Das **Institut für Biochemie** lädt gemeinsam mit dem Ortsverband der **Gesellschaft Deutscher Chemiker** zu einem

K o l l o q u i u m der GDCh

Großer Hörsaal des Instituts für Biochemie
Felix-Hausdorff-Str. 4, Greifswald

Montag, 27. Januar 2020, 16 Uhr c.t.

Dr. Stephan Hammer

Emmy Noether Forschungsgruppenleiter,
Institut für Biochemie und Technische Biochemie,
Universität Stuttgart

spricht zum Thema:

New catalytic reaction development by directed enzyme evolution

Abstract:

In recent years, enzyme engineering has evolved from engineering native enzyme function to a field that develops new enzymes for abiological chemical transformations. A fascinating question in this nascent research area is: What can be imparted by a protein that cannot be readily achieved with a small molecule catalyst? We believe that enzyme engineering provides access to completely new catalytic cycles beyond the reach of classical catalysts (e.g. small molecule and heterogeneous catalysts). This is based on the macromolecular structure of proteins that provides multiple precise catalyst-substrate interactions to tightly control substrate conformations, transition states and reaction pathways. The talk will focus on the laboratory evolution, mechanism and application of enzymes for anti-Markovnikov alkene oxidation, a challenging oxidation reaction that has largely eluded efficient catalysis.

Einladender
Prof. Dr. Uwe Bornscheuer

PD Dr. Heike Kahlert
Vorsitzende des Ortsverbandes der GDCh