



## Condensed Matter Physics and Chemistry (CMPC) Workshop on "Nanoscale Materials - Structure and Properties"

**21-22 February 2019**

**Bldg. 1b, Room 4a/b**

This workshop will present research from invited speakers and the activities of the research association Condensed Matter Physics and Chemistry (CMPC) at PETRA III and our collaborators from universities and research institutes. CMPC members include the teams of the PETRA III beamlines P02.1, P07-DESY, P08, P21.1 as well as scientists and engineers from the technical infrastructure and sample environment groups.

Organizers: Alexander Schökel

Contact: [alexander.schoekel@desy.de](mailto:alexander.schoekel@desy.de)

### PROGRAMME Thursday, 21 February 2019

12:55	Welcome	Oliver Seeck	DESY Hamburg
<b>Nanoconfinement session (chaired by Milena Lippmann)</b>			
13:00	Experimental observation of crystal-liquid coexistence in slit-confined non-polar fluids	Milena Lippmann	DESY Hamburg
13:30	In-situ studies of Electrodeposition within Confined Nanopores	Gary Harlow	Lund University
14:00	High energy diffraction on anisotropically shaped metal halide perovskite nanoparticles in tubular pores	Bert Nickel	Ludwig-Maximilians-Universität München
14:30	Controlling optical properties and molecular self-assembly of a discotic liquid crystal in nanoconfinement	Kathrin Sentker	Universität Hamburg
<b>15:00-15:45</b>	<b>Discussions &amp; Coffee break</b>		
<b>Energy materials and catalysts session (chaired by Alexander Schökel)</b>			
15:45	In situ/Operando XRD study of a Reversible PtO <sub>x</sub> Formation at the Pt/YSZ interface	Sergey Volkov	DESY Hamburg
16:15	Operando XRD of supported nanoparticles during catalytic reactions	Vedran Vonk	DESY Hamburg
16:45	Operando study of Zn <sub>4</sub> Sb <sub>3</sub>	Lasse Rabøl Jørgensen	Aarhus University
<b>Crystallization and nanoparticles session (chaired by Ann-Christin Dippel and Michael Wharmby)</b>			
17:15	Synthesizing Metastable 2D layers in Confined Geometries By Design: The Need for in-situ monitoring	Dave Johnson	University of Oregon
<b>17:45-18:30</b>	<b>Discussions &amp; Poster session</b>		
<b>19:00</b>	<b>Conference dinner (in the DESY canteen, Bldg. 9)</b>		

**PROGRAMME Friday, 22 February 2019****Crystallization and nanoparticles session (chaired by Ann-Christin Dippel and Michael Wharmby)**

09:00	Observing trends of the Group 13 prenucleation clusters	Ida Gjerlevsen Nielsen	Aarhus University
09:30	Combining in-situ HERFD-XANES and total X-ray scattering to catch the full picture of cobalt oxide nanoparticle formation in solution	Lukas Grote	Universität Hamburg
10:00	New Nanostructure from X-ray total scattering: In situ studies of mechanisms in material formation	Kirsten M. Ø. Jensen	University of Copenhagen
<b>10:30-11:30</b>	<b><i>Discussions &amp; Coffee break (with sandwiches)</i></b>		
11:30	Formation dynamics on Nanocrystals: Cation exchange reactions and nucleation/growth studies	Cristina Palencia	Universität Hamburg
12:00	Electrochemical synthesis and phase transformation of thiourea precursor for copper sulphide	Abhisakh Sarma	DESY Hamburg
12:30	What happens in solution during wet chemical synthesis of solid materials?	Huayna Terraschke	Christian-Albrechts-Universität Kiel
<b>13:00-13:30</b>	<b><i>Discussions</i></b>		
13:30	Summary and closing remarks	Oliver Seeck	DESY Hamburg
<b>13:35</b>	<b><i>End of workshop</i></b>		