Transition Metal Catalyzed Borylation of C-H and C-X Bonds: Synthesis of Aryl and Alkyl Boronates

Todd B. Marder
Institut für Anorganische Chemie, Universität Würzburg, Germany
E-mail: todd.marder@uni-wuerzburg.de

Arylboronate esters are of great importance in synthesis, as substrates for Suzuki-Miyaura coupling, conjugate additions, and conversion to many functional groups. New routes to arylboronates include Pd or Ni-catalyzed cross-coupling reactions of alkoxydiboron or alkoxyborane reagents with aryl halides, and more recently, the selective iridium catalyzed C-H-borylation of aromatic substrates. The lecture will present some of our work on the Ir-catalyzed borylation of aromatic C-H bonds, applications (e.g., to pyrene chemistry) and issues affecting selectivity, and our recent development of inexpensive Cu and Zn-catalysts for the borylation of aryl- as well as alkyl halides.