

UniSysCat Colloquium

Prof. Dr. Wolfgang Kroutil

University of Graz

Start Time: Wednesday, October 28, 2020 05:00 pm

End Time: Wednesday, October 28, 2020 06:00 pm

Online Meeting
Technical University of Berlin

Extending the biocatalytic reaction and cascade repertoire for organic synthesis

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Using biocatalysts in organic synthesis is a continuously increasing field. We contributed to the field by developing e.g. a formal reductive amination of ketones, enabling e.g. regio- and stereoselective amination of di-ketones and improved the reaction sequence by substituting chemical reactions with biocatalytic ones.

The biocatalytic reaction toolbox was further extended e.g. by a biocatalytic Friedel-Crafts like reaction, giving for the acylation of catechols alternative protocols. Furthermore, the biocatalytic Pictet-Spengler reaction of tryptamine and aldehyde enables a C-C bond formation leading to chiral amines, namely beta-carbolines allowing the shortest synthesis of (R)-harmicine.

Oximes have not been reported at all to be reduced by a defined single enzyme. We were just recently able to identify en-reductases as suitable catalyst for the asymmetric reduction of activated oximes.

This colloquium will take place online. More information coming soon.

Prof. Neubauer

Organizer