

EI-ICHI NEGISHI

Lecture

“New Avenues in Synthesis via Organic Photoredox Catalysis”

Tuesday, November 12, 2024
4:30 PM, WTHR 104



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Abstract:

Single electron pathways are common in the biological realm and are integral to photosynthesis and physiological processes in humans. As synthetic chemists, we seek to harness the power of single electron mediated pathways to more efficiently make the pharmaceuticals, agrochemicals and materials that the modern world requires. My group seeks to use organic salts as excited state catalysts to mediate single electron processes in the development of new chemical transformations. This lecture will give a brief background to organic photoredox catalysis and cover some of the reactivity from my group including functional group interconversion to bioisosteres, organic photoredox catalysis enabling the total synthesis of several members of the stemona alkaloid family of natural products and applications to C-11 and F-18 radiolabeling reactions.