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Major: Chemistry

Co-presenter(s):

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Presentation Type: Poster Presentation

Project Title: Cobalt Complexes for Reduction of Nitrogen Oxides

Synopsis: To investigate the reduction of NOx gas to N2 through synthesis of new metal complexes.

Abstract: Carbon dioxide (CO2) is oftentimes a focus for pollution remediation, however lesser known pollutants such as nitrogen oxides (NOx), containing a nitrogen atom and any number of oxygen atoms, pose a similar threat. NOx species are formed through combustion reactions and can react with organic compounds to form ozone. Conversion of NOx species to less harmful inert gasses occurs in nature, but at an unfavorable rate that does not diminish atmospheric levels to a safe minimum. This work aims to synthesize new cobalt complexes with the capability to react with NOx species. These transition metal complexes may offer insights towards the biological cycle by characterization of potential intermediates. Long term goals include utilizing the metal complexes to transform NOx species in chemical conversions.