Supplementary Material



Figure S1: overlap of the three methodologies used.

| Table S1: optimization calculations using relativistic and non-relativistic method | s for platinum |
|--|----------------|
| atom. | |

| Bond lengths (Å) | Lanl2dz | aug-cc-pVTZ-pp | Zora-Def2-TZVP |
|-----------------------------|---------|----------------|----------------|
| Pt – Cl | 2.317 | 2.304 | 2.303 |
| Pt – Cl | 2.318 | 2.305 | 2.305 |
| Pt – N | 2.047 | 2.037 | 2.034 |
| Pt – N | 2.099 | 2.093 | 2.097 |
| Bond angle (^o) | Lanl2dz | aug-cc-pVTZ-pp | Zora-Def2-TZVP |
| Cl – Pt – Cl | 93.979 | 93.649 | 93.746 |
| N – Pt – Cl | 94.689 | 94.754 | 94.613 |
| N – Pt – Cl | 89.230 | 89.410 | 89.533 |
| N – Pt – N | 82.031 | 82.191 | 82.121 |

We performed optimization calculations for platinum complexes using three different methods to validate the optimization step. Based on this, the same calculations were carried out at the B3LYP/Lanl2dz, B3LYP/ aug-cc-pVTZ-pp and Zora-B3LYP/Def2-TZVP level, which is a relativistic method.

In this line, it is possible to see that when comparing the results for methodology using Lanl2dz and aug-cc-pVTZ-pp were similar to Zora-Def2-TZVP results.