

nanoGe Fall Meeting19 (NGFM19)

#CharDy19. Charge Carrier Dynamics

Berlin, Germany, 2019 November 4th - 5th

Conference Chairs: Marcus Scheele, Vanessa Wood and Maksym Yarema

Conference Program

November 4th - Day 2 (Monday)	
Plenary Session	
09:00 - 09:30 Session-K1	<u>Efrat Lifshitz</u> (<i>Schulich Faculty of Chemistry, Solid State Institute, Russell Berrie Nanotechnology Institute and the Helen Diller Quantum Information Center; Technion, Haifa, Israel</i>), Maksym Kovalenko, Andrew Rappe The Effect of Magnetism on the Optical Properties of Bulk and Confined Perovskite Structures
09:00 - 09:30 Session-K2	<u>Daniel Nocera</u> (<i>Harvard University</i>) Sustainable and Renewable Carbon and Nitrogen Cycles for Fuel and Crop Production
CharDy 1.1	
09:30 - 10:00 1.1-I1	<u>Dmitri Talapin</u> (<i>Department of Chemistry, University of Chicago, Chicago, Illinois 60637, USA</i>) Electronic Coupling and Transport in Non-covalent Inorganic Nanoscale Assemblies
10:00 - 10:30 1.1-I2	Bertille martinez, Clement Livache, Charlie Greboval, Audrey Chu, nicolas goubet, <u>Emmanuel Lhuillier</u> (<i>Sorbonne Université, CNRS, Institut des NanoSciences de Paris, INSP, F-75005 Paris, France.</i>) Designing Photovoltaic Devices Using HgTe Nanocrystals for SWIR and MWIR Detection
10:30 - 11:00	Coffee Break
CharDy 1.2	
11:00 - 11:30 1.2-I2	<u>Frank Schreiber</u> (<i>Institute of Applied Physics, Tuebingen University, 72076 Tuebingen, Germany</i>) Coupled Organic-Inorganic Nanostructures (COINs): From Complex Structure Formation to Advanced Functional Properties
11:30 - 12:00 1.2-O1	<u>Arianna Marchioro</u> (<i>Laboratory for fundamental BioPhotonics, Ecole Polytechnique Fédérale de Lausanne, 1015 Lausanne, Switzerland</i>), Marie Bischoff, Sylvie Roke Surface Characterization of Colloidal Nanoparticles by Second Harmonic Scattering: Surface Potential and Interfacial Water Order
12:00 - 12:30 1.2-I1	<u>Sabrina Disch</u> (<i>Department für Chemie, Universität zu Köln</i>) Spatially Resolved Magnetization and Spin Disorder in Magnetic Nanoparticles
12:30 - 14:00	Lunch
CharDy 1.3	
14:00 - 14:30 1.3-I1	Ali Khan, Valerio Pinchetti, Ivo Tanghe, Zhiya Dang, Beatriz Martín-García, Zeger Hens, Dries Van Thourhout, Pieter Geiregat, Sergio Brovelli, <u>Iwan Moreels</u> (<i>Department of Chemistry, Ghent University, Krijgslaan 281-S3, 9000 Ghent, Belgium</i>) Silver Doping in Cadmium Chalcogenide Colloidal Nanoplatelets
14:30 - 15:00 1.3-O2	<u>Maria Wächtler</u> (<i>Leibniz Institute of Photonic Technology</i>) Charge-separation in Ni-tipped CdSe@CdS Nanorods for Hydrogen Evolution
15:00 - 15:30 1.3-O1	<u>Dennis Friedrich</u> (<i>Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Institute for Solar Fuels, Germany</i>), Mario Borgwardt, Matthias May, Roel van de Krol, Rainer Eichberger Ultrafast Carrier Relaxation in Cu2O Photoelectrodes: Unravelling Photovoltage Limitations by Time-resolved Two-photon Photoemission Spectroscopy.
15:30 - 16:00	Coffee Break

CharDy 1.4	
16:00 - 16:30	<u>Matthias Wuttig</u> (<i>RWTH Aachen University - Germany</i>)
1.4-I1	Phase Change Materials by Design: Taming Bond No. 6
16:30 - 17:00	<u>Maria Ibáñez</u> (<i>IST Austria</i>)
1.4-I2	High-Performance Thermoelectric Nanocomposites from Nanocrystal Building Blocks
November 5th - Day 3 (Tuesday)	
Plenary Session	
08:30 - 09:00	<u>Juan Bisquert</u> (<i>1 Institute of Advanced Materials (INAM), Universitat Jaume I, Castellon, 12006 (Spain)</i>)
Session-K1	Understanding Time Scales of Ionic and Electronic Phenomena in Perovskite Solar Cells
08:30 - 09:00	<u>William Tisdale</u> (<i>Massachusetts Institute Of Technology</i>)
Session-K2	Nonequilibrium Dynamics of Excitons and Charges in Semiconductor Nanomaterials
CharDy 2.1	
09:00 - 09:30	<u>David Cahen</u> (<i>Weizmann Institute and Bar-Ilan University</i>)
2.1-I1	Proteins can be "Good" Electronic Conductors !
09:30 - 10:00	<u>Mathieu Luisier</u> (<i>Swiss Federal Institute of Technology (ETH) Zurich</i>), Aron Szabo, Cedric Klinkert, Christian Stieger, Martin Rau, Tarun Agarwal, Youseung Lee
2.1-I2	Carrier Transport in 2-D Materials: an Ab Initio Study
10:00 - 10:15	<u>Raj Pandya</u> (<i>Optoelectronics Group, Cavendish Laboratory, University of Cambridge, UK.</i>), Akshay Rao
2.1-O1	Ultrafast Long-Range Energy Transport via Strong Light-Matter Coupling in Organic Semiconductor Films
10:15 - 10:30	<u>Oskar Sandberg</u> (<i>Swansea University, Department of Physics, Swansea, United Kingdom.</i>), Kristofer Tvingstedt,
2.1-O2	Paul Meredith, Ardan Armin A Theoretical Perspective on Transient Photovoltage and Charge Extraction Techniques
10:30 - 11:00	Coffee Break
CharDy 2.2	
11:00 - 11:30	<u>Jenny Nelson</u> (<i>Department of Physics and Centre for Plastic Electronics, Imperial College London, London, SW7 2AZ, UK.</i>)
2.2-I1	Charge Carrier Dynamics at Molecular Heterojunctions in Organic Photovoltaic and Photocatalytic Systems
11:30 - 11:45	<u>Stefan Zeiske</u> (<i>Sêr Cymru Chair in Sustainable Advanced Materials Department of Physics, Swansea University, Singleton Park Swansea SA2 8PP</i>), Oskar Sandberg, Nasim Zarrabi, Paul Meredith, Ardan Armin
2.2-O1	Quantifying Trap-assisted Recombination in Thin Film Solar Cells from Intensity Dependent Photocurrent Measurements
11:45 - 12:00	<u>Ankita Kolay</u> (<i>Department of Chemistry, Indian Institute of Technology Hyderabad, Kandi, Sangareddy</i>),
2.2-O2	Melepurath Deepa Nickel Oxide Based Photocathode and Selenium Nanowires Coated Photoanode for a Highly Efficient Tandem Quantum Dot Solar Cell
12:00 - 12:30	<u>Grigorios Itskos</u> (<i>Experimental Condensed Matter Physics Lab, Department of Physics, University of Cyprus</i>)
2.2-I2	Photophysics and Optoelectronic Applications of Lead Halide Perovskite Nanocrystals
12:30 - 14:00	Lunch
CharDy 2.3	
14:00 - 14:30	Francesco Lamberti, <u>Teresa Gatti</u> (<i>Institute of Physical Chemistry and Center for Materials Research, Justus Liebig University Giessen</i>), Enrico Cescon, Lorenzo Franco
2.3-O1	Evidences of Spiro-OMeTAD De-doping by the Action of the t-butyl Pyridine Additive in Hole-transporting Layers for Perovskite Solar Cells

14:30 - 14:45 2.3-O2	<u>Hannes Hempel</u> (<i>Department Structure and Dynamics of Energy Materials, Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Germany</i>), Andrei Petsiu, Martin Stolterfoht, Pascal Becker, Dieter Neher, Rainer Eichberger, Thomas Unold Limits of Charge Carrier Transport in Halide Perovskites Revealed by Optical-Pump Terahertz-Probe Spectroscopy
14:45 - 15:00 2.3-O3	<u>Katarzyna Pydzinska</u> (<i>Adam Mickiewicz University in Poznan, Faculty of Physics, Uniwersytetu Poznanskiego 2, 61-614 Poznan, Poland.</i>), Jesus Idigoras, Juan Anta, Victoriia Durshliak, Marcin Ziótek Charge dynamics, absorption and emission spectra of triple cation perovskite solar cells under different place of excitation, illumination and applied potential.
15:00 - 15:30 2.3-I1	<u>Thomas Kirchartz</u> (<i>IEK-5 Photovoltaics, Forschungszentrum Jülich</i>) Combination of Transient and Steady-state Photoluminescence for the Characterization of Halide Perovskite-based Layer Stacks
15:30 - 16:00	Coffee Break
16:00 - 17:00	CharDy 2.4
17:00 - 19:00	Poster Session