

**Program of PCAM school on Surface Science, Mo 29.08.2022 – Fr 02.09.2022**

**Monday 29.08**

**ECOSS Plenary Talk, Advances in Experimental Methods**

10:00 – 11:00

Prof. Alec Wodtke, Max Planck Institute for Multidisciplinary Sciences, Göttingen, Germany  
*Adsorbate quantum dynamics observed using a mid-IR superconducting nanowire single photon detector*

**PCAM session, Theory and Modeling I**

11:30 - 12:30

Dr. Alejandro Molina-Sánchez, University of Valencia, Spain  
*Electronic structure of 2D materials and surfaces: Introduction to band structure theory*

**PCAM session, Theory and Modeling II**

14:00 - 16:00

Dr. Alejandro Molina-Sánchez, University of Valencia, Spain  
*Theoretical spectroscopy of 2D materials*

**PCAM session, Theory and Modeling III**

16:30 - 17:30

Prof. Bjørk Hammer, Aarhus University, Denmark  
*Machine learning methods for surface structure determination*

17:30 - 18:30

Prof. Bjørk Hammer, Aarhus University, Denmark  
*Calculating chemical reaction pathways and energy barriers*

**Tuesday 30.08**

**ECOSS Plenary Talk, Ultrafast Surface Spectroscopy**

09:00 - 10:00

Prof. Karina Morgenstern, Ruhr-Universität Bochum, Germany  
*STM investigation of laser driven processes at surfaces*

**PCAM session, Catalysis I**

10:30 - 12:30

Prof. Katharina Al-Shamery, University of Oldenburg, Germany  
*New concepts in heterogeneous catalysis*

**PCAM session, Catalysis II**

14:00 - 16:00

Prof. Barbara Lechner, Technical University of Munich, Germany  
*Probing surface dynamics in nanoparticle catalysts*

**ECOSS Poster Session I**

16:30 - 19:00

**Wednesday 31.08**

**ECOSS Plenary Talk, 2D Materials**

09:00 - 10:00

Prof. Eva Andrei, Rutgers University, USA  
*The Magic of Atomically Thin Crystals*

**PCAM session, Advances in Experimental Methods I**

10:50 - 12:50

Dr. Patrick Philipp, Luxembourg Institute of Science and Technology  
*Ion based microscopy, spectroscopy and related techniques*

**PCAM session, Advances in Experimental Methods I**

14:20 - 16:20

Prof. Nadine Witkowski, Sorbonne Université, France  
*Electron based surface microscopy, spectroscopy, and related techniques*

**Conference Excursion and Dinner**

17:00 - ... Boat trip and gala dinner

**Thursday 01.09**

**ECOSS Plenary Talk, Ultrafast Spectroscopy**

09:00 - 10:00

Prof. Dr. Ulrich Höfer, Philipps University of Marburg, Germany  
*Momentum-Space Movies of Electrons at Surfaces and Interfaces*

**PCAM session 2D Materials**

10:30 - 12:30

Prof. Ursula Wurstbauer, University of Münster, Germany  
*2D quantum materials on demand: twisting, stacking & defect engineering*

**PCAM session Ultrafast Spectroscopy I**

14:00 - 15:30

Prof. Daniele Brida, University of Luxembourg

**PCAM session ultrafast Spectroscopy II**

16:00 - 17:30

Prof. Daniele Brida, University of Luxembourg

**ECOSS Poster Session II**

17:30 - 19:00

**Friday 02.09**

**ECOSS Plenary Talk, Advances in theoretical methods**

09:00 - 10:00

Prof. Bjørk Hammer, Aarhus University, Denmark  
*Machine learning for surface structure search*

**PCAM session Energy Materials**

10:30 - 12:30

Prof. Thomas Ebel, South Denmark University  
*New insights into energy storage devices – advanced capacitor, supercapacitor and battery technologies*