CISCEM 2018 - PROGRAM

WEDNESDAY, OCTOBER 10, 2018

From 09:00		Registration and coffee
09:50		Opening words by Niels de Jonge
		SESSION 1 – ELECTRON MICROSCOPY OF PROTEINS AND CELLS
10:00	invited	"Smart Microscopy: Automation of CLEM Using *In Situ* Fluorescence Detection" *Lucy Collinson*, The Francis Crick Institute, London, UK
10:30	invited	"Correlative Fluorescence and Electron Microscopy of Graphene-Enclosed Whole Cells for High Resolution Analysis of Cellular Proteins" *Indra Navina Dahmke*, INM – Leibniz Institute for New Materials, Saarbrücken, Germany
11:00	invited	"Single Particle Imaging with the Volta Phase Plate" *Radostin Danev*, The University of Tokyo, Japan
11:30		"Quantitative Studies of Membrane Proteins in Whole Cells with Different Methods of Liquid Phase Scanning Transmission Electron Microscopy" *Diana Peckys*, Saarland University, Homburg/Saar, Germany
11:50		"Imaging Graphene-Encapsulated Microtubules at Room Temperature with Electron Microscopy" *Sercan Keskin*, INM – Leibniz Institute for New Materials, Saarbrücken, Germany
12:10		LUNCH
		SESSION 2 – SOFT MATTER AND BIOLOGICAL SPECIMENS
13:30	invited	"Translating Insights from Liquid Phase Microscopy into Theory and Design" *Joe P. Patterson*, University of California, Irvine, USA
14:00		"Contrast Analysis in Latex/Surfactant Aqueous Suspensions" *Karine Masenelli-Varlot*, Université Lyon, France
14:20		"*In-Situ* Correlative Helium Ion Microscopy and Secondary Ion Mass Spectrometry For High-Resolution High-Sensitivity Nano-Analytics in Life Sciences" *Jelena Lovric*, Institute of Science & Technology (LIST), Belvaux, Luxembourg
14:40		"Liquid-Phase TEM of Biological Systems Reveals Nanoscale Dynamics" *Madeline Dukes*, Protochips Inc., Morrisville, USA

15:00		"Interactive Correlative *In-Situ* Analysis on the Nanoscale by Combination of AFM and SEM" *Christian Schwalb*, GETec Microscopy GmbH, Vienna, Austria
15:20		COFFEE BREAK
		SESSION 3 – STUDYING MATERIAL REACTIONS WITH *IN-SITU* SPECTROSCOPY
15:40	invited	"Nanoscale Elemental mapping in Liquids and Gases" *Sarah Haigh*, University of Manchester, UK
16:10		"*In-Situ* Characterization of 2-Dim Materials at High Energy and Spatial Resolution" *Robert Klie*, University of Illinois, Chicago, USA
16:30		„Tracking the Structural and Chemical Evolution of Nanostructured Materials by *In-Situ* Experiments" *Zaoli Zhang*, Erich Schmid Institute of Material Science, Leoben, Austria
16:50		"Probing Fonctional Oxides by Ultra-High Resolution EELS under Variable-Temperature Stimuli" *Laura Bocher*, Laboratoire de Physique des Solides – CNRS, Université Paris-Sud, Orsay, France
17:10 - 19:00		POSTER AND EXHIBITOR SESSION WITH SNACKS AND DRINKS

THURSDAY, OCTOBER 11, 2018

08:50		Opening words by Kristian Molhave
		SESSION 4 – INNOVATIONS IN TECHNIQUES TO STUDY NANOMATERIAL PROCESSES
09:00	invited	"Toward Quantitative Liquid Cell Electron Microscopy through Kinetic Control of Solution Chemistry" *Taylor J. Woehl*, University of Maryland, College Park, USA
09:30		"Exploring nanoparticles' motion and surface charge by liquid phase transmission electron microscopy and off-axis electron holography" *Murat Nulati Yesibolati*, Technical University of Denmark, DTU Nanotech, Kongens Lyngby,Copenhagen, Denmark
09:50		"Utilizing Graphene Liquid Cell TEM to Elucidate the Mechanisms of Non-Equilibrium Etching of Metallic Nanocrystals" *Matthew Hauwiller*, University of California, Berkley, USA

10:10	invited	"Scanning Transmission Electron Microscopy and Diffraction in SEM: Novel Approaches for *In Situ* Studies" *Erdmann Spiecker*, Universität Erlangen-Nürnberg, Germany
10:40		COFFEE BREAK

		SESSION 5 – TOWARDS HIGH-SPEED LOW-DOSE *IN-SITU*
11:00	invited	"Mapping Atomic Motions with Ultrabright Electrons: Fundamental Space-Time Limits to Imaging Chemistry and Biological Processes" *R. J. Dwayne Miller*, Max Planck Institute for the Structure and Dynamics of Matters, Hamburg, Germany
11:30	invited	"Using Sub-Sampling/Inpainting to Control the Kinetics and Observation Efficiency of Dynamic Processes in Liquids" *Nigel Browning*, University of Liverpool, UK
12:00	invited	"Sparse and Adaptive Sampling in Scanning Electron Microscopy" *Tim Dahmen*, Deutsches Forschungszentrum für Künstliche Intelligenz, Saarbrücken, Germany
12:30		LUNCH
		KEYNOTE SPEECH
13:45	invited	"High Resolution *In Situ* and Transmission Environmental Electron Microscopy of Material Reactions" *Robert Sinclair*, Stanford University, USA
		SESSION 6 – NANO-CATALYSTS
14:40	invited	Electron Microscopy Advances in Catalysis *Stig Helveg*, Haldor Topsoe A/S, Lyngby, Denmark
15:10	invited	"Revealing the Surface Energetics and Reactivity of Bimetallic Copper-Gold Catalyst Nanoparticles by *In Situ* Environmental TEM" *Jaysen Nelayah*, Université Paris Diderot, Paris, France
15:40		"Imaging the Attachment of Iron Oxide Nanoparticles to Carbon Nanotubes with Liquid Phase Electron Microscopy" *Nynke A. Krans*, Utrecht University, The Netherlands
16:00		COFFEE BREAK
16:15		"Studying Electrocatalyts in *Operando* Conditions: Correlating TEM Imaging and X-Ray Spectroscopies" *Nathaly Ortiz Peña*, IPCMS-Université de Strasbourg, France
16:35		"Environmental Gas TEM for Catalysis in *Operando* Conditions" *Mounib Bahri*, IPCMS, Strasbourg, France

16:55		"Pattern Formation in Catalyzed Surface Reactions Studied by *In Situ* SEM" *MarcWillinger*, ETH Zürich, ScopeM, Zürich, Switzerland
17:15	invited	"Introducing and Controlling Water Vapor in Gas-Cell Microscopy Experiments" *Kinga A. Unocic*, Oak Ridge National Laboratory, USA
17:45		POSTER AND EXHIBITOR SESSION (PART 2)
18:45		Bus to the Conference Dinner Location
19:00		Conference dinner „Bistro Malzeit im Kunstwerk"

FRIDAY, OCTOBER 12, 2018

08:50		Opening words by Damien Alloyeau
		SESSION 7 – NANOMATERIAL PROCESSES AND DYNAMICS
09:00	invited	"*Operando* Liquid-Electochemical TEM for Monitoring the Charge/Discharge Processes in a NA-O_2 Battery" *Arnaud Demortière*, CNRS, Amiens,France
09:30		"*In-Situ* Template Assisted Growth of Ag@Au Bimetallic Nanostructures" *Nabeel Ahmad*, Swiss Federal Labs for Materials Science, Zürich, Switzerland
09:50		"Dynamics of Gold Nanoparticles at the Solid:Liquid Interface Studied by Liquid-Phase Electron Microscopy" *Elisa Cepeda Pérez*, INM – Leibniz Institute for New Materials, Saarbrücken, Germany
10:10		"Probing the Dynamics and the Atomic Structure of Gold Nanorods in Solution with Liquid-Cell TEM" *Abdelali Khelfa*, CNRS / Paris-Diderot University, Paris, France
10:30		„Molecular Beam Epitaxy of Germanium in the Atomic-Resolution Transmission Electron Microscope" *Jean-Luc Maurice*, LPICM, CNRS, École polytechnique, Palaiseau, France
10:50		COFFEE BREAK

		SESSION 8 – HIGH TEMPERATURE *IN-SITU* EXPERIMENTS
11:10		"*In-Situ* 3D Characterization of Au/Pd Octapods while Heating" *Wiebke Albrecht*, University of Antwerp, Belgium
11:30		"*In-Situ* Transmission Electron Microscopy Annealing for Crystallization and Phase Stability Studies in the GA_2O_3-IN_2O_3-AL_2O_3 System" *Toni Markurt*, Leibniz-Institut für Kristallzüchtung, Berlin, Germany
11:50		"First Stage of Sintering of ThO_2 Microspheres: a HT-ESEM and HT-HRTEM Study" *Renaud Podor*, ICSM, UMR 5257, Bagnols-sur-Cèze, France
12:10		„Elevated Temperature *In-Situ* Transmission Kikuchi Diffraction for the Characterization of Ultra-Thin Metal Films in Nanofabrication Applications" *Matteo Todeschini*, Technical University of Denmark, Kongens Lyngby, Denmark
12:30		CLOSING WORDS
		BROWNBAG LUNCH