Virtual Thesis Defense in Chemistry

Wednesday, August 12, 2020 at 2:00pm
Email mdf2105@columbia.edu to request zoom link

Investigation of Bridgehead Atom Manipulation in Traditionally Boron-Centered Tripodal Ligands

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The popularity of poly(pyrazolyl)borates in modern coordination chemistry is undoubtedly a result of the many components of the ligand framework that can be readily modified. Of these, the bridgehead atom has been the focus of comparatively few investigations, with synthetic approaches for altering the identity of the bridgehead atom being primarily concerned with the incorporation of carbon. This talk will summarize our efforts to prepare heavier Group 13 congeners and novel dianionic tripodal derivatives, the latter of which have been obtained by the incorporation of magnesium and zinc into the bridgehead. The synthesis, characterization, and reactivity of homodinuclear magnesium and zinc complexes supported by a tris(pyrazolyl) framework, including the first example of an anionic terminal zinc hydride species, will also be detailed.