Trent University
Chemistry/Physics Seminar Series

Synthesis, Characterization, Polymerization, and Applications of Boron Difluoride Formazanate Complexes

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11:00 a.m. to 11:50 a.m.

Science Complex Room 115

Recently, my group has been working to develop the chemistry of formazanates, which are nitrogen-rich analogs of β-diketiminate ligands. In particular, we have found that boron difluoride complexes of these ligands, which can be prepared in two straightforward synthetic steps, exhibit unique and potentially useful redox and light absorbing/emitting properties. These properties can be tuned through variation of the *N*-aryl substituents and have been shown to depend heavily on the extent of π conjugation and the electron donor/acceptor properties associated with the substituents. Our recent progress in this area, including the use of boron difluoride formazanate complexes as fluorescence cell-imaging agents, as efficient electrochemiluminescence emitters, and in the production of high molecular weight polymers will be presented.