グローバル COE 物質科学イノベーション講演会

演 題：**Using Theory and Experiment to Understand Mechanisms of C–H Borylation**

講 師：**Prof. Milton R. Smith III**

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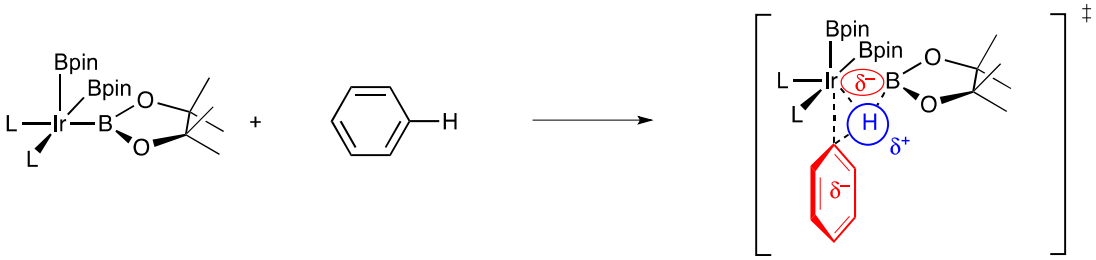
場 所：理学部 7 号館 3 階 7-310 室

要 旨：Chemists have sought methods for functionalizing sp^2-C–H bonds that complement Electrophilic Aromatic Substitutions. Building from the first thermal, catalytic coupling of a borane and a hydrocarbon, our research group, and others, have developed highly active iridium catalysts that exhibit unique regioselectivities for arene substitution and remarkable chemoselectivity for C–H functionalization. For example, sp^2-C–X bonds (X = Cl, Br, and I) that are commonly cleaved in reactions with late transition metal complexes are typically inert to the Ir catalysts. Consequently, these substrates typically give C–H borylated products.



The combination of theory and experiment have provided a working model for the mechanism of C–H borylation. Previously unappreciated electronic effects of this reaction will be described and practical applications in C–H functionalization will be presented.

本講演は『化学研究先端講義／総合化学特別研究第二』の一部として認定されています

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