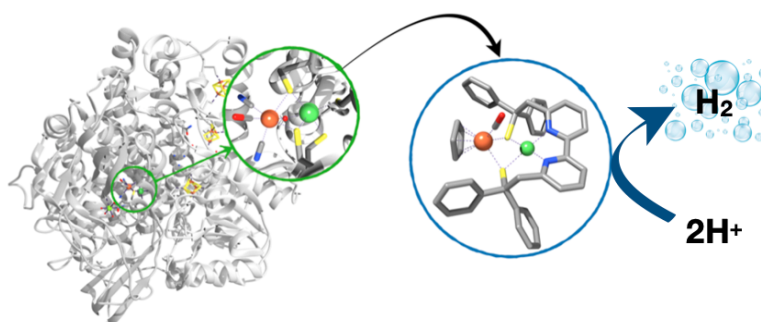


Bio-inspired complexes with metal-thiolate bonds for small molecule activation

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The activation of small molecules in multi-electron catalysis usually requires the presence of a metal. To develop bio-inspired catalysts, we have focused on complexes with thiolate ligands. This type of complex is widely present in the active site of enzymes that catalyze redox reactions of major interest in the context of the current energy challenges that chemists must face. For example, we can cite the hydrogenases which reversibly reduce protons to generate H₂ (see Figure). In this context, we have isolated and characterized a series of bio-inspired complexes to develop catalysts for the production of H₂ and the reduction of O₂ or CO₂.^[2]



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