



Chemistry Colloquium

Expanding the accessible chemical space by utilizing traditional organic chemistry, small transition-metal catalysts, and enzymes

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Modern advancements in various fields, such as medicine, agriculture, and material sciences, rely on the synthesis and application of organic compounds. Continuous efforts to improve synthetic routes for efficiently accessing these targeted products stem from the development of innovative methodologies to construct and modify chemical scaffolds. Significant progress in organic synthesis has recently enabled the selective functionalization of the periphery and the remodeling of molecular skeletons. In this talk, diverse synthetic methods, spanning traditional organic chemistry, transition-metal catalysis, and biocatalysis are presented. The complementarity of these strategies facilitates the implementation of efficient syntheses to generate compounds for their application in various areas of chemical space. Advancements in ring expansion reactions mediated by the insertion of a nitrogen atom into carbocyclic cores are showcased, facilitating the construction of highly desirable N-heterocycles. Additionally, functionalization reactions catalyzed by nickel-based small molecular catalysts or engineered biocatalysts are demonstrated as useful tools due to their unique capability for selectively introducing functional handles. Overall, the versatility of these methods enables unique synthetic pathways that include diverse opportunities for the field of organic chemistry.

Thursday, August 8, 2024 03:30pm - 04:30pm

Sunstone Bldg / Ground floor / Big Seminar Room B / 63 seats (I23.EG.102)



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

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