

Seminar

9:45 a.m. Thursday, April 23, 2015 • 331 Smith Hall



Assistant Professor

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C–C and C–H Functionalization Based on Common Functional Groups

Research focuses on developing new transition metal catalysts based on supramolecular chemistry for chemoselective C-H bond activation of small molecules; developing novel catalytic C-H and C-C bond activation methods for efficient small-molecule agents synthesis; establishing efficient synthetic routes to access natural products with high potent anticancer activity and their unnatural analogues; and evaluating *in vitro* and *in vivo* efficacy of rationally designed natural product analogues and understanding the origins of the selectivity in the cell-killing process.

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Abstract

C-H and C-C bonds are the most abundant bonds in majority of organic compounds. Selective functionalization of C-C and C-H bonds would lead to efficient synthesis but of significant challenges. We have been focusing on a “cut and sew” strategy to synthesize bridged and fused rings by utilizing metal-catalyzed C-C bond activation. We have also been working on a number of ketone and alcohol-based site-selective C-H functionalizations for preparing useful building blocks.

Host: Professor Christopher Douglas
Refreshments will be served prior to the seminar.