

Tribology and Interfaces in Functional Materials



Wednesday 15 March 2017 - Friday 17 March 2017

DESY Hamburg

Scientific Programme

Workshop Program

Location: DESY, Bldg.28c (FLASH SeminarRoom)

15 March 2017, Wednesday

13:00 Registration (Lobby of FLASH Seminarroom, Bldg. 28c)

14:00 Christian Schroer (DESY Photon Science):

<div style="text-indent:44px;"> Science at PETRA III + IV: Conditions and Opportunities </div>

14:30 Martin Dienwiebel (KIT):

<div style="text-indent:44px;"> Current trends and open research questions in tribology </div>

15:00 Roland Bennewitz (INM Saarbrücken):

<div style="text-indent:44px;"> Nanotribology – shedding light on structure, stress, deformation, chemistry, and lubricants </div>

15:30 Coffeebreak

16:00 Andreas Schropp (Deutsches Elektronen-Synchrotron DESY)

<div style="text-indent:44px;"> Scanning coherent X-ray microscopy </div>

16:30 Kai Schlage (Deutsches Elektronen-Synchrotron DESY)

<div style="text-indent:44px;"> In-situ GISAXS: Observing nanostructure self-assembly on sub-nm

length scales </div>

17:00 Michael Sprung (Deutsches Elektronen-Synchrotron DESY)

<div style="text-indent:44px;"> X-ray photon correlation spectroscopy at PETRA III/IV </div>

17:30 Discussion

19:00 Dinner at the DESY Bistro

16 March 2017, Thursday

9:00 Christian Greiner (Karlsruhe Institute of Technology KIT)

<div style="text-indent:37px;"> Sequence of stages in the microstructure evolution in Copper under
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<div style="text-indent:37px;"> reciprocating tribological loading </div>

9:30 Dirk Dietzel (Justus Liebig University Giessen)

<div style="text-indent:37px;"> Tribological properties of nanoparticles:
From superlubricity to contact ageing </div>

10:00 Carsten Gachot (Vienna University of Technology)

<div style="text-indent:44px;"> Evaluation of Boundaries of Tribofilm Formation in Machine
Elements </div>

10:30 Coffee Break

11:00 Ralf Röhlsberger (Deutsches Elektronen-Synchrotron DESY)

<div style="text-indent:44px;"> Nuclear resonant scattering for probing tribological processes </div>

11:30 Milena Lippmann (Deutsches Elektronen-Synchrotron DESY)

<div style="text-indent:44px;"> Confined fluids in slit geometry </div>

12:00 Enrico Gnecco (Friedrich Schiller University Jena)

<div style="text-indent:44px;"> Tip-based nano-manipulation and lithography:
To what extent can they be controlled ? </div>

12:30 Discussion

13:00 Lunch

15:30 Coffee break

16:00 Guided Tours: PETRA III and FLASH

Contributed Talks: Instrumentation

18:00 Ralph Döhrmann (DESY)

<div style="text-indent:44px;"> Nanopositioning and Precision Mechanics
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18:30 David Pennicard (DESY)

<div style="text-indent:44px;"> 2D - Detector Technology </div>

19:00 Poster Session

19:00 Dinner (Barbecue; Location: Patio of Conference hall)

17 March 2017, Friday

9:00 Oliver Seeck (DESY)

<div style="text-indent:37px;"> X-ray Reflectometry with high-brilliance synchrotron radiation </div>

9:30 Markus Valtiner (BA Freiberg)

<div style="text-indent:37px;"> In-situ tracking of the dynamic structure evolution in nanometer
confined liquids by combining </div>

<div style="text-indent:37px;"> X-Ray Reflectivity and white light interferometry in a surface forces
apparatus </div>

10:00 Stefanie Hanke (Duisburg)

<div style="text-indent:44px;"> Cyclic Strain Accumulation and Ultra-Mild Wear
</div>

10:30 Coffee break

11:00 Wolfgang Caliebe (DESY)

<div style="text-indent:44px;"> X-ray spectroscopy at PETRA III </div>

11:30 Fillipo Mangolini (Leeds)

<div style="text-indent:44px;"> Imaging X-ray absorption spectroscopic investigation of the mechanisms behind the </div>

<div style="text-indent:44px;"> environmental dependence of the tribological properties of amorphous carbon surfaces </div>

12:00 Discussion

12:30 Closing remarks, lunch and departure