

Einladung

Im Rahmen der gemeinsamen Kolloquien der Fakultät für Chemie und Chemische Biologie der Technischen Universität Dortmund hält

Herr Prof. Dr. Sandip Murarka

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einen Vortrag mit dem Thema:

Unlocking Chemical Space via Strategic Assembly and Selective C–H Functionalization

The robust, predictable, and selective synthetic methodologies equip chemists with the tools and techniques necessary to create diverse molecular architectures, facilitating the discovery of drug-like molecules. In the recent past, our research group has developed a variety of sustainable and efficient synthetic methodologies based on multicomponent reactions, cascade annulations, and C-H functionalization under thermal, photo- and electrochemical conditions to create a library of medicinally relevant compounds. We documented transition-metal-free, one-pot, multi-component reactions providing convenient and efficient access to biologically relevant *S*-aryl dithiocarbamates.¹ Through combined in silico and cellular studies, we established *S*-aryl dithiocarbamates as antiproliferative agents in lung, cervical and breast cancer cells, and the lead compounds demonstrated efficacy in the low micromolar range. We are actively developing a variety of visible-light-induced, complexity-enhancing radical cascade annulations that enable the synthesis of biologically relevant nitrogen heterocycles.² Our group has developed photoinduced site-selective methods for the direct Csp²-H alkylation and arylation of azauracils and other biologically relevant heterocycles under amenable conditions.³ More recently, we have developed photoinduced strategies for the direct and site-selective C(sp³)-H arylation and alkylation of glycine derivatives and peptides.⁴ These methodologies provide a versatile and mechanistically informed platform for precision molecular editing of peptides, opening new opportunities for late-stage diversification in drug discovery and chemical biology.

References

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Zeit: Dienstag, 26.05.2026, um 17.15 Uhr

Ort: Hörsaal 1, Chemiegebäude, Campus Nord

Im Anschluss an den Vortrag findet eine Nachsitzung statt.

Für die Dozenten der Chemie
Im Auftrag des Dekans

Betreuer: Prof. Dr. M. Hansmann