



南京大学高济宇有机化学前沿讲座

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题目: **Chiral Brønsted acids: What can be gained from multifunctional systems for chemosensing and organocatalysis?**

报告人: **Prof. Jochen Niemeyer**
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地点: 仙林化学楼 G211

时间: 2019年5月27号 (星期一) 上午10:00

联系人: 王乐勇 教授 强琚莉 副教授



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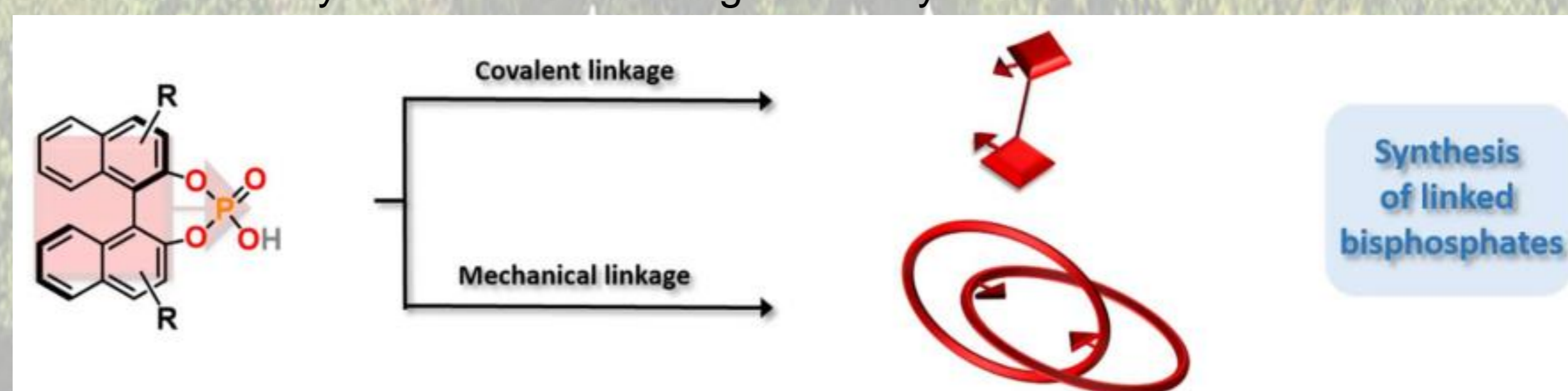
Scientific Career:

Dr. Jochen Niemeyer obtained his Ph.D. in organic chemistry from the University of Münster (Germany) with Prof. Gerhard Erker in 2009. After postdoctoral research with Prof. Simon Aldridge in the University of Oxford, he joined Evonik Industries AG as Laboratory Head Research & Development in 2011. Since 2014, he became a young group leader of the Institute of Organic Chemistry, University of Duisburg-Essen (UDE) and worked with Prof. Carsten Schmuck. Dr. Jochen Niemeyer has authored or coauthored over 30 research publications such as *Angew. Chem. Int. Ed.*, *Chem. Eur. J.*, *Chem. Commun.*, *J. Org. Chem.* et al. He has obtained the Thieme Chemistry Journal Award and the Teaching Award of the Faculty of Chemistry at the University of Duisburg-Essen. He was appointed as the member of the Centre for Medical Biotechnology (ZMB) (since 2017) and the member of the Centre for Nanointegration Duisburg-Essen (CENIDE) (since 2016). His research interests focus on Organic Chemistry, Supramolecular Chemistry, and DNA-Based systems with applications in Catalysis and Chemosensing.

Group Web: https://www.uni-due.de/akschmuck/jochen_niemeyer_home.php

Lecture abstract:

We focus on the development of bi- and polyfunctional covalently linked and mechanically interlocked frameworks based on chiral Brønsted acids by using different strategies. For example, we have developed a novel [2]catenane featuring two chiral 1,1'-binaphthyl-phosphoric acids. This catenane was successfully used as a receptor for chiral diamine-guests and is the first example for a chiral catenane-based catalyst. Moreover, we have generated a series of rigidly tethered bis-phosphoric acids, realizing that the nature of the tether has a profound influence on their properties, which can be used for the chemoselective detection of ferric ions. Recently, we have also used these systems for the binding and array-based detection of amino-acids.



Selected publications:

1. R. Mitra, M. Thiele, F. Octa-Smolín, M. C. Letzel, J. Niemeyer. *Chem. Commun.* **2016**, 5977-5980.
2. R. Mitra, H. Zhu, S. Grimme, J. Niemeyer. *Angew. Chem. Int. Ed.* **2017**, 56, 11456-11459.
3. F. Octa-Smolín, J. Niemeyer. *Chem. Eur. J.* **2018**, 24, 16506-16510.
4. M. Kohlhaas, M. Zähres, C. Mayer, M. Engeser, C. Merten, J. Niemeyer. *Chem. Commun.* **2019**, 3298-3301.

欢迎参加!

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