

# ROCCAT II – Münster 2019

## Rising Organic Chemists in **CAT**alysis

Friday the 5th of July 2019

Lecture Hall O1, Organisch-Chemisches Institut, Westfälische Wilhelms-Universität Münster

- 13:30** **Congyang Wang** Institute of Chemistry, CAS  
*Manganese Organometallic Catalysis*
- Tatiana Besset** COBRA laboratory, Rouen University  
*Recent Advances to Original Fluorinated Molecules*
- Xavier Bugaut** Aix-Marseille Université  
*Synthesis of atropisomers:  
when organocatalysis meets conversion of chirality*
- 15:00** **Coffee Break**
- 15:30** **Zhuangzhi Shi** Nanjing University  
*P(III)-directed C-H bond activation*
- Frederic W. Patureau** RWTH Aachen  
*Development of direct dehydrogenative couplings towards  
new organic structures and materials*
- Joanna Wencel-Delord** Université de Strasbourg  
*Different approaches for the functionalization of C-H bonds*
- 17:00** **Coffee Break**
- 17:15** **Akkattu T. Biju** Indian Institute of Science, Bangalore  
*Molecular Rearrangements Involving Aryne Intermediates*

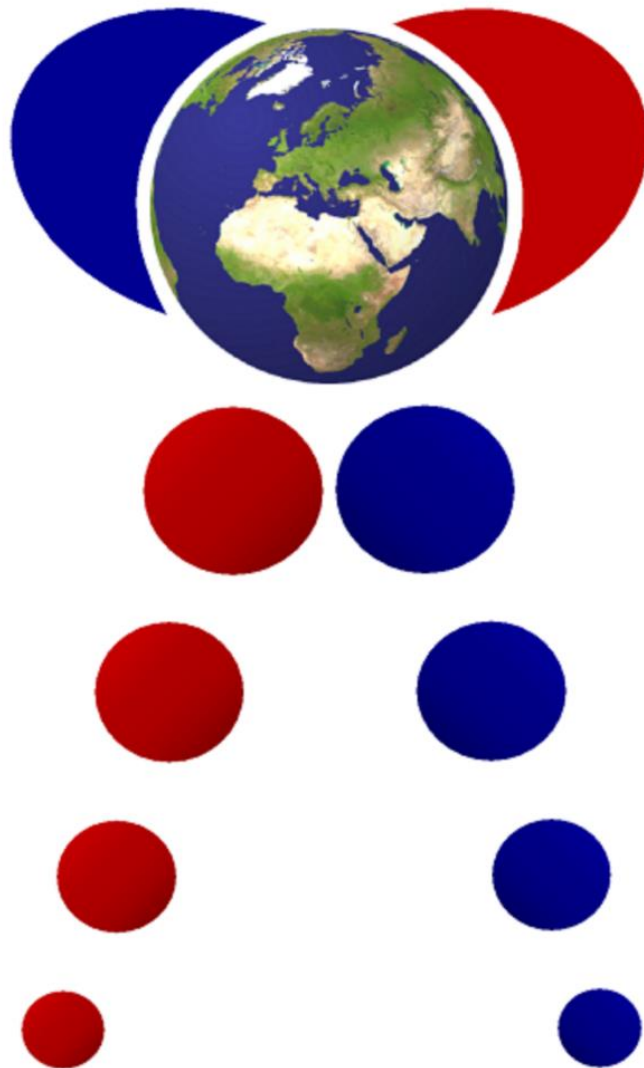
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Organization: Svenja Röwer, Manuel van Gemmeren, Olga Garcia Mancheño, Frank Glorius

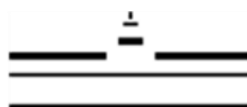


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## Münster 2019



5<sup>th</sup> July 2019  
Münster/Germany



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### Congyang Wang

Institute of Chemistry, Chinese Academy of Sciences

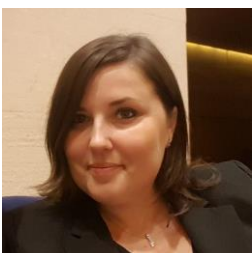
**Research Interests:** Manganese-Group Metal Catalysis.

**Selected key publications:**

*Manganese-Catalyzed Aromatic C-H Alkenylation with Terminal Alkynes*, *J. Am. Chem. Soc.* **2013**, 135, 1264.

*Manganese-Catalyzed Dehydrogenative [4+2] Annulation of N-H Imines and Alkynes by C-H/N-H Activation*, *Angew. Chem., Int. Ed.* **2014**, 53, 4950.

*Manganese-Catalyzed Direct Nucleophilic C(sp<sup>2</sup>)-H Addition to Aldehydes and Nitriles*, *Angew. Chem., Int. Ed.* **2015**, 54, 13659.



### Tatiana BESSET

COBRA laboratory, Rouen University

**Research Interests:** Organofluorine chemistry, transition metal catalyzed C-H bond activation

**Selected key publications:**

*BiCl<sub>3</sub>-Mediated Direct Functionalization of Unsaturated C-C Bonds with an Electrophilic SCF<sub>2</sub>PO(OEt)<sub>2</sub> Reagent*, *Chem. Commun.* **2019**, accepted articles.

*Pd-Catalyzed Diastereoselective Trifluoromethylthiolation of functionalized Acrylamides*, *Org. Lett.* **2017**, 19, 5106.

*An Electrophilic Reagent for the Direct Introduction of the SCF<sub>2</sub>PO(OEt)<sub>2</sub> Group onto Molecules*, *Angew. Chem. Int. Ed.* **2016**, 55, 13490.



### Xavier Bugaut

Aix-Marseille Université

**Research Interests:** enantioselective organocatalysis, multicomponent reactions, axial chirality, halogen bonding, dearomatization, synthesis of natural and bioactive compounds.

**Selected key publications:**

*Combining Organocatalysis with Central-to-Axial Chirality Conversion: Atroposelective Hantzsch-Type Synthesis of 4-Arylpyridines*, *Angew. Chem. Int. Ed.* **2016**, 55, 1401.

*Organocatalytic Enantio- and Diastereoselective Conjugate Addition to Nitroolefins: When  $\beta$ -Ketoamides Surpass  $\beta$ -Ketoesters*, *Chem. Eur. J.* **2014**, 20, 8458.

*Enantioselective Organocatalytic Multicomponent Synthesis of 2,6-Diazabicyclo[2.2.2]octanones*, *Angew. Chem. Int. Ed.* **2013**, 52, 14143.



## Zhuangzhi Shi

Nanjing University

**Research Interests:** transition metal-catalyzed organic reactions, inert chemical bond activation, boron chemistry, organic free radicals

**Selected key publications:**

*Highly Tunable Multi-Borylation of gem-Difluoroalkenes via Copper Catalysis, Nat. Catal.* **2018**, 1, 860.

*Bottom-up Construction of  $\pi$ -Extended Arenes by a Palladium-Catalyzed Annulative Dimerization of o-Iodobiphenyl Compounds, Angew. Chem. Int. Ed.* **2018**, 57, 8848.

*Palladium-Catalyzed C–H Arylation of Indoles at the C7-Position, J. Am. Chem. Soc.* **2016**, 138, 495.



## Frederic W. Patureau

RWTH Aachen University

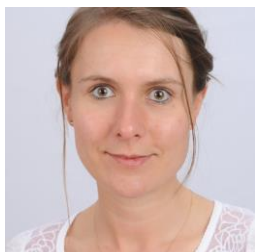
**Research Interests:** C-H bond activations, (radical) cross dehydrogenative couplings, oxidative C-H aminations, fused heterocyclic materials

**Selected key publications:**

*Cu-catalyzed cross-dehydrogenative ortho-aminomethylation of phenols, Angew. Chem. Int. Ed.* **2018**, 57, 11807

*O<sub>2</sub>-mediated dehydrogenative amination of phenols, Angew. Chem. Int. Ed.* **2015**, 54, 4102.

*Ruthenium-Catalyzed Cross-Dehydrogenative ortho-N-Carbazolation of Diarylamines: Versatile Access to Unsymmetrical Diamines, Angew. Chem. Int. Ed.* **2014**, 53, 3505.



## Joanna Wencel-Delord

Laboratoire d'Innovation Moléculaire et Applications, ECPM, UMR 7042, Université de Strasbourg/Université de Haute-Alsace, France

**Research Interests:** Asymmetric C-H activation, Axial chirality, C-N axially chiral compounds, Hypervalent iodine, Photocatalysis

**Selected key publications:**

*Two Stereinduction Events in One C–H Activation Step: A Route towards Terphenyl Ligands with Two Atropisomeric Axes, Angew. Chem. Int. Ed.* **2018**, 57, 4668.

*Asymmetric, Nearly Barrierless C(sp<sup>3</sup>)-H Activation Promoted by Easily-Accessible N-protected Aminosulfoxides as New Chiral ligands, ACS. Catal.* **2019**, 9, 2532.

*Synthesis of Axially Chiral C–N Scaffolds via Asymmetric Coupling with Enantiopure Sulfinyl Iodanes, ACS Catal.* **2018**, 8, 2805.



## Akkattu T. Biju

Indian Institute of Science, Bangalore, India

**Research Interests:** Aryne Chemistry, Asymmetric Catalysis, N-Heterocyclic Carbenes, Heterocyclic Chemistry, Transition-metal-free Reactions, Chemistry of small rings.

**Selected key publications:**

*NHC-Catalyzed Generation of  $\alpha,\beta$ -Unsaturated Acylazoliums for the Synthesis of Heterocycles, Acc. Chem. Res.* **2019**, 52, 425.

*N-Heterocyclic Carbene-Catalyzed Umpolung of Imines, Angew. Chem. Int. Ed.* **2017**, 56, 2730.

*Employing Arynes in Diels-Alder Reactions and Multicomponent Coupling and Arylation Reactions, Acc. Chem. Res.* **2016**, 49, 1658.