Work in the Lambert group has focused on exploiting the properties of aromatic ions, developing chemistry around their unique reactivity. We have previously shown the utility of highly-electron deficient pentacarboxycyclopentadienes (PCCPs) in Brønsted acid catalysis. My talk will cover the development of methods for the synthesis of PCCPs, and how we can access even more stabilized members of this family. We then found the silylated cyclopentadienes were effective Lewis acid catalysts, culminating in the development of a halide activation strategy for alkylation of various nucleophiles with benzylic bromides.