

Electronic Supplementary Information

Phosphorus-based Ligand Effects on the Structure and Radical Scavenging Ability of Molecular Nanoparticles of CeO₂

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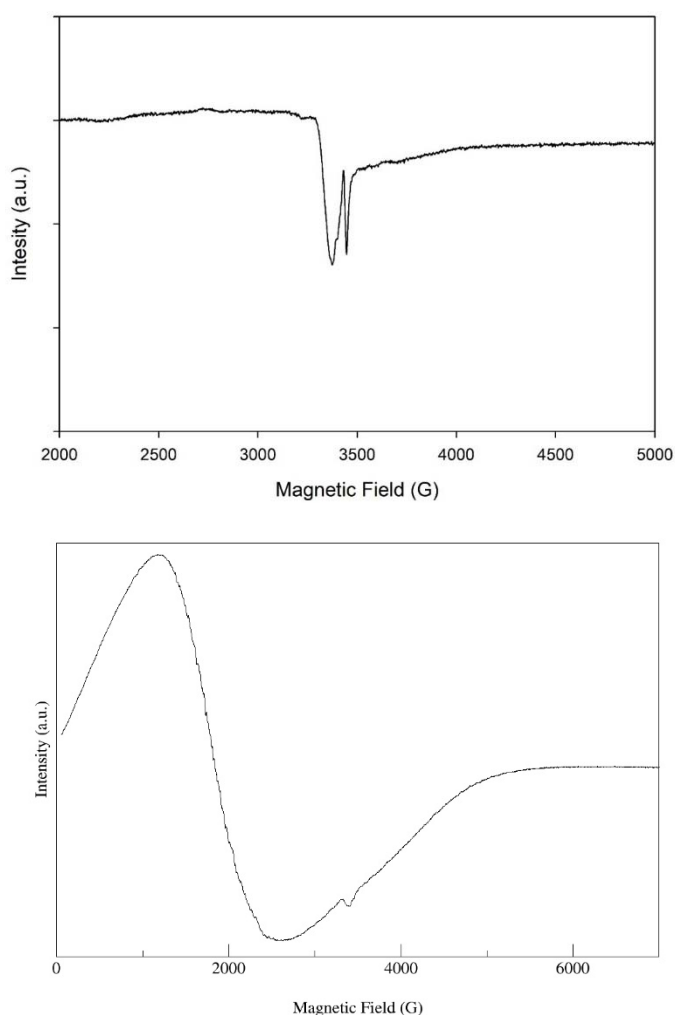


Figure S1. (top) The X-band electron paramagnetic resonance (EPR) spectrum of a microcrystalline powder of $2 \cdot 2py \cdot 2H_2O$ at 5.0 K. The only peak observed is a Cu impurity in the resonator at approx 3500 G, indicating that there are no unpaired electrons from Ce^{III} present in the complex. (bottom) EPR spectrum of cluster Ce_{24a} as a microcrystalline powder at 5.0 K. The Cu impurity present in the resonator is the weak signal at ~3500 G.

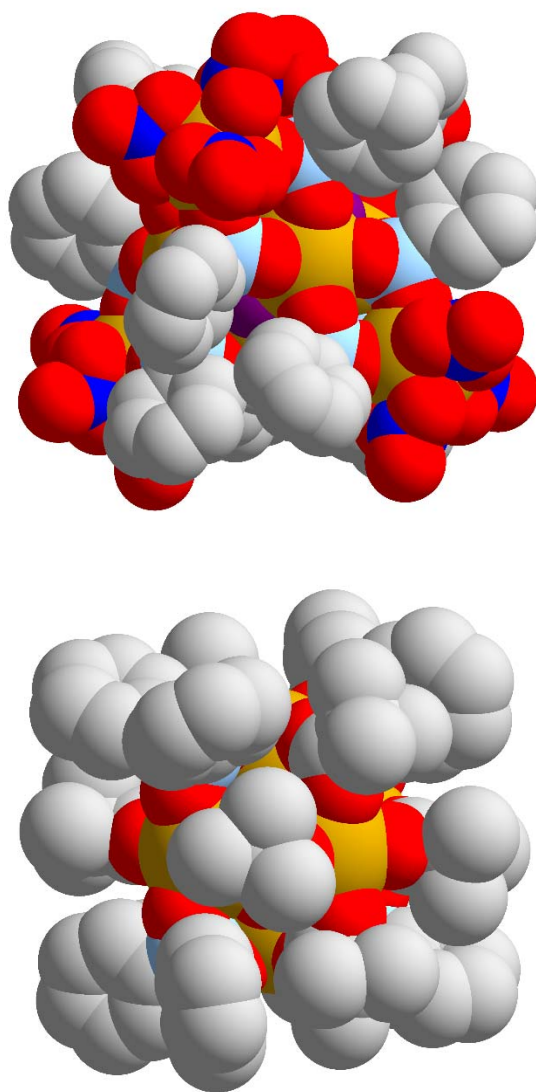


Figure S2. The structures of the anion of **1** (top) and **2** (bottom) in space-filling mode, showing that access by hydroxyl radicals to the surface is not prevented and thus cannot be the explanation for the poor radical scavenging ability of these complexes. Color code: Ce^{IV} gold, O red, OH purple, N dark blue, P light blue and C grey. H atoms have been omitted for clarity.