



Call for Papers

Free-Standing Functional Molecular 2D Materials

Mini-Symposium during Virtual DPG Meeting FV Oberflächen Spring 2021

“Free-Standing Functional Molecular 2D Materials” are ultrathin sheets and membranes having a molecular size thicknesses and areal sizes extending into the meso- and macroscale. They can be regarded as “surfaces without bulk” which can be tailored with specific chemical or physical function as well as perforated with nanopores of well-defined sizes. Examples include 2D Polymers, Covalent Organic Frameworks (COFs), Biomembranes, Carbon Nanomembranes (CNMs), and others. Their 2D geometry allows applications as functional components in fluidics and filtration, in nanoscale resonators and sensors, as well as in electronics, optoelectronics and plasmonics.

The Mini-Symposium will take a surface science view on fundamental physical and chemical understanding of molecular 2D materials and recent progress in synthesis, as well as in proof of concept experiments for applications. **Two 2h virtual sessions, each consisting of 2 invited presentations (25 min oral) and contributed presentations (oral and poster).** Moreover, a **virtual 45 min podium discussion** amount the invited speakers and organizes, which will also take questions from the public, will enable the participants to get a lively inside into this vibrant topic of nanoscience. The **interactive poster session** will conclude the oral sessions and the podium discussion. The best poster will be selected and announced at the end.

The symposium should introduce the free-standing functional molecular 2D materials and communicate the diversity of this subject to DPG FV O. A particular focus is laid on the relation between surface and membrane science. The symposium is open for presentations covering fundamental and applied aspects of Free-Standing Functional Molecular 2D Materials, including fabrication methods, characterization, applications and modeling.

Invited speakers:

Marcello Lozada-Hidalgo (The University of Manchester, UK)

Isabelle Staudé (Friedrich Schiller University Jena, Germany)

Thomas Weitz (Georg August University of Göttingen, Germany)

Zhikun Zheng (Guangzuo University, China)

Organizers:

Prof. Dr. Andrey Turchanin, Jena

Prof. Dr. Armin Götzhäuser, Bielefeld