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Houk-Jung Organic Colloquium

Selective Functionalization of Pyridines, Diazines and Pharmaceuticals via Unconventional Intermediates

Abstract: Pyridines and diazines are ubiquitous in pharmaceuticals and agrochemicals, yet there are limits in synthetic methods that can directly functionalize the C–H bonds in these structures. We will show two distinct approaches, using phosphorus and ring-opened intermediates, that enable selective functionalization of these heterocycles into a range of valuable derivatives. A range of C–C and C–Heteroatom bond formations are viable, and the chemistry is applicable on structures typically encountered in drug discovery programs. Our lab has also performed mechanistic and computational studies of the regioselectivity of these reactions and phosphorus the ligand- coupling processes involved.

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Thursday, April 21, 2022
4:00 PM | CS 24 & Via Zoom