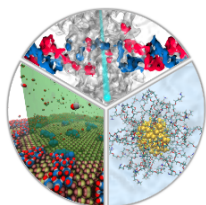


4th Annual MultIChem Conference (Heidelberg, Germany)

Scientific Program

Wednesday, July 16

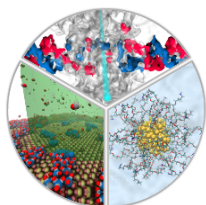
08 ⁰⁰ – 09 ⁰⁰	Participants registration
09 ⁰⁰ – 09 ³⁰	<u>Morning session I: Irradiation-driven transformations and fabrication of condensed matter systems</u> Hubertus Marbach , Zeiss SMT, Rossdorf, Germany <i>Semiconductor mask repair with focused electron-beam induced processing</i>
09 ³⁰ – 10 ⁰⁰	Ilia Solov'yov , Institute of Physics, Carl von Ossietzky University, Oldenburg, Germany <i>Stochastic dynamics simulation of the focused electron beam induced deposition process</i>
10 ⁰⁰ – 10 ³⁰	Flyura Djurabekova , University of Helsinki, Finland <i>Atomistic simulations of nanoscale structural modification of oxide materials under swift heavy ion irradiation</i>
10 ³⁰ – 11 ⁰⁰	Lisa McElwee-White , Department of Chemistry, University of Florida, Gainesville, USA <i>Ion-induced chemistry of Pt precursors: Precursor reactions and spontaneous formation of multi-layered PtC_x films</i>
11 ⁰⁰ – 11 ³⁰	Coffee break
11 ³⁰ – 11 ⁵⁵	<u>Morning session II: Electron and ion irradiation-driven transformations in nanofabrication processes</u> Jakub Jurczyk , Institute of Applied Physics, Vienna University of Technology, Austria <i>Creating functional magnetic nanostructures using focused electron beam: from FEBID models to experiment design</i>
11 ⁵⁵ – 12 ²⁰	Miloš Hrabovský , TESCAN Group, Brno, Czech Republic <i>AMBER X2: The next generation plasma FIB for advanced characterization and nanoprototyping</i>
12 ²⁰ – 12 ⁴⁰	Alba Salvador-Porroche , Goethe University, Frankfurt am Main, Germany <i>Nanofabrication using organometallic precursors in combination with electron and ion irradiations</i>
12 ⁴⁰ – 13 ⁰⁰	Matija Zlatar , Institute of Chemistry, Technology and Metallurgy, University of Belgrade, Serbia <i>Exploring chemical bonding and dissociation: Computational perspectives with transition metal and organometallic complexes</i>
13 ⁰⁰ – 14 ³⁰	Lunch
14 ³⁰ – 14 ⁵⁵	<u>Afternoon session I: Electron and positron collisions with molecular systems</u> Jaroslav Kočíšek , J. Heyrovský Institute of Physical Chemistry, Czech Academy of Sciences, Prague, Czech Republic <i>Electron attachment to azoles and their clusters</i>
14 ⁵⁵ – 15 ²⁰	Stephan Denifl , Institute for Ion Physics and Applied Physics, University of Innsbruck, Austria <i>Interaction of free low-energy electrons with potential radiosensitizers</i>
15 ²⁰ – 15 ⁴⁰	Bobby Antony , Department of Physics, Indian Institute of Technology (ISM), Dhanbad, India <i>Electron and positron scattering from biomolecules</i>
15 ⁴⁰ – 16 ⁰⁰	Jan Franz , Gdansk University of Technology, Poland <i>Cross sections for collisions of positrons with water molecules</i>



16 ⁰⁰ – 16 ³⁰	Coffee break
16 ³⁰ – 18 ⁰⁰	<u>Poster session</u>

Thursday, July 17

09 ³⁰ – 10 ⁰⁰	<u>Morning session I: Irradiation-driven transformations in a medium</u> Brendan Dromey , Centre for Light Matter Interactions, Queen's University Belfast, United Kingdom <i>Ultrafast Nanodosimetry – Tracking dynamics for solvated electrons due to proton stopping in pristine H₂O in real time</i>
10 ⁰⁰ – 10 ³⁰	Juraj Fedor , J. Heyrovský Institute of Physical Chemistry, Czech Academy of Sciences, Prague, Czech Republic <i>Understanding the complexity of electron-induced chemistry in bulk step by step</i>
10 ³⁰ – 11 ⁰⁰	Ilko Bald , Institute of Chemistry, University of Potsdam, Germany <i>How to conduct low-energy electron-induced processes at atmospheric conditions using visible light</i>
11 ⁰⁰ – 11 ³⁰	Coffee break
11 ³⁰ – 11 ⁵⁵	<u>Morning session II: Collisions with biomolecules and biomolecular systems</u> Thomas Schlathöler , Zernike Institute for Advanced Materials, University of Groningen, the Netherlands <i>Photon and ion-induced dynamics in gas-phase DNA</i>
11 ⁵⁵ – 12 ²⁰	Marc Benjamin Hahn , Federal Institute for Materials Research and Testing – BAM, Berlin, Germany <i>Radiation damage to DNA binding proteins exposed to various particle sources and dose-rates</i>
12 ²⁰ – 12 ⁴⁰	Dorothea Hallier , Fraunhofer Institute for Cell Therapy and Immunology, Potsdam, Germany <i>Radiation response of ssDNA-binding protein G5P: Comparing radiation damage of accelerated protons and X-rays</i>
12 ⁴⁰ – 13 ⁰⁰	Hidetsugu Tsuchida , Quantum Science and Engineering Center, Kyoto University, Japan <i>Experiment of irradiating a liquid film with MeV heavy ions</i>
13 ⁰⁰ – 14 ³⁰	Lunch
14 ³⁰ – 14 ⁵⁵	<u>Afternoon session I: Dynamics and chemistry of molecular systems</u> Majdi Hochlaf , Université Gustave Eiffel, Champs sur Marne, France <i>Chemistry induced by ionizing radiation in the atmosphere of the early Earth: theory and experiment</i>
14 ⁵⁵ – 15 ²⁰	Felipe Fantuzzi , University of Kent, United Kingdom <i>Structure, stability, and VUV-driven processes in molecules of astrochemical interest</i>
15 ²⁰ – 15 ⁴⁰	Kevin Li , Technical University München, Garching, Germany <i>Where do interstellar anions come from? Tracking the formation of NCO⁻ and carbon chain anions in the gas phase</i>
15 ⁴⁰ – 16 ⁰⁰	Małgorzata Śmiałek-Telega , Gdansk University of Technology, Gdansk, Poland <i>Revisiting cresols: Insights into electronic structures via spectral analysis</i>
16 ⁰⁰ – 16 ³⁰	Coffee break
16 ³⁰ – 16 ⁵⁵	<u>Afternoon session II: Nanostructured materials, surfaces and interfaces</u> Petra Tegeder , Physikalisch-Chemisches Institut, Heidelberg University, Germany <i>Electronic properties of interfaces with functional molecules</i>



16 ⁵⁵ – 17 ²⁰	Katarina Marušić , Ruđer Bošković Institute, Zagreb, Croatia <i>The role of saturation and cis/trans isomerism in crosslinking of aliphatic self-assembled monolayers</i>
17 ²⁰ – 17 ⁴⁰	Cauê Souza , University of Kent, United Kingdom <i>Alkanethiol SAMs on gold: Assessment of force field parameters</i>
17 ⁴⁰ – 18 ⁰⁰	Alise Podelinska , Institute of Physics, University of Tartu, Estonia <i>Thermodynamic stability and melting behavior of ionic crystals: A case study of LiF</i>
19 ⁰⁰ – 22 ⁰⁰	Conference dinner (Wirtshaus zum Nepomuk)

Friday, July 18

<u>Morning session I: Biomedical and technological applications of radiation</u>	
09 ³⁰ – 10 ⁰⁰	Martin Falk , Institute of Biophysics, Czech Academy of Sciences, Brno, Czech Republic <i>Chromatin: a key player in radiation-induced DNA damage and repair – New insights from micro- and nanoscale studies</i>
10 ⁰⁰ – 10 ³⁰	Kate Ricketts , Division of Surgery and Interventional Science, University College London, United Kingdom <i>Neutron capture therapy – Current status and future potential</i>
10 ³⁰ – 11 ⁰⁰	Revaz Shandize , Kutaisi International University, Kutaisi, Georgia <i>Comparison of doses for proton therapy obtained with different methods</i>
11 ⁰⁰ – 11 ³⁰	Coffee break
<u>Morning session II: Mechanisms of nanoparticle radiosensitization</u>	
11 ³⁰ – 12 ⁰⁰	Michael Hausmann , Kirchhoff-Institute for Physics, Heidelberg University, Germany <i>Characteristic chromatin networks and their response to radiation, nanoparticle exposure or peritoneal dialysis</i>
12 ⁰⁰ – 12 ³⁰	Cécile Sicard-Roselli , Institut de Chimie Physique, University Paris Saclay, France <i>Are gold nanoparticles so inert under ionizing radiation?</i>
12 ³⁰ – 12 ⁵⁰	Sara Freitas , University of Porto, Portugal <i>Synergistic effect between photothermal and ionizing radiation therapies using plasmonic nanoparticles as photo-absorbing agents and radiosensitizers toward higher-efficiency colorectal cancer treatments</i>
12 ⁵⁰ – 13 ⁰⁰	Final remarks / Conference closing
14 ³⁰ – 16 ⁰⁰	MultIChem Management Committee Meeting