# Supplementary Material

# The use of carbonyl group anisotropy effect in determination of the relative configuration of carbapenams

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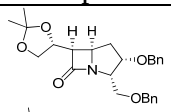
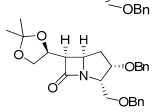
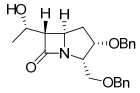
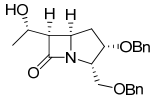
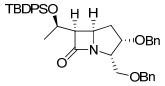
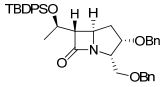
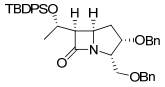
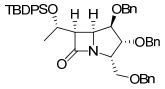
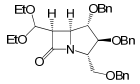
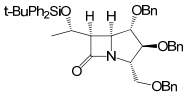
**Dedicated to Prof. Pierre Vogel on the occasion of his 70th anniversary**

**Table 2.** ***continuation.*** Selected chemical shifts (in ppm) of other carbapenam

| Entry | Carbapenam | **H-2** | $CH_2$-OBn | **H-2 to H-5** |
|---|---|---|---|---|
| 16 |  | 4.03 | 3.62- 3.68 | *anti* |
| 17 |  | 4.08 | 3.63-3.65 | *anti* |
| 18 |  | 3.90 | 3.55–3.61, 3.65 | *anti* |
| 19 |  | 4.00 | 3.60, 3.65-3.70 | *anti* |
| 20 |  | 3.99 | 3.61, 3.67 | *anti* |
| 21 |  | 4.03 | 3.55, 3.62 | *anti* |
| 22 |  | 3.90 | 3.57, 3.64 | *anti* |
| 23 |  | 3.84 | 3.60-3.62 | *anti* |
| 24 |  | 4.52 | 3.34-3.51 | *anti* |
| 25 |  | 4.42 | 3.32, 3.39-3.44 | *anti* |

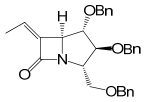
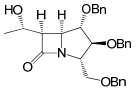
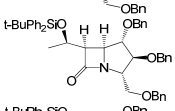
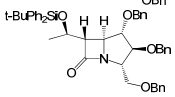
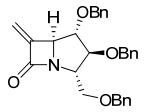
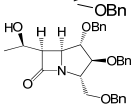
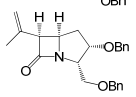
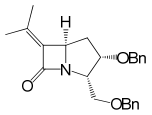
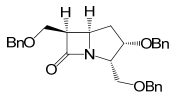
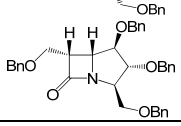
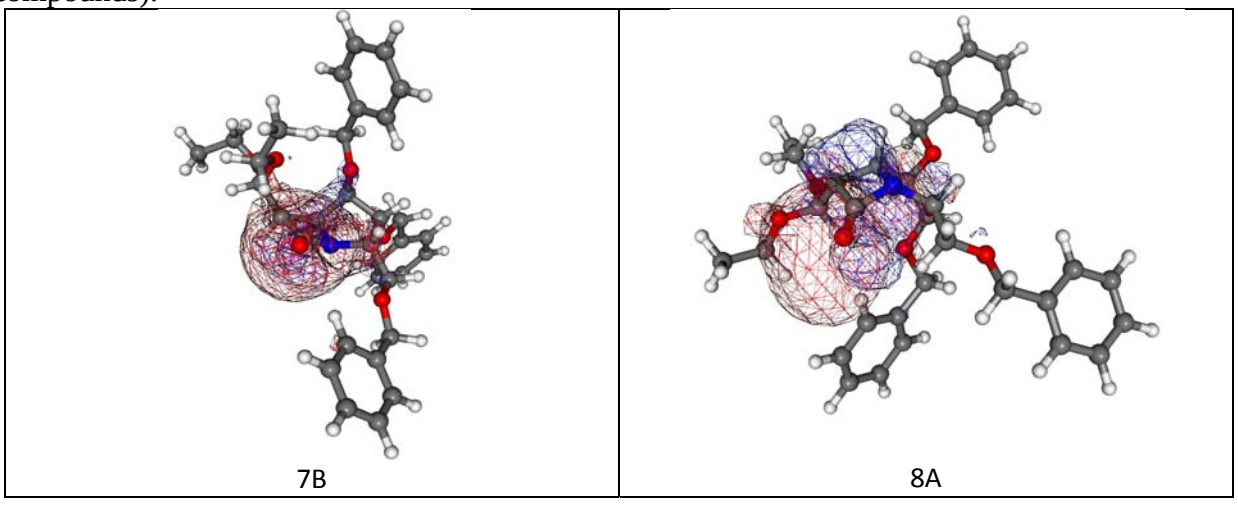
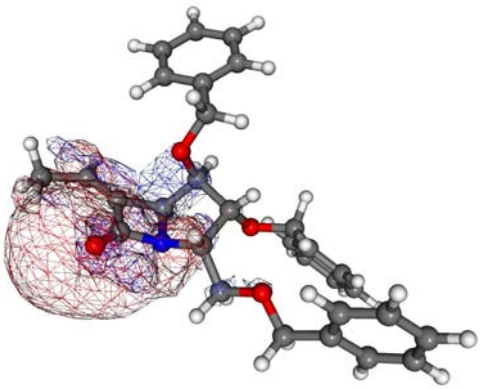
| | | | | |
|---|---|---|---|---|
| 26 |  | 4.30 | 3.49, 3.54 | *anti* |
| 27 |  | 4.22 | 3.45-3.52 | *anti* |
| 28 |  | 4.15 | 3.43-3.49 | *anti* |
| 29 |  | 4.20 | 3.47-3.48 | *anti* |
| 30 |  | 4.44 | 3.36, 3.43 | *anti* |
| 31 |  | 4.24 | 3.44-3.51 | *anti* |
| 32 |  | 4.31 | 3.63, 3.67 | *anti* |
| 33 |  | 4.32 | 3.68, 3.72 | *anti* |
| 34 |  | 4.00 | 3.57-3.72 | *anti* |
| 35 |  | 4.35 | 3.30, 3.38 | *anti* |

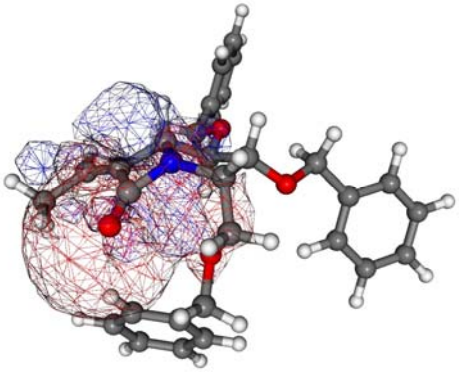
**Figure 4.** ***continuation.*** The iso-chemical shielding surfaces (ICSS); red area represents deshielding and blue area represents shielding regions with cutoff ±0.3 ppm (the NICS matrixes for compounds with ethylene substituents are subtracted from the NICS for carbonyl substituted compounds).



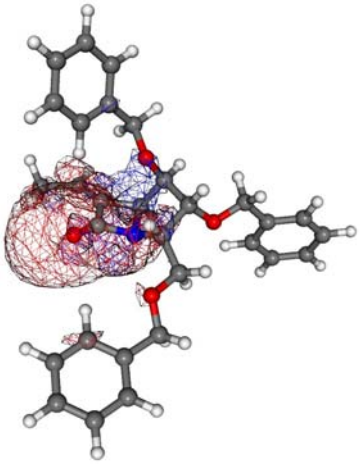

 



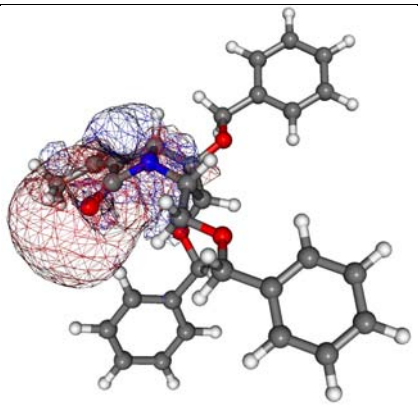
12B



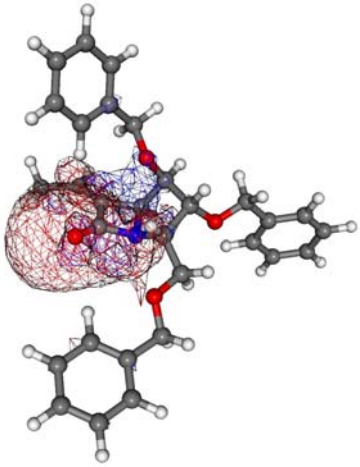
13A



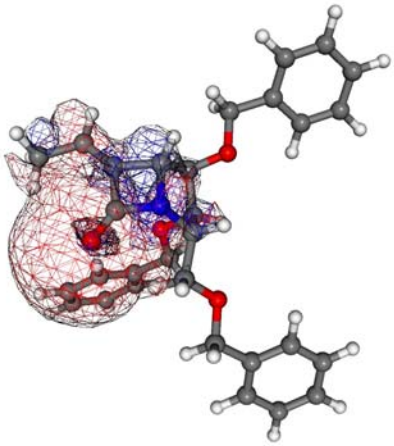
12C



13C



12D



13D