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 onthe synthesis and application of organic compounds. Continuous efforts to improve synthetic routesfor efficiently accessing these targeted products stem from the development of innovativemethodologies to construct and modify chemical scaffolds. Significant progress in organic synthesishas recently enabled the selective functionalization of the periphery and the remodeling of molecularskeletons. In this talk, diverse synthetic methods, spanning traditional organic chemistry, transition-metal catalysis, and biocatalysis are presented. The complementarity of these strategies facilitates theimplementation of efficient syntheses to generate compounds for their application in various areas ofchemical space. Advancements in ring expansion reactions mediated by the insertion of a nitrogenatom into carbocyclic cores are showcased, facilitating the construction of highly desirable N-heterocycles. Additionally, functionalization reactions catalyzed by nickel-based small molecularcatalysts or engineered biocatalysts are demonstrated as useful tools due to their unique capability forselectively introducing functional handles. Overall, the versatility of these methods enables uniquesynthetic 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)

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