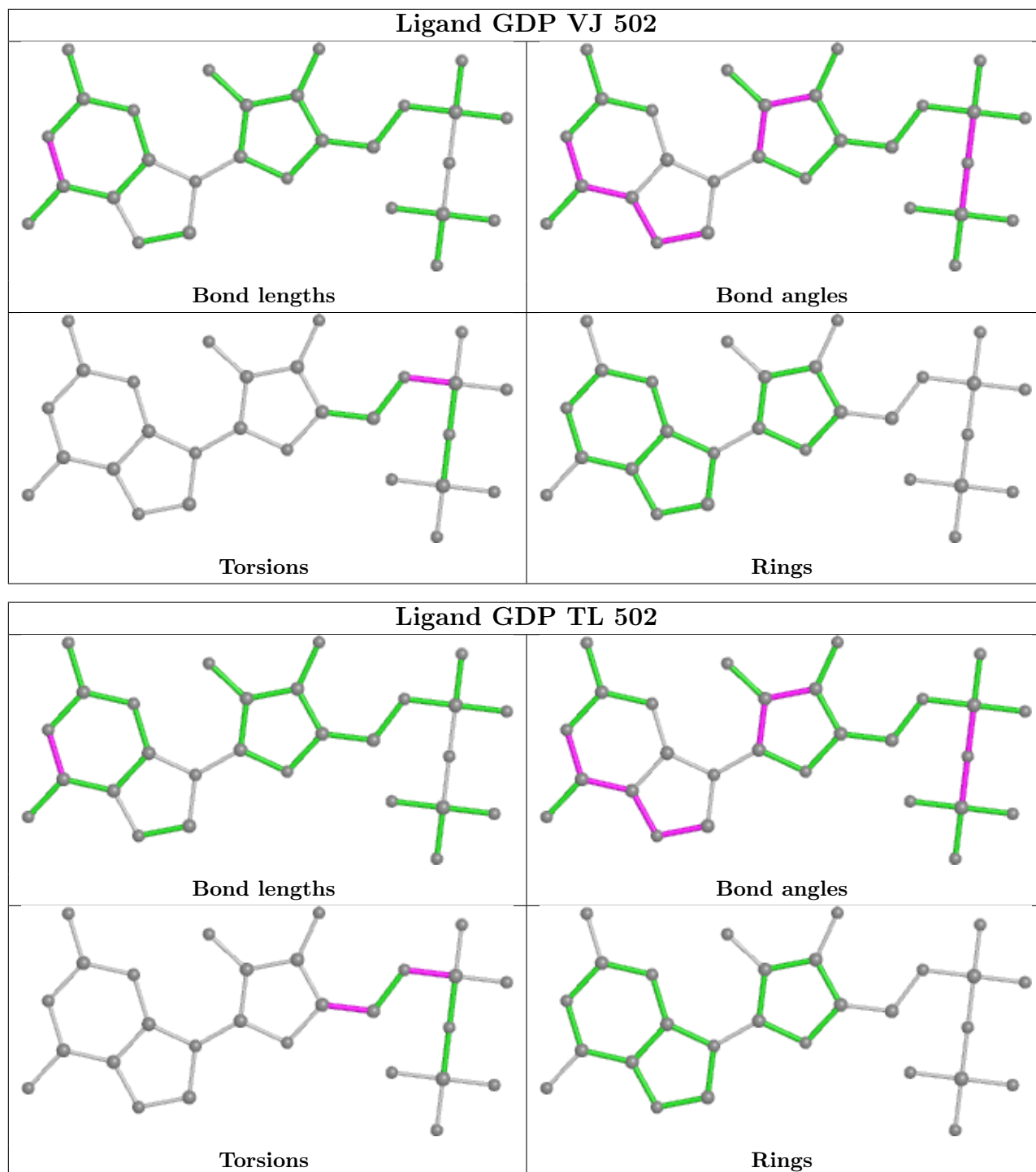


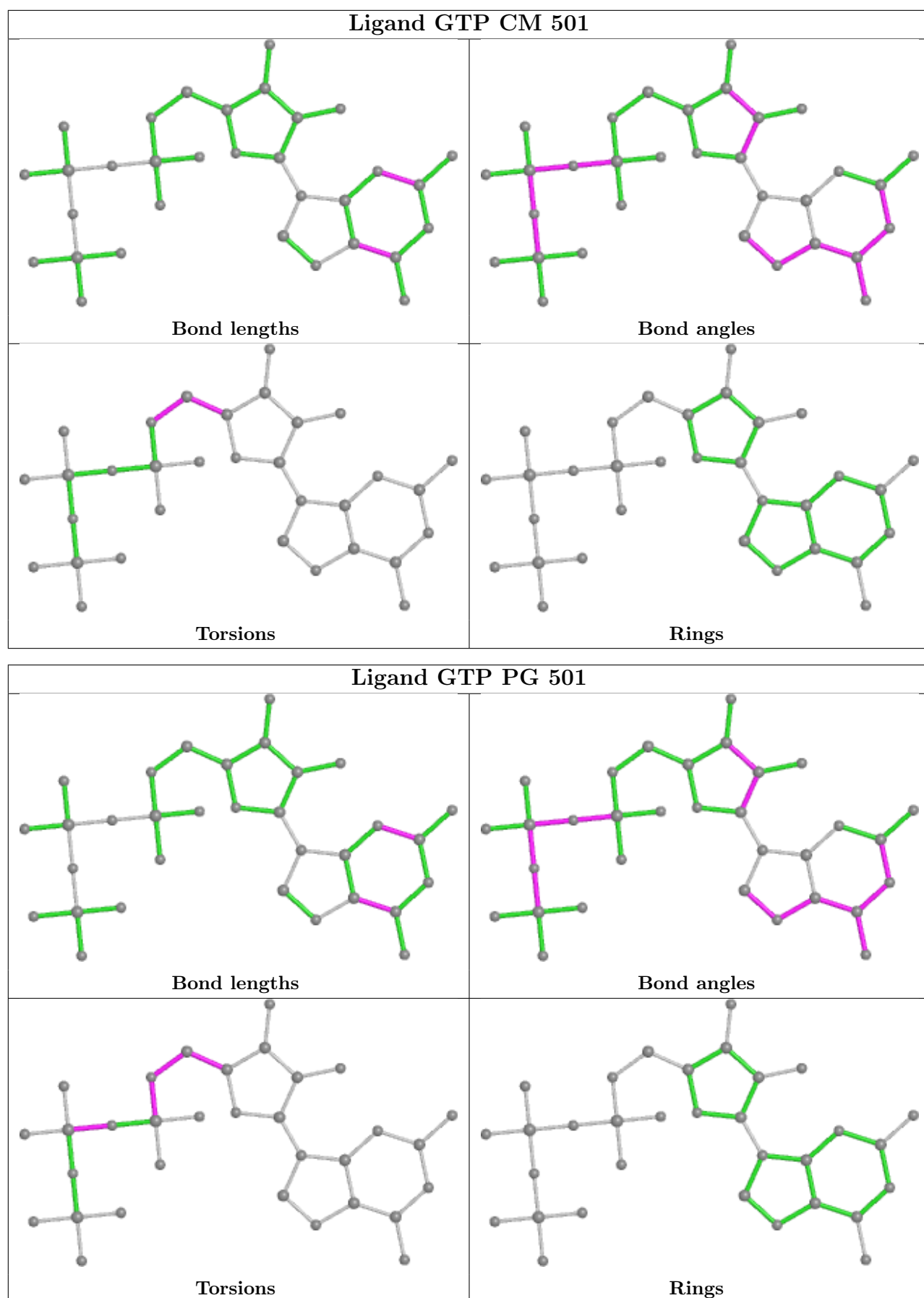


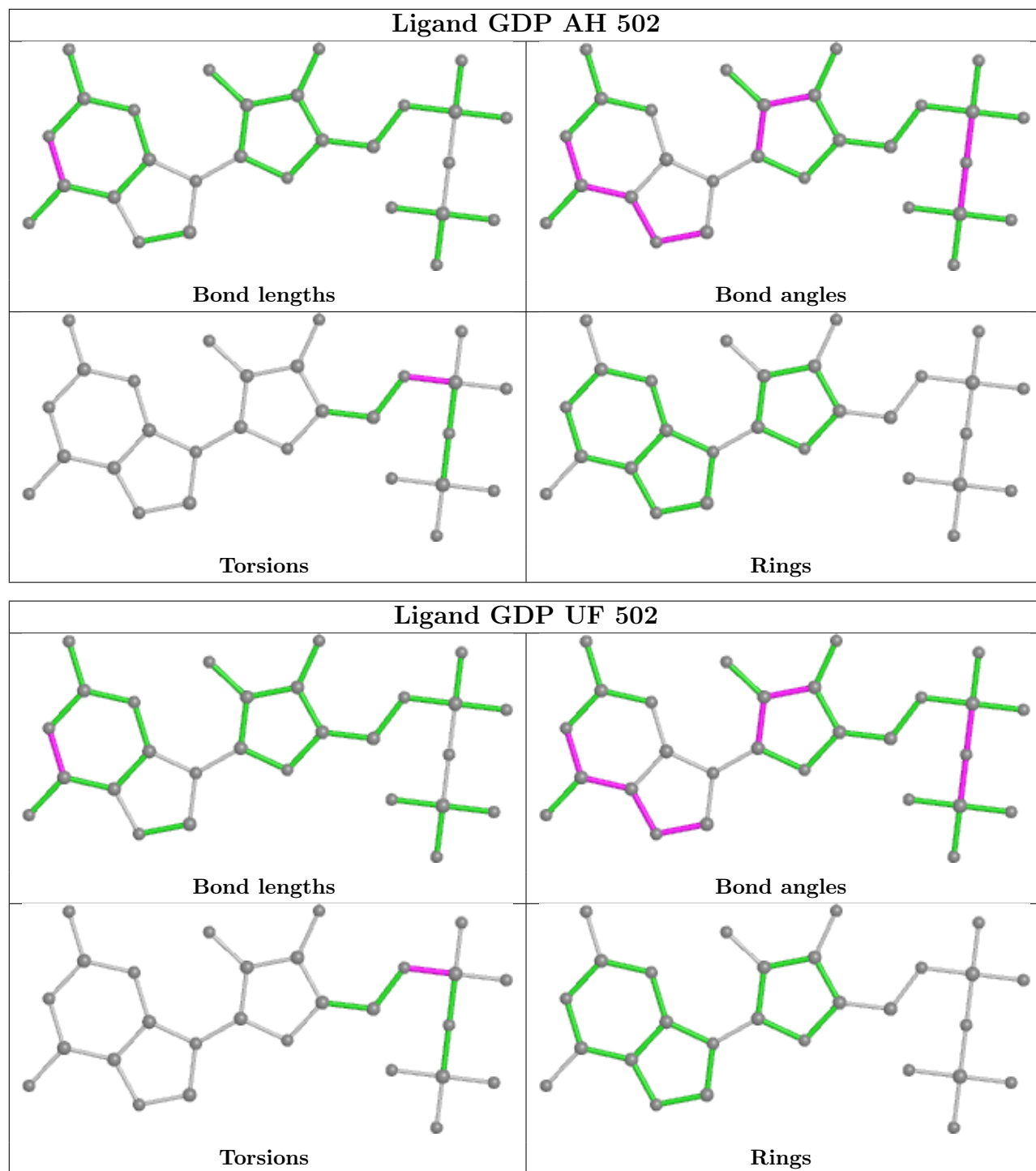


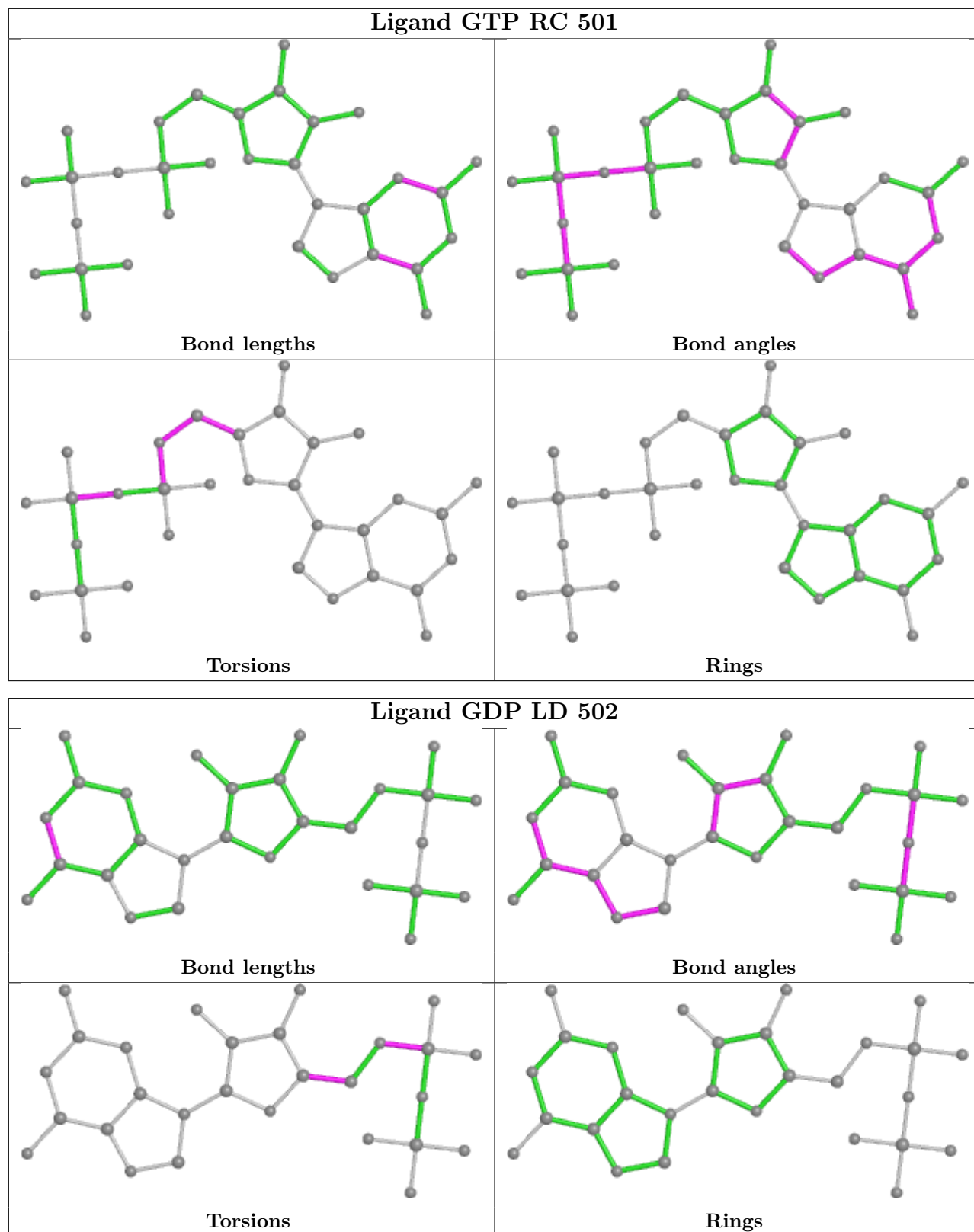


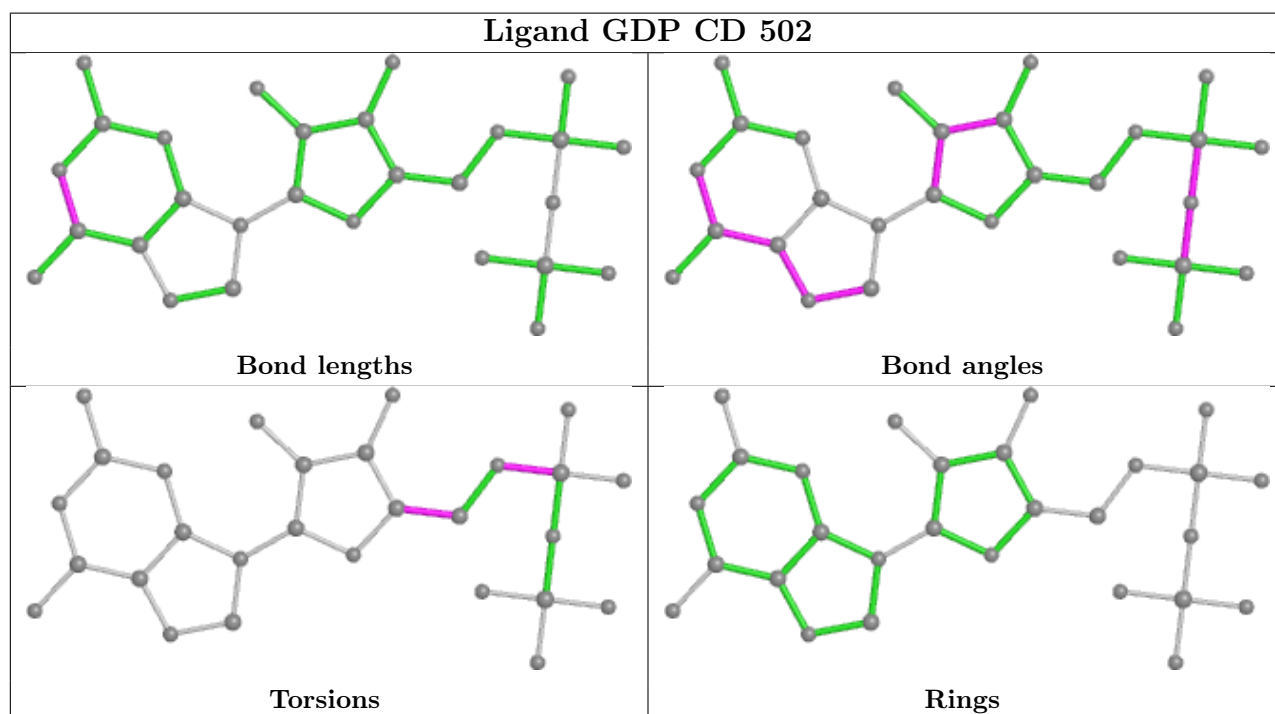
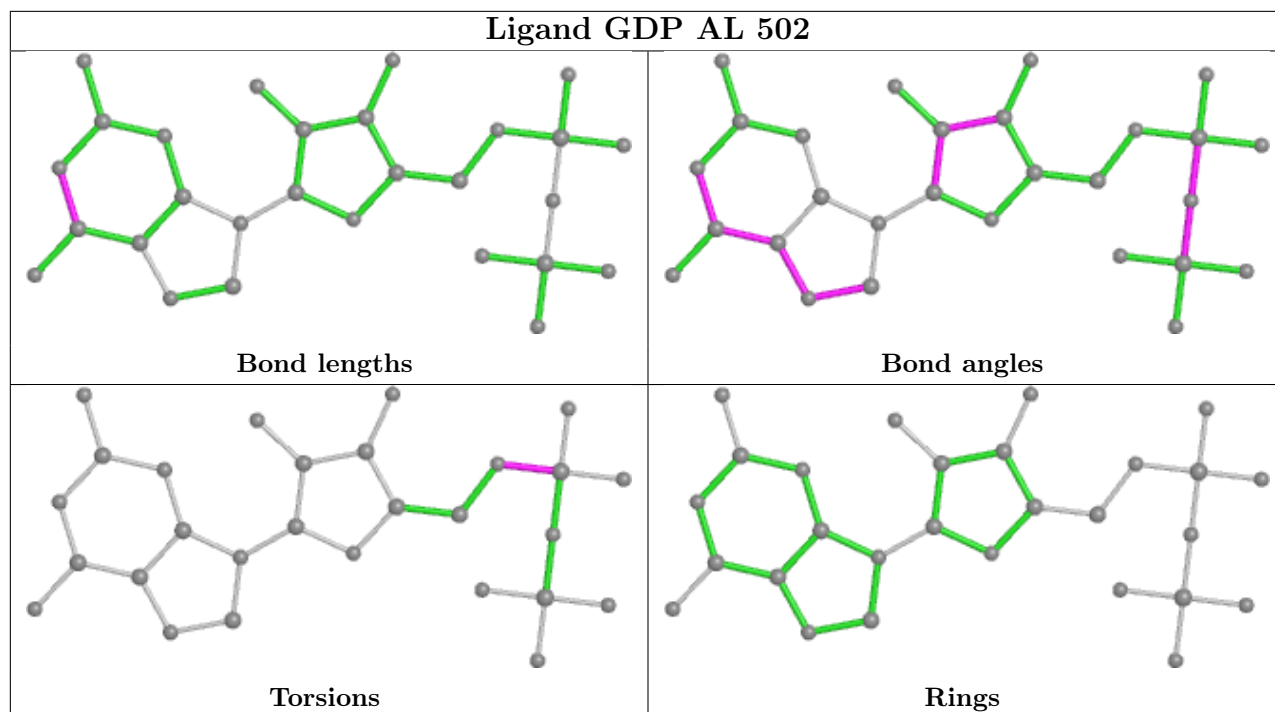


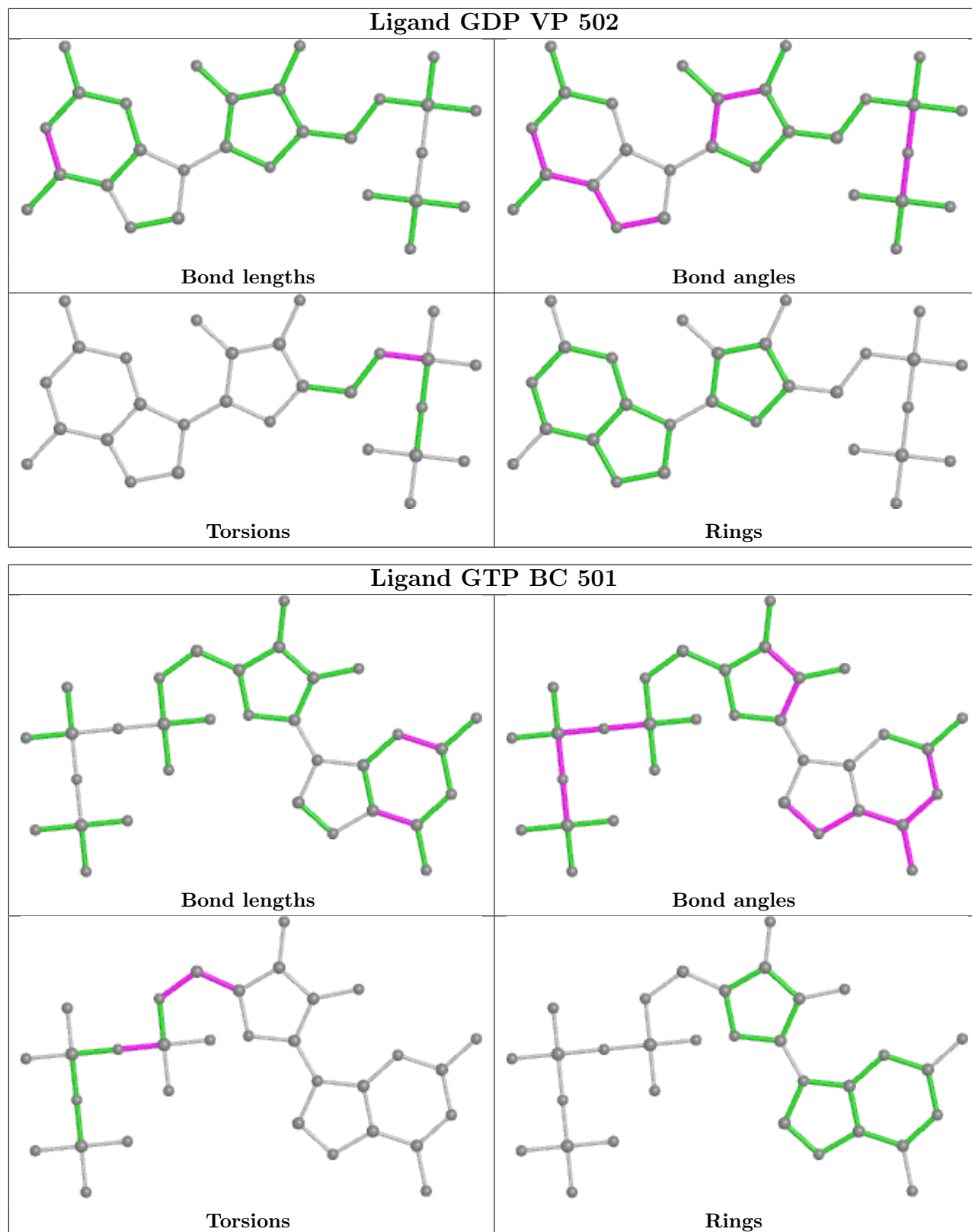


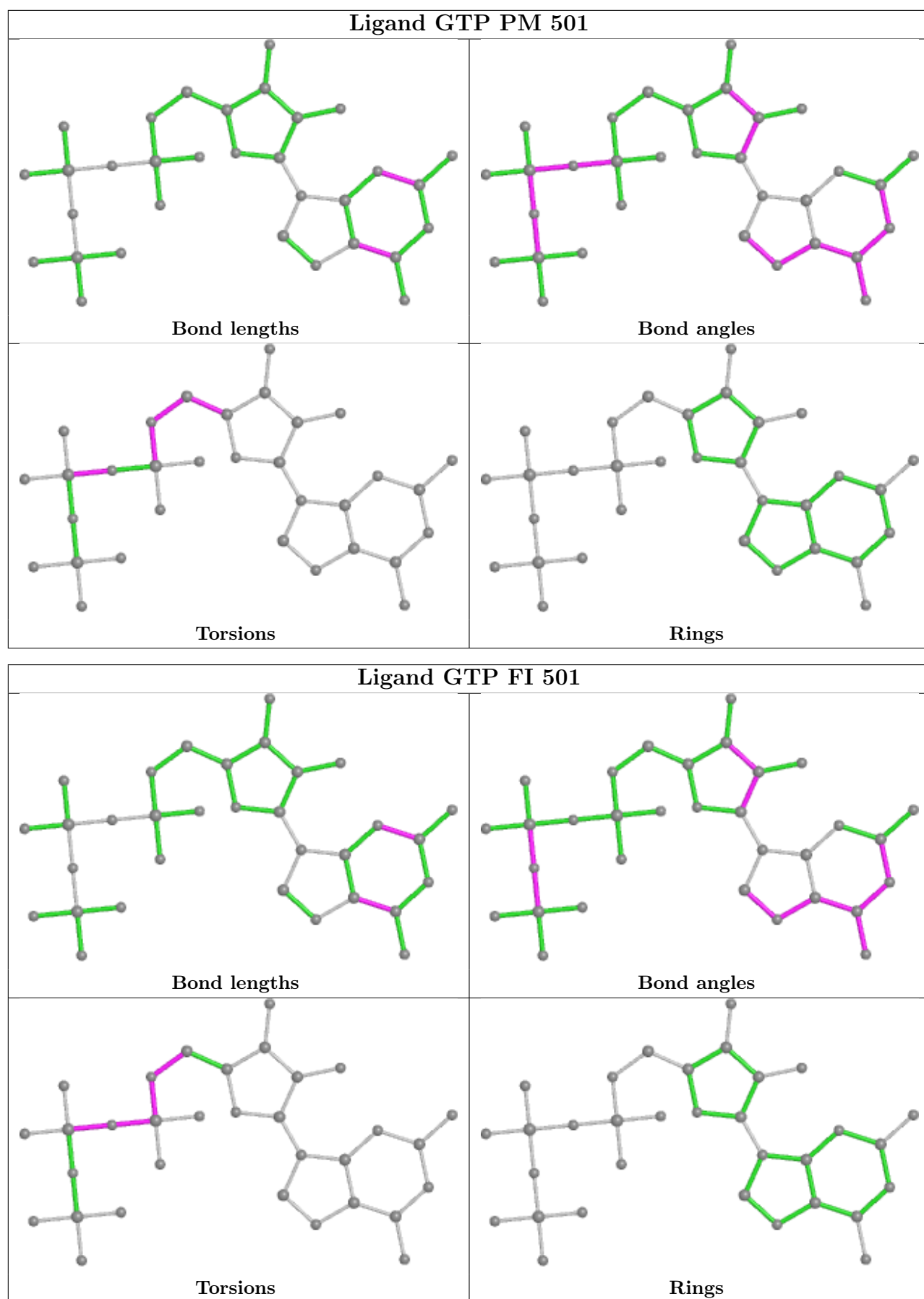


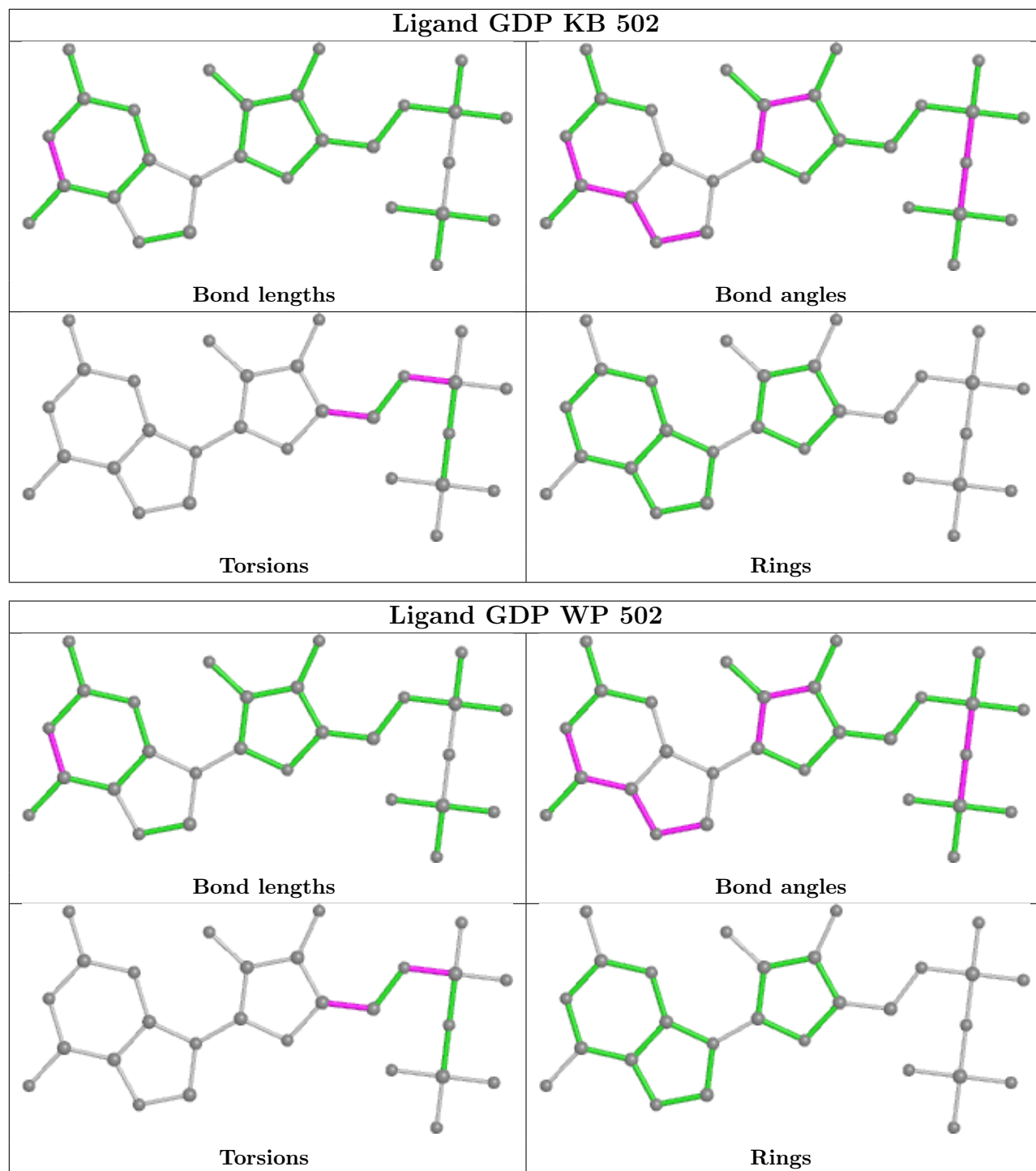


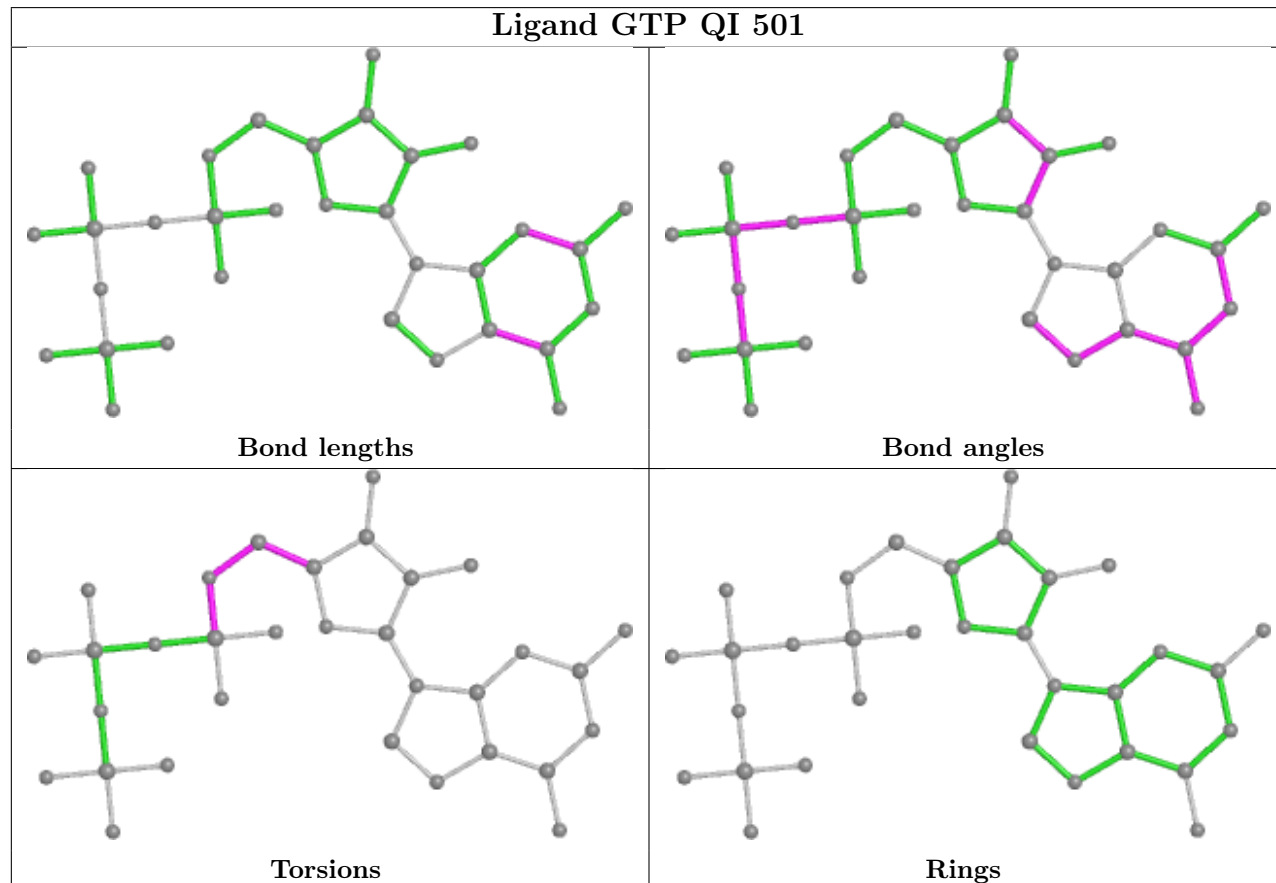
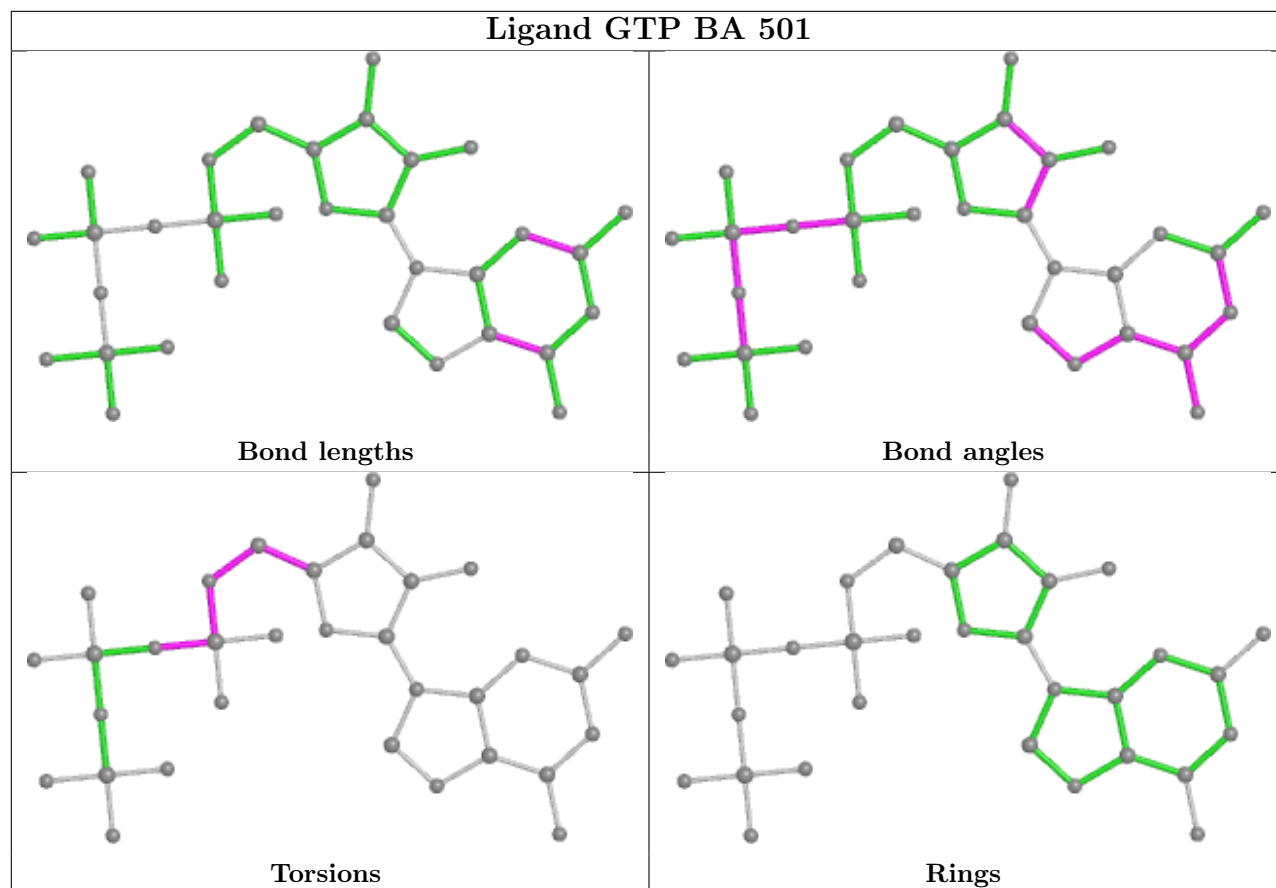


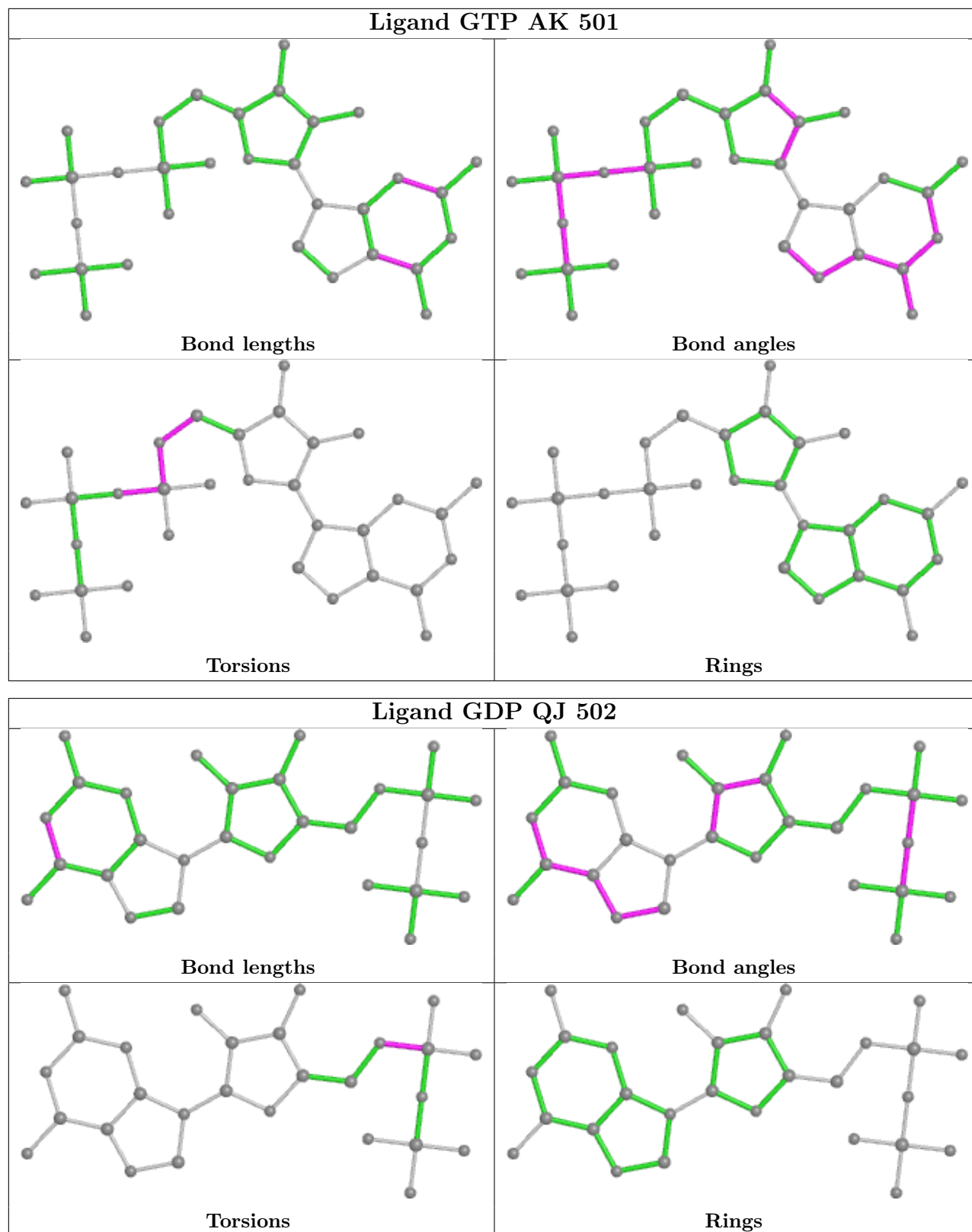


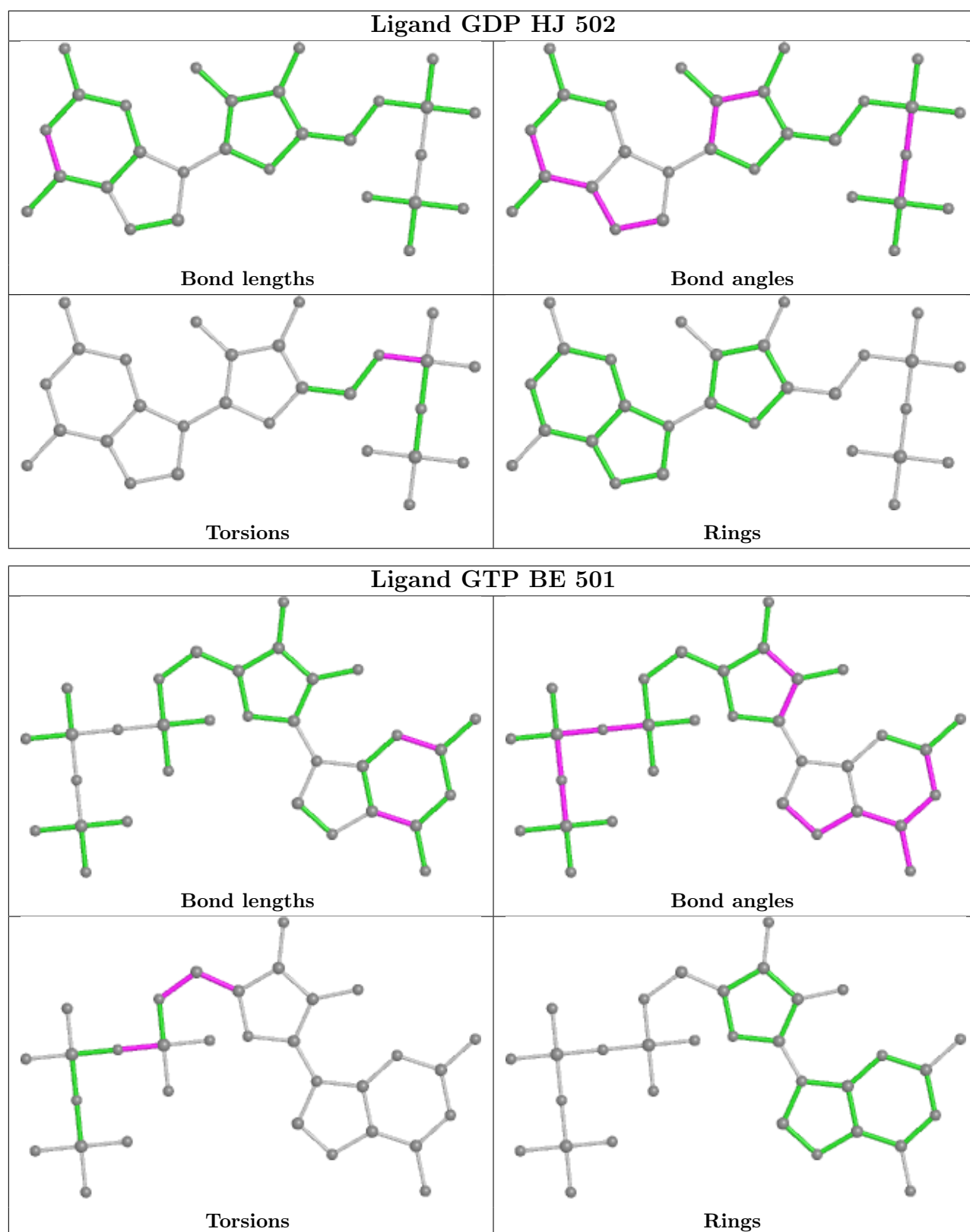


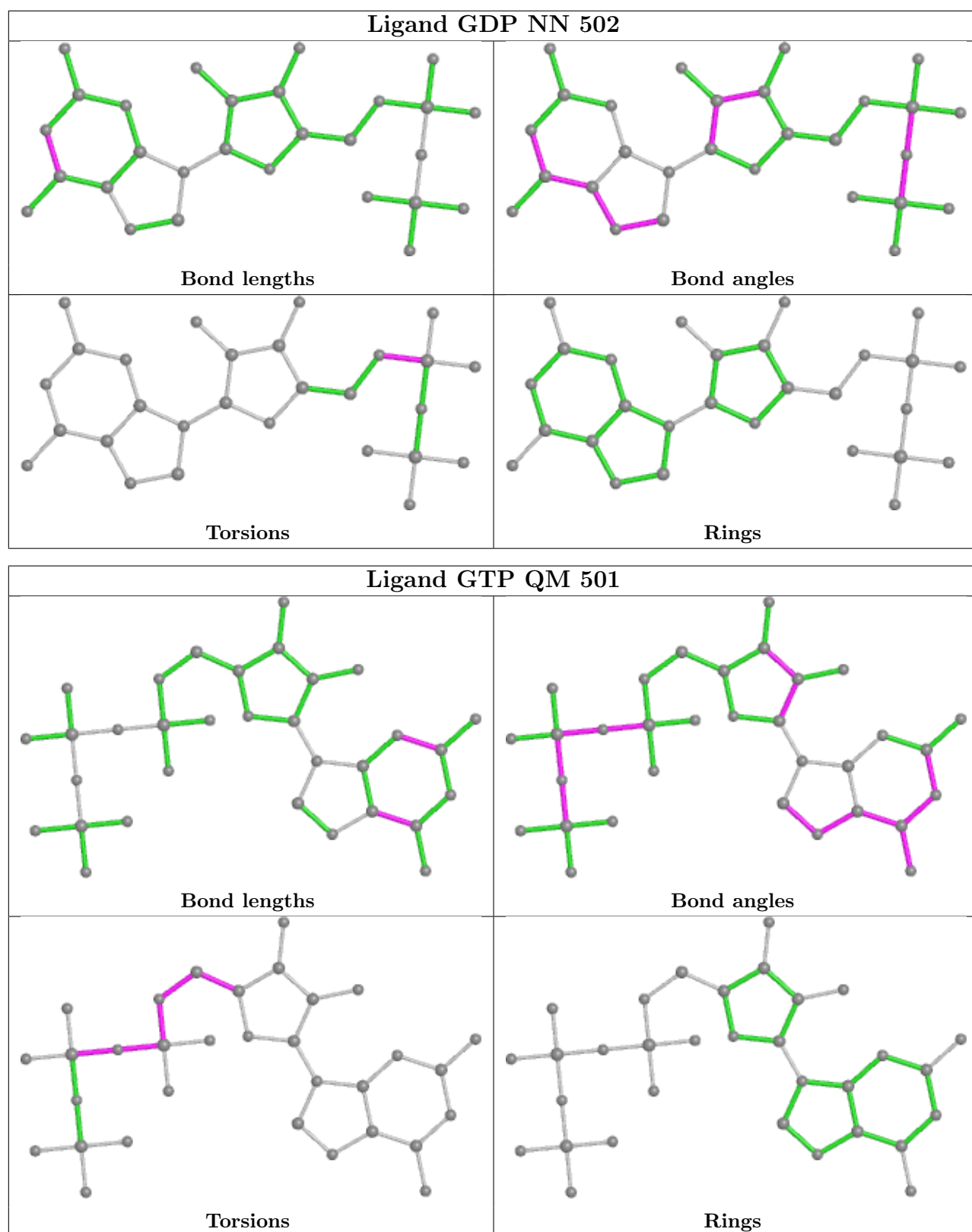


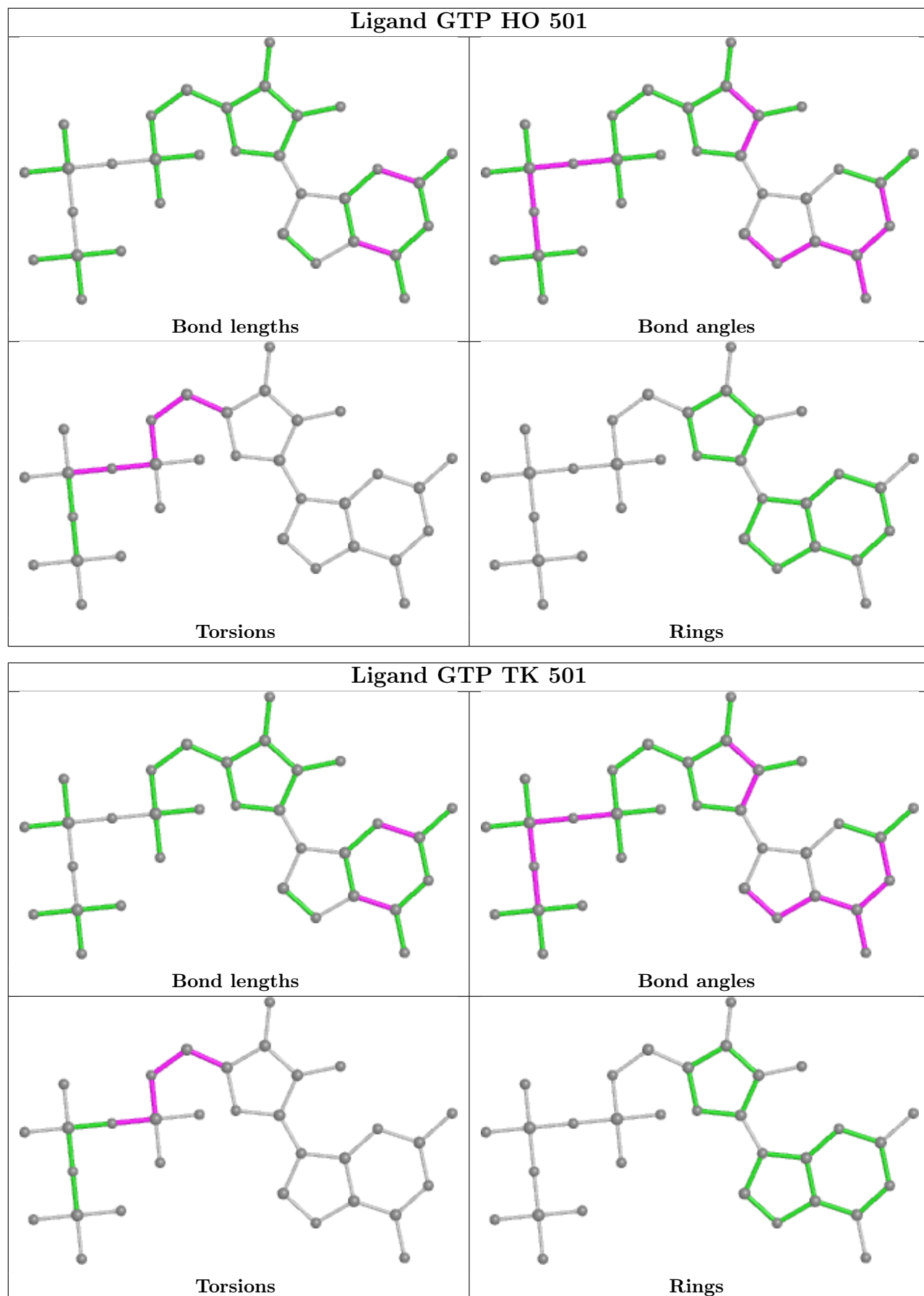


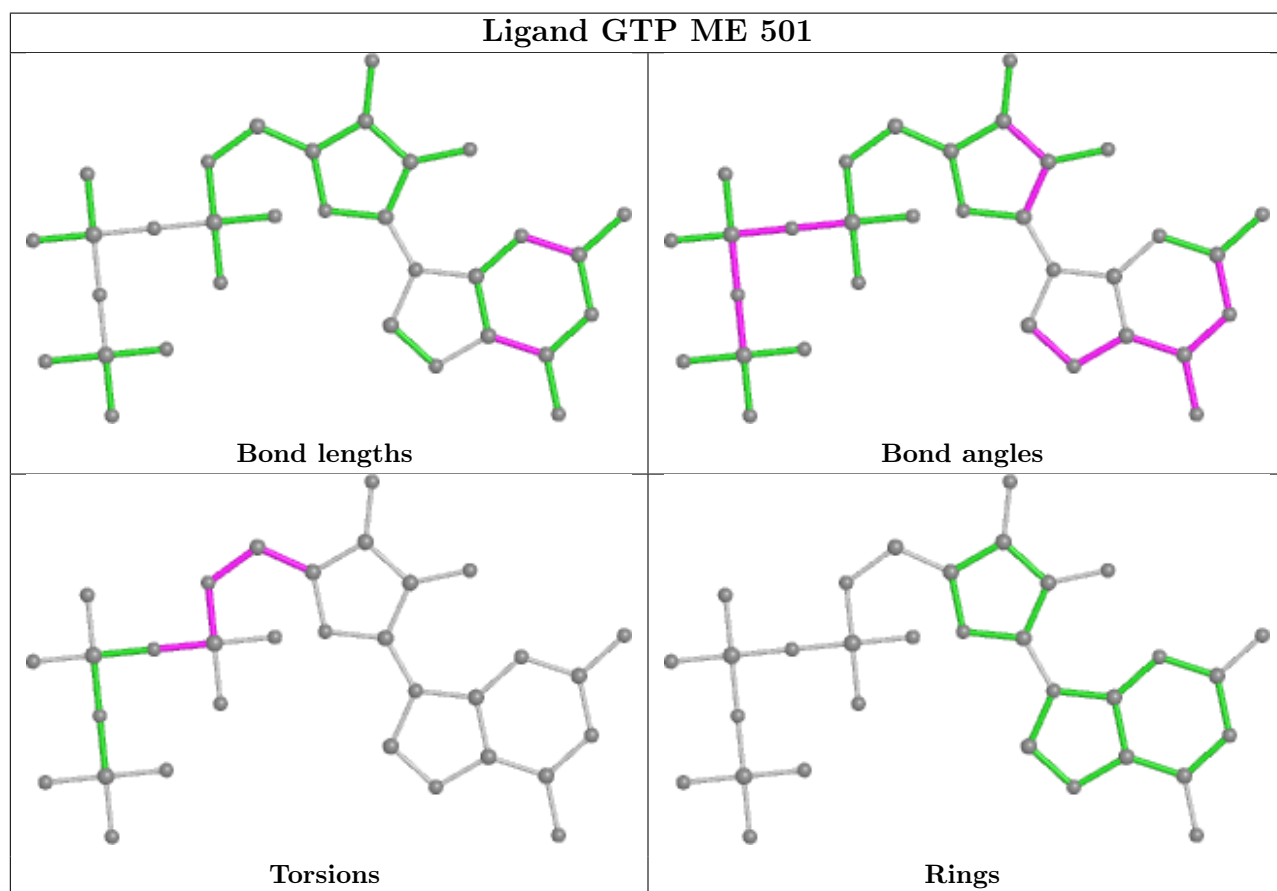
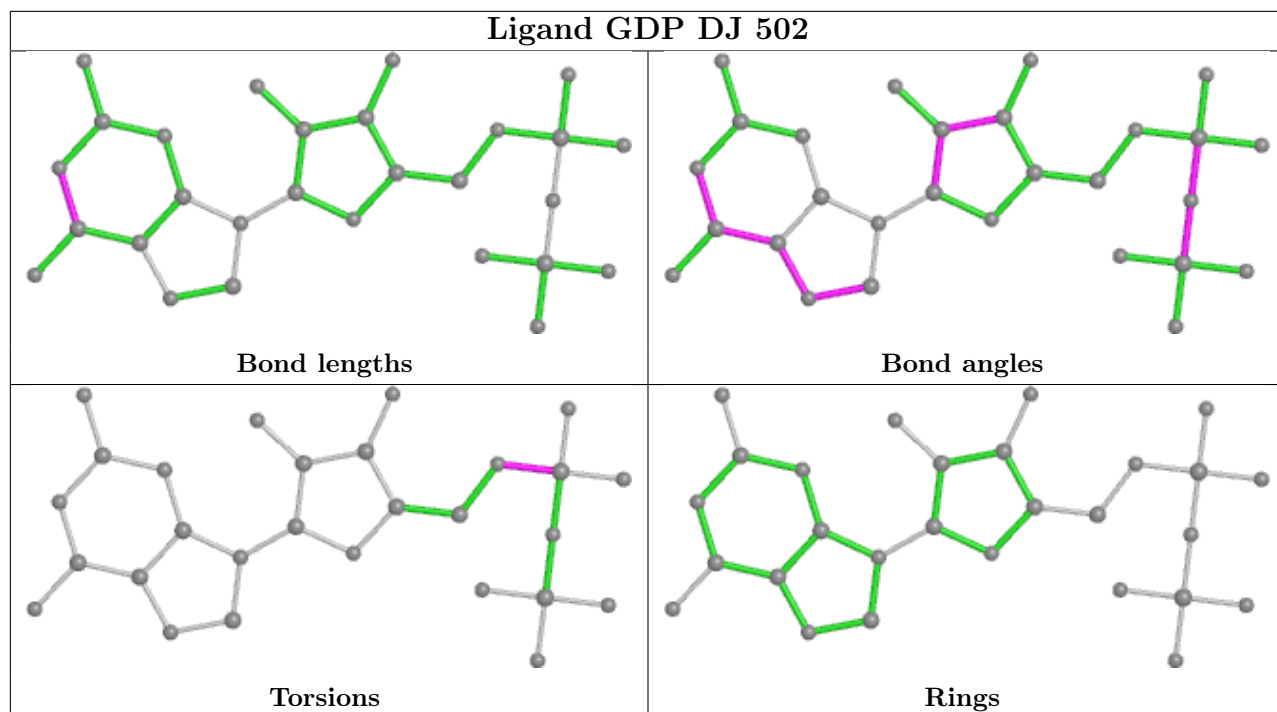


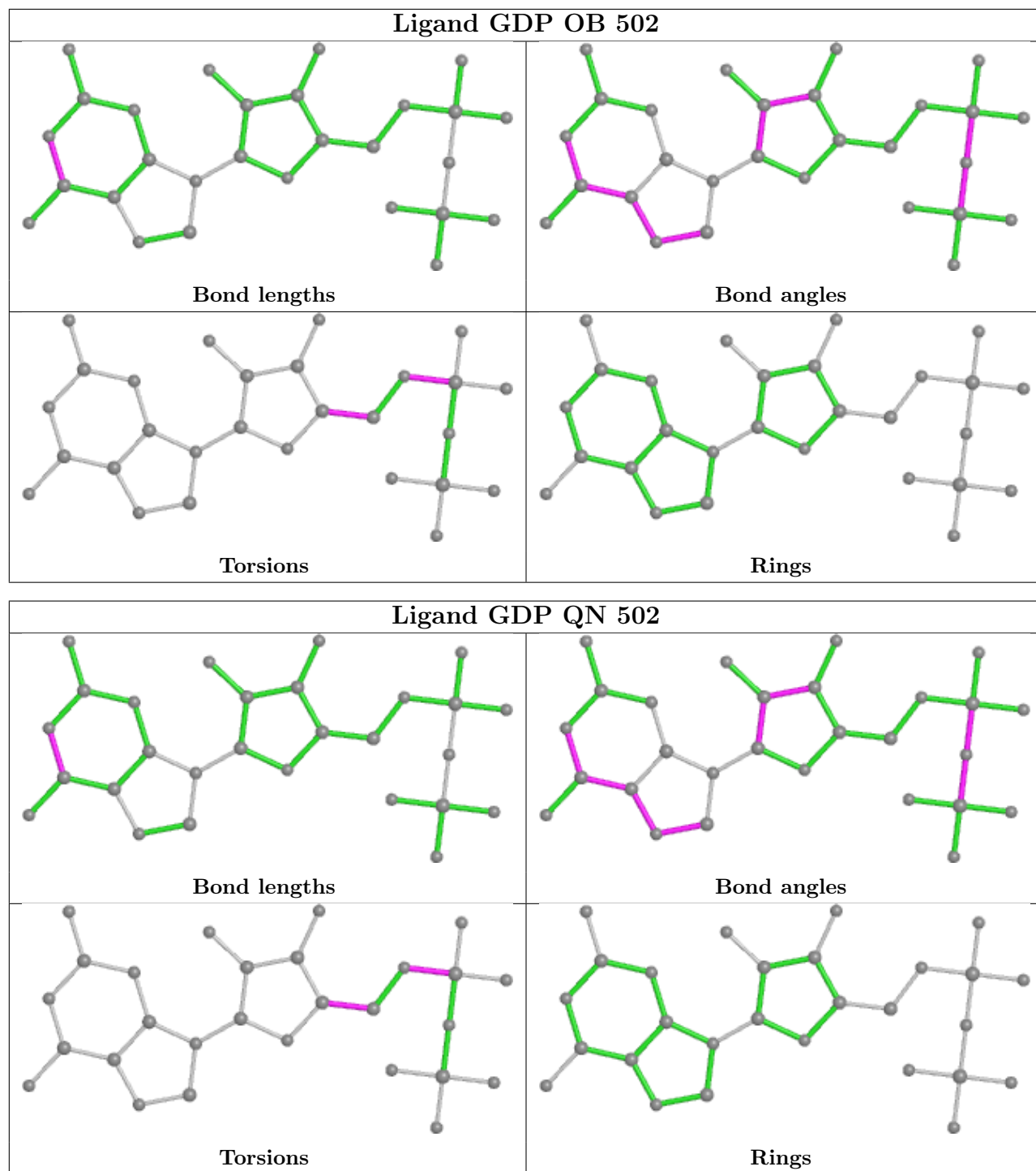


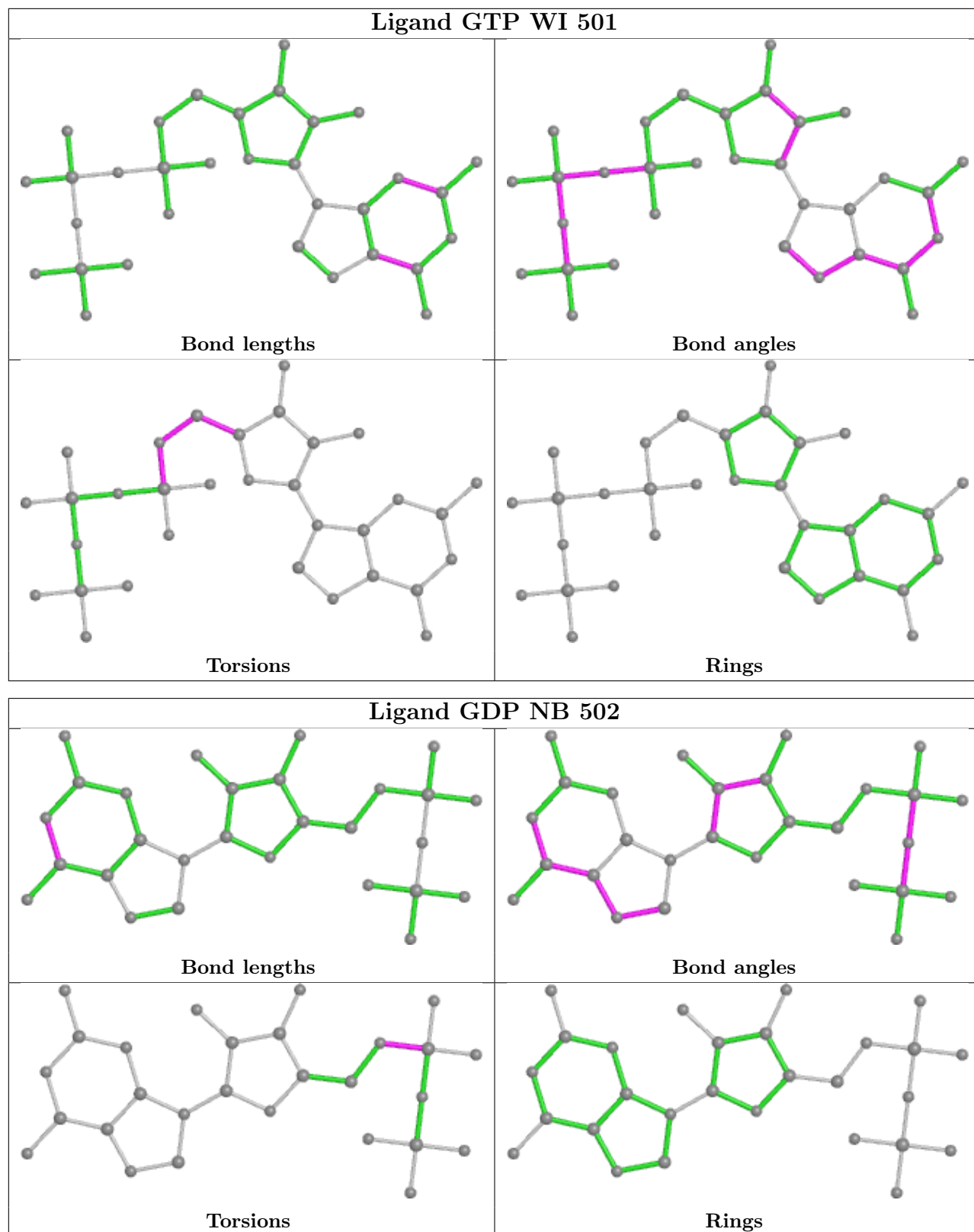


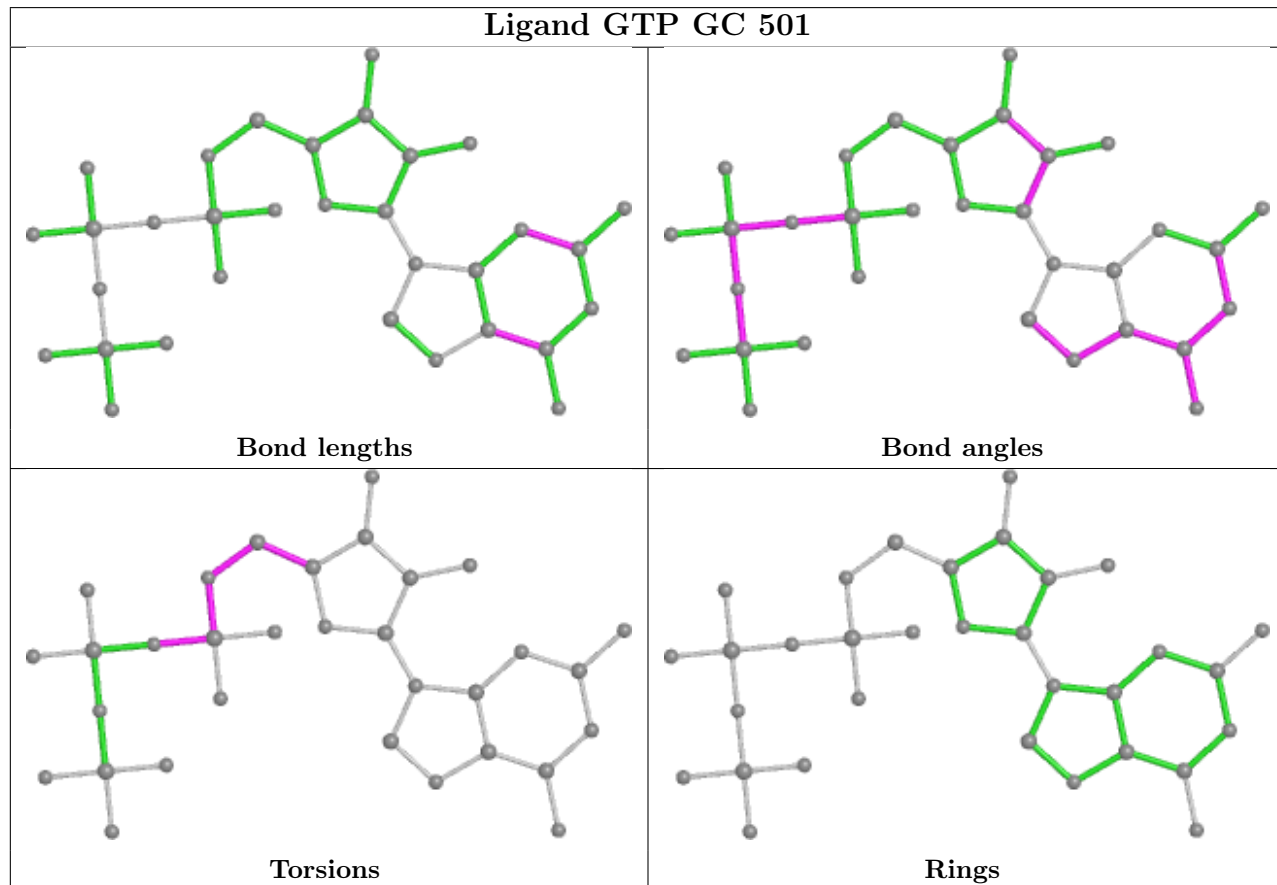
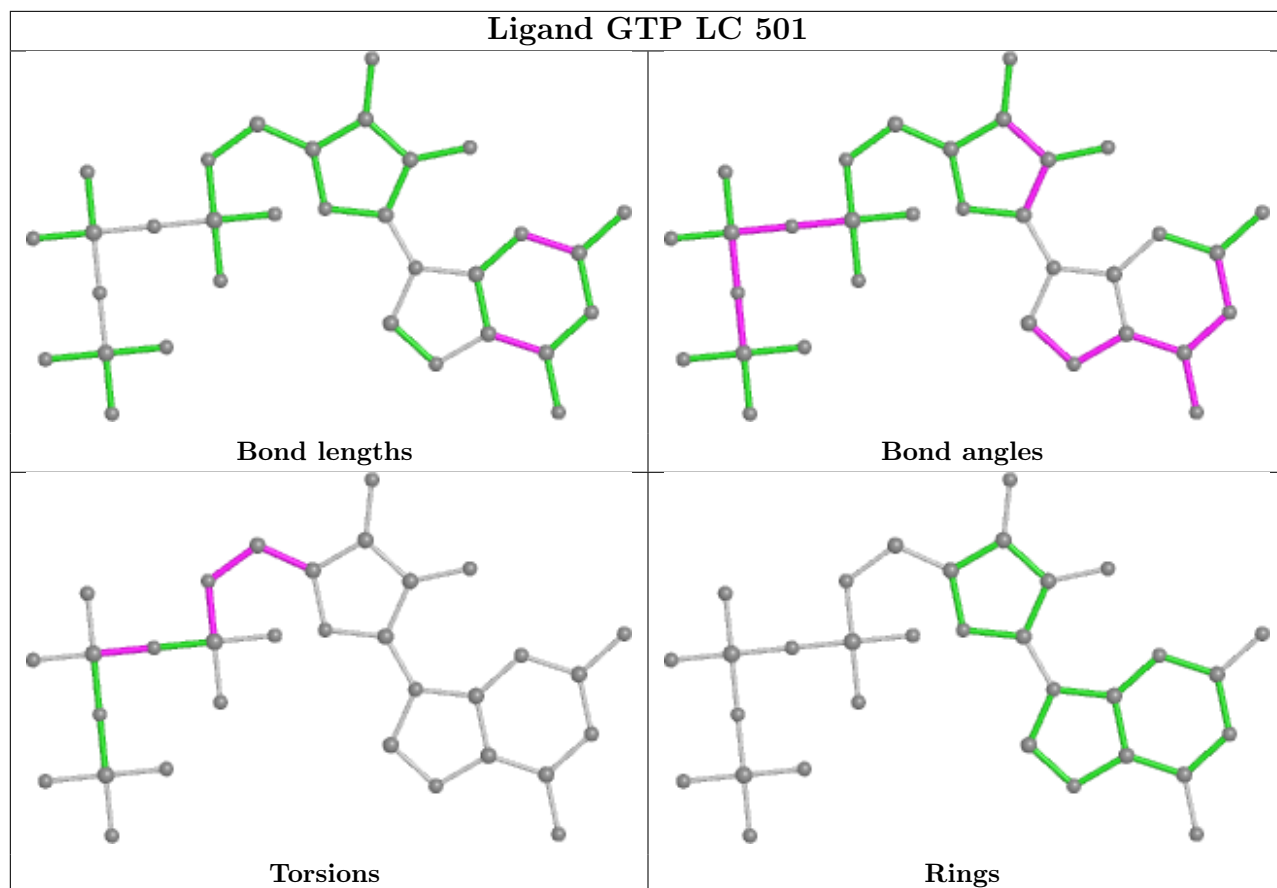


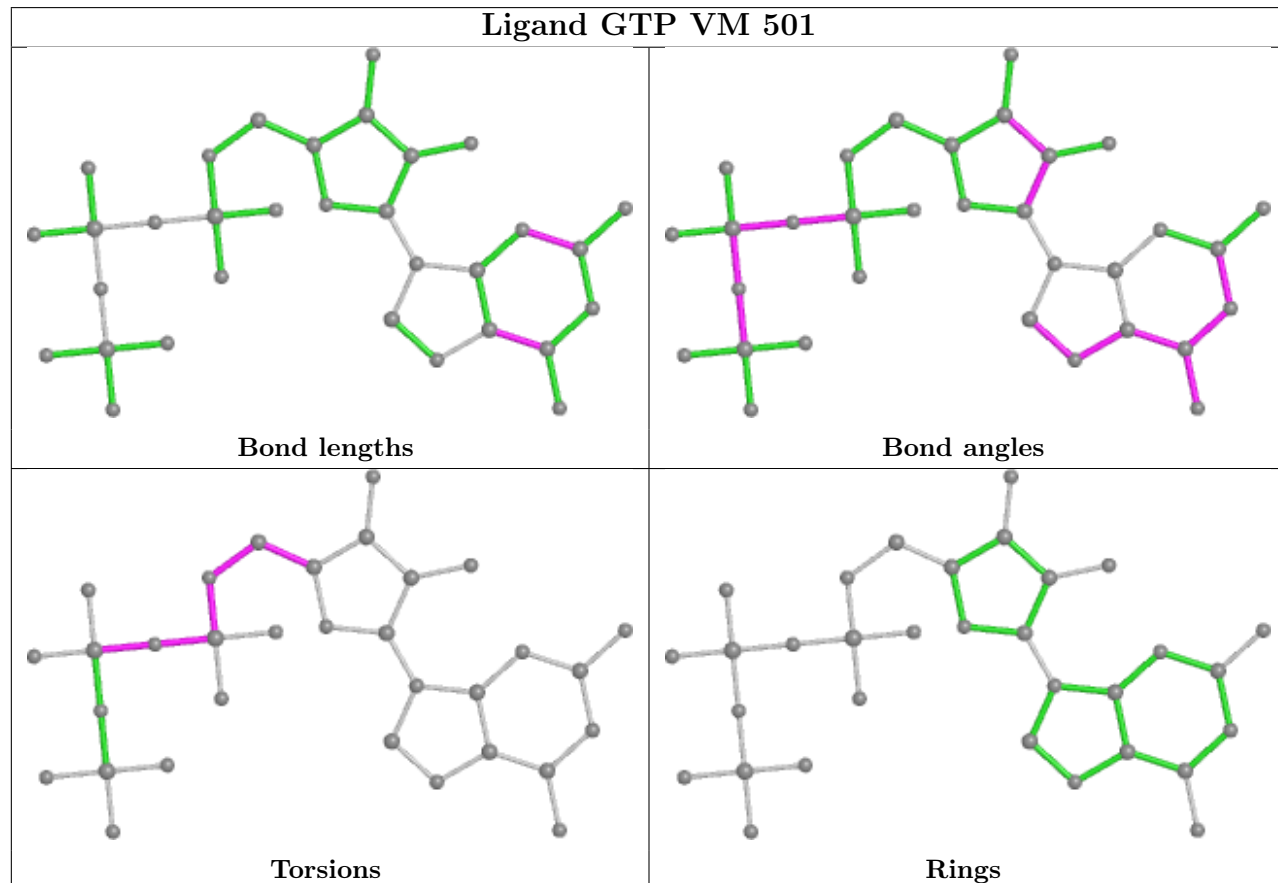
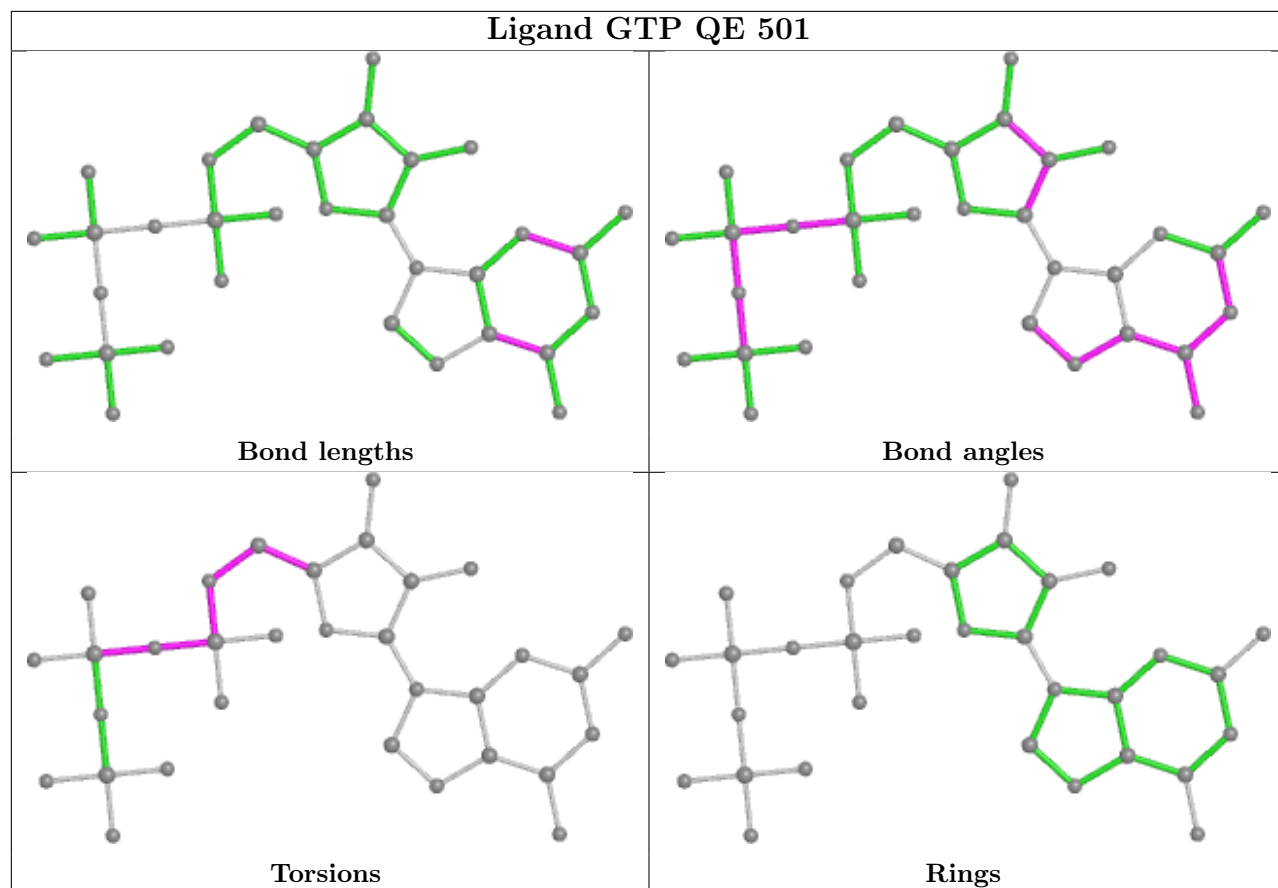


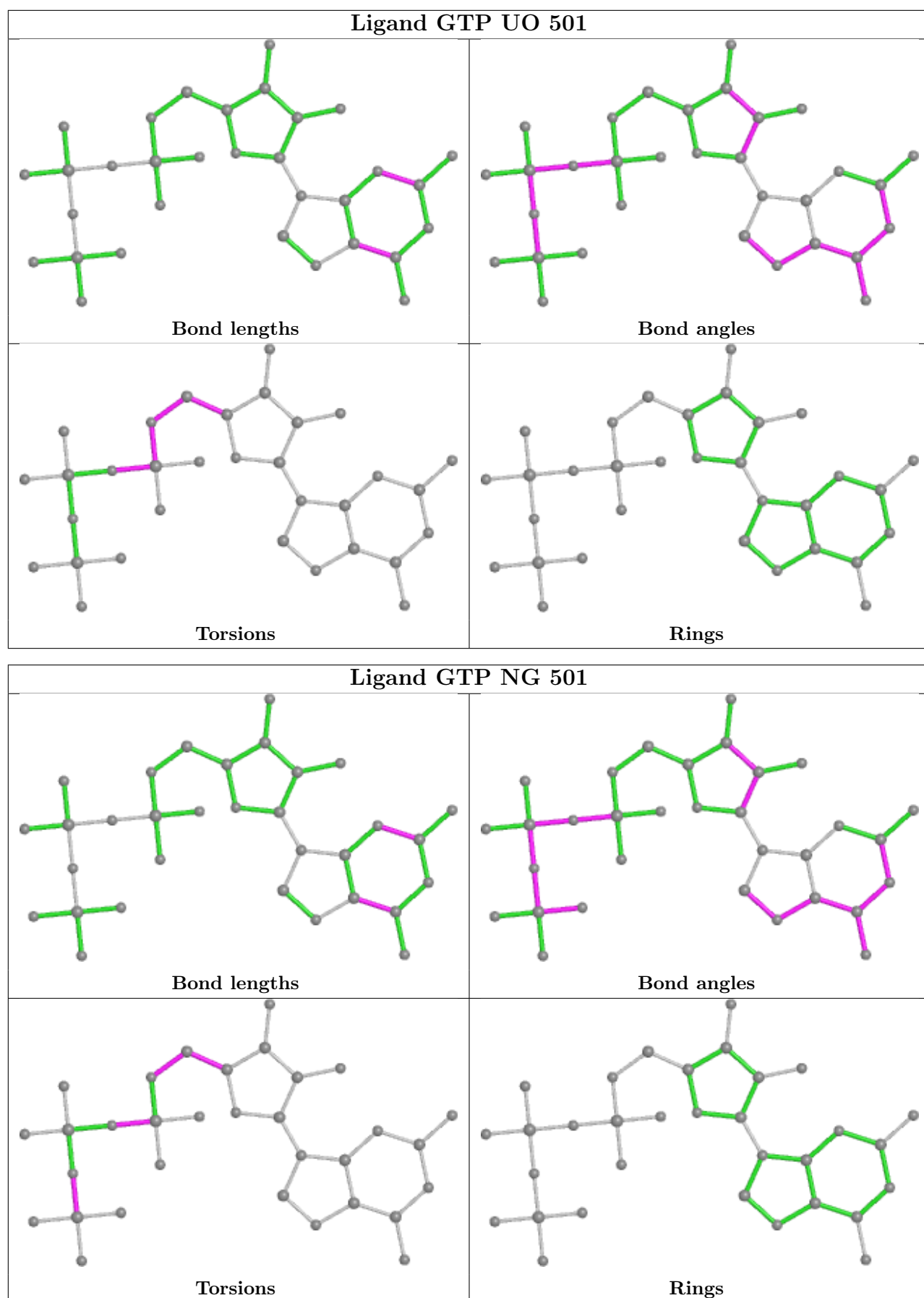


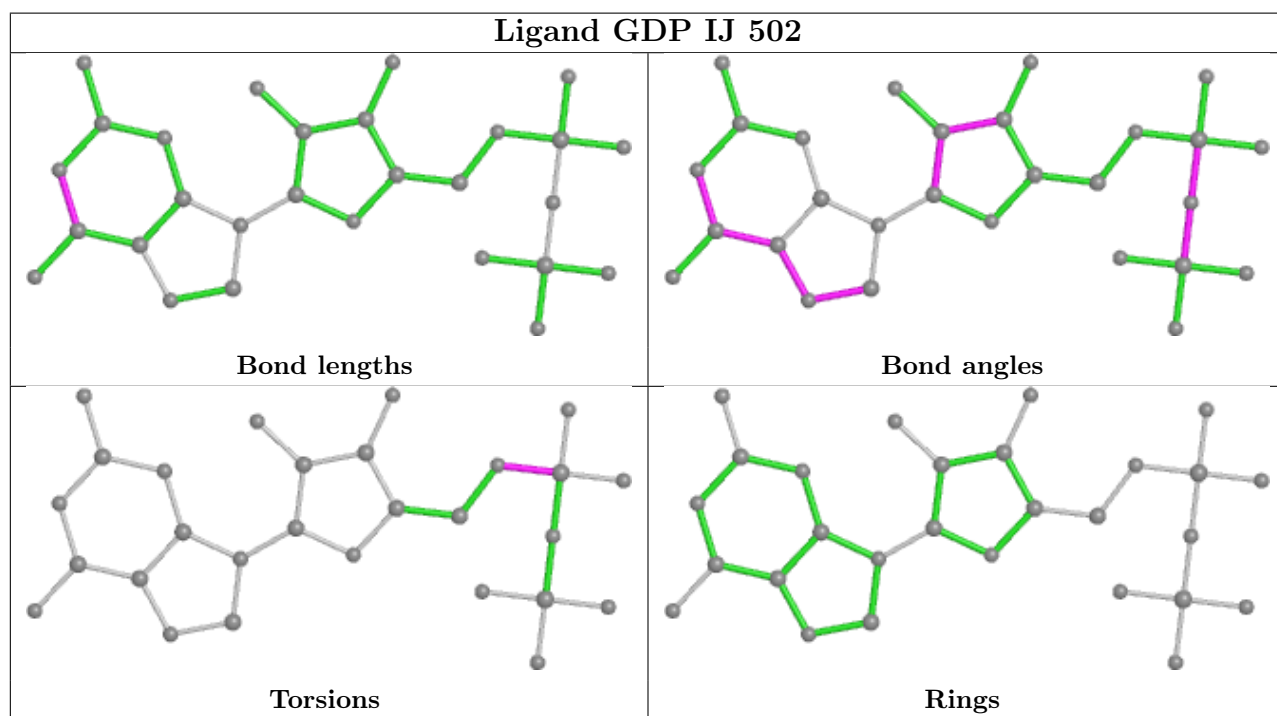
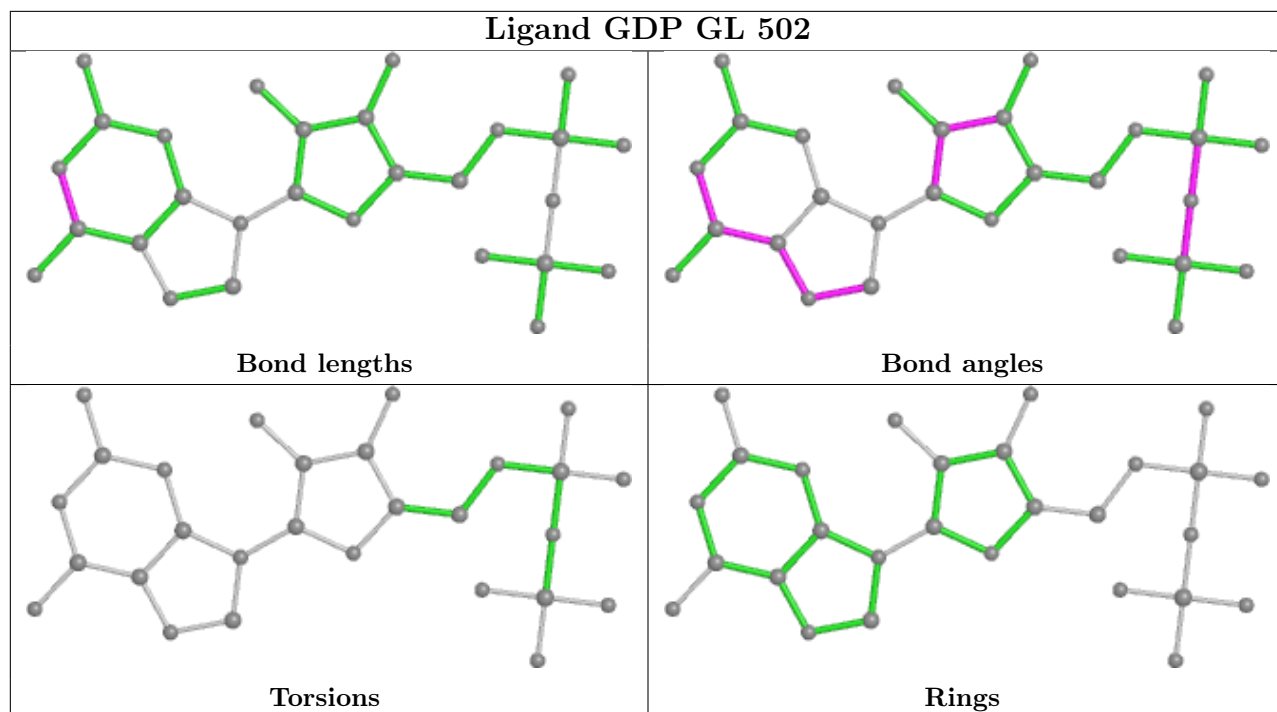


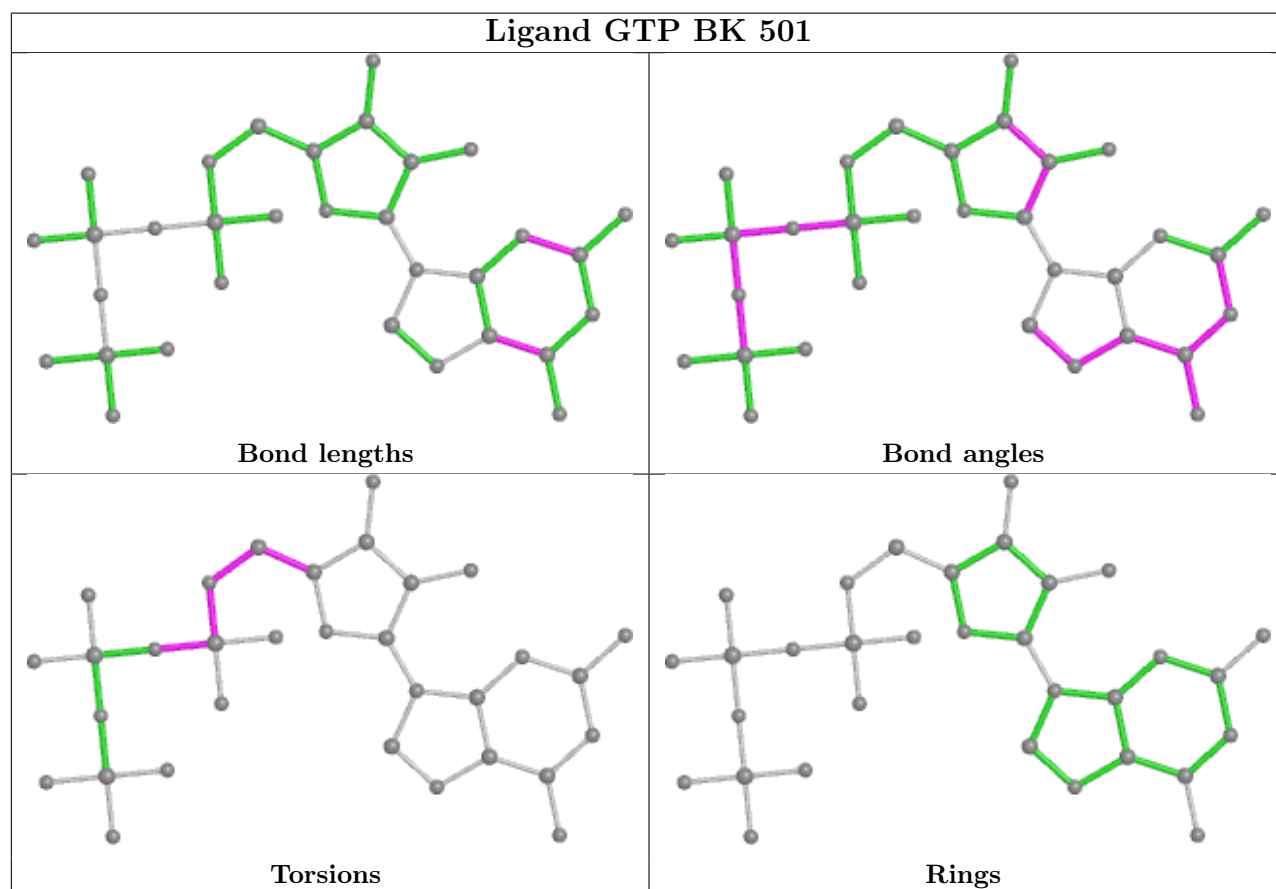
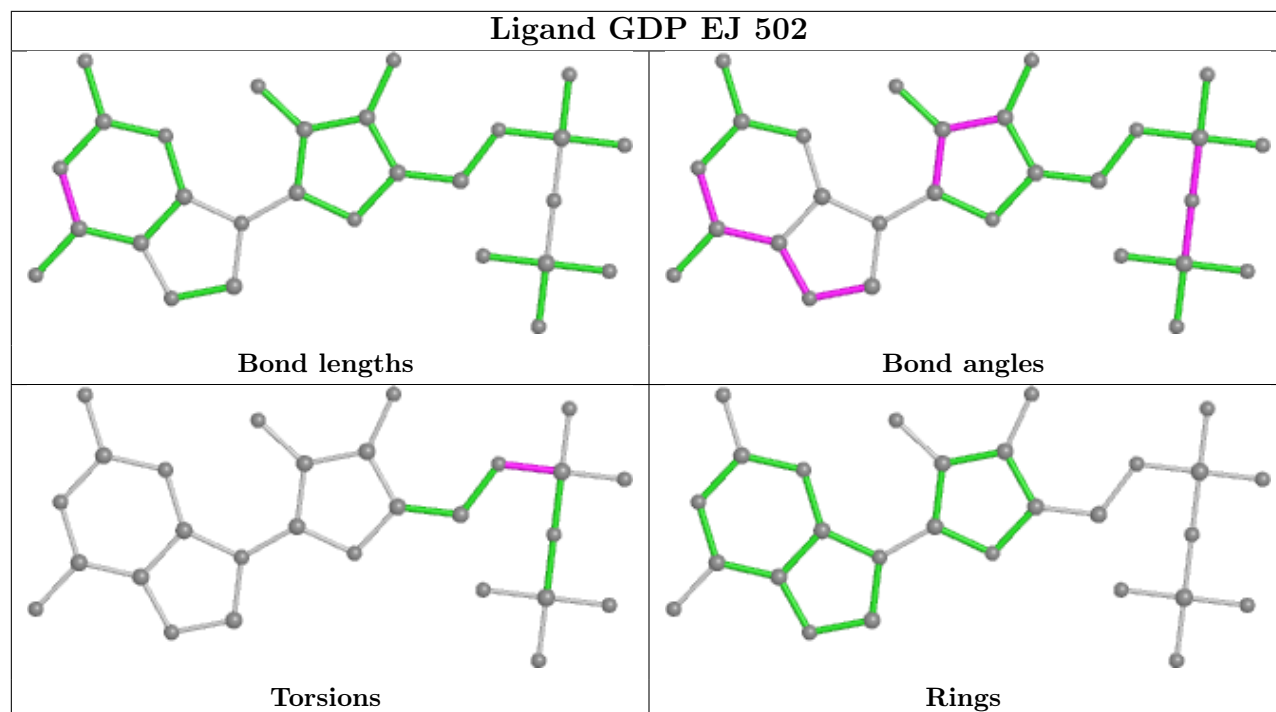


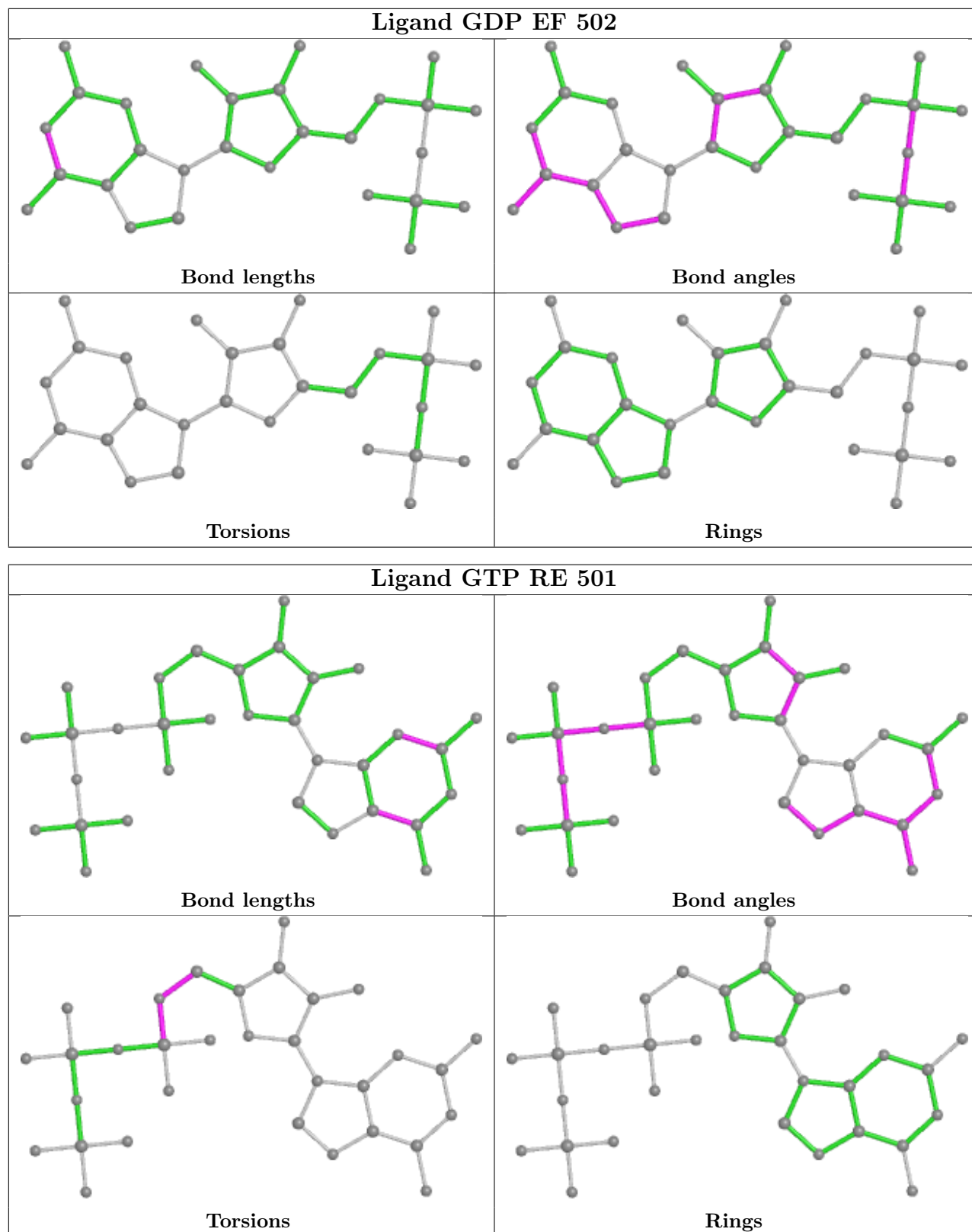


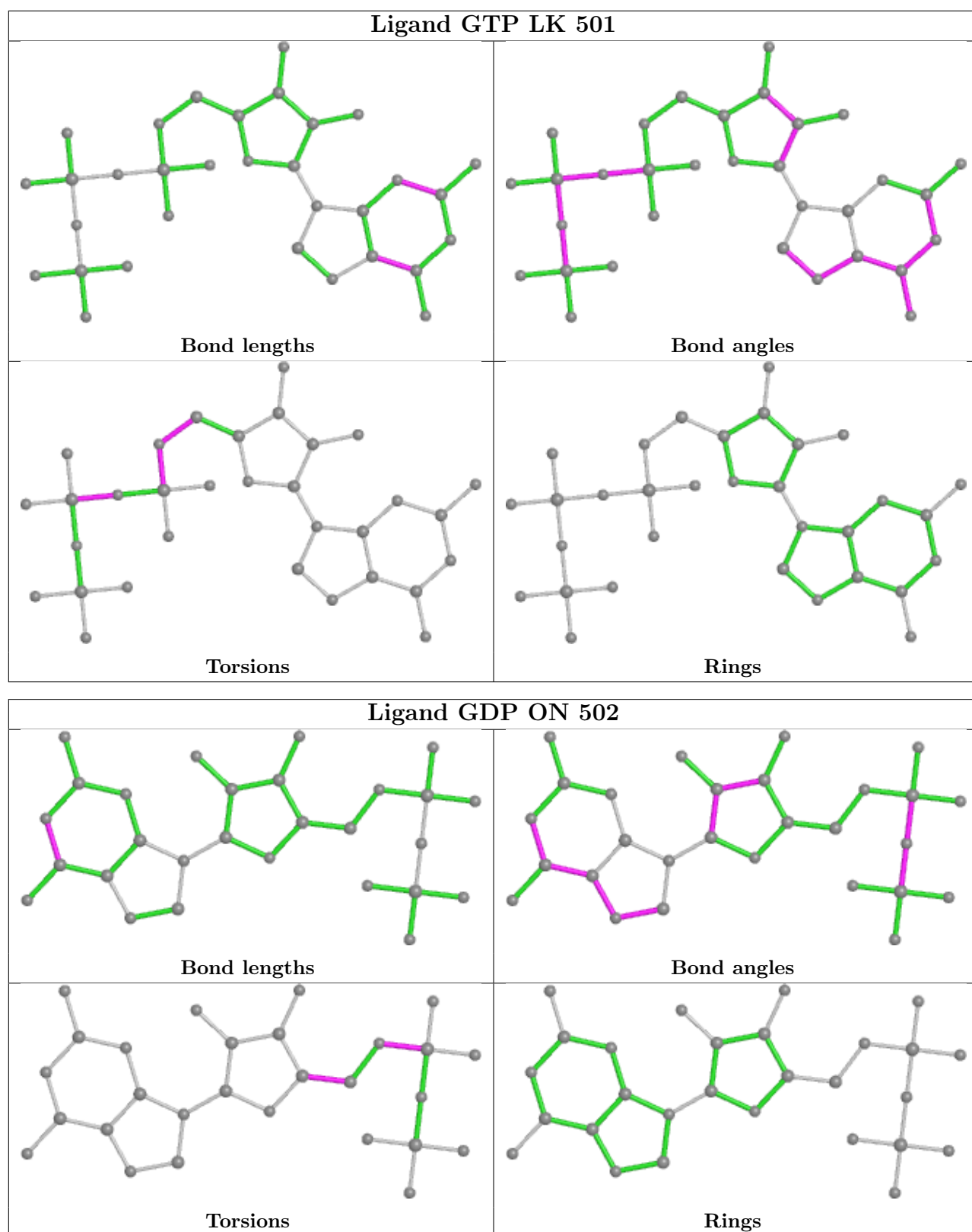


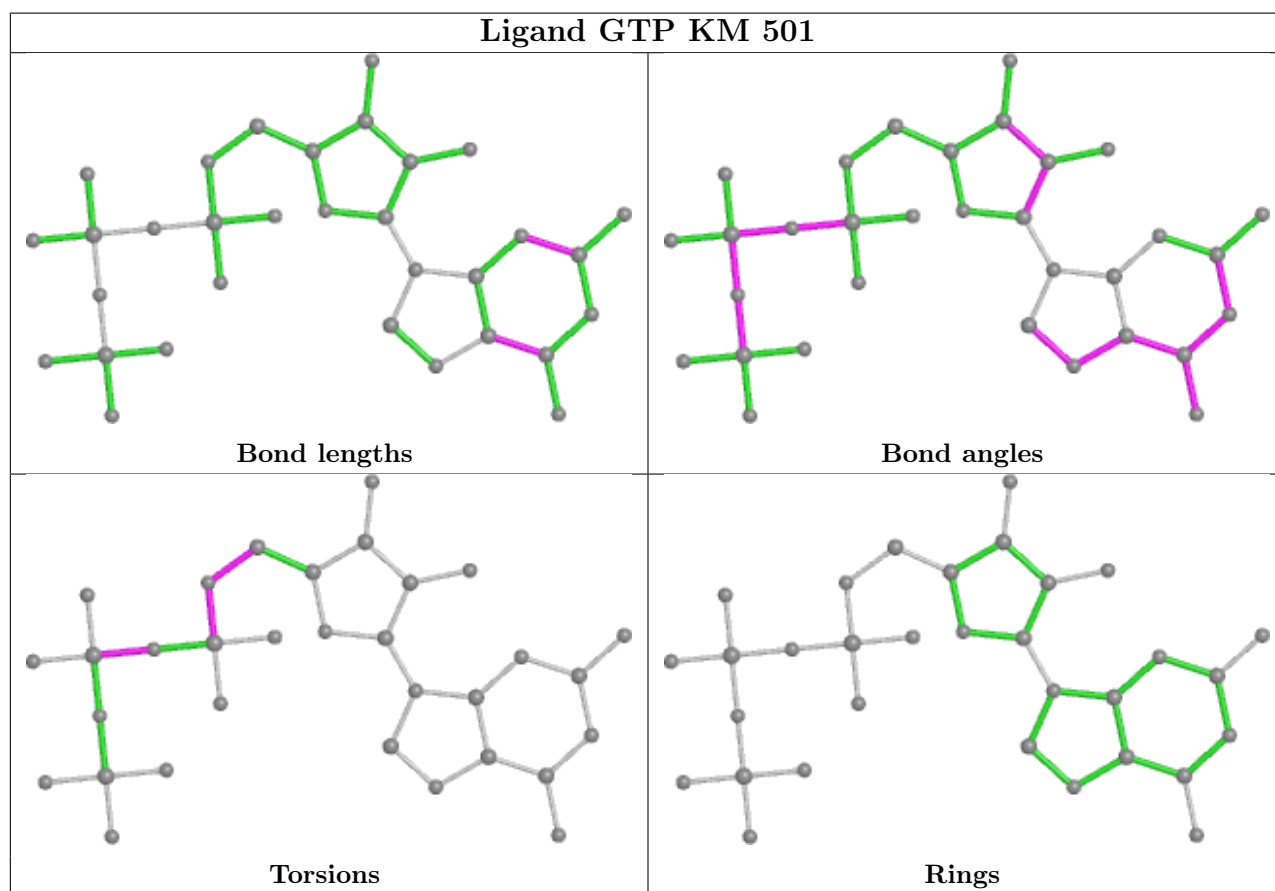
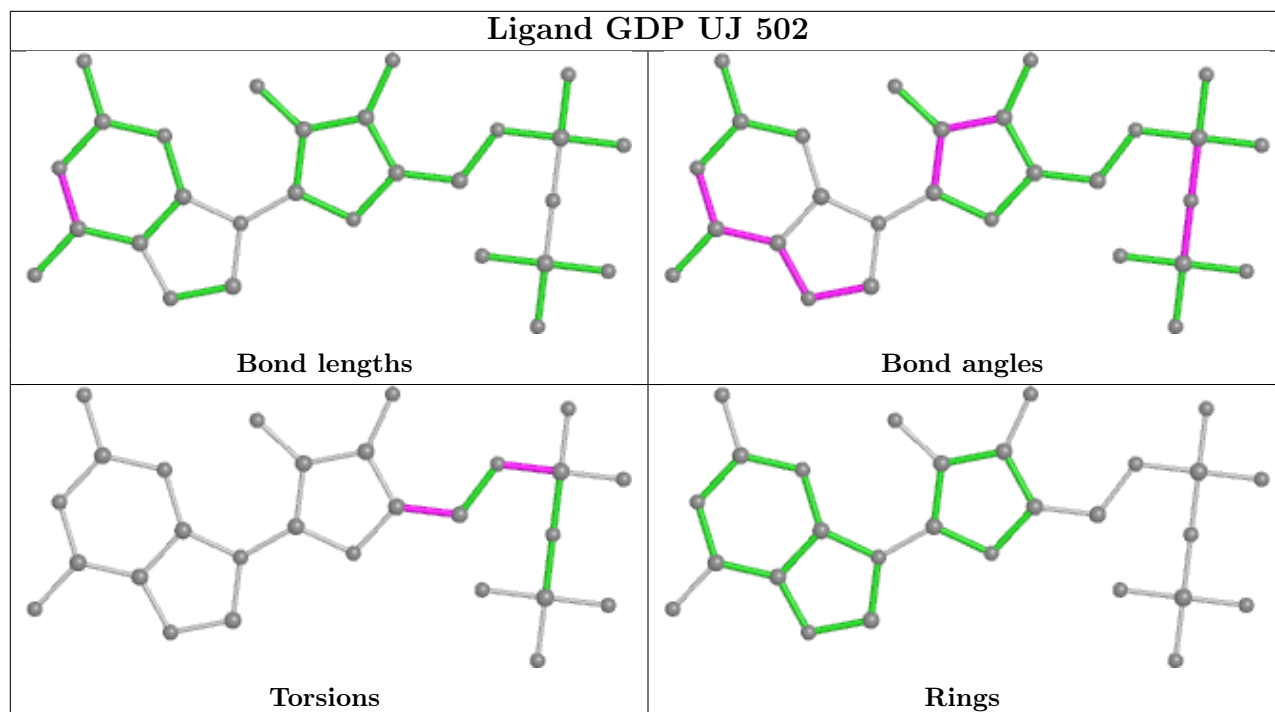


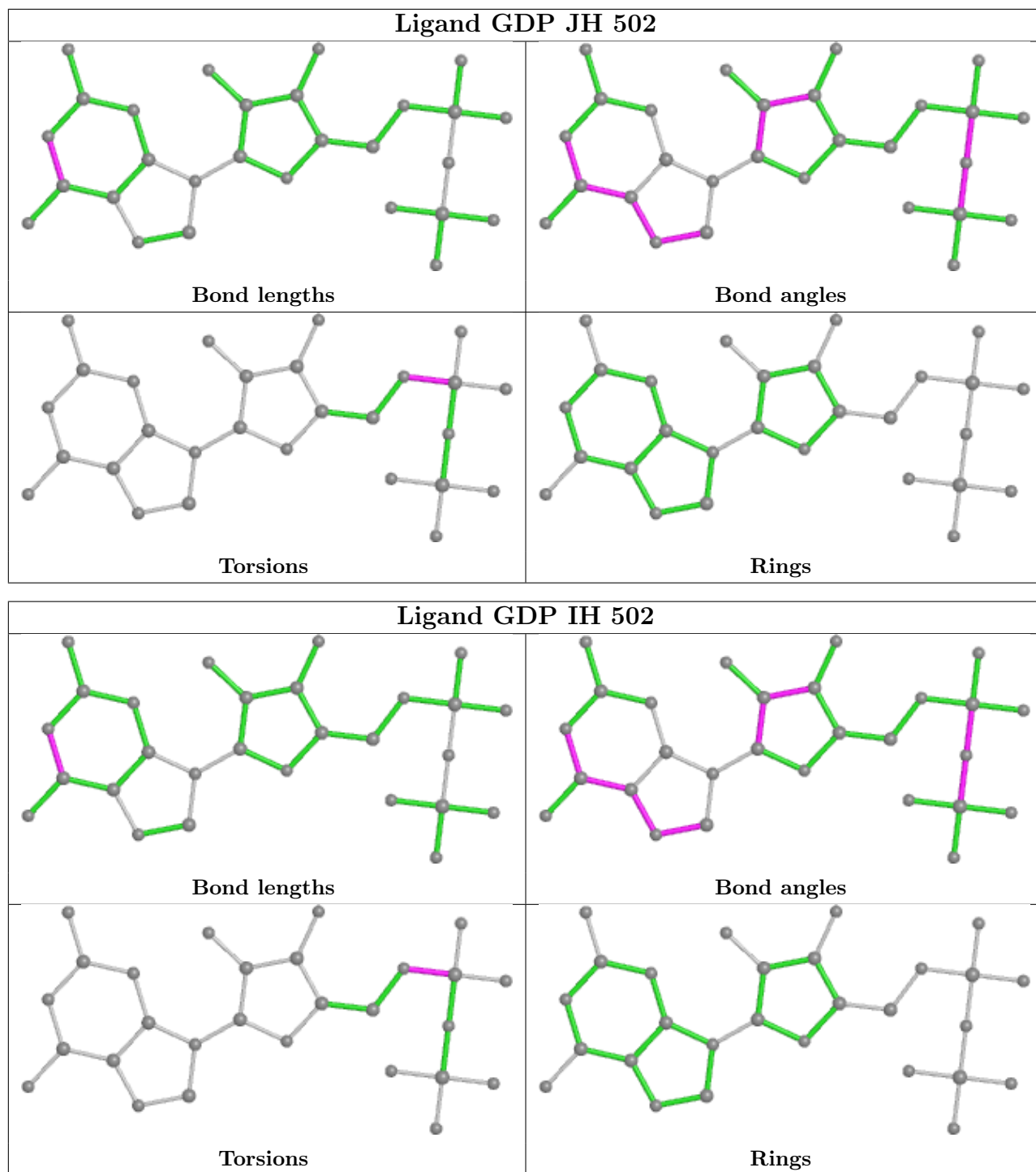


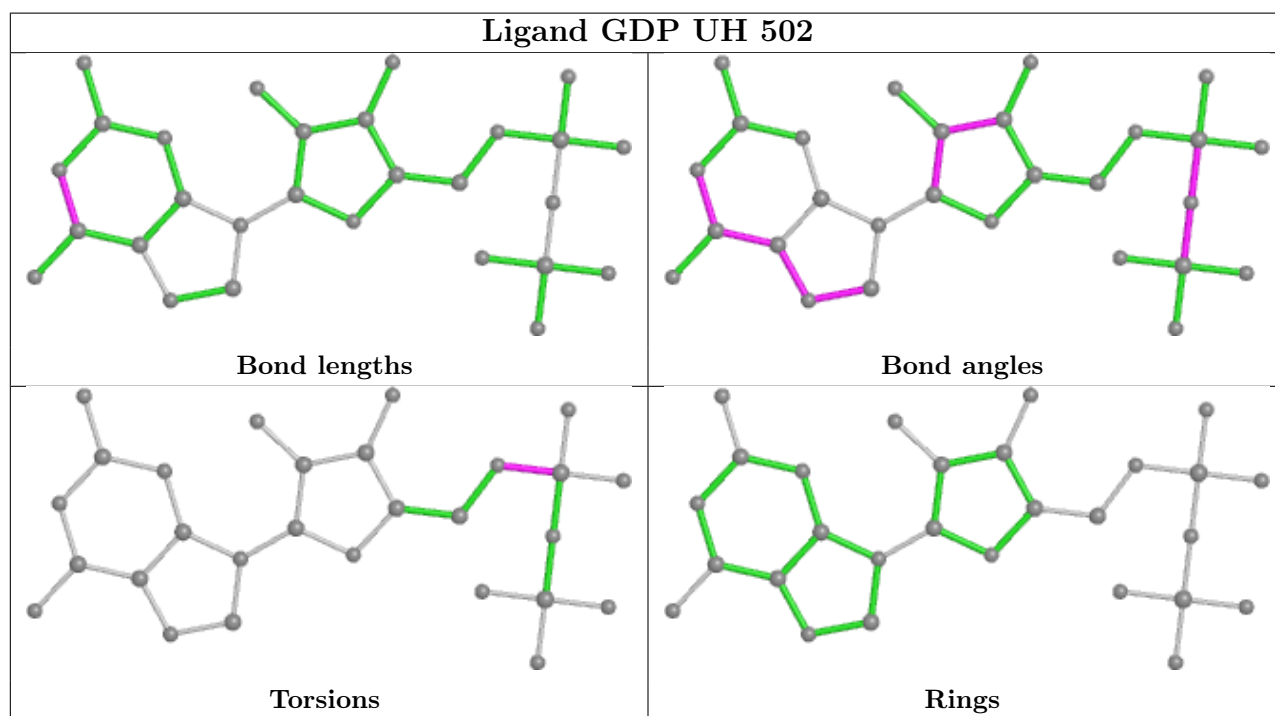
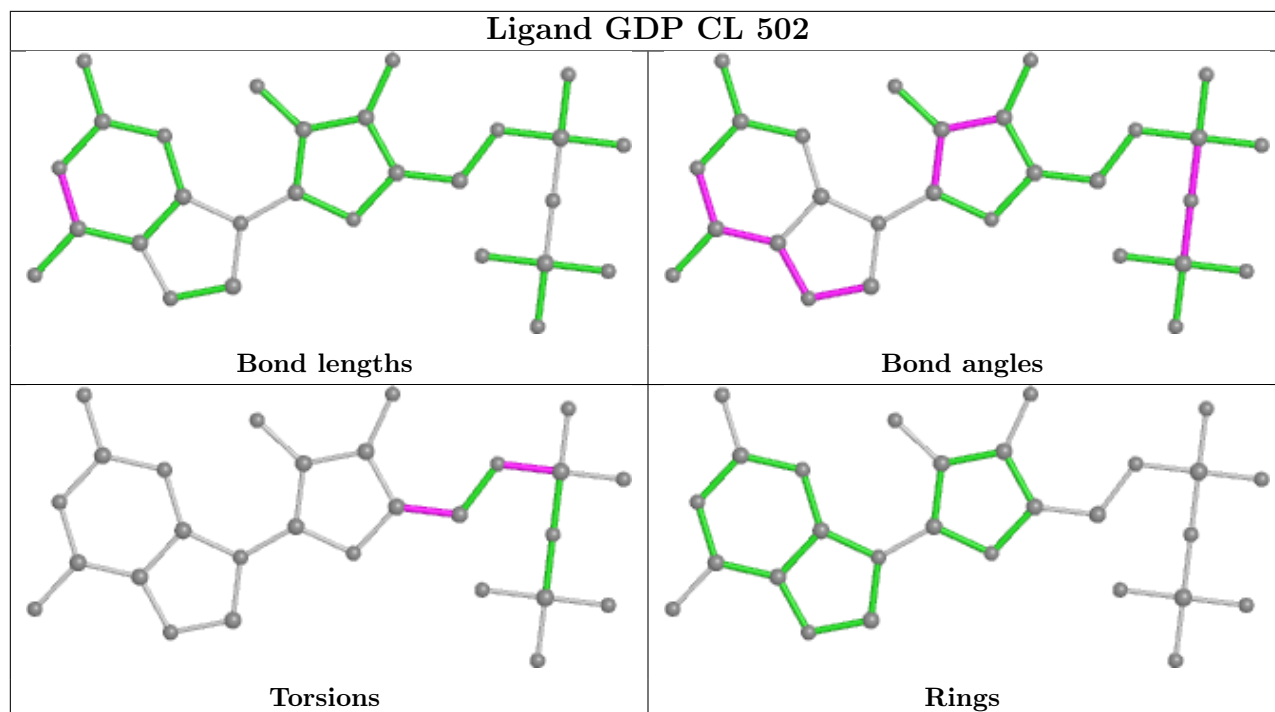


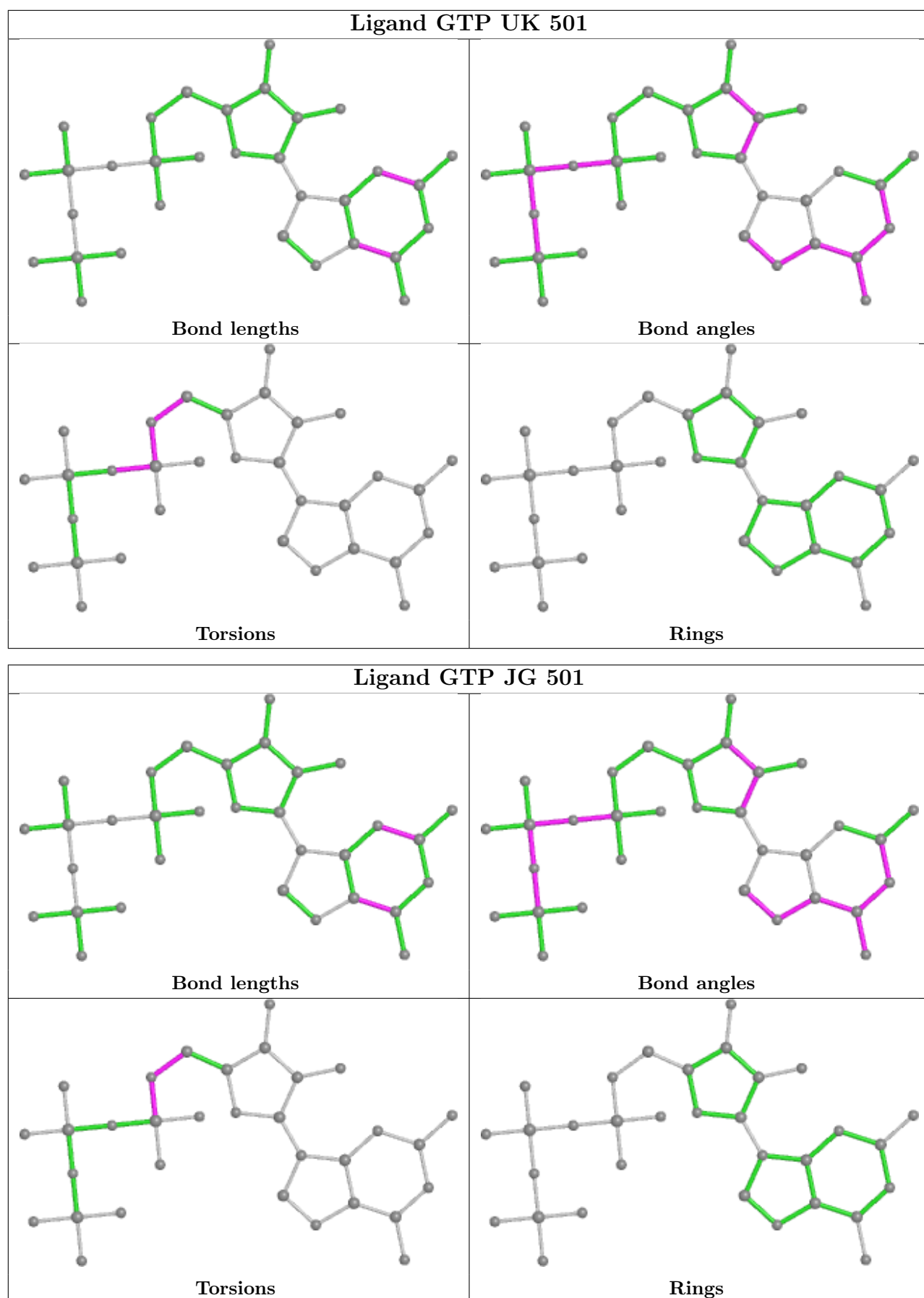


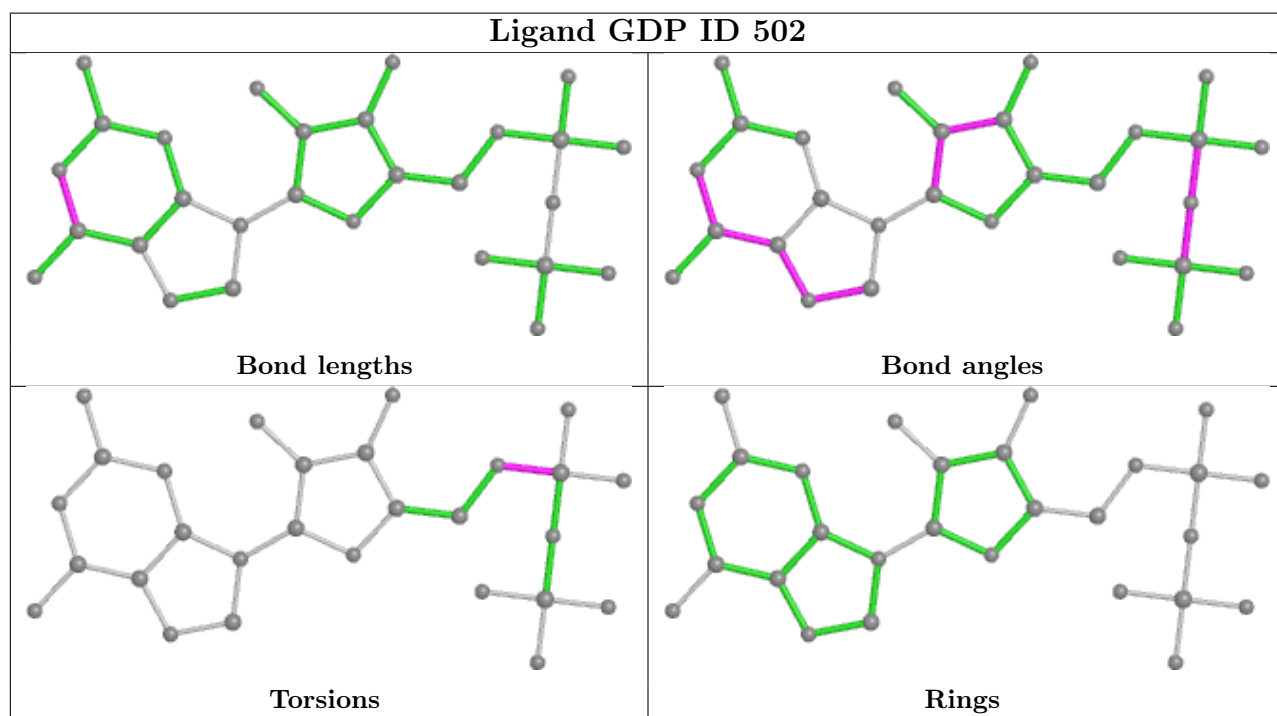
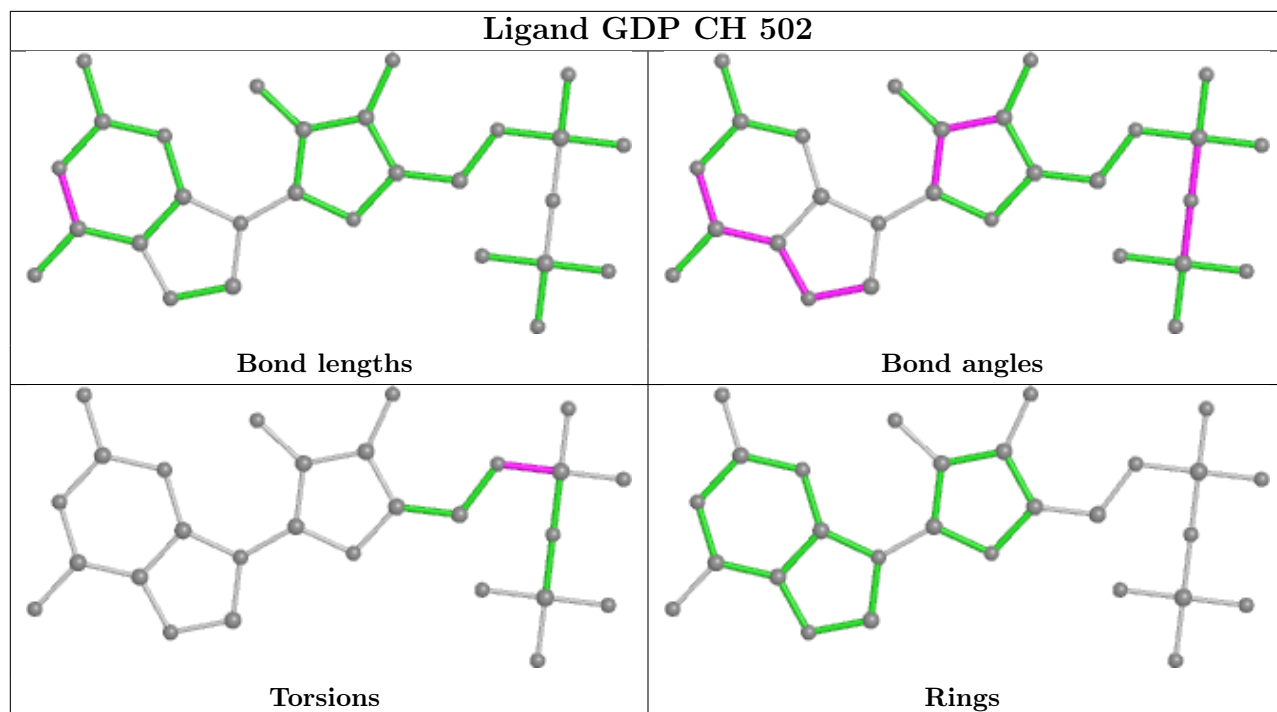


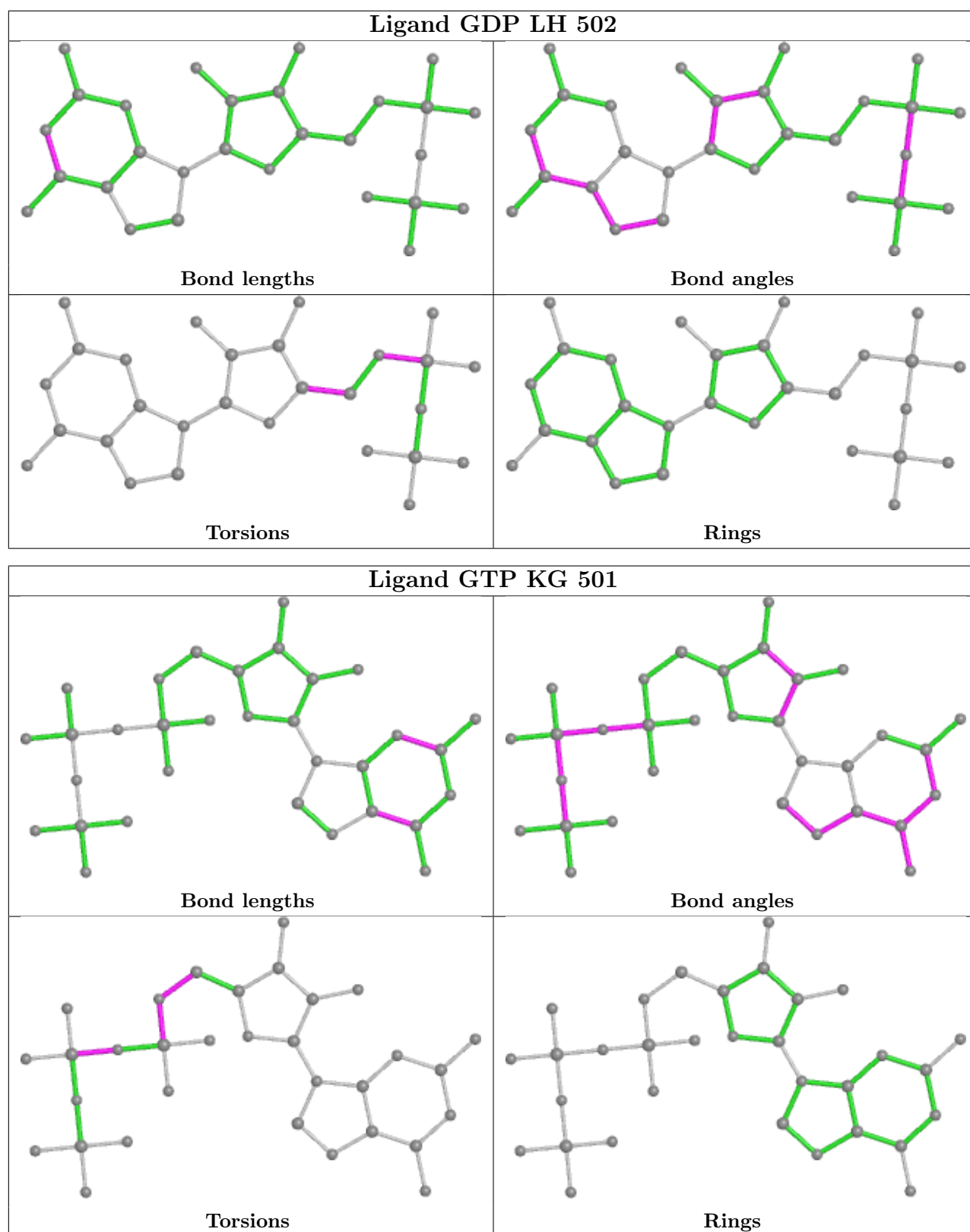


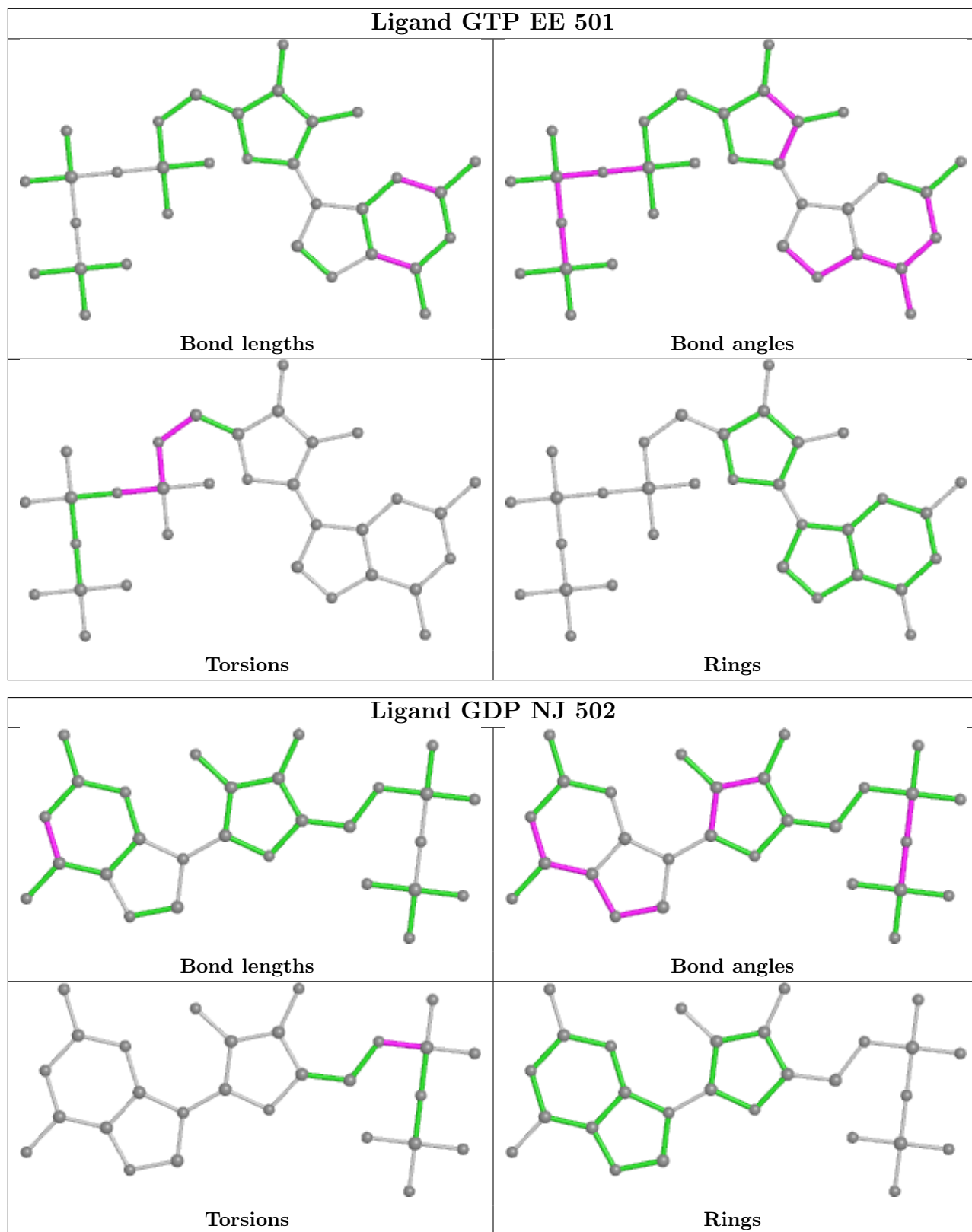


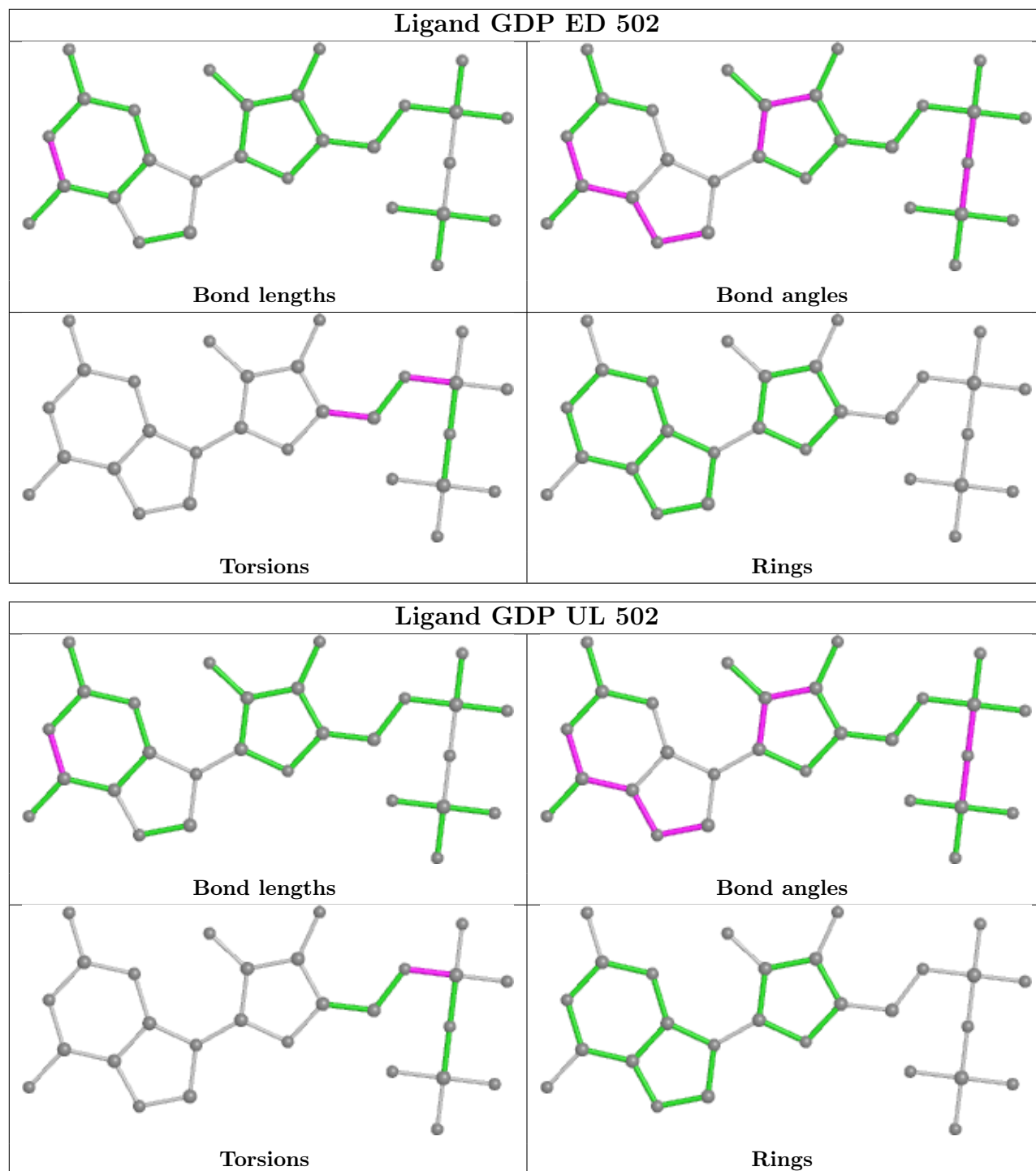


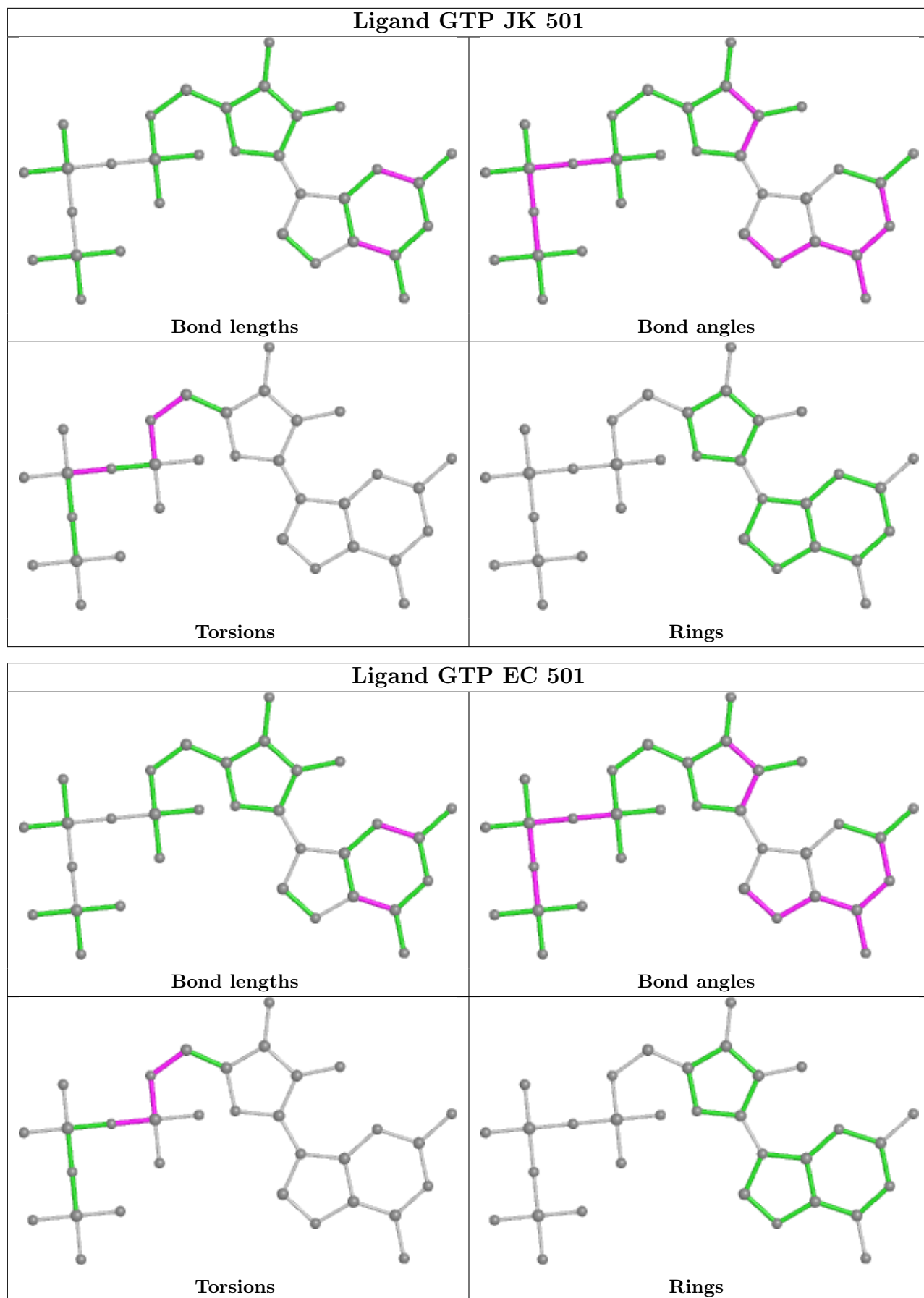


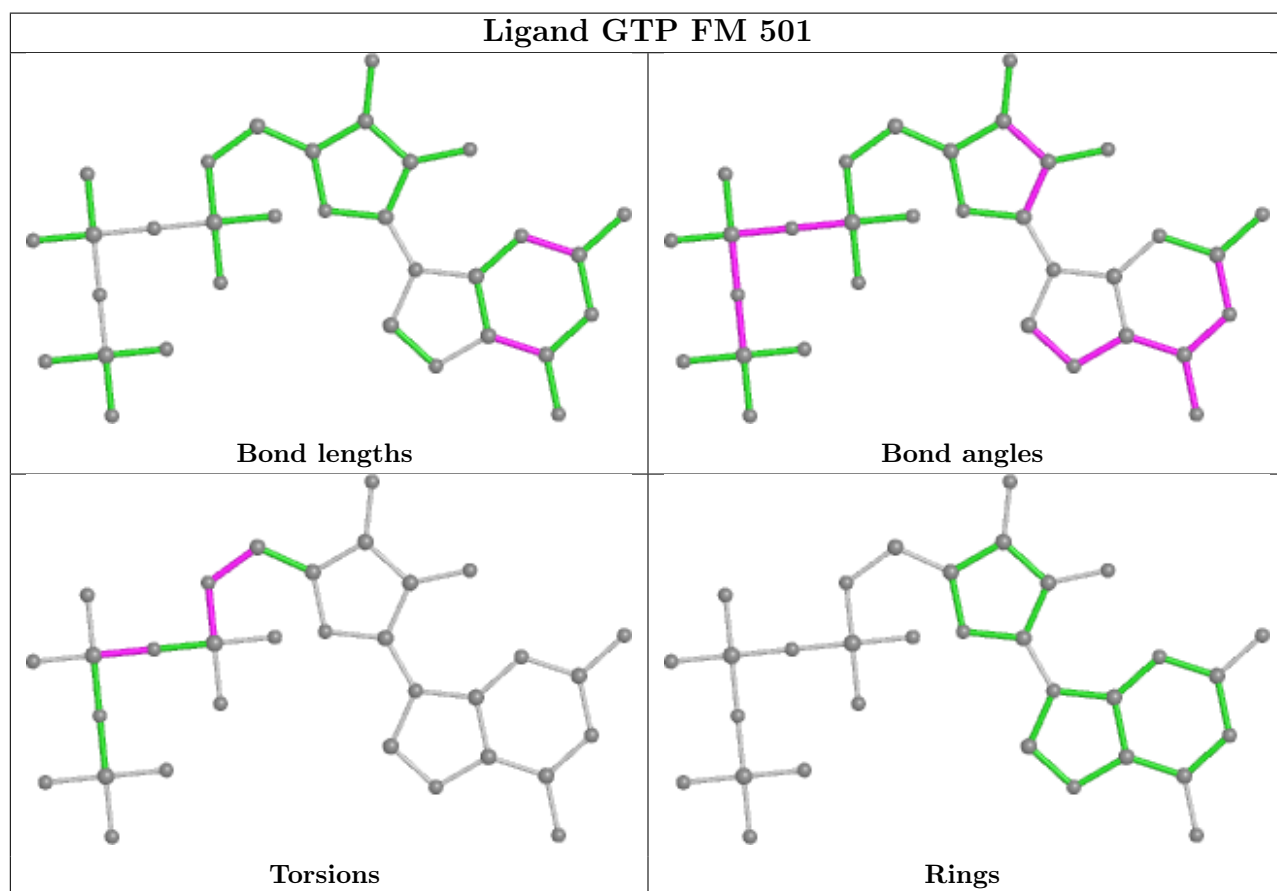
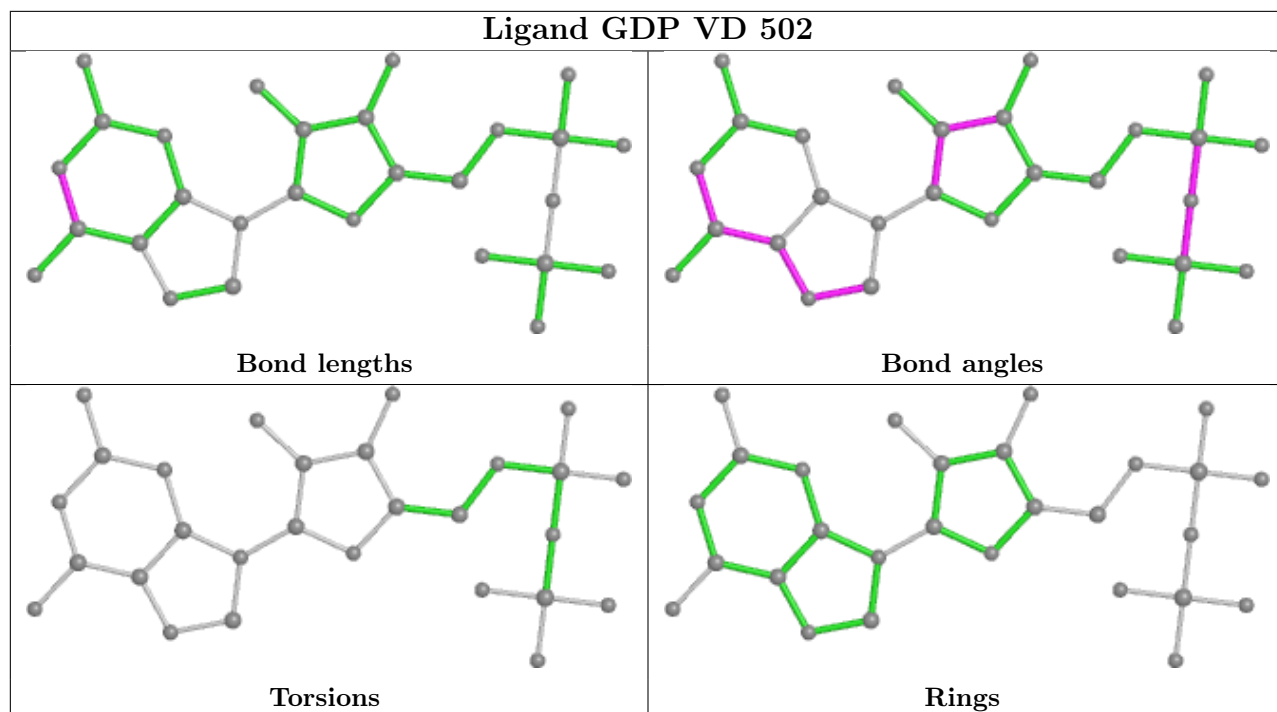


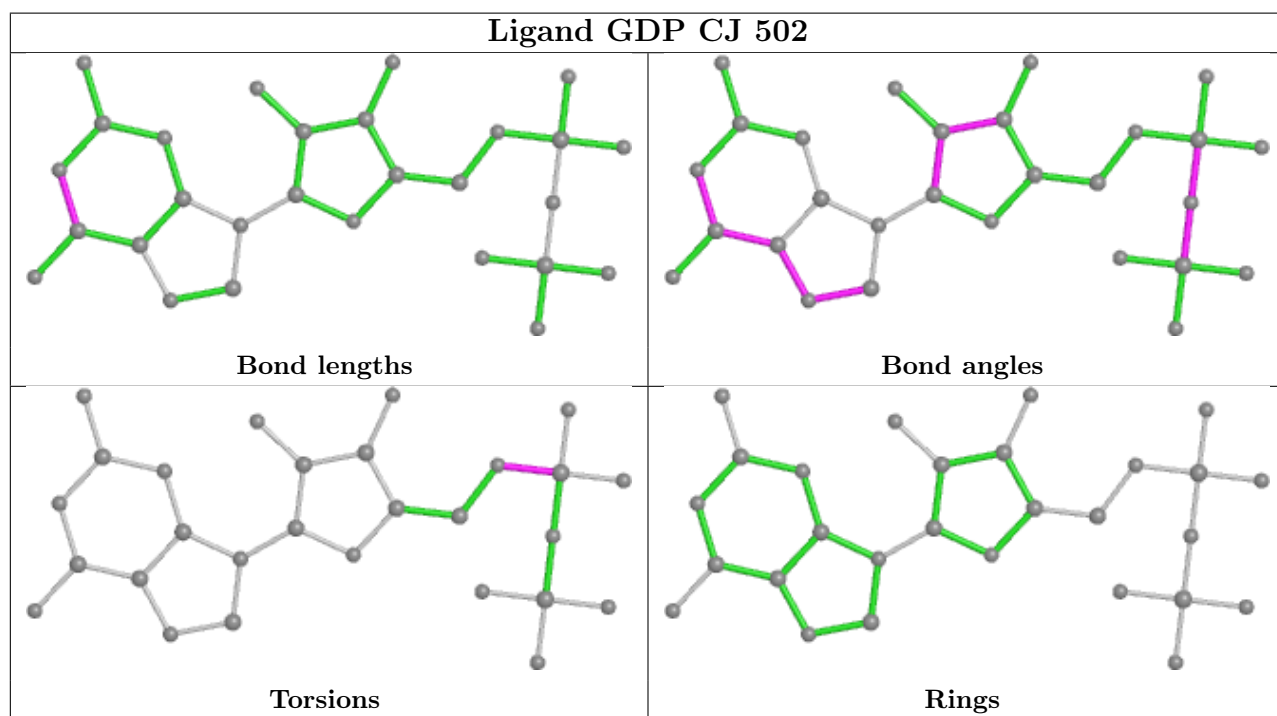
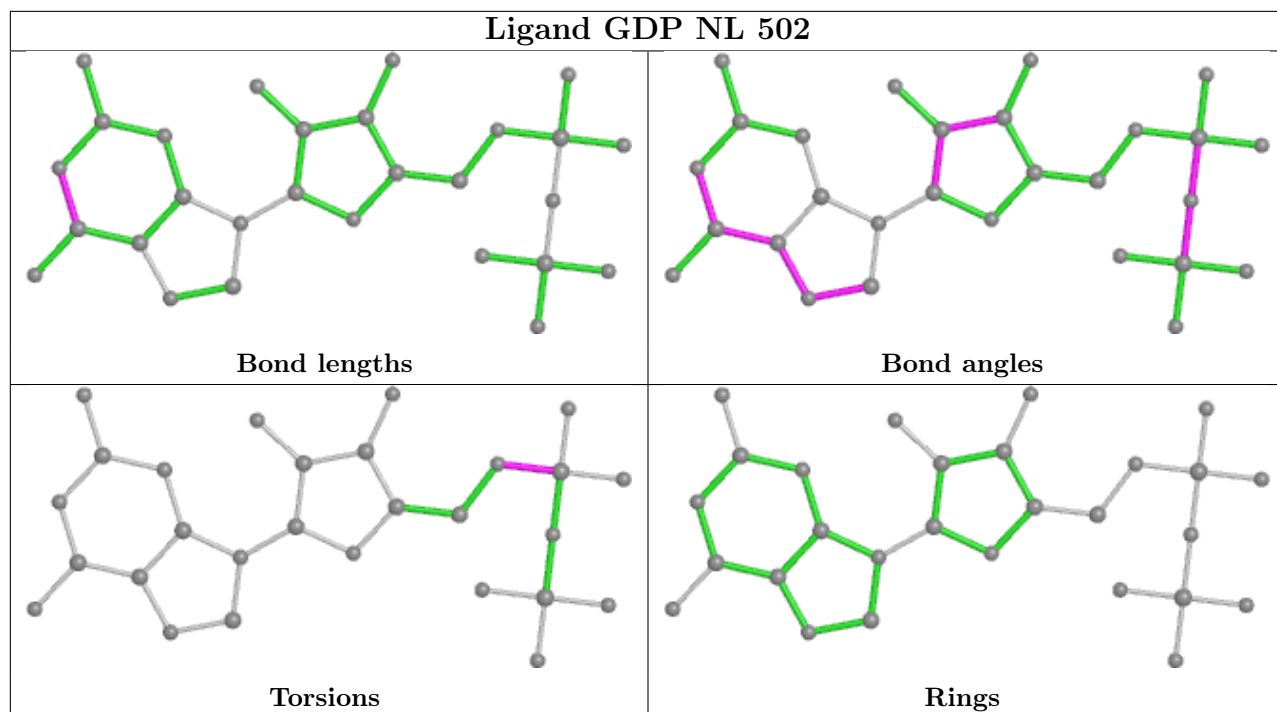


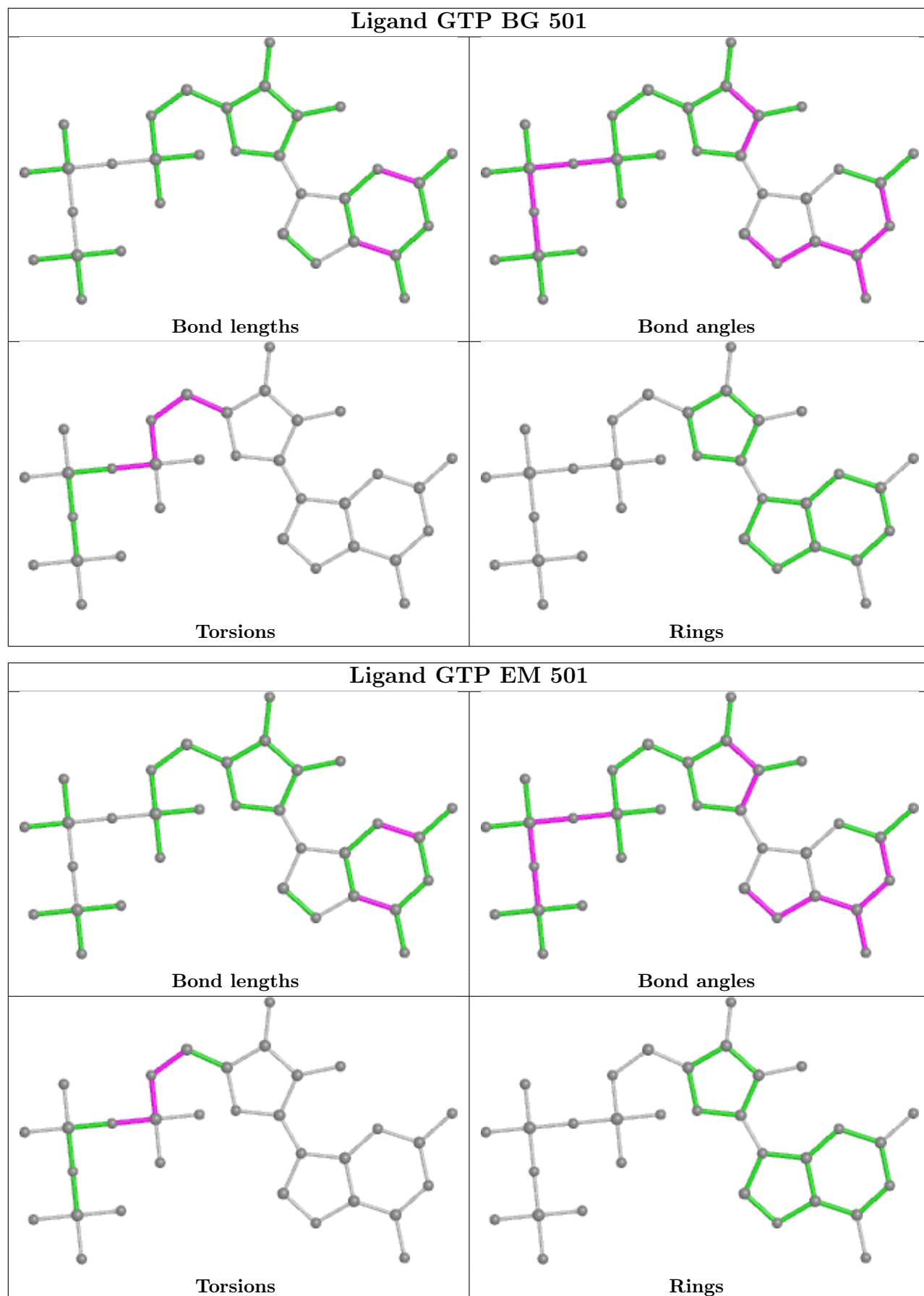


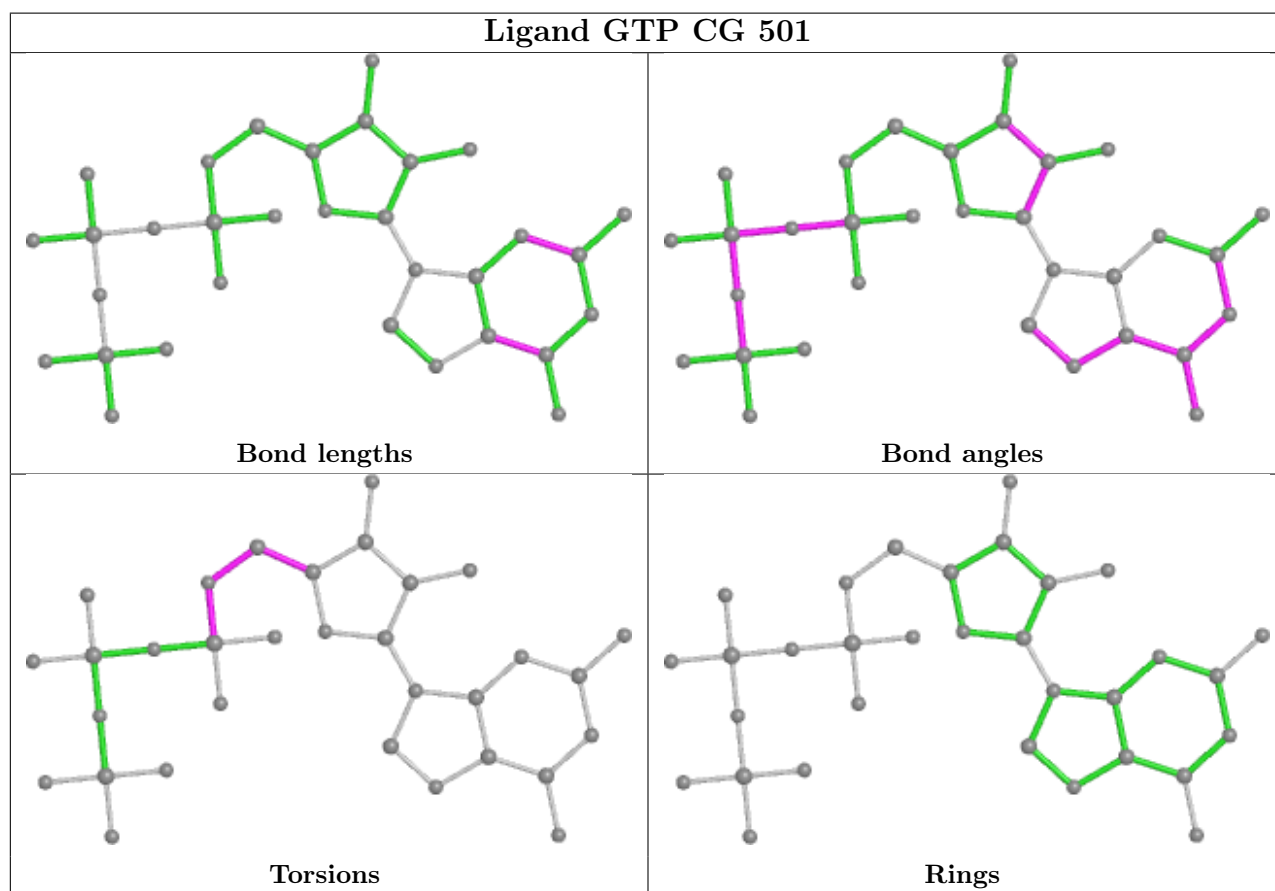
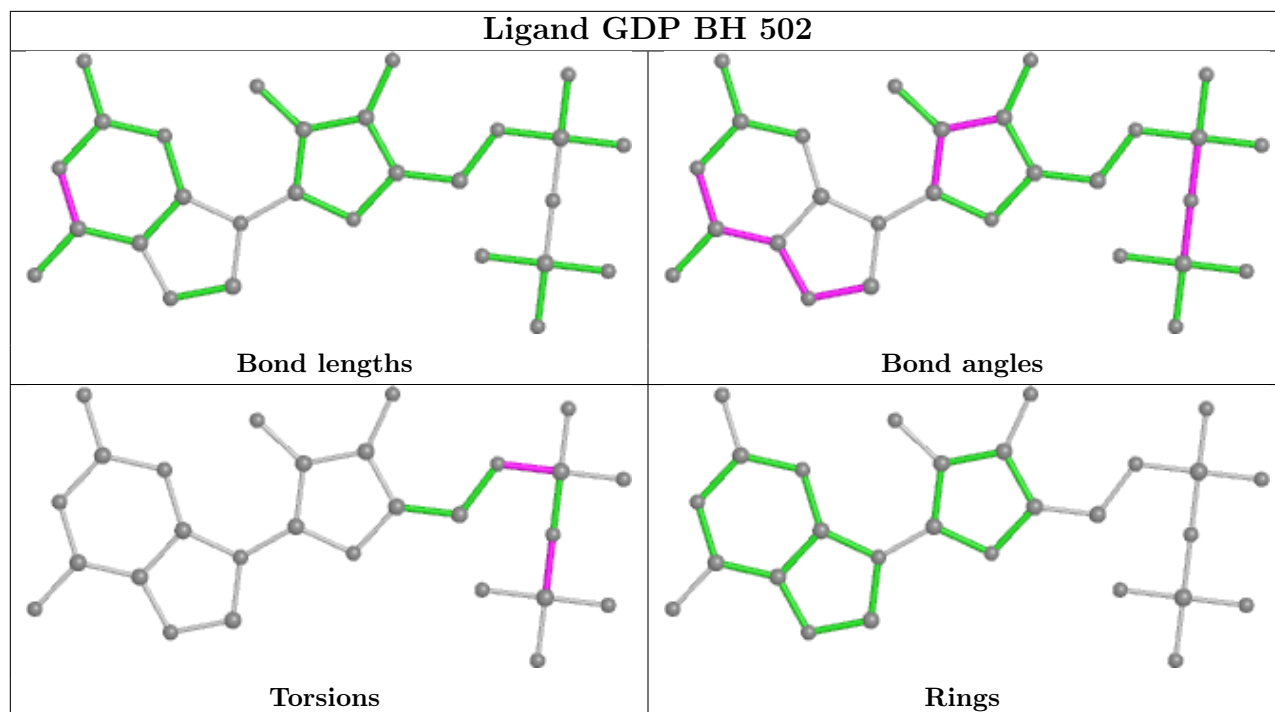


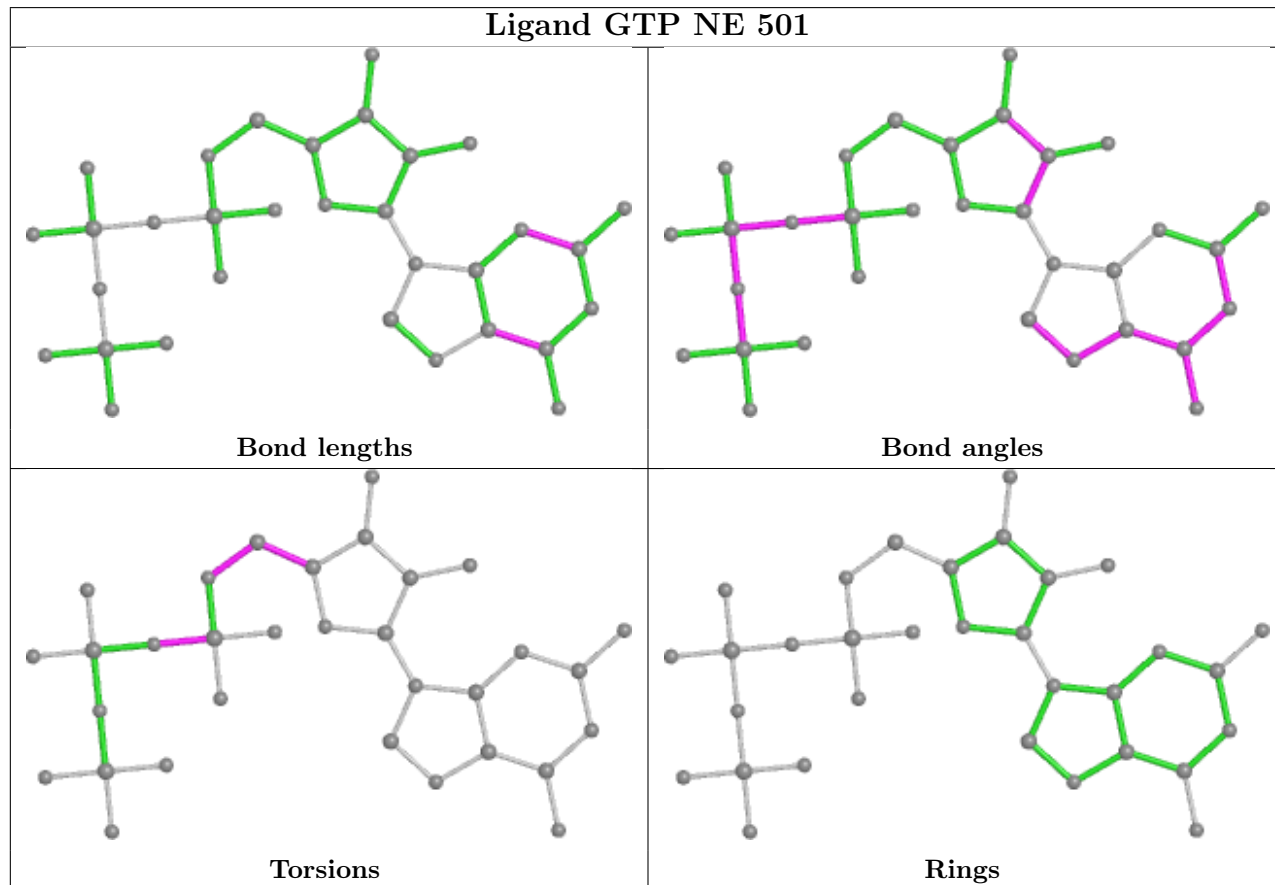
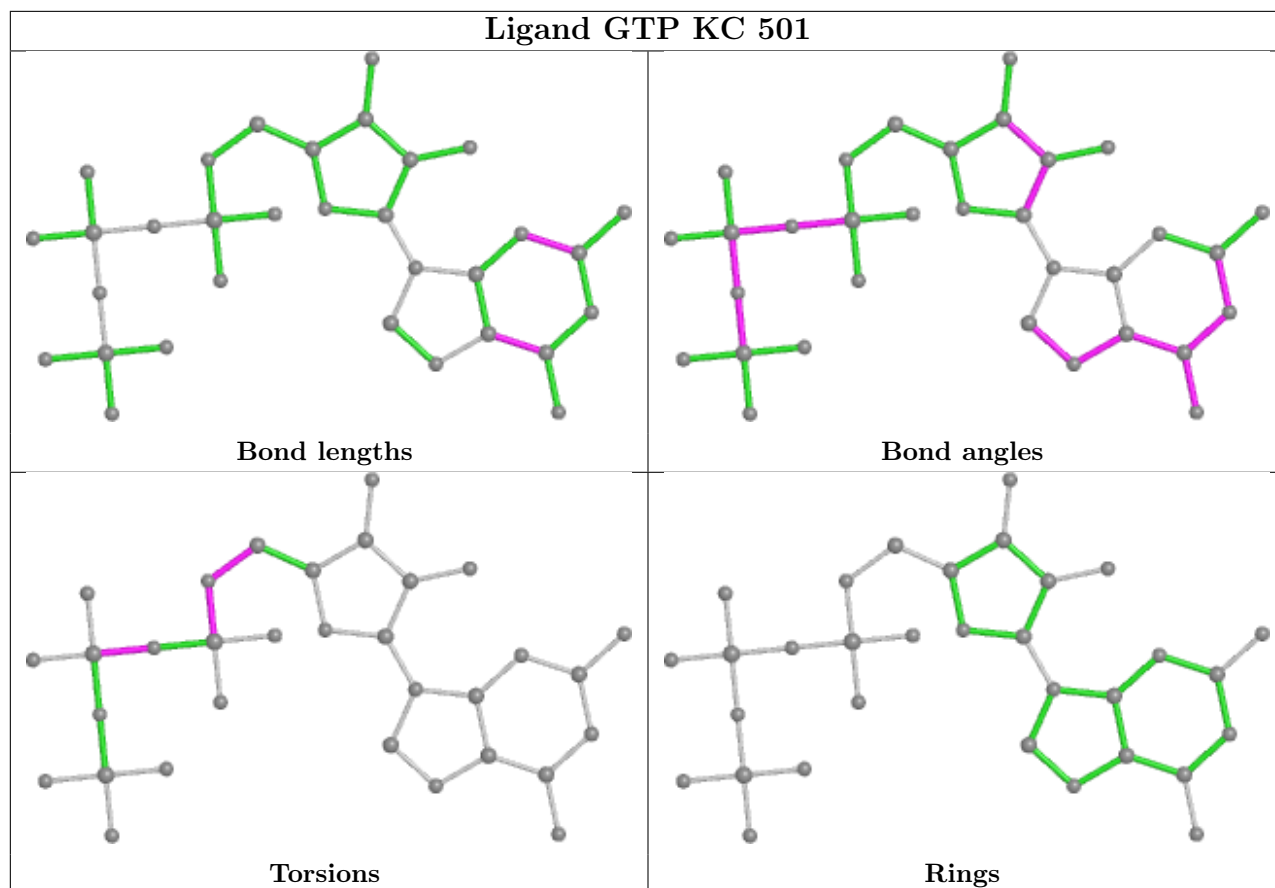


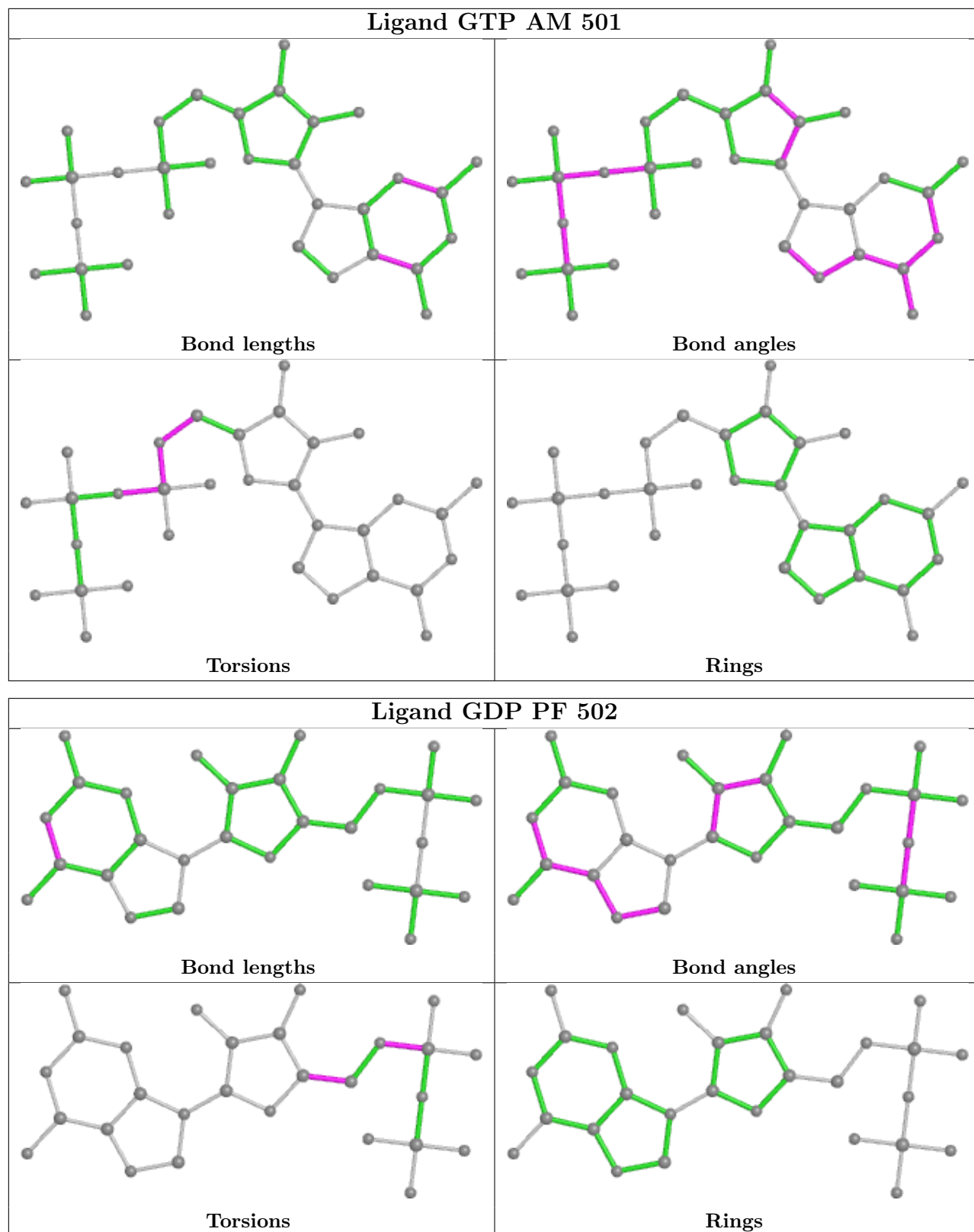


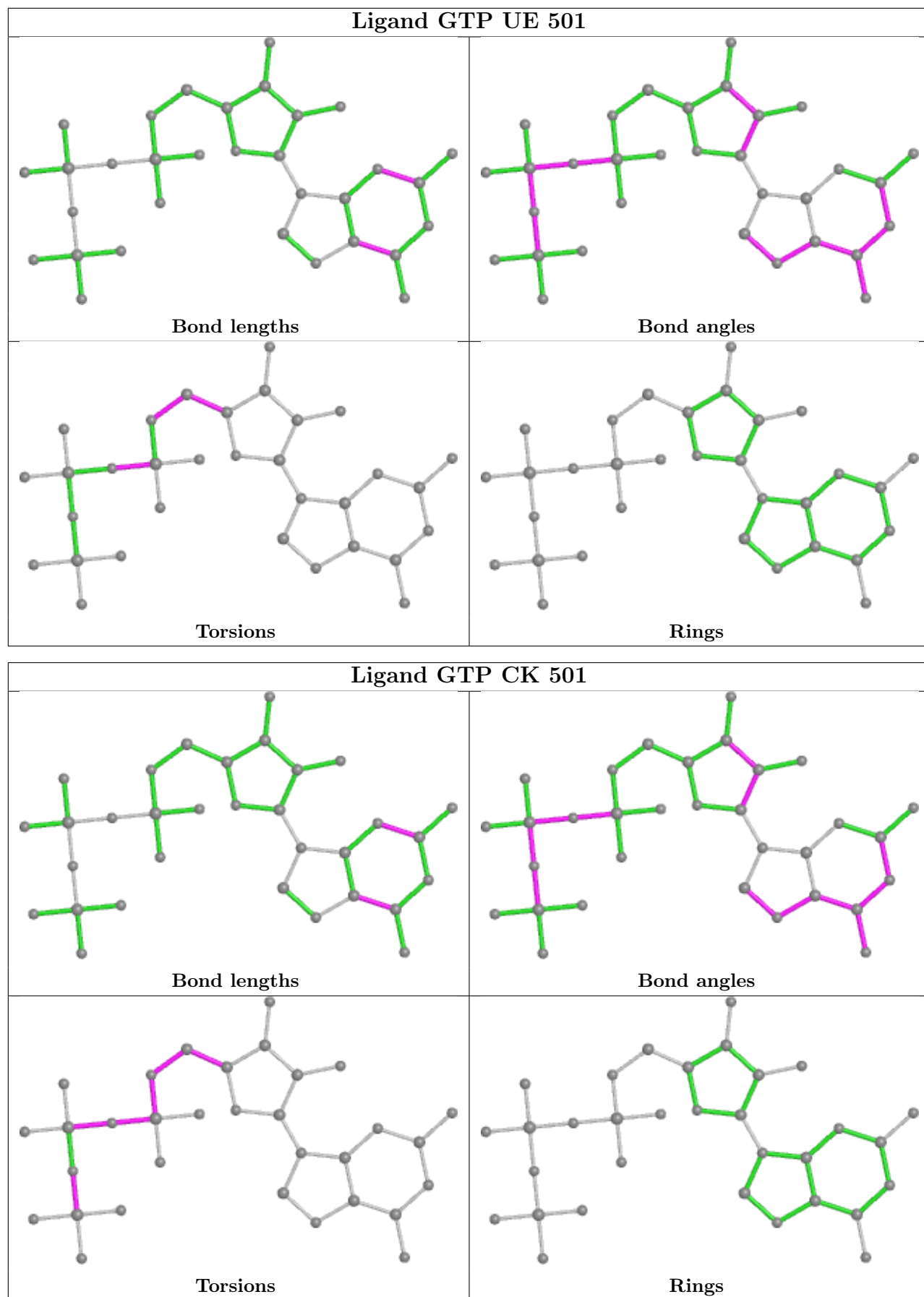


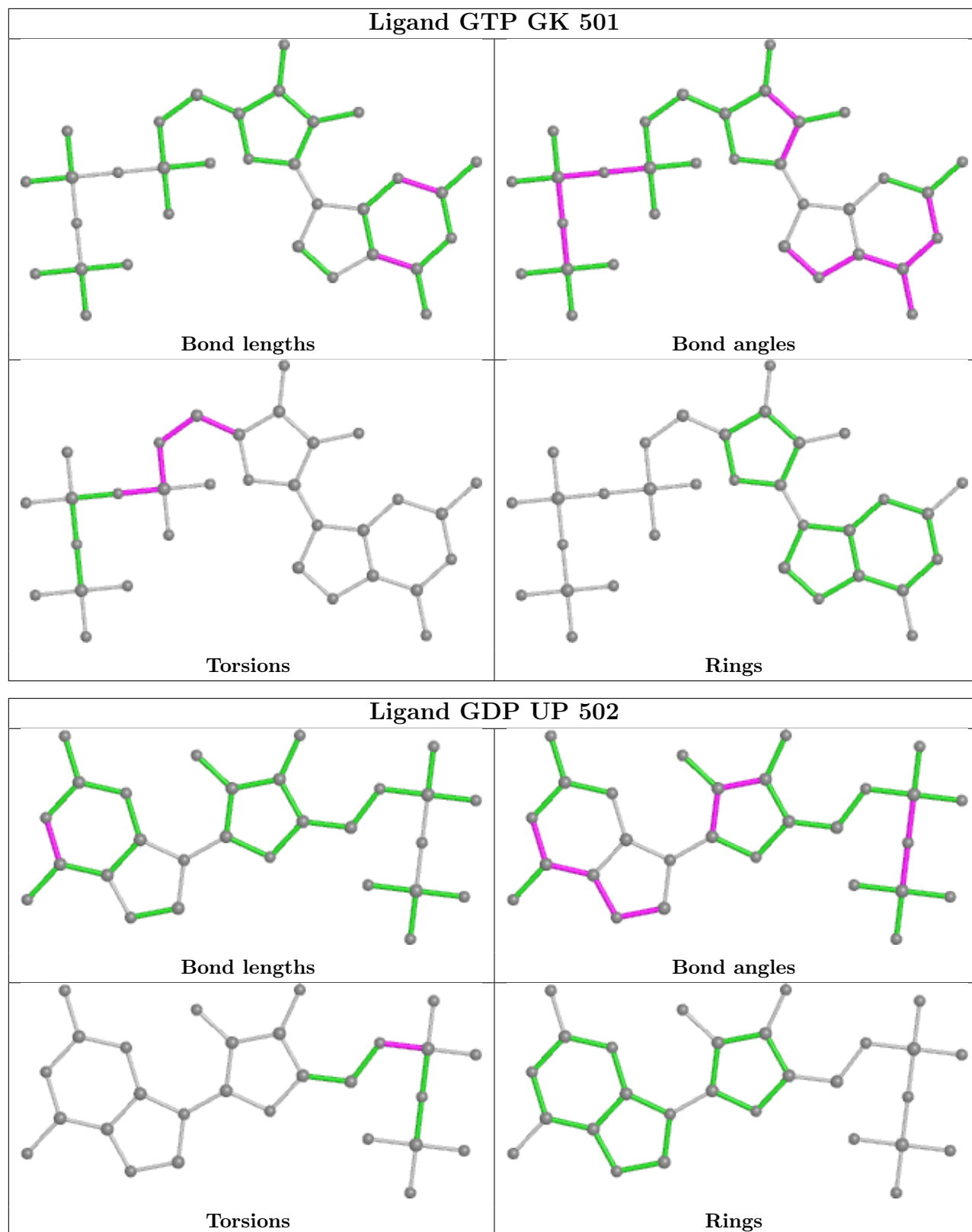


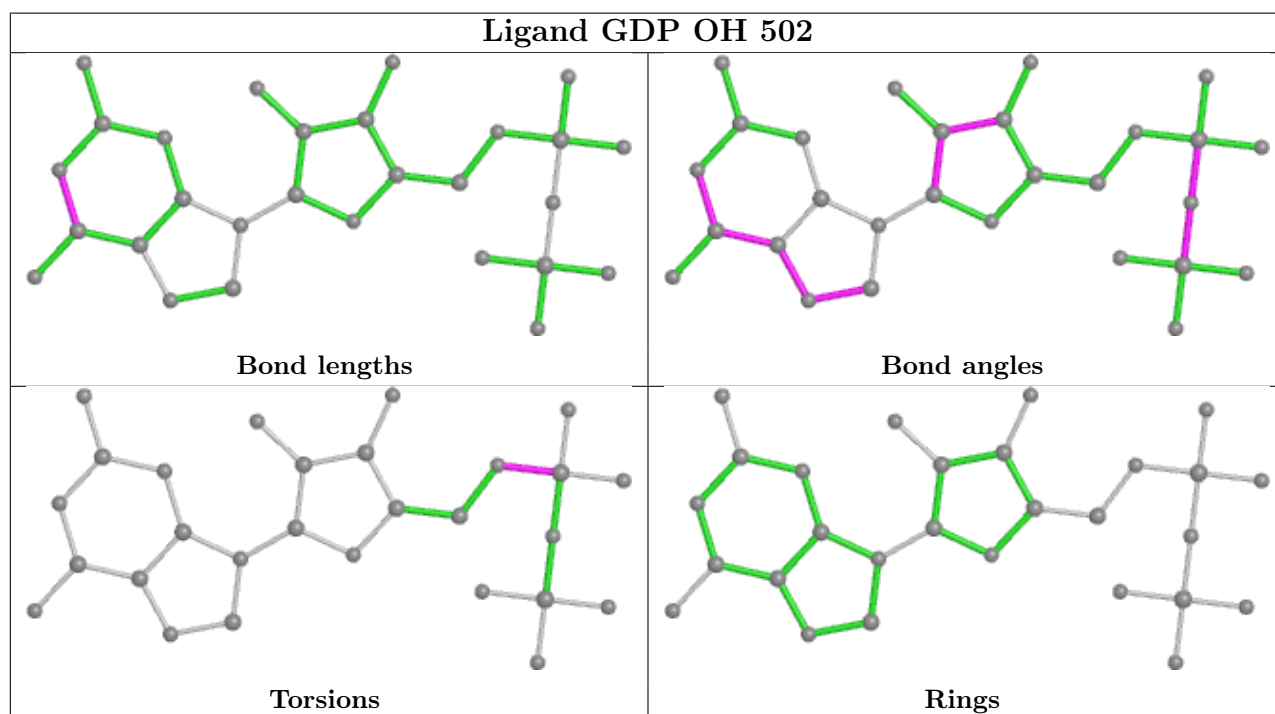
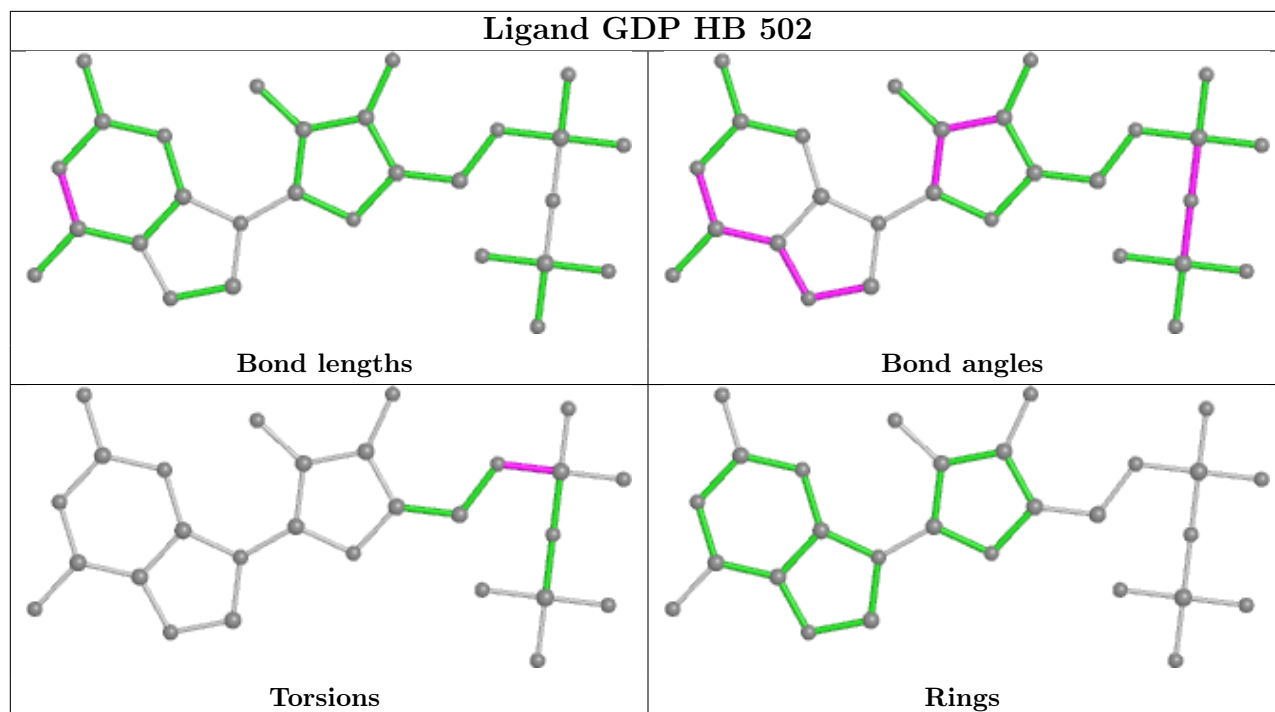


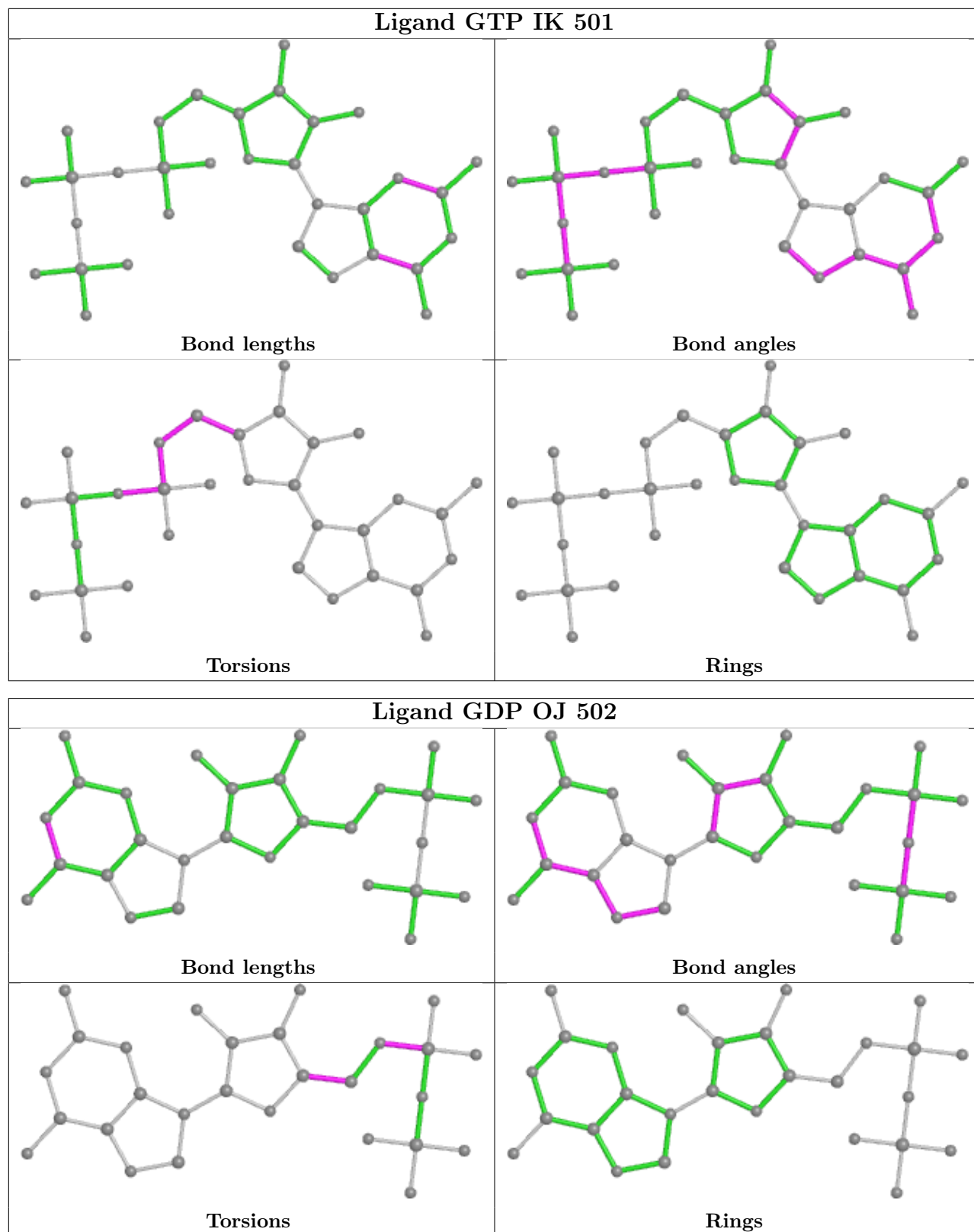


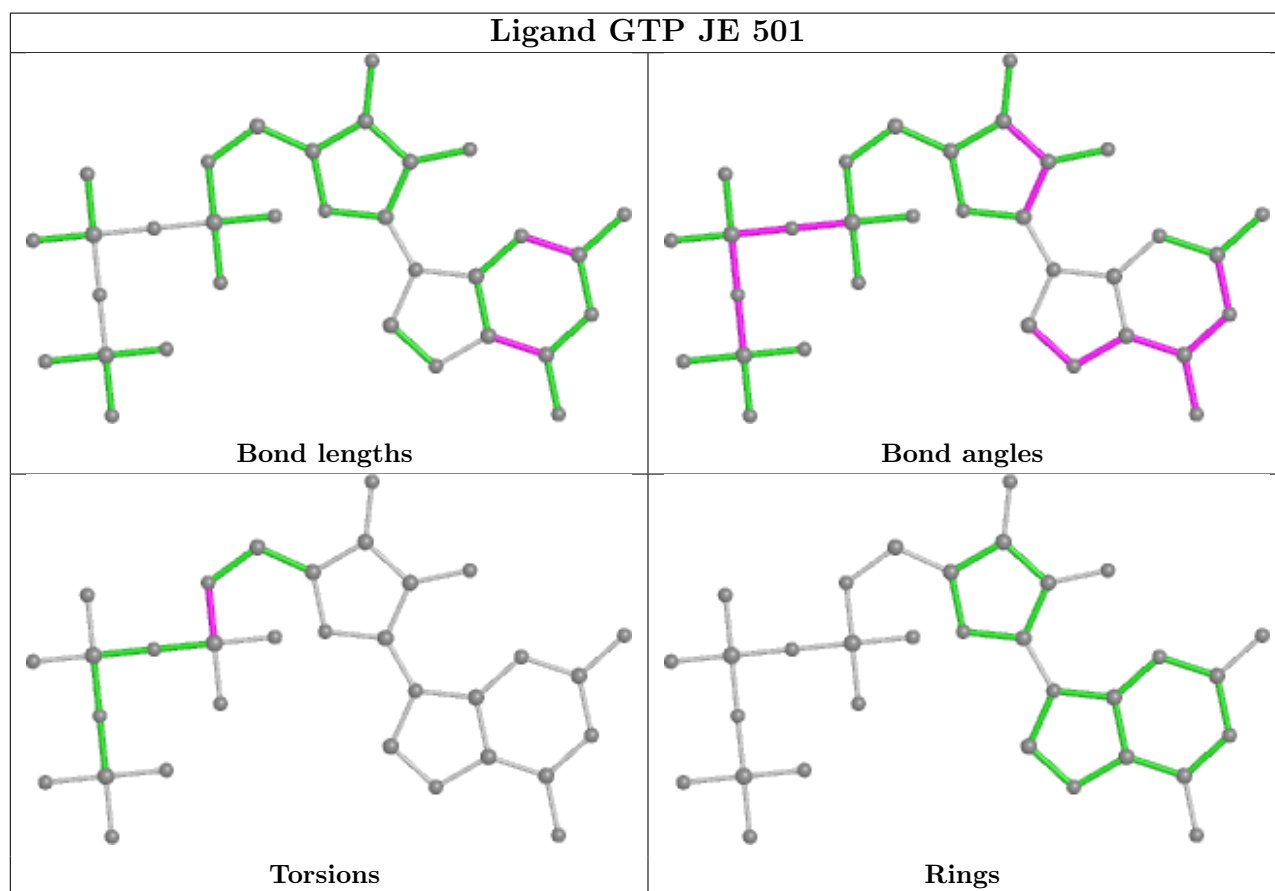
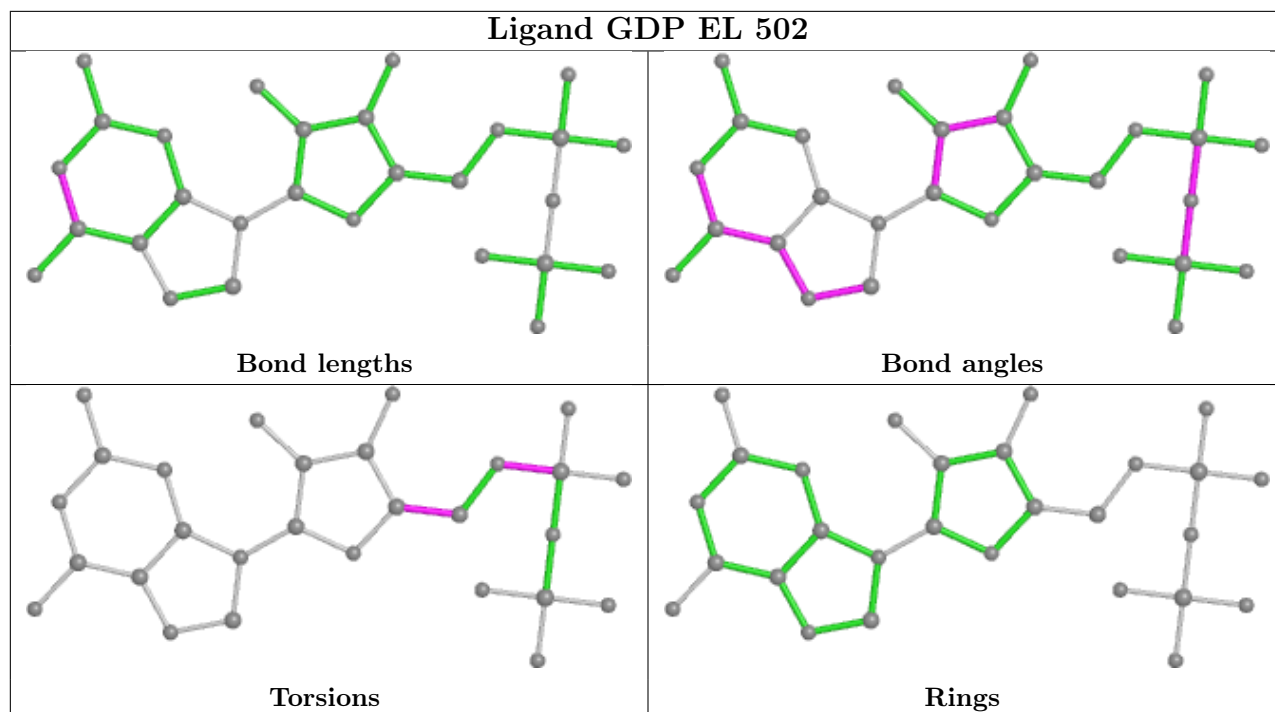


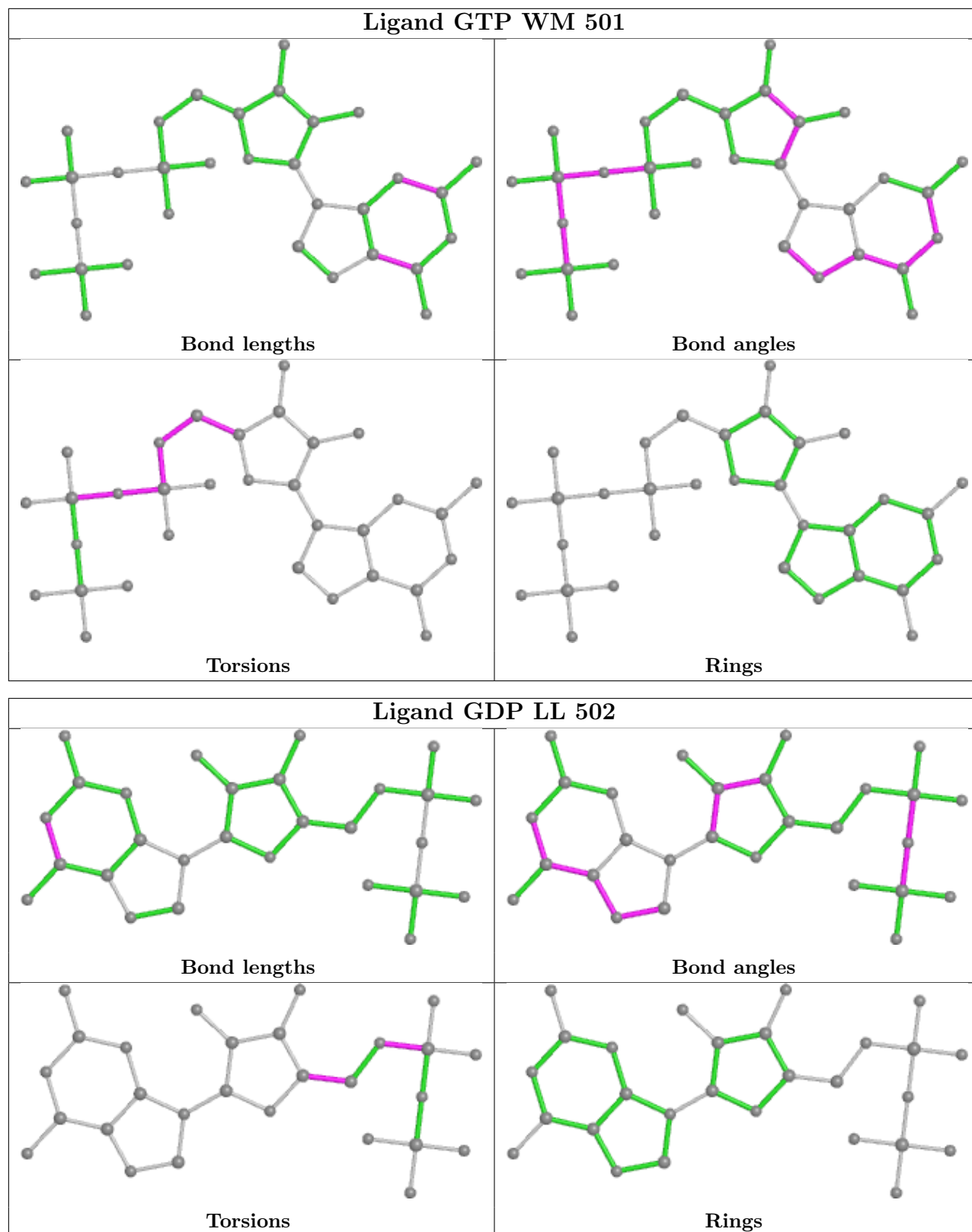


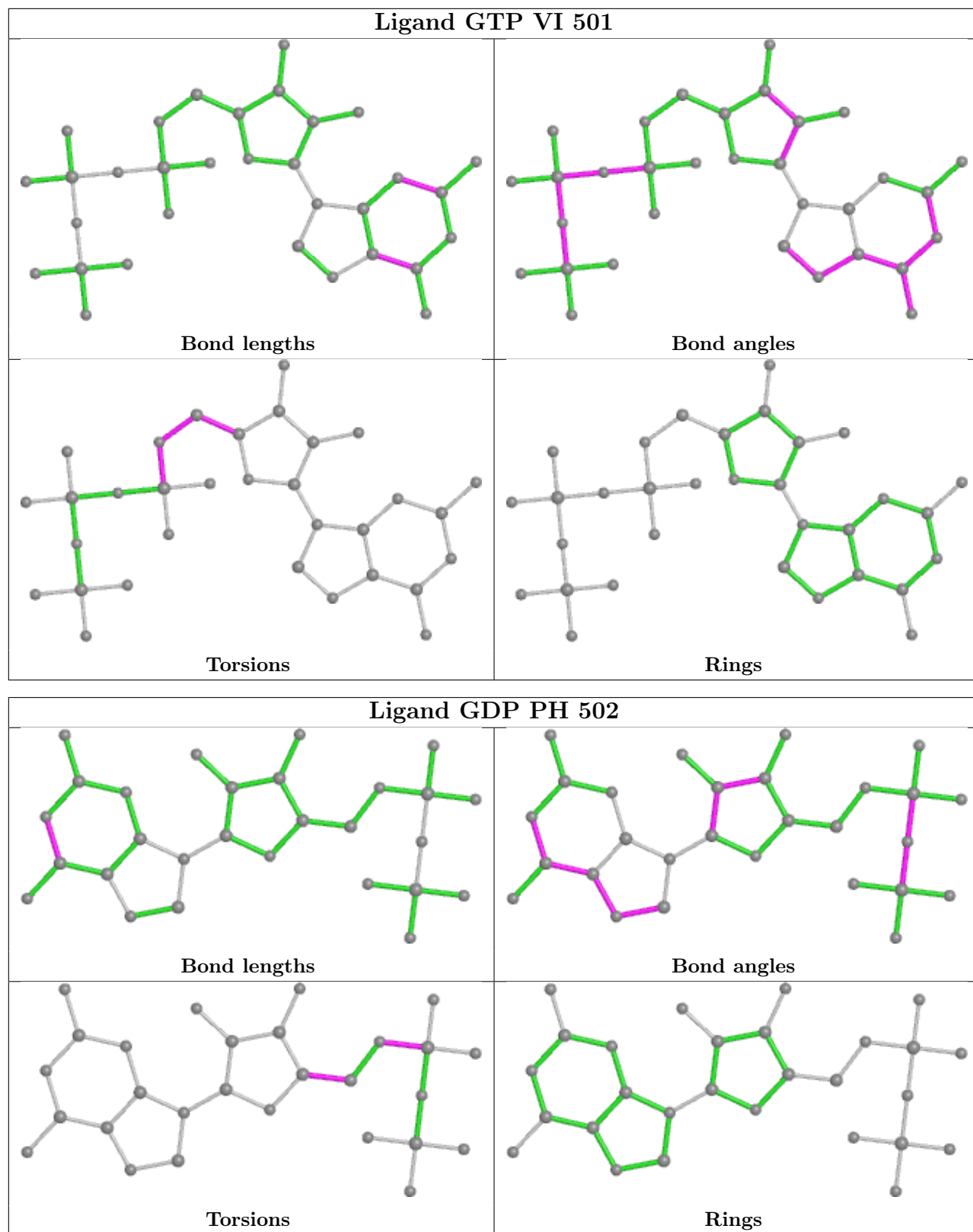


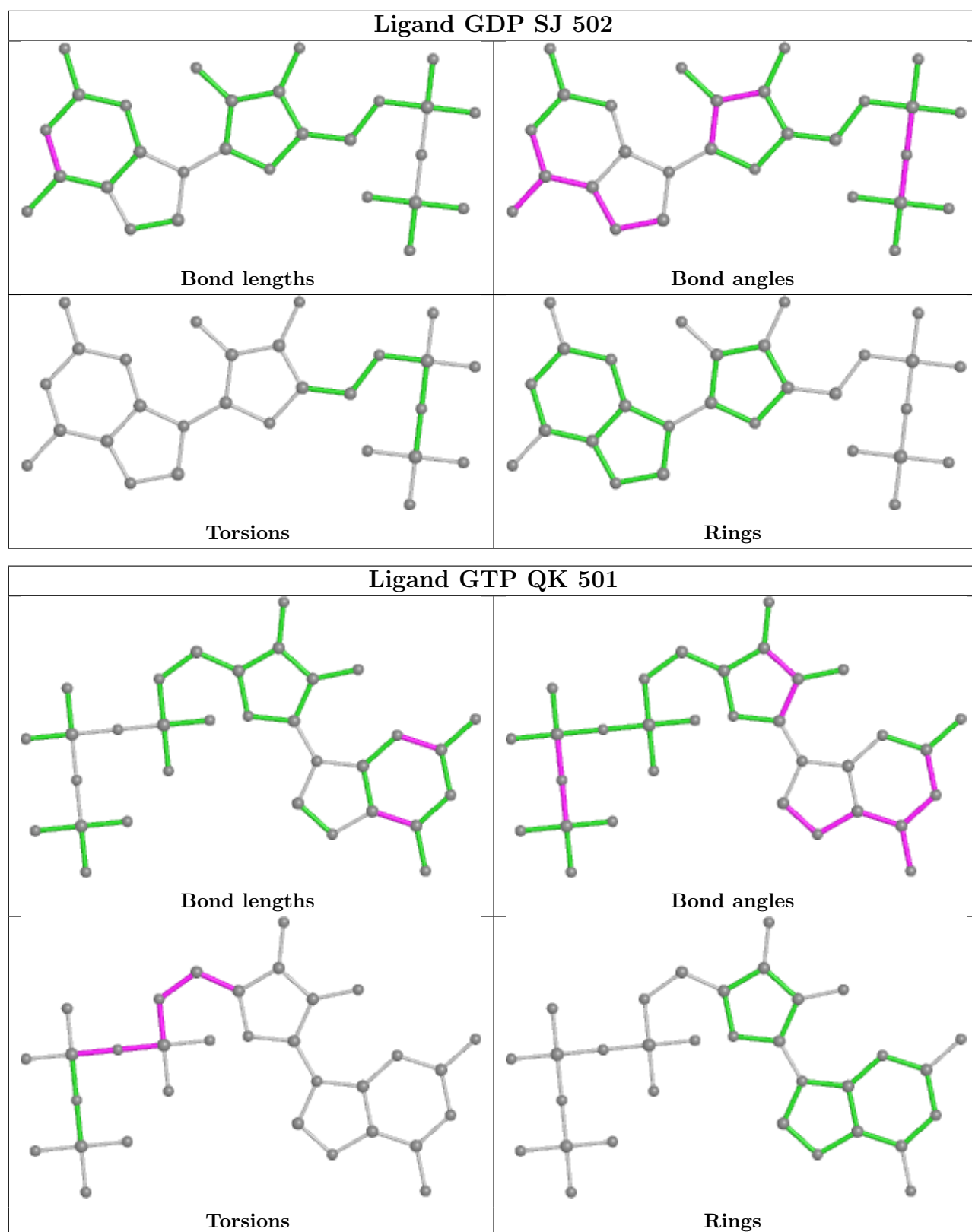


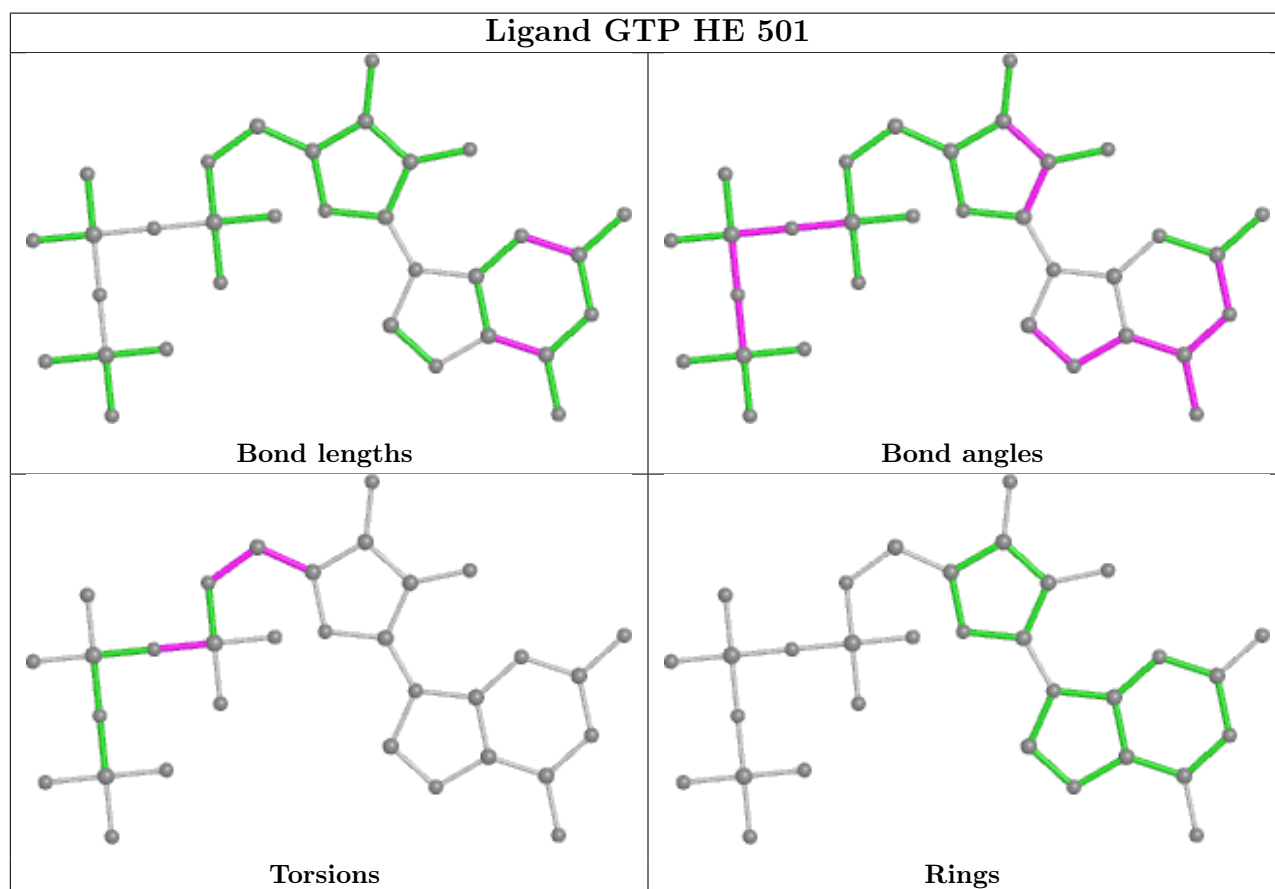
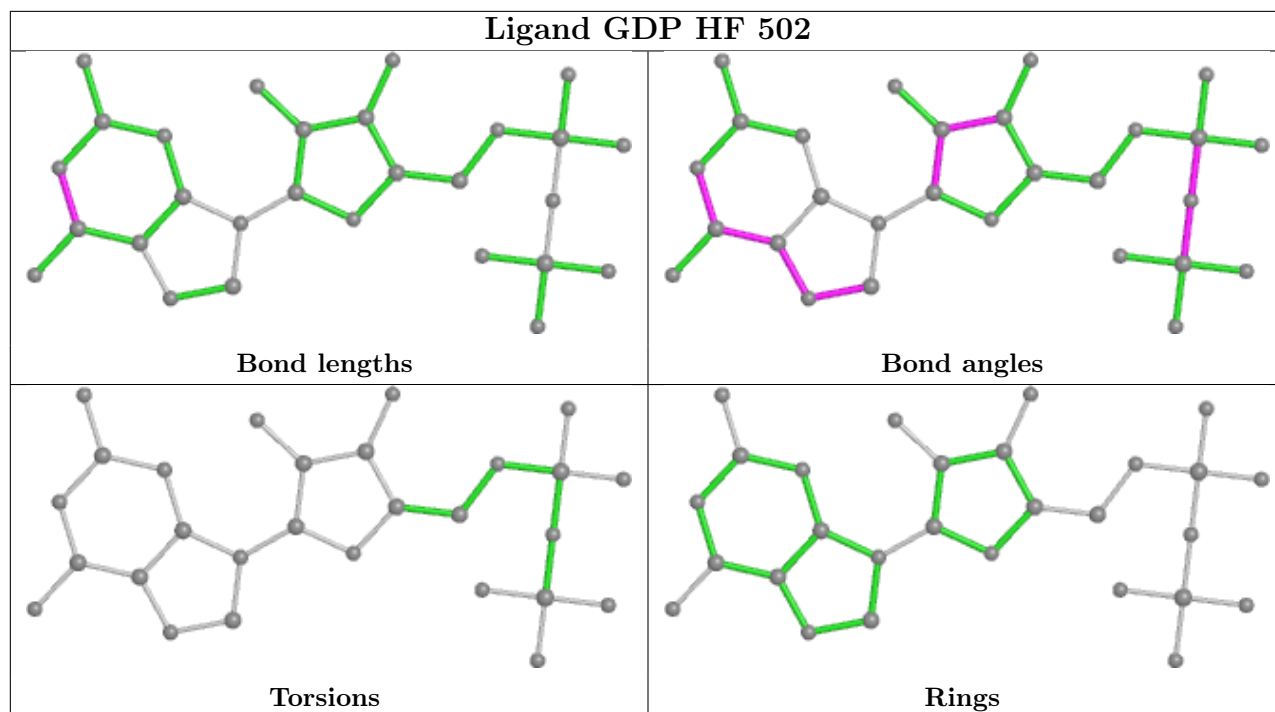


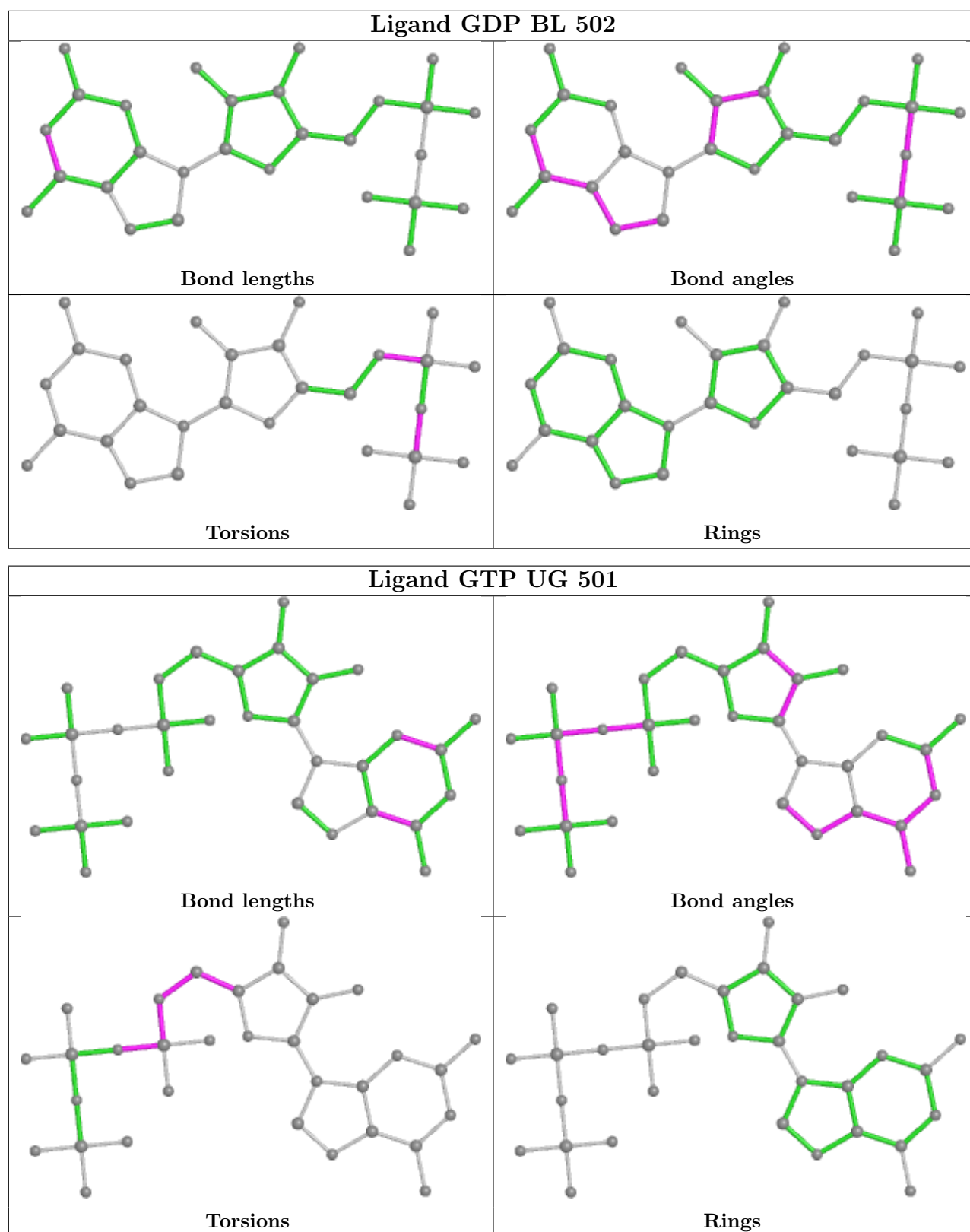


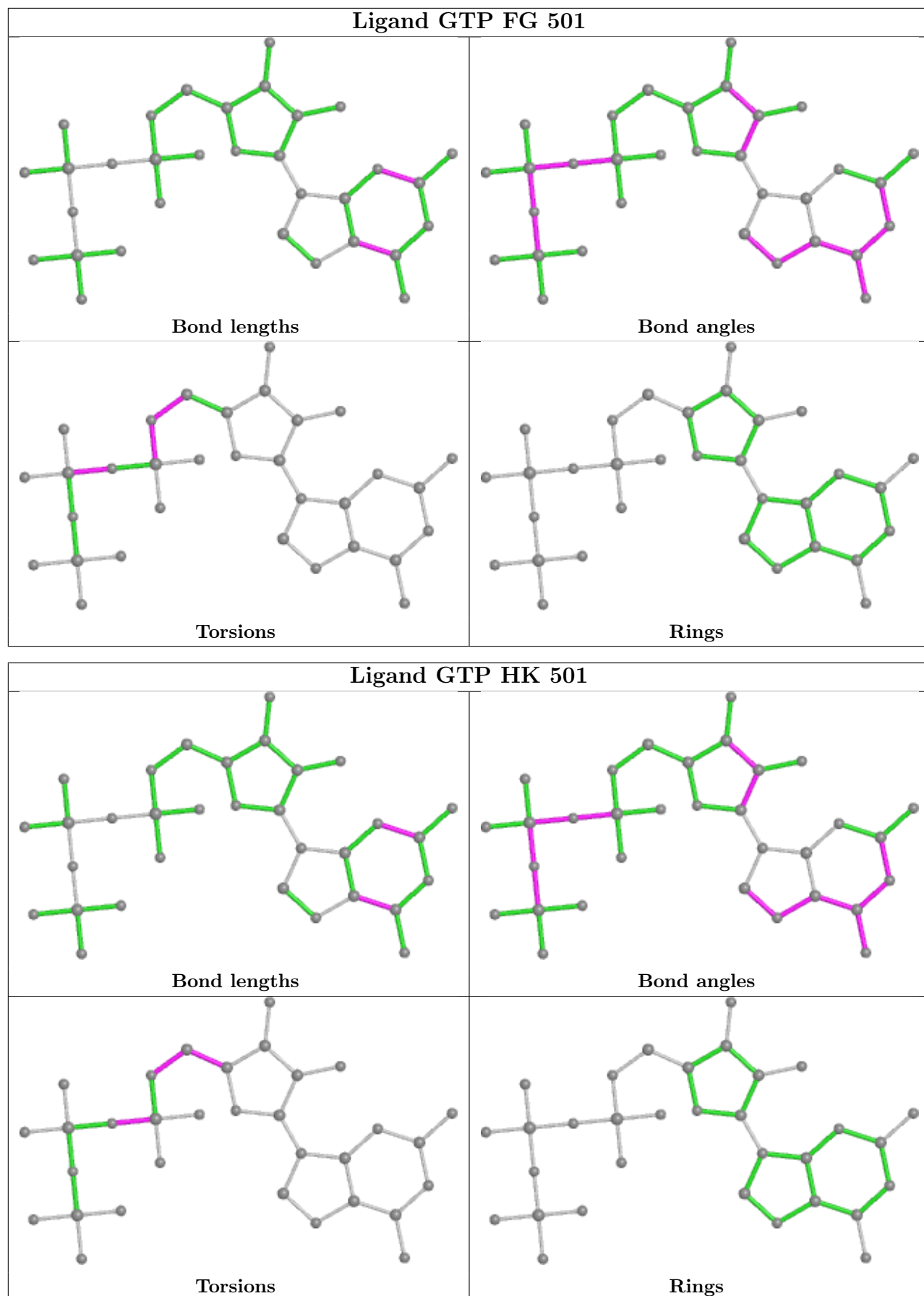


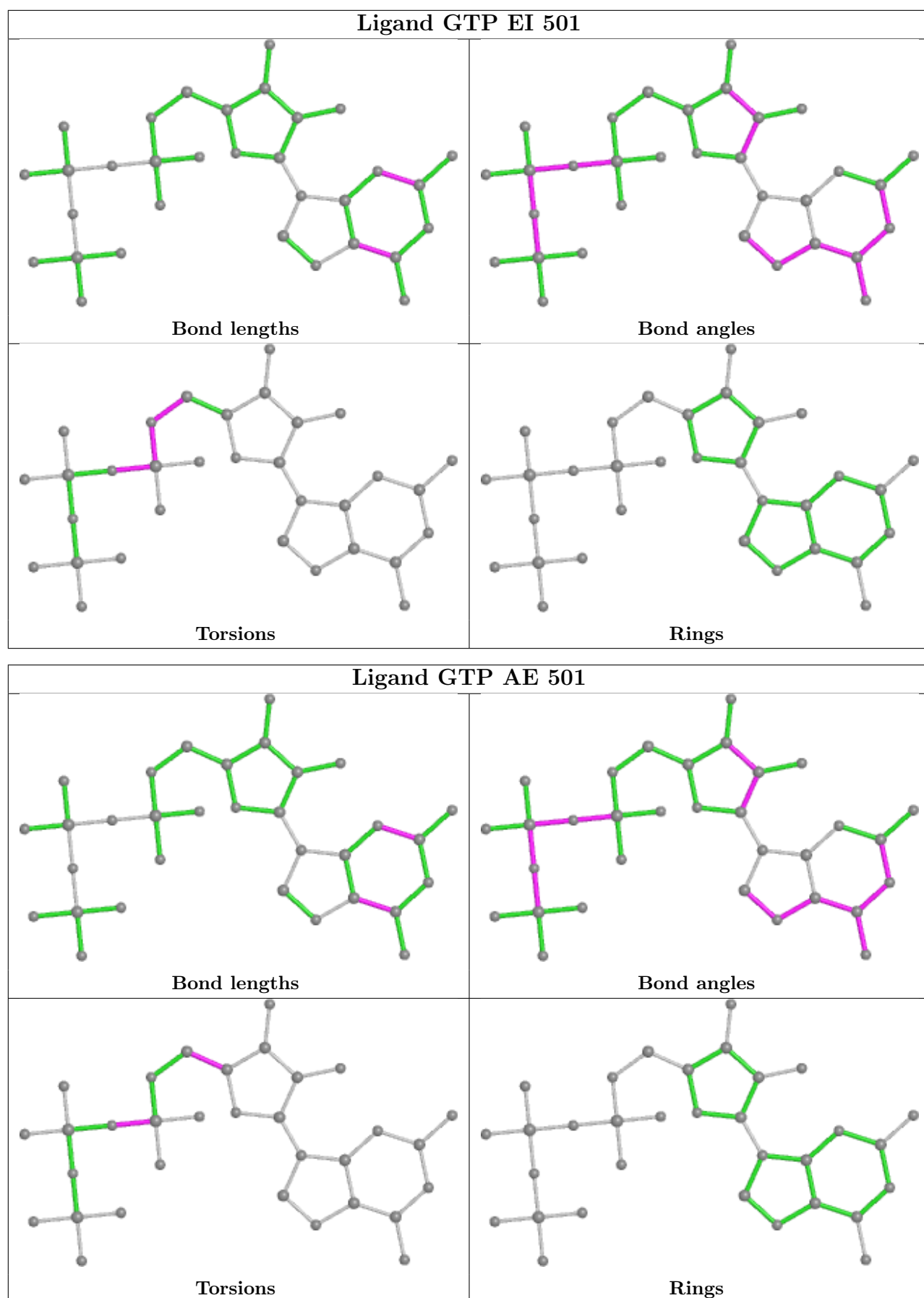


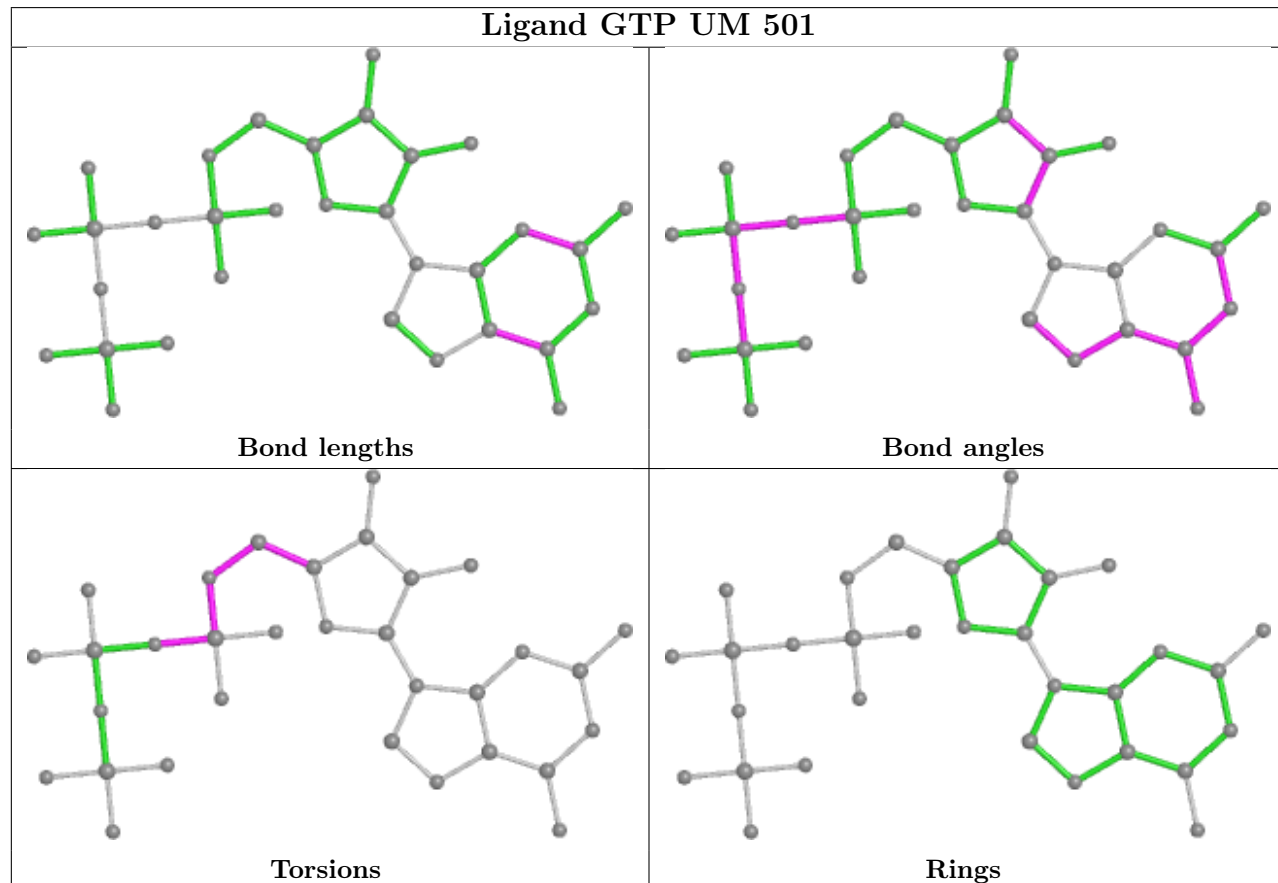
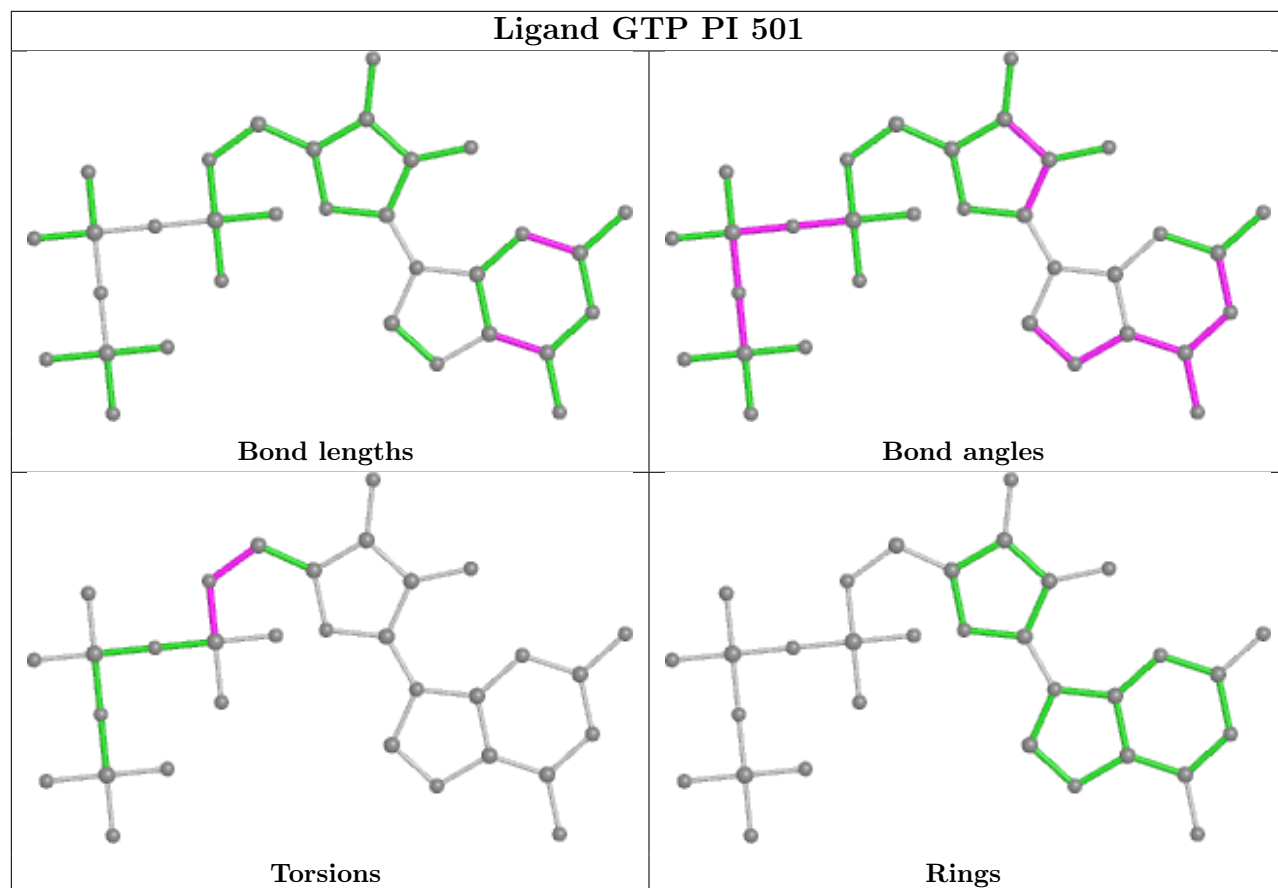


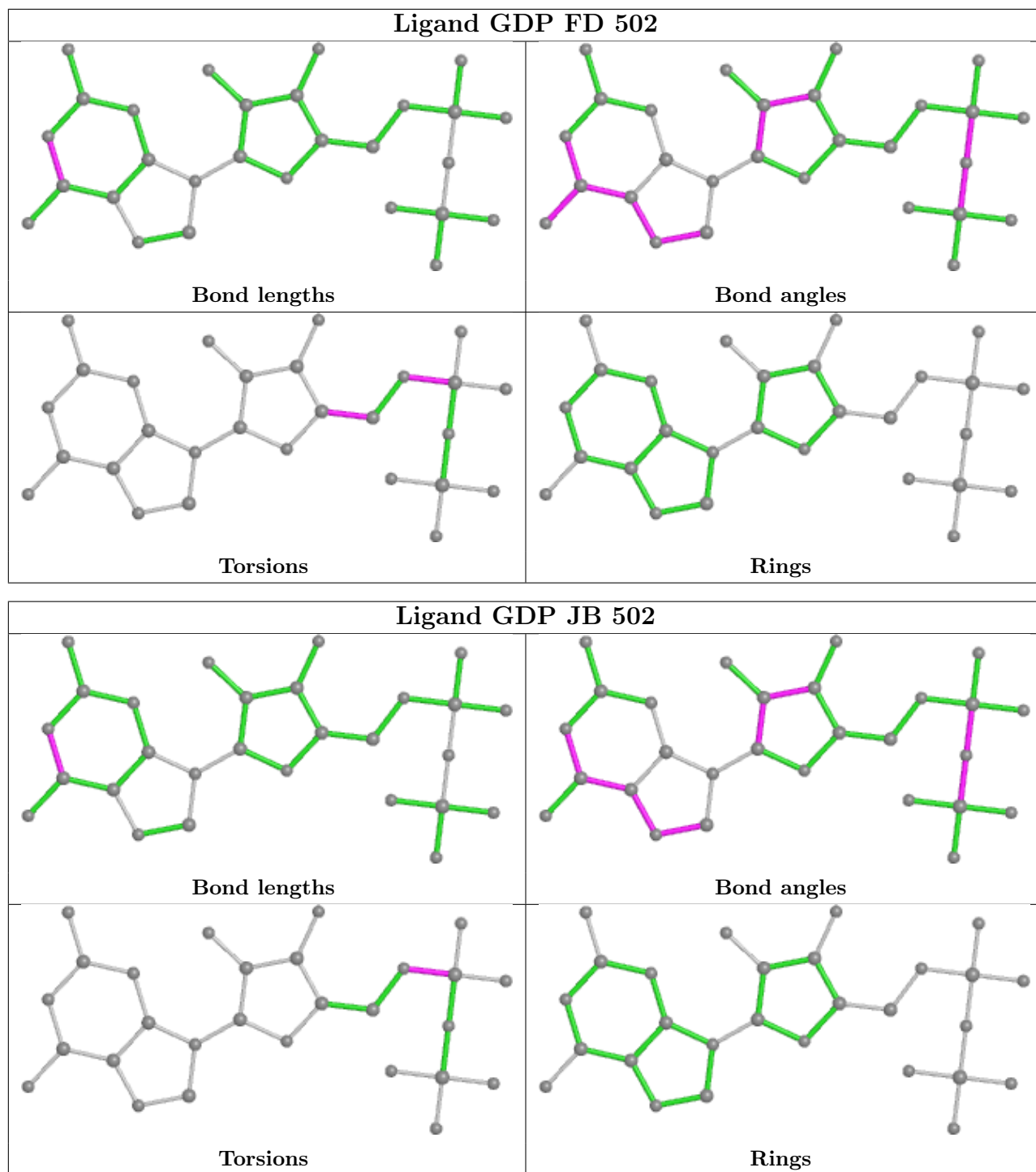


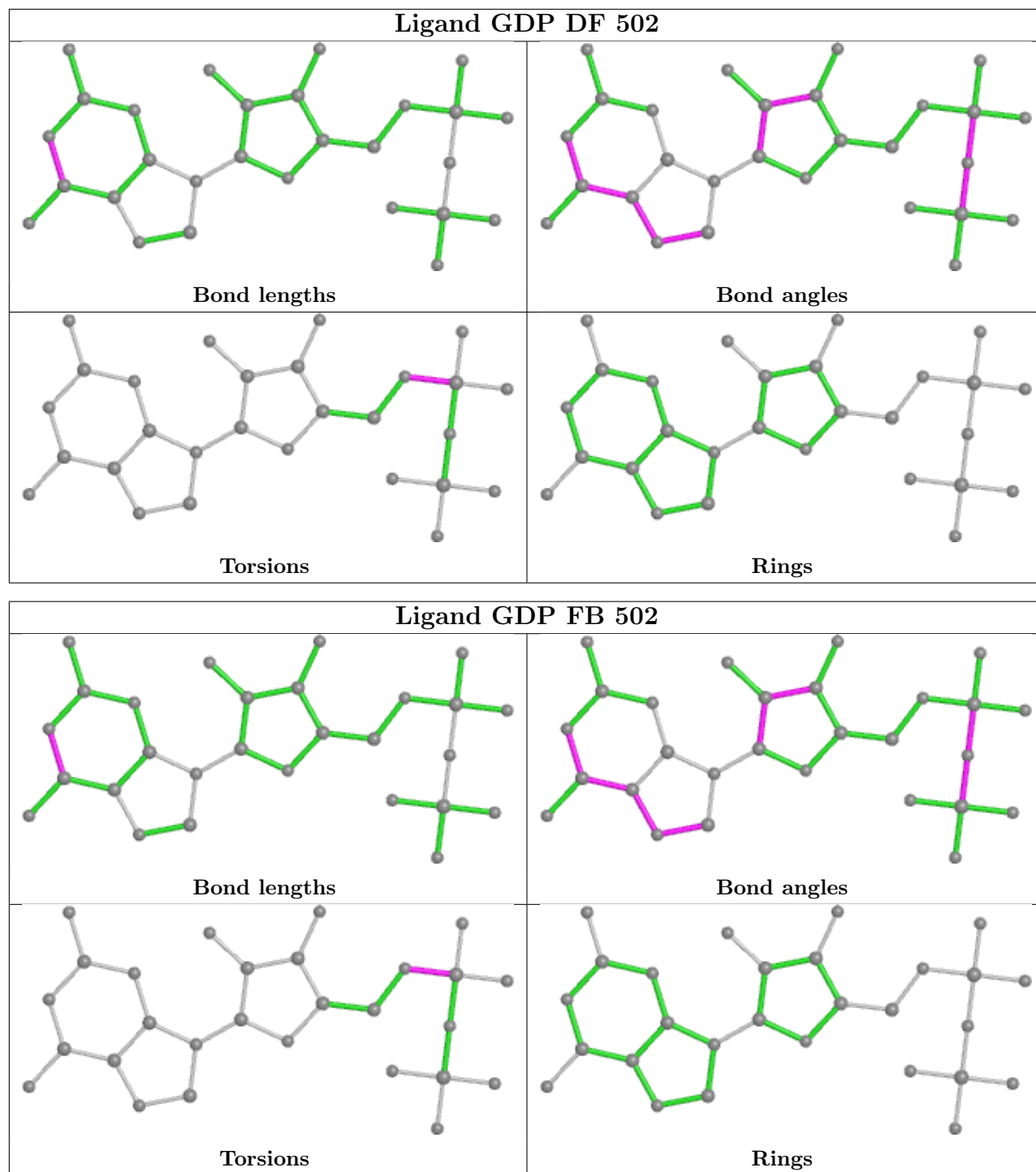


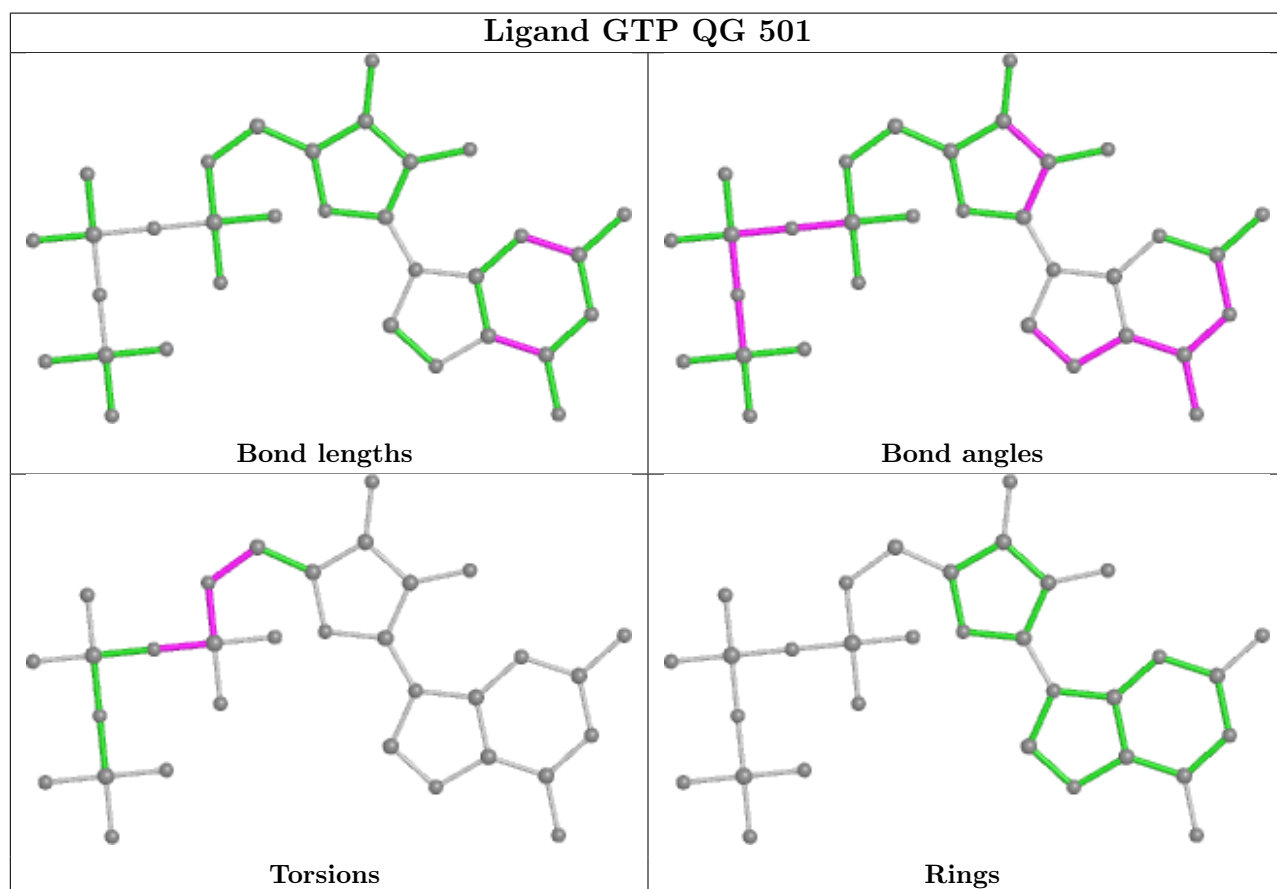
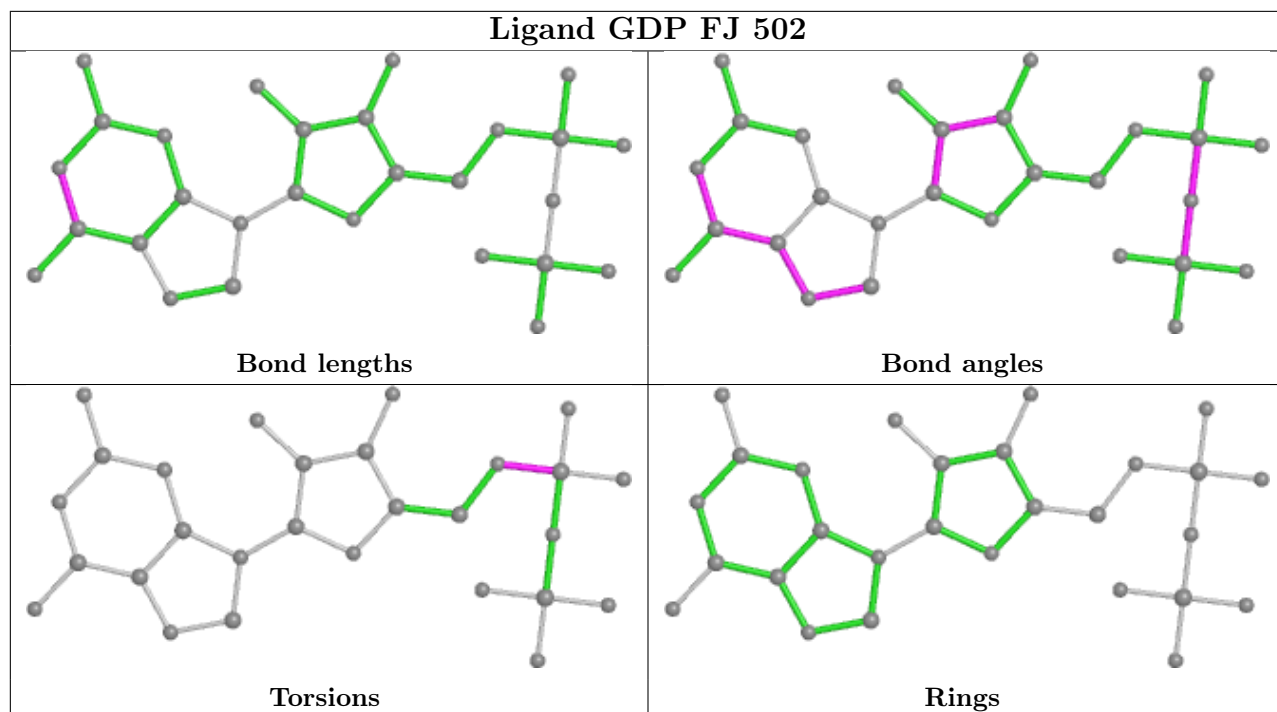


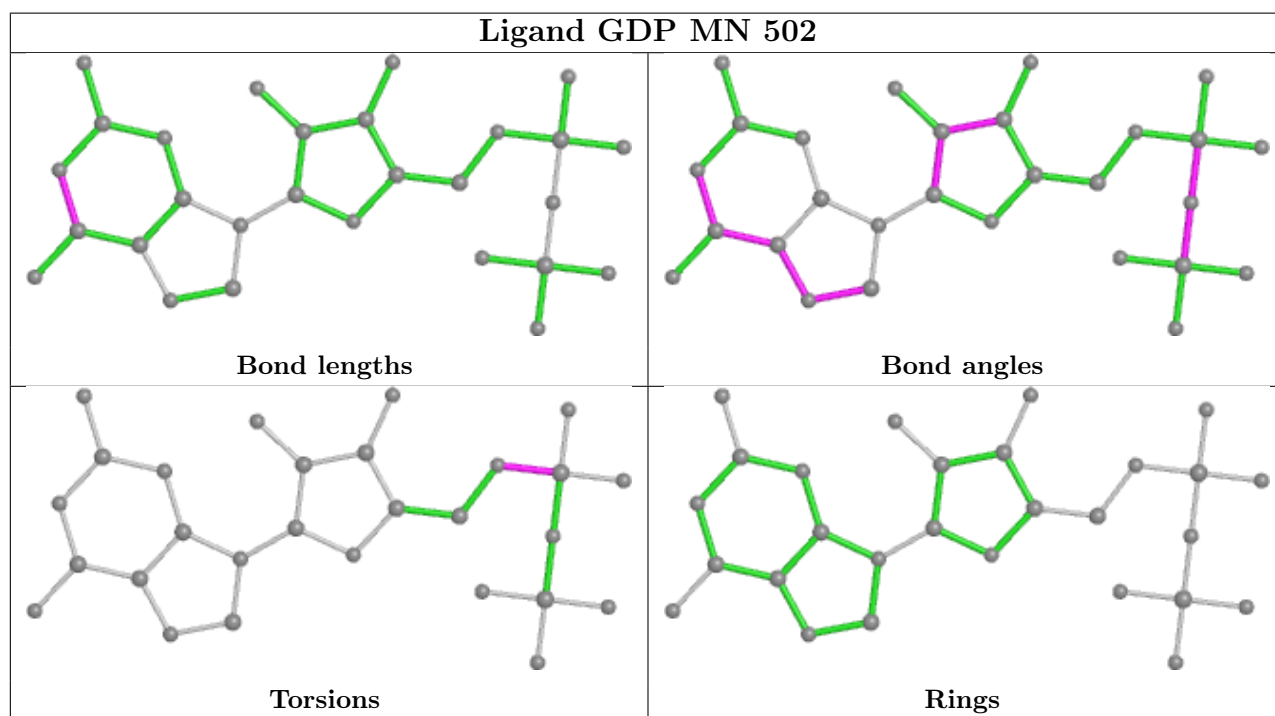
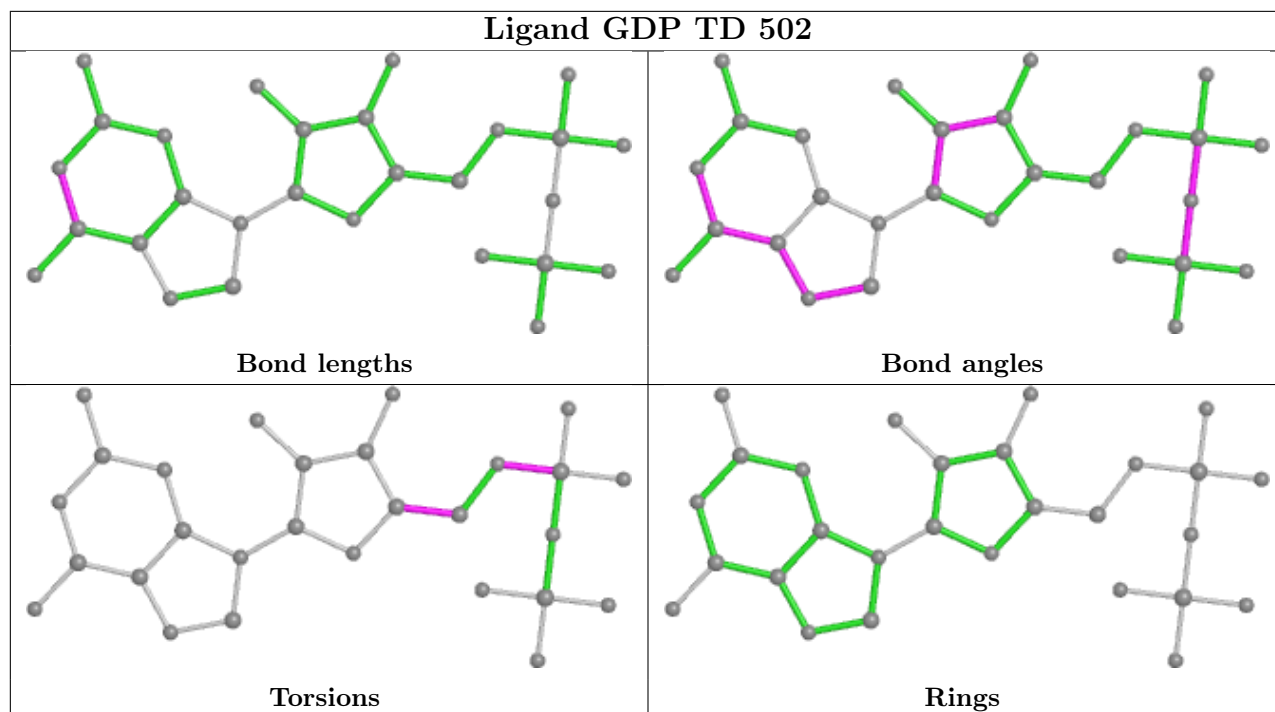


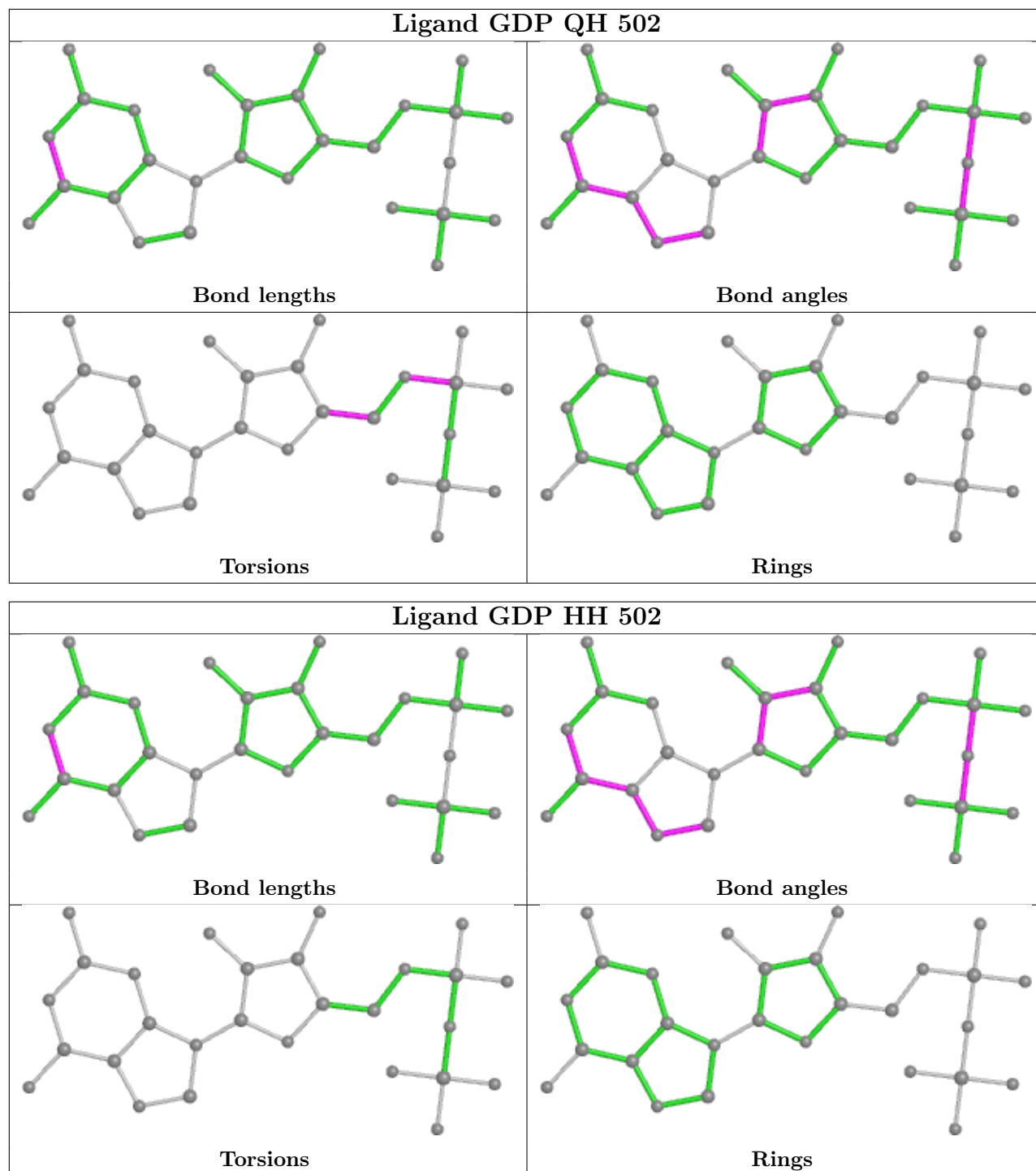


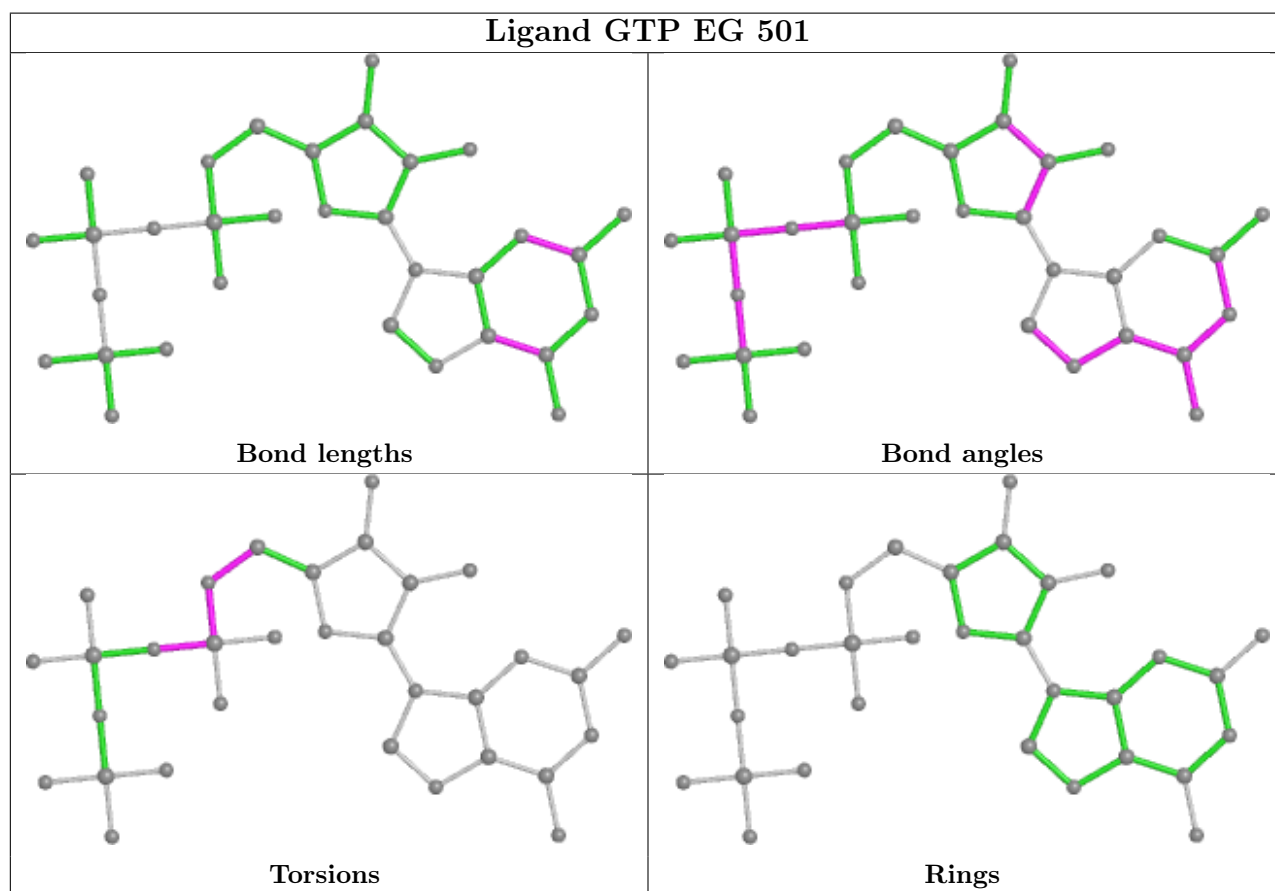
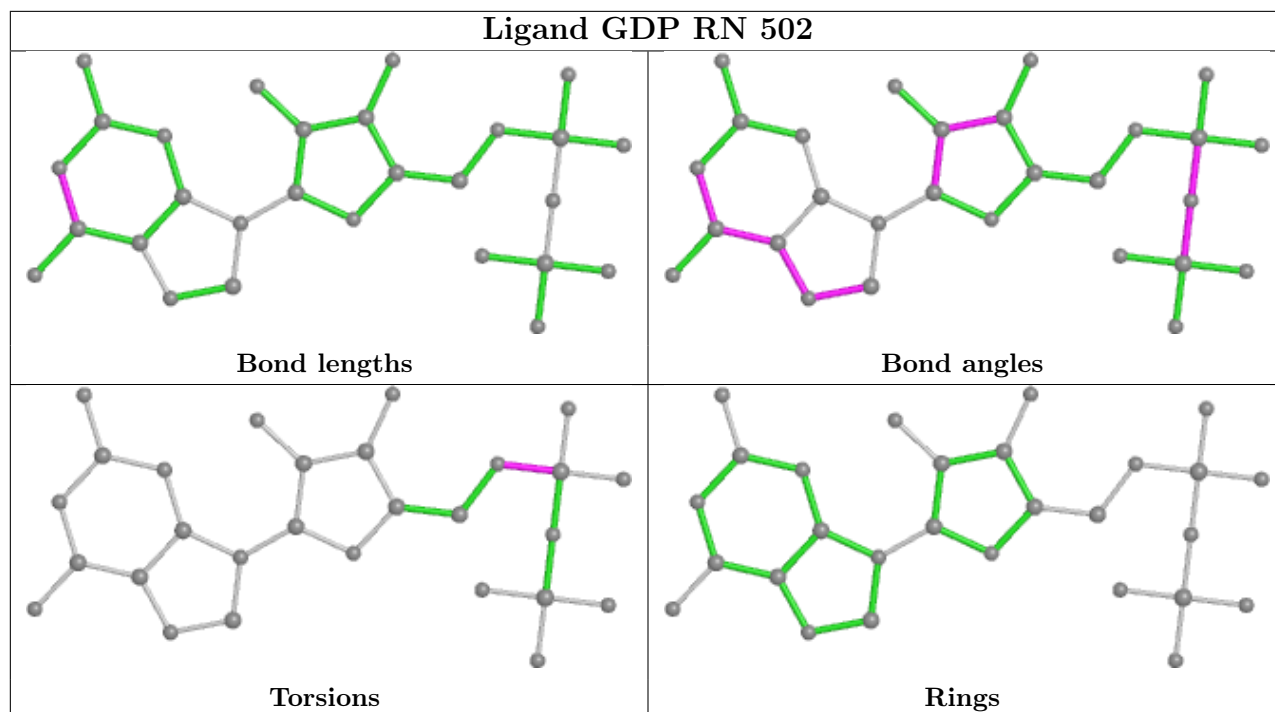


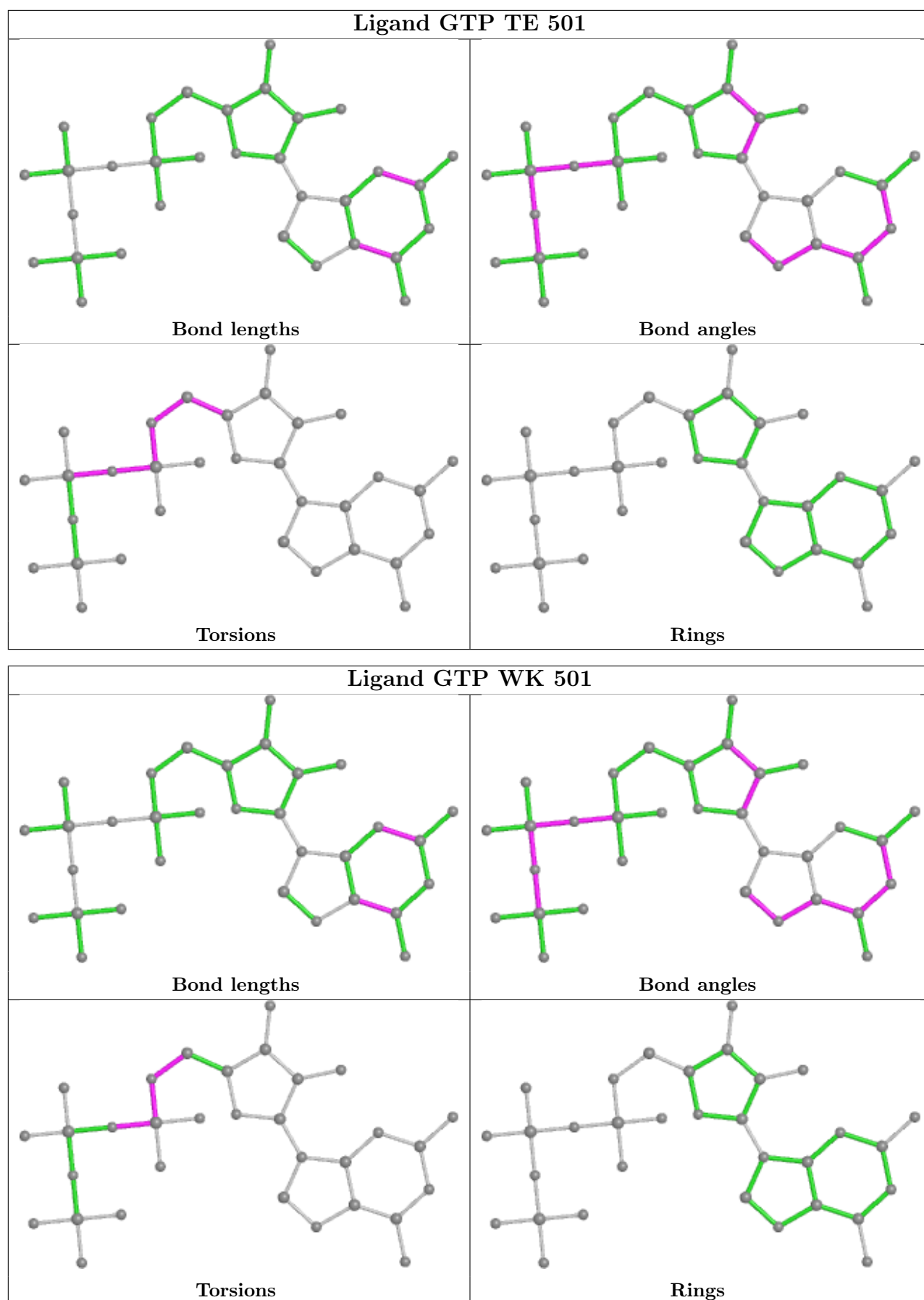


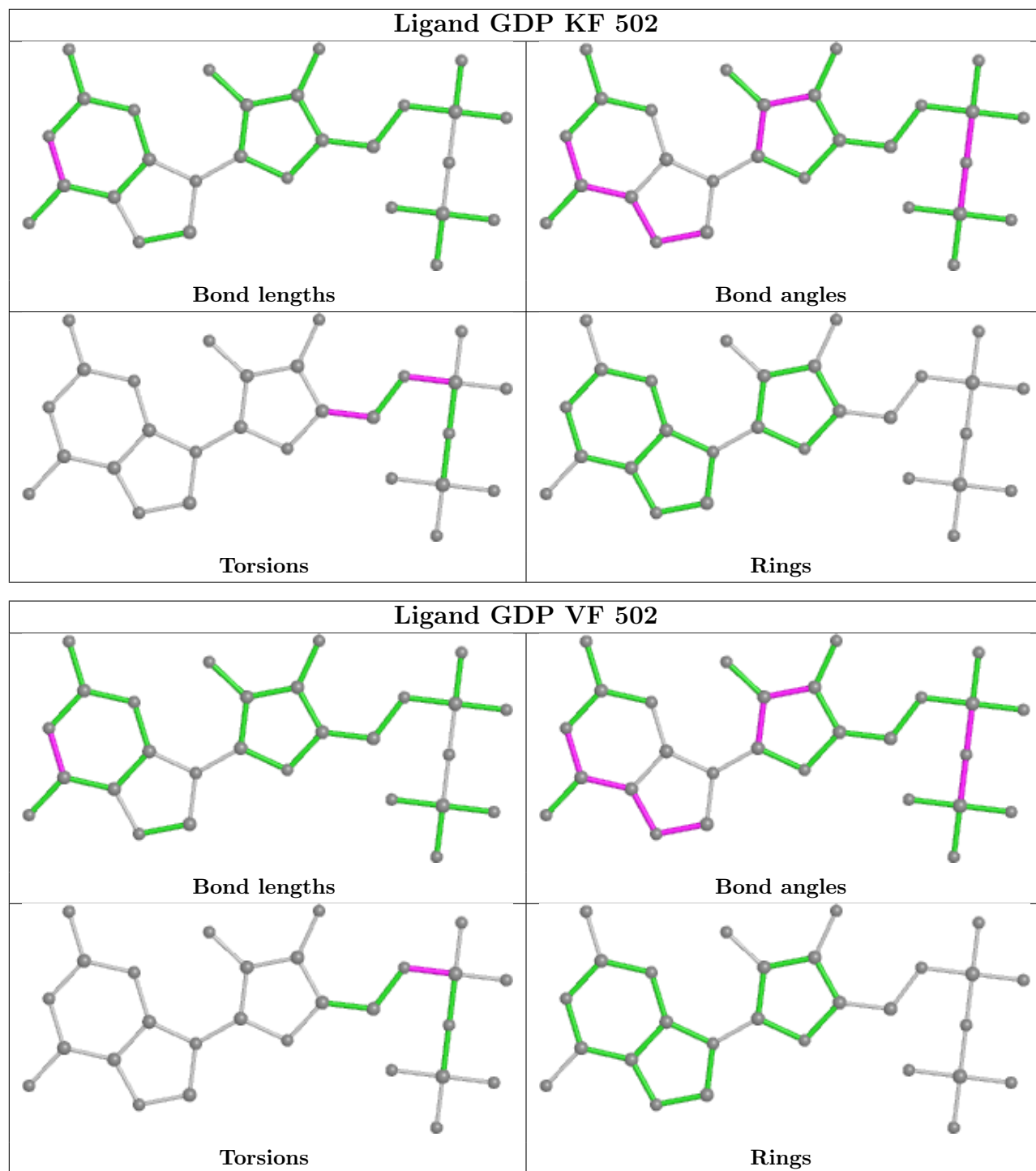


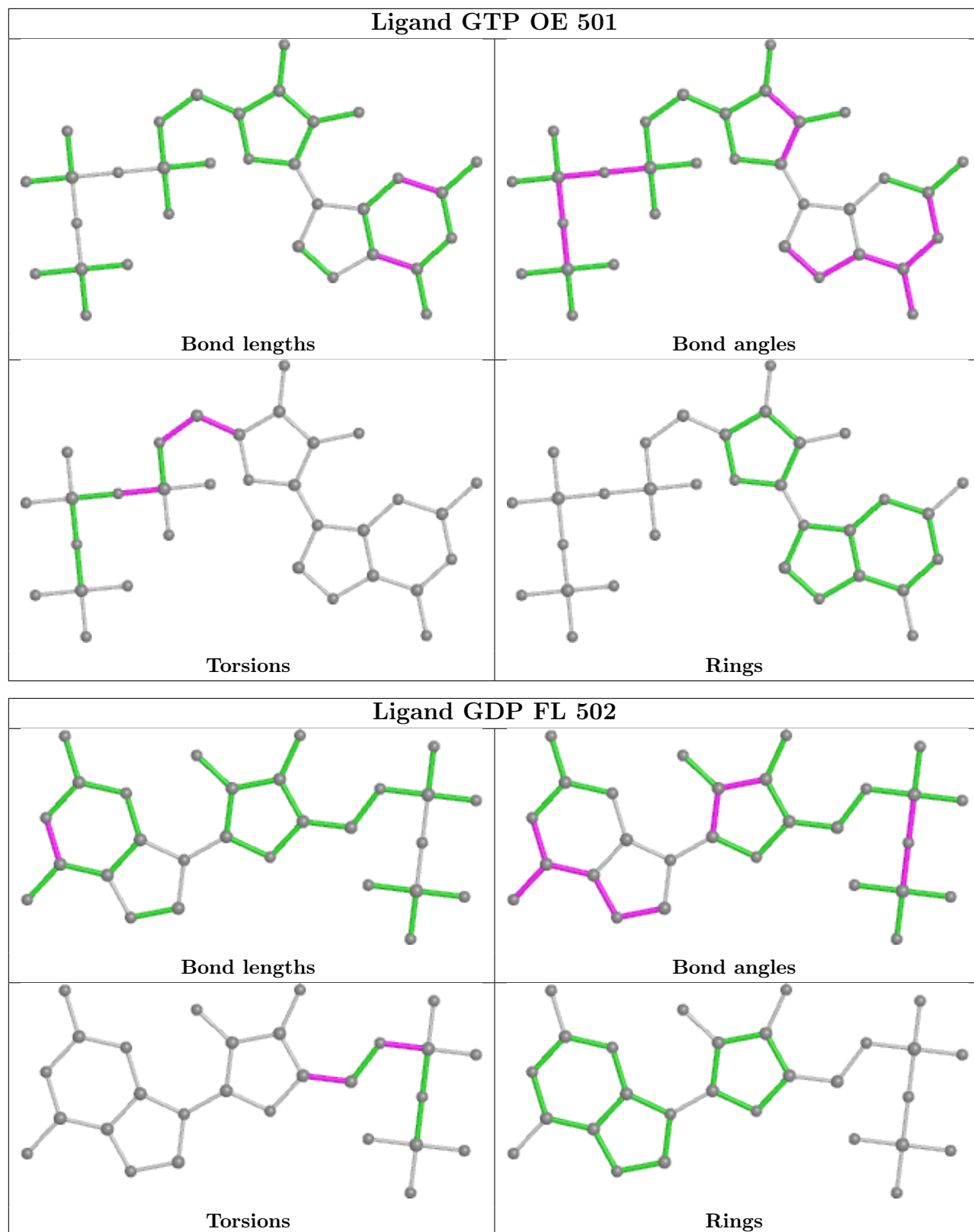


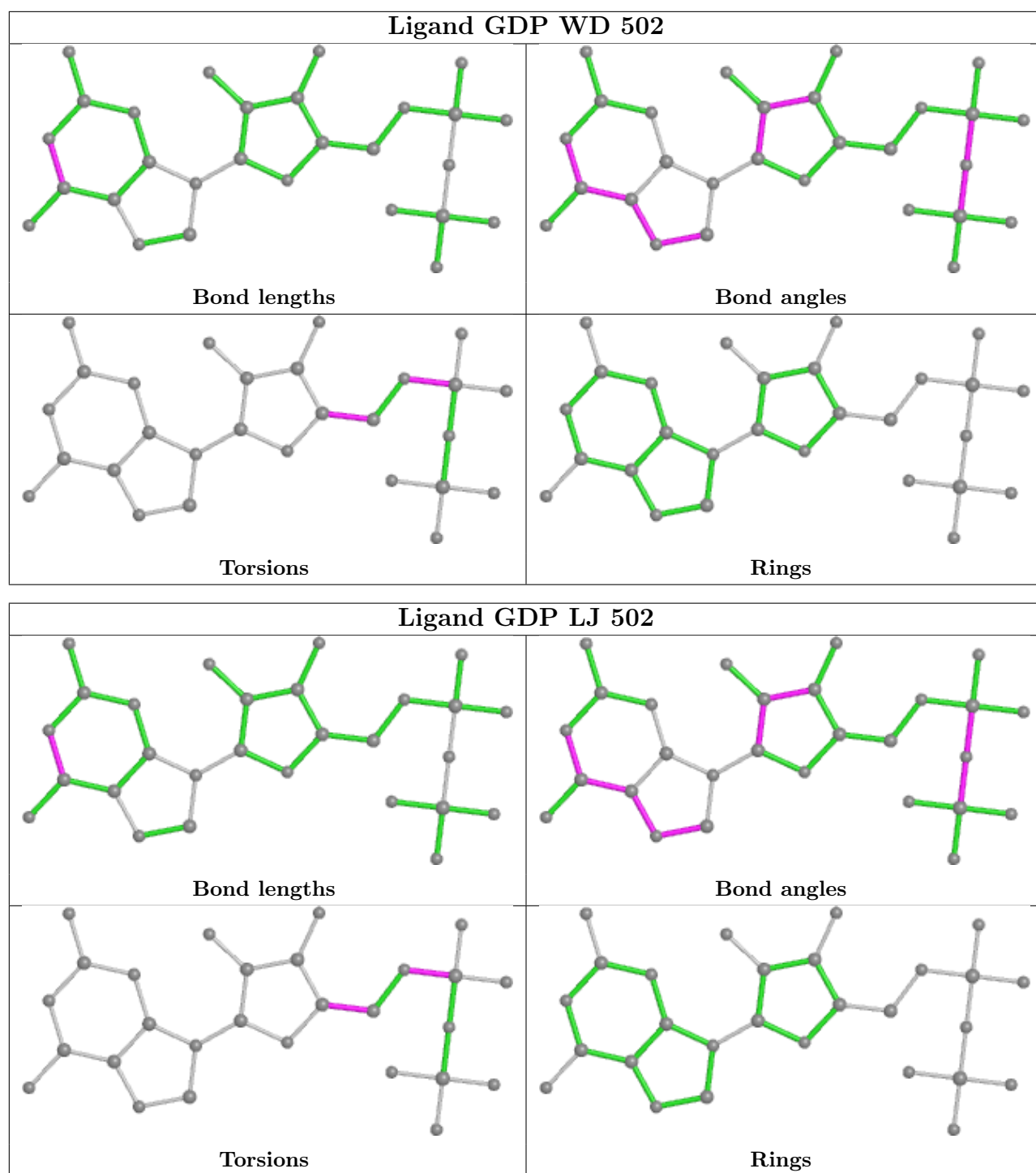


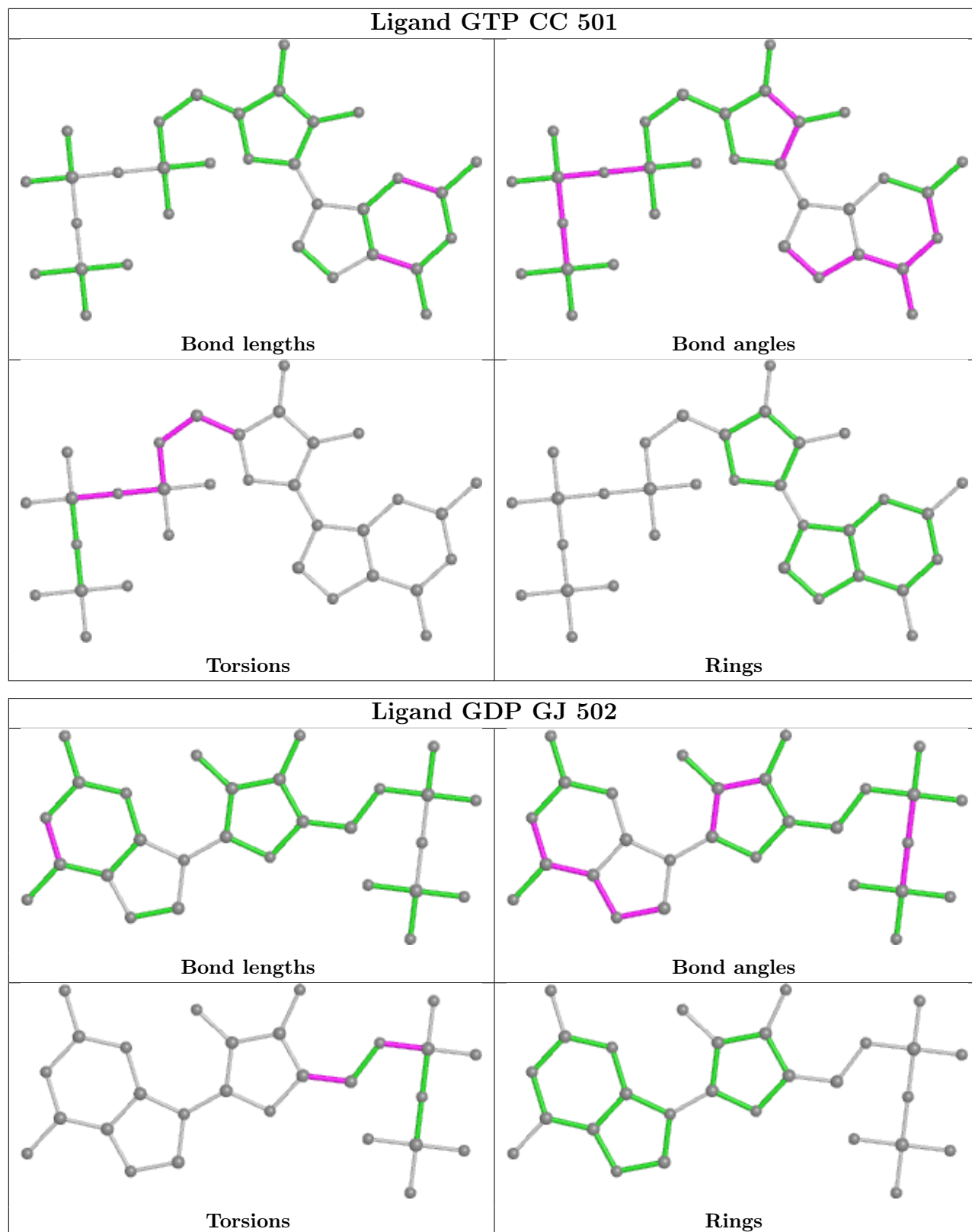


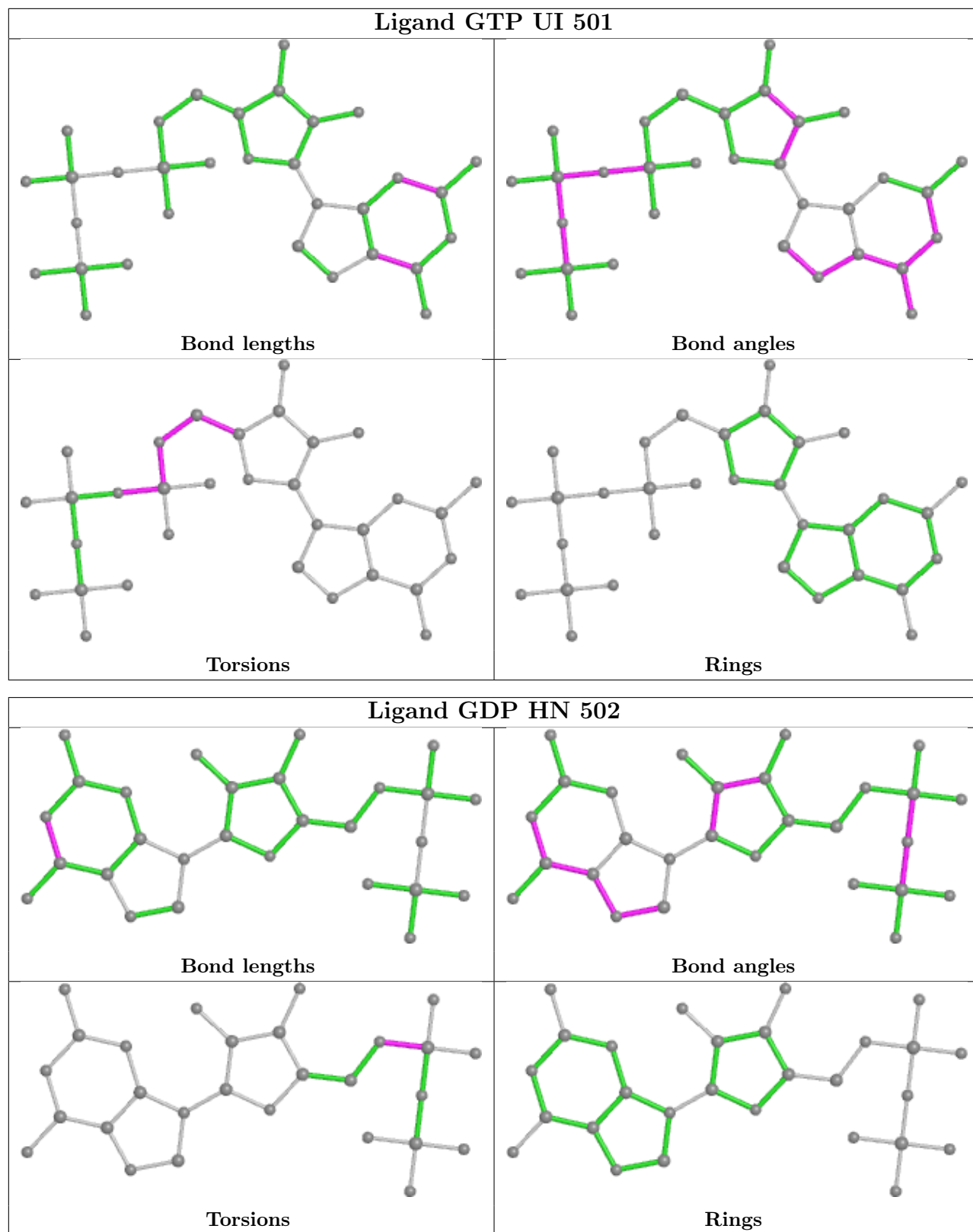


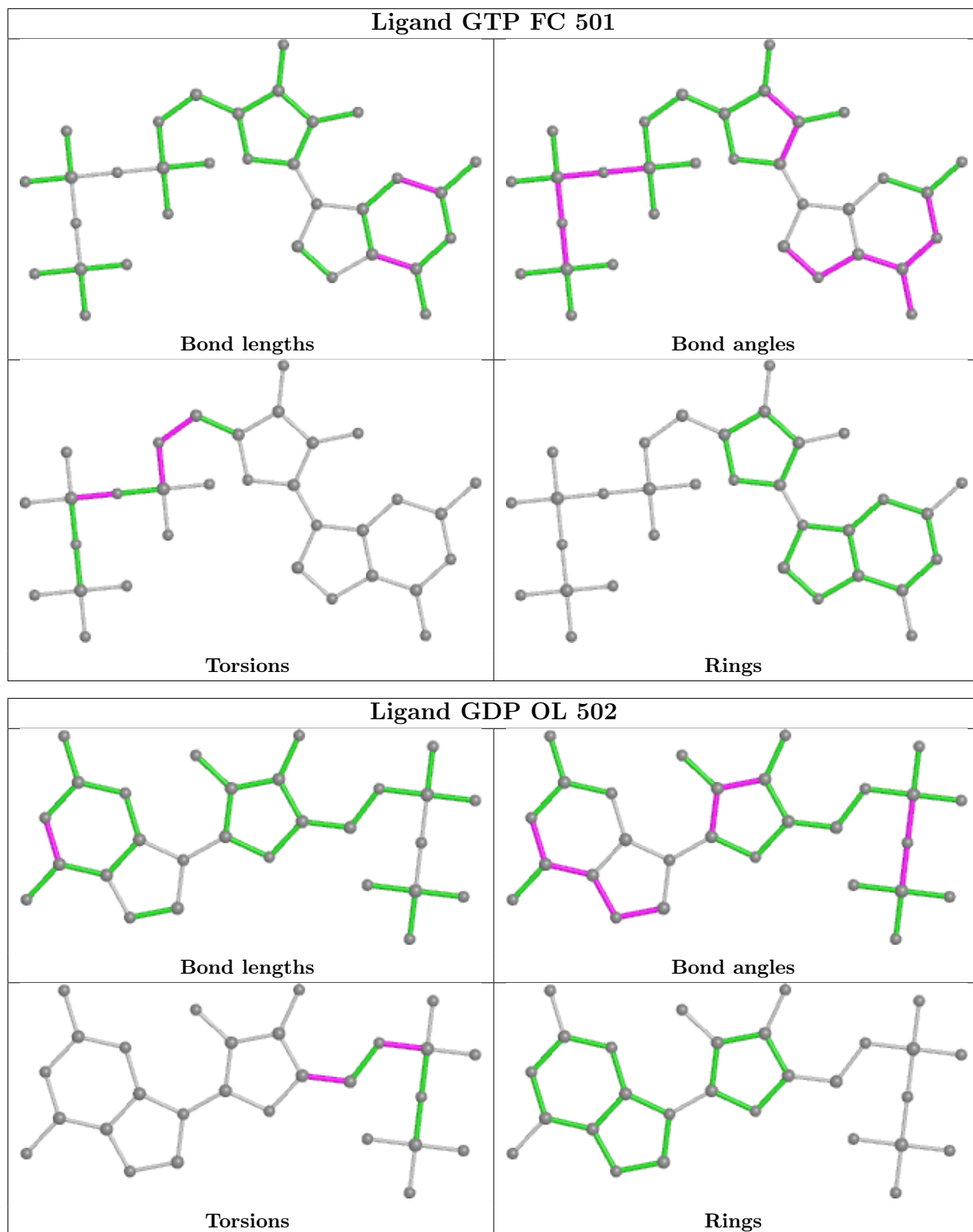


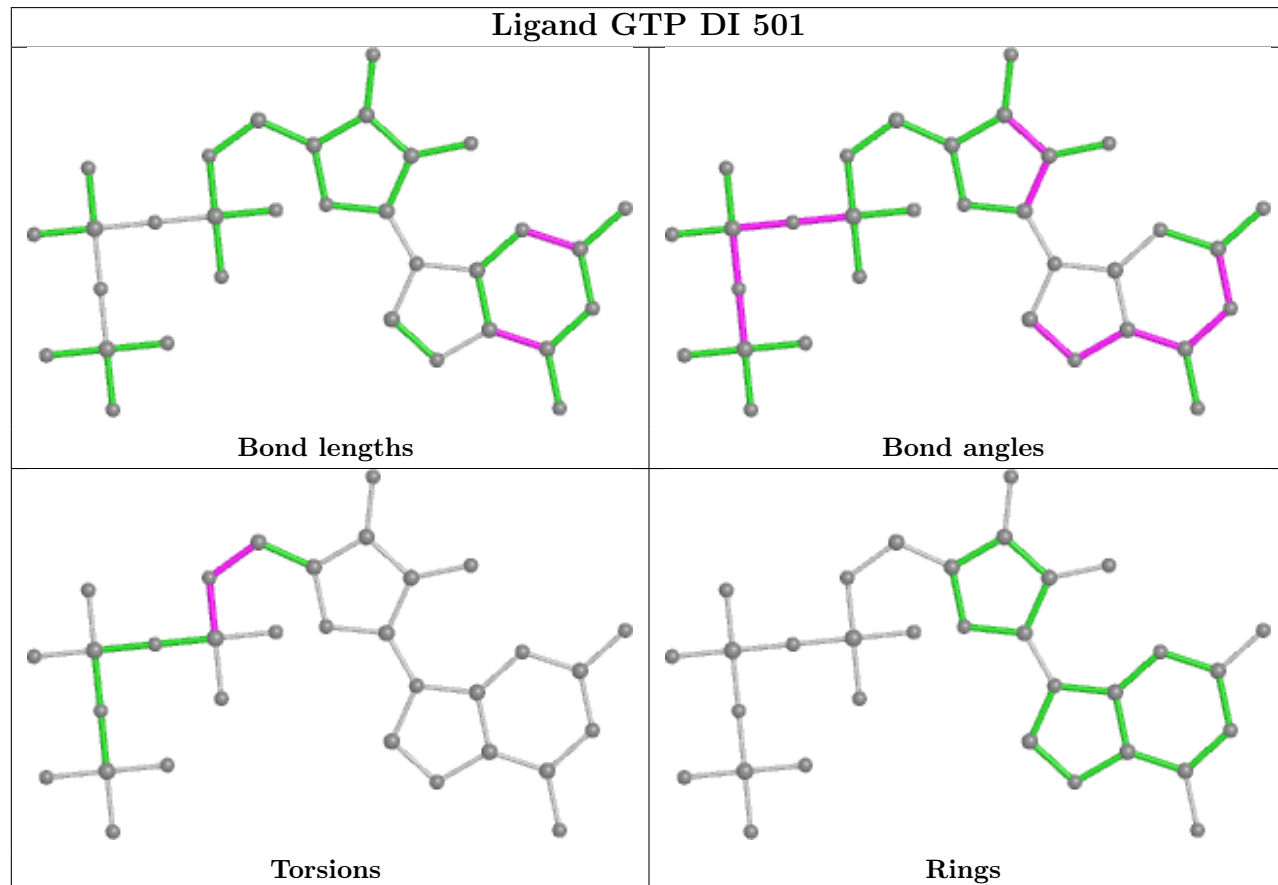
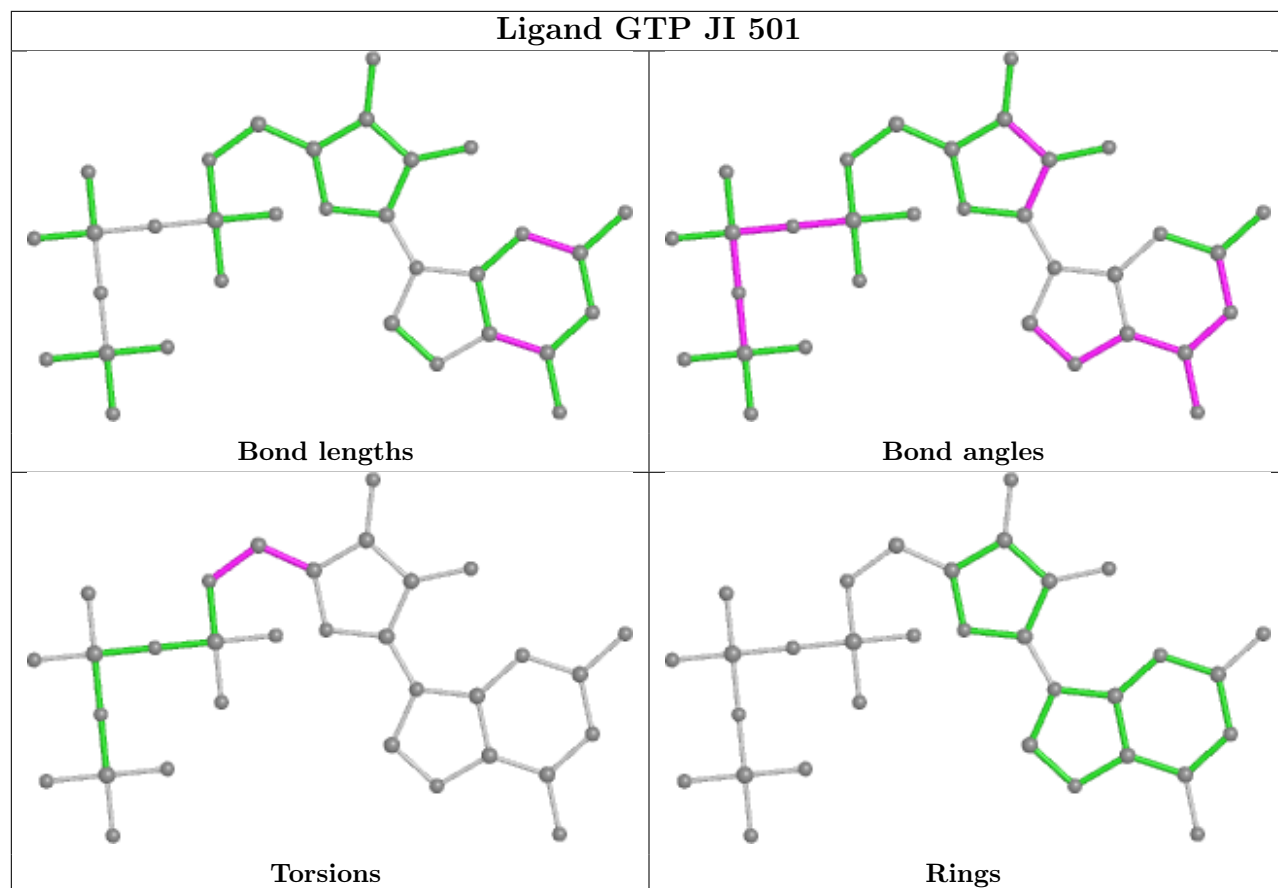












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Map visualisation

This section contains visualisations of the EMDB entry EMD-26624. These allow visual inspection of the internal detail of the map and identification of artifacts.

Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

This section was not generated.

6.2 Central slices

This section was not generated.

6.3 Largest variance slices

This section was not generated.

6.4 Orthogonal surface views

This section was not generated.

6.5 Mask visualisation

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

This section contains the results of statistical analysis of the map.

7.1 Map-value distribution

This section was not generated.

7.2 Volume estimate versus contour level

This section was not generated.

7.3 Rotationally averaged power spectrum

This section was not generated. The rotationally averaged power spectrum had issues being displayed.

8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit

This section was not generated.