

**11.01.2022 - SESSION 1**

		05:00 PM in Xi'an, China	<b>OPENING LECTURE</b>	
10:00-10:45 (CET)	Opening Lecture 45 min	03:00 AM in TX and AL, USA, 04:00 AM in FL	<b>Prof. Dr. Hans-Joachim Freund</b>	Investigation of Model Systems for Heterogeneous Catalysis at the Atomic Scale via Surface Science Techniques
			<b>Studying reactions at surfaces</b>	
10:45-11:10	Lecture 1 25 min		Prof. Dr. Haiping Lin	Tuning of catalytic selectivity in on-surface synthesis
11:10-11:35	Lecture 2 25 min		Prof. Dr. Luca Vattuone	Boudouard reaction under graphene cover on Ni(111)
11:35-12:00	Lecture 3 25 min		Dr. María Verónica Ganduglia-Pirovano	Dry Reforming of Methane on a Highly Active Metal-CeO <sub>2</sub> Catalysts: Escaping the tyranny of linear scaling
12:00-12:25	Lecture 4 25 min		Prof. Dr. Martin Sterrer	Charging and metalation of porphyrins on ultrathin oxide films
12:25-13:25			Lunch break	

**11.01.2022 - SESSION 2**

			<b>CreaTec Fischer &amp; Co. GmbH</b>	Scanning probe microscopy products
13:25-13:40	Presentation of modern surface science instruments		<b>Understanding the structure of metal oxide films</b>	
13:40-14:05	Lecture 5 25 min		Prof. Dr. Martin R. Castell	Point and line defect structures in Ti <sub>2</sub> O <sub>3</sub> honeycomb monolayers on Au(111)
14:05-14:30	Lecture 6 25 min		Prof. Dr. Yu Lei	Understanding of the Palladium and Titanium Oxide Interfaces for the Synthesis of Nanocatalysts using Atomic Layer Deposition
14:30-14:45	Lecture 7 25 min		Dr. Krisztián Palotás	Revised Chen's derivative rule for efficient simulations of STM and some recent applications
14:45-15:10	Lecture 8 25 min		Dr. Tomasz Ossowski	Simulation of STM Images of Iron Oxides Surfaces
15:10-15:25	Coffee break			

**11.01.2022 - SESSION 3**

			<b>Metal/non-metal compounds beyond oxides</b>	
15:25-15:50	Lecture 9 25 min		Prof. Dr. Talat S. Rahman	The role of defects in emergent properties of 2D materials: MoS <sub>2</sub> and h-BN
15:50-16:15	Lecture 10 25 min		Prof. Dr. Irene Groot	Preparation and Characterization of 2-Dimensional Sheets of Cobalt Sulfide on Au(111)
16:15-16:40	Lecture 11 25 min	11:40 PM in Xi'an, China 09:40 AM in TX and AL, USA, 10:40 AM in FL	Prof. Dr. Jeffrey A. Kelber	Transition Metal Oxynitrides for Electrocatalytic Reduction of Nitrogen

**12.01.2022 - SESSION 1**

		05:00 PM in Xi'an, China	<b>Mixed systems, surface oxides and alloys</b>	
10:00-10:25 (CET)	Lecture 12 25 min	03:00 AM in TX and AL, USA, 04:00 AM in FL	Prof. Dr. Jeppe Vang Lauritsen	Properties of mixed Co/Fe oxides on Au(111) in electrocatalytic water splitting
10:25-10:50	Lecture 13 25 min		Dr. Jacek Goniakowski	(V, Fe) <sub>2</sub> O <sub>3</sub> mixed honeycomb monolayer on Pt(111) probed at the atomic level
10:50-11:15	Lecture 14 25 min		Prof. Dr. Niklas Nilius	Cuprous Oxide: From Surface Reconstruction to Excitonic Properties
11:15-11:40	Lecture 15 25 min		Dr. Rémi Lazzari	Oxides at the surfaces of the Fe <sub>0.85</sub> Al <sub>0.15</sub> random bcc alloy
11:40-12:05	Lecture 16 25 min		Dr. Tevfik Onur Mentes	Oxidation of FeNi alloys: chemistry and magnetic coupling at the oxide-metal interface
12:05-12:30	Lecture 17 25 min		Dr. Lutz Hammer	The wondrous structures of surface tellurides revealed by combined LEED-IV, STM and DFT
12:30-13:30	Lunch break			

**12.01.2022 - SESSION 2**

			<b>PREVAC</b>	Electron spectroscopy products
13:30-13:45	Presentation of modern surface science instruments		<b>The old good iron oxides</b>	
13:45-14:10	Lecture 18 25 min		Prof. Dr. Gareth S. Parkinson	A Multi-Technique, Multi-Year Study of the Fe <sub>3</sub> O <sub>4</sub> (111) Surface
14:10-14:35	Lecture 19 25 min		Prof. Dr. Nika Spiridis	FeO on Pt(111) – a new member of the ferromagnetic oxide family
14:35-15:00	Lecture 20 25 min		TBA	TBA
15:00-15:25	Lecture 21 25 min		Prof. Dr. Mikolaj Lewandowski	Structural flexibility of ultrathin iron oxide films on Ru(0001)
			<b>CLOSING LECTURE</b>	
15:25-16:10	Closing Lecture 45 min	11:10 PM in Xi'an, China 09:10 AM in TX and AL, USA, 10:10 AM in FL	<b>Prof. Dr. Gianfranco Pacchioni</b>	The metal/support interaction: the common denominator of catalysis by single atoms, nanoclusters, and nanoparticles