

Supramolecular Adventures with Platinum

The coordination chemistry of platinum has been extensively investigated, especially for cancer therapy and catalysis. Platinum readily reacts with phenylpyridine-based pro-ligands to form organometallic complexes of Pt(II) and Pt(IV). We recently discovered that bis(phenylpyridine)platinum(III) complexes form new species whose optical properties are strongly affected by metal-metal interactions in solution and in the solid state. Furthermore, these molecules can undergo reversible intermetallic bonding, opening new opportunities in supramolecular chemistry. In this presentation, I will discuss our recent studies of these platinum-containing molecules for potential use in sensing, displays, and ion separation.