

Online basic lecture program

- EC2/BIG-NSE Initial Phase WS 2021 -

All lectures will be given in **English**. Everyone in UniSysCat welcome to attend!
A "Zoom" link will be sent to potential participants prior to each lecture

Date	Time	Lecturer	Subject basic lecture
Tu. Oct. 05	13:00-15:00	Prof. Thomas (TU)	General presentation of UniSysCat
Mo. Oct. 18	13:00-15:30	Prof. v. de Krol (HZB)	Solar fuels: from materials Chemistry towards devices
Tu. Oct. 19	13:00-15:30	Dr. Trunschke (FHI)	Concepts and challenges with regard to digital catalysis
We. Oct. 20	13:00-15:30	Prof. Ray (HU)	Physical methods in bioinorganic chemistry
Th. Oct. 21	13:00-15:30	Prof. Wendler (UP)	How can Cryo EM help in understanding enzymatic catalysis?
Mo. Oct. 25	13:00-15:30	Prof. Dau (FU)	X-ray absorption spectroscopy and application to electrocatalysis for nonfossil fuels
Tu. Oct. 26	13:00-15:30	Prof. Neubauer (TU)	Introduction of the fed batch technology as the basis for high cell density efficient bioprocesses
We. Oct. 27	13:00-15:30	Prof. Thomas (TU)	Nanostructured catalysts
Mo. Nov. 1	13:00-15:30	Prof. Braun (HU)	Principles in homogeneous catalysis
Tu. Nov. 2	13:00-15:45	1. Prof. Sauer (HU) 2. Prof. Keller (FU)	1. Computational quantum chemistry in heterogeneous catalysis 2. Kinetic models from molecular simulations
We. Nov. 3	13:00-15:30	Prof. Schomäcker (TU)	Fundamentals of chemical reaction engineering I
Th. Nov. 4	13:00-15:30	1. Dr. Nunes Alves (TU) 2. Dr. Matera (FU)	1. Machine learning to predict kinetic rates for protein-ligand binding 2. Foundations of chemical kinetics and the kinetic Monte Carlo method"
Mo. Nov. 8	13:00-15:30	Dr. Lenz (TU)	Enzymatic catalysis
Tu. Nov. 9	13:00-15:30	Prof. Leimkühler (UP)	Structure, function and mechanism of molybdo-flavoenzymes
We. Nov. 10	13:00-15:30	Prof. Schomäcker (TU)	Fundamentals of chemical reaction engineering II
Fr. Nov. 12	14:30-16:30	Prof. Roldan (FHI)	Surface science and x-ray synchrotron methods applied to Nanocatalysis
Mo. Nov. 15	13:00-15:30	Prof. Oestreich (TU)	Catalysis with main-group elements
Tu. Nov. 16	13:00-15:30	Prof. Hess (TU)	Insight into the stability and degradation of heterogeneous and electrocatalysts from ab-initio thermodynamics
Wed. Nov. 17	14:15-16:00	Dr. Schlesiger (TU)	Basics and applications of laboratory-based X-ray absorption fine structure (XAFS) spectroscopy
Th. Nov. 18	13:00-15:30	1. Dr. Zebger (TU) 2. Dr. Horch (FU)	1. Vibrational spectroscopic methods to elucidate (bio)catalytic mechanisms in metalloenzymes I 2. Understanding catalyst dynamics by time-resolved and non-linear vibrational spectroscopy