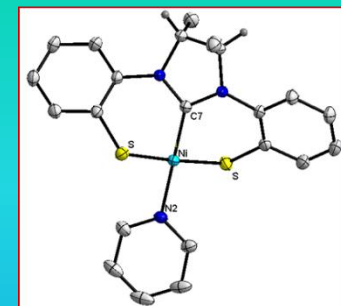


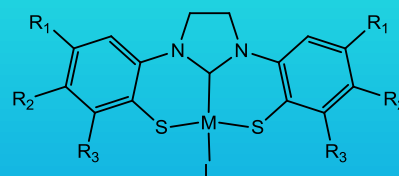
Synthesis of N-Heterocyclic Carbene-Dithiolate Pincer Ligands and their Transition Metal Complexes: Investigation of Reactivity and Ligand Redox Behavior

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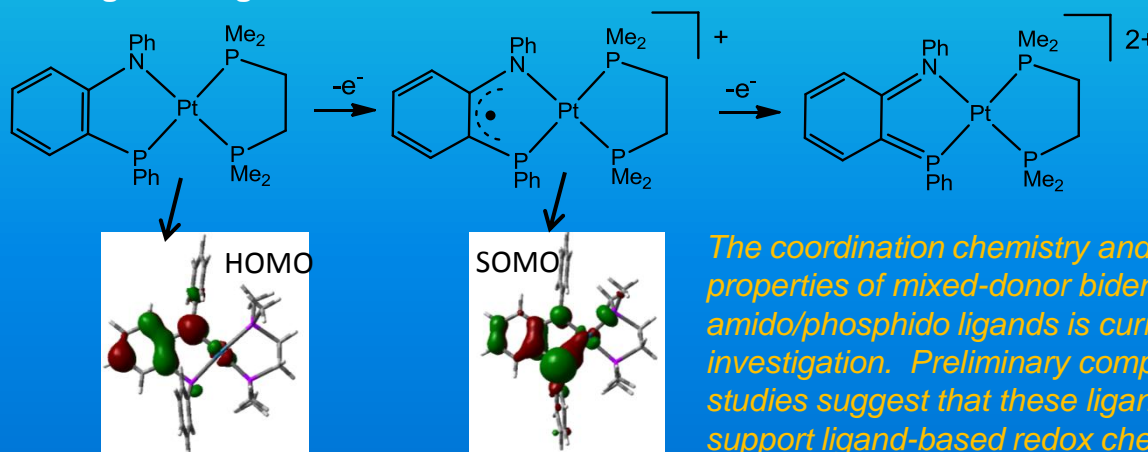
Pincer ligands containing a central N-heterocyclic carbene donor and two pendant thiolate arms have been targeted and their coordination chemistry explored. Thus far, the only route to their synthesis is via a on-pot method in which the central carbene carbon and transition metal are incorporated in the same step. This method works well for Group 10 metals (Ni, Pd, Pt) but expansion of the series to other transition metals has proven difficult.



Cyclic voltammetry of Group 10 NHC-dithiolate complexes reveals little evidence for ligand-based redox chemistry



New Ligand Target:



The coordination chemistry and redox properties of mixed-donor bidentate amido/phosphido ligands is currently under investigation. Preliminary computational studies suggest that these ligands will support ligand-based redox chemistry.

