

Visit of the UniSysCat and EC²/BIG-NSE Scientific Advisory Board (SAB)

October 12 – 13, 2023

Day / Time	Subject	Participants/	Location
Thursday, Oct 12			TU Berlin, Main building, Straße des 17. Juni 135, 10623 Berlin
9:00 am	Opening speech / short introduction to UniSysCat	Thomas	Н 3005
9:20	Coupling spatially defined active centers	Ray	
9:40	Reducing complexity of biocatalysts	Limberg	
10:00	Collaborative research in heterogenous catalysis at BasCat, the UniCat-BASF JointLab	Rosowski	
10:20	Coffee break		Н 3004
10:50	Spatially defined chemocatalytic centers on surfaces	Roldan Cuenya	H 3005
11:10	Coupled photoelectrochemical systems for the reduction of unsaturated compounds and CO ₂ as energy storage and value-added product	van de Krol	
11:30	Multiscale modeling and experimental validation for the optimization of close proximity tandem catalysis systems	Heß	
11:50	Spotlight technology transfer - The role of CIF & Green <i>CHEM</i> within UniSysCat	Rahmel	
12:10 pm	Lunch break	SAB Members, Hosts, Executive Board Members	H 3003 A















1:30	Manipulating ground-state catalysis with light - from understanding to control + overview on analytical methods in UnisysCat	Horch	H 3005
1:50	Coupling Biocatalysts to Enable nonnatural small-molecule conversions supported by smart materials	Leimkühler	
2:10	Coupling chemio-bio- electrocatalytic refining of lignocellulosic biomass in flow system	Al-Naji	
2:30	Structural evidence for intermediates during O ₂ formation in photosystem II evolution	Hussein	
2:50	Coffee break		Н 3004
3:20	Coupling biocatalysis and chemocatalysis – Chemzymes	Lenz	Н 3005
3:40	Light-supported H ₂ production from waste material using living cells	Nunes Alves	
4:00	Organelle-mediated catalytic systems	Fiedler	
4:20	Theory in UniSysCat	Matera	
4:40	Future of UniSysCat	Mroginski	
5:00	Postersession		H 3004
6:00	End		

















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Friday, Oct 13			TU Berlin Gerhard Ertl Center Marchstraße 6 10587 Berlin
08:45 am	Arrival to Villa Bell		BEL 301
9:00	Presentation of the Einstein Center of Catalysis EC2/BIG- NSE	Dr. J.P. Lonjaret, Managing Director of EC2/BIG-NSE	BEL 301
9:30	Flavin/protein interactions that differently shape the reactivities of the two cofactors in bifurcating Electron Transferring Flavoproteins	María Gonzales Viegas, WS23 batch student	BEL 301
09:50	Additive manufacturing of catalytic systems for CO ₂ utilization	Emiliano Dal Molin, WS20 batch student	BEL 301
10:10	Free discussion between SAB members and EC ² /BIG-NSE students around coffee table		BEL 301
11:00	Final discussion SAB members	SAB Members	BEL 208
12:00 pm	Lunch	<u>Only</u> SAB Members, Speakers, Hosts	BEL 301

















Posters:

Covalent Organic Frameworks as Platform for Coupled (Photo) Catalytic Reactions Arne Thomas

Electrochemical Reduction of Phosphine Oxides Paired with Selective Oxidation: A Systems Approach

Matthias Driess

Photomanipulation of Membrane Models Doped with Azobenzene-Lipid Photoswitches Mina Aleksanyan (AG Dimova)

Engineering Enzyme Active Sites for C-C Bond Formation from CO₂-CO Holger Dobbek

Bifunctional Systems for Transition Metal Catalysed Carbonylation Kallol Ray

Donor-Acceptor Covalent Organic Frameworks for Water Splitting Christopher Penschke (AG Saalfrank)

Construction of a Non-Canonical Amino Acid Labeled [NiFe]-Hydrogenase Production System in Escherichia coli Qin Fan (AG Neubauer)

High-throughput Scale-Down Approach for Improved Production of Regulatory [NiFe]-Hydrogenase in E. coli Francisco De La Fuente Kratzborn (AG Neubauer)

PHA Production From Residues Eike Janesch (AG Junne)

The Magic of Catalysis with Superelectrophiles Martin Oestreich

Bioinspired Copper Catalysts for the Coupling of O₂ Activation to Hydrocarbon Oxidation Christian Limberg

Equal Opportunities and Diversity Claudia Ben Nasrallah, Peter Hildebrandt

Towards a "Critique of Fossil Reason" Benjamin Steininger













