

nanoGe Fall Meeting19 (NGFM19)

#NCFun19. Fundamental Processes in Semiconductor Nanocrystals

Berlin, Germany, 2019 November 7th - 8th

Conference Chairs: Ivan Infante and Jonathan Owen

Conference Program

November 7th - Day 5 (Thursday)	
NCFun 1.1 Chair: Ivan Infante Room: Breakout 4	
09:00 - 09:30	<u>Brandi Cossairt</u> (<i>University of Washington, Department of Chemistry, Seattle, WA 98195-1700</i>)
1.1-I1	Understanding and Directing the Structure and Properties of Indium Phosphide Nanocrystals through Chemistry
09:30 - 10:00	<u>Zeger Hens</u> (<i>Department of Chemistry, Ghent University, Krijgslaan 281 - S3, 9000 Gent, Belgium</i>)
1.1-I2	Properties of the Bright Exciton in InP Quantum Dots
10:00 - 10:30	<u>Sohee Jeong</u> (<i>Sungkyunkwan University, Republic of Korea</i>)
1.1-I3	III-V Colloidal Nanocrystals: Control over the Covalent Surfaces
10:30 - 11:00	Coffee Break
NCFun 1.2 Chair: Zeger Hens Room: Breakout 4	
11:00 - 11:30	<u>Nathan Neale</u> (<i>Chemical and Nanoscale Sciences Center, National Renewable Energy Laboratory</i>), Michael Carroll, Rens Limpens, Lance Wheeler, Gregory Pach
1.2-I1	Surface Chemistry Effects on Quantum Confinement in Group IV Nanocrystals
11:30 - 12:00	<u>Heather Kulik</u> (<i>Department of Chemical Engineering, Massachusetts Institute of Technology</i>)
1.2-I2	Electronic Structure Origins of Surface-Dependent Growth in III-V Quantum Dots
12:00 - 12:30	<u>Alina Schimpf</u> (<i>University of California San Diego</i>), Alexander Rachkov
1.2-O1	Synthesis of Monodisperse and Size-Tunable Colloidal Copper Phosphide Nanocrystals by Redox Disproportionation of Aminophosphine
12:30 - 14:00	Lunch
NCFun19 1.3 Chair: Jonathan Owen Room: Breakout 4	
14:30 - 15:00	<u>Arjan Houtepen</u> (<i>Delft University of Technology (TU Delft)</i>)
1.3-I1	Electrochemical Control over Semiconductor Nanomaterials: Doping and Surface Reduction
15:00 - 15:15	<u>Solrun Gudjonsdottir</u> (<i>Delft University of Technology (TU Delft)</i>), Ward van der Stam, Christel Koopman, Bob Kwakkenbos, Arjan Houtepen
1.3-O1	On the Stability of Permanent Electrochemical Doping of Quantum Dot, Fullerene and Conductive Polymer Films in Frozen Electrolytes for Use in Semiconductor Devices
15:15 - 15:30	<u>Felix Thiel</u> (<i>Institute of Physical Chemistry, University of Hamburg</i>), Cristina Palencia Ramirez, Horst Weller
1.3-O2	Cation Exchange Reactions in Nanorods: Vacancy-Mediated Diffusion in Cu-deficient Cu(2-x)S Nanorods during the Formation of a Ternary System
15:30 - 16:00	Coffee Break
NCFun19 1.4 Chair: Heather Kulik Room: Breakout 4	

16:00 - 16:15	<u>Anumol s</u> (<i>Solid State and Structural Chemistry Unit, Indian Institute of Science (IISc)</i>), Biswajit Bhattacharyya, V. V. R. Kishore, Abhinav Kumar, Guru Pratheep Rajasekar, D. D. Sarma, Anshu Pandey Spectroscopic Insights into the Electronic Structure of Copper Iron Sulfide Nanocrystals
1.4-O1	
16:15 - 16:30	<u>Cristina Palencia Ramírez</u> (<i>Institute of Physical Chemistry, University of Hamburg</i>), Robert Seher, Jan Krohn, Felix Thiel, Felix Lehmkuhler, Horst Weller Formation Dynamics of Nanocrystals: In-situ Observation of the Growth of CdSe NCs Via Magic-sized Clusters Intermediates.
1.4-O2	
16:30 - 17:00	<u>Oleksandr Voznyy</u> (<i>University of Toronto</i>) Ab Initio Studies of Surface Chemistry and Exciton Fine Structure in Semiconductor Nanocrystals
1.4-I1	

17:00 - 19:00 Poster Session

November 8th - Day 6 (Friday)

Plenary Session 7 Chair: Paulina Plochocka Room: Plenum	
09:00 - 09:30	<u>Xiaoyang Zhu</u> (<i>Department of Chemistry, Columbia University, New York, New York 10027, United States</i>) Ferroelectric Polarons in Lead Halide Perovskites
7-K1	
Plenary Session 8 Chair: Ivan Infante Room: Breakout 4	
09:00 - 09:30	<u>Dmitri Talapin</u> (<i>Department of Chemistry, University of Chicago, Chicago, Illinois 60637, USA</i>) Self-organization of Electrostatically and Sterically Stabilized Colloidal Nanocrystals: The Roles of Topology, Image Charges and Non-classical Nucleation
8-K1	
NCFun 2.1 Chair: Ivan Infante Room: Breakout 4	
09:30 - 10:00	<u>Raquel Galian</u> (<i>Universidad de Valencia - ICMol (Institute of Molecular Science)</i>), Soranyel Gonzalez Carrero, Ignacio Rosa-Pardo, Julia Pérez-Prieto Critical Role of Ligands on the Photoluminescence and Morphology of Colloidal Perovskite Nanocrystals
2.1-I1	
10:00 - 10:30	
10:30 - 11:00	Coffee Break
NCFun19 2.2 Chair: Maryna Bodnarchuk Room: Breakout 4	
11:00 - 11:15	<u>Valeria Mantella</u> (<i>Laboratory of Nanochemistry for Energy, EPFL, Switzerland</i>), Silviya Ninova, Seryio Saris, Anna Loiudice, Ulrich Aschauer, Raffella Buonsanti Synthesis and Size-dependent Optical Properties of Intermediate Band Gap Cu ₃ VS ₄ Nanocrystals
2.2-O2	
11:15 - 11:30	<u>Evert Dhaene</u> (<i>Department of Chemistry, Ghent University</i>), Jonas Billet, Ellie Bennett, Isabel Van Driessche, Jonathan De Roo The Trouble With 1-Octadecene: Polymerization During Nanocrystal Synthesis
2.2-O3	
11:30 - 12:00	<u>Iván Mora-Seró</u> (<i>Universitat Jaume I, Institute of Advanced Materials (INAM) - Spain</i>) Phase Segregation in Perovskite Nanoparticles and Applications of these Materials in Photocatalytic Processes
2.2-I1	
12:00 - 12:30	<u>Anna Loiudice</u> (<i>Laboratory of Nanochemistry for Energy, EPFL, Switzerland</i>), Seryio Saris, Raffaella Buonsanti Metal Oxide Shell to Study Nanoscale Phenomena in Perovskite Quantum Dots
2.2-O1	
12:30 - 14:00	Lunch
NCFun 2.3 Chair: Jonathan Owen Room: Breakout 4	

14:00 - 14:30	<u>Maryna Bodnarchuk</u> (<i>EMPA - Swiss Federal Laboratories for Materials Science and Technology</i>), Simon Boehme, Caterina Bernasconi, Maksym Kovalenko, Ivan Infante
2.3-I1	Surface Chemistry of Colloidal Cesium Lead Halides Nanocrystals
14:30 - 15:00	<u>Daniel Gamelin</u> (<i>University of Washington, Department of Chemistry, Seattle, WA 98195-1700</i>)
2.3-I2	Solar Quantum Cutting and Spectral Downconversion using Ytterbium-Doped Metal-Halide Perovskites
15:00 - 15:30	<u>Liberato Manna</u> (<i>Istituto Italiano di Tecnologia (IIT), Genova, Italy</i>)
2.3-I3	Beyond Lead Halide Perovskite Nanocrystals
15:30 - 16:00	Coffee Break
	CNFun 2.4 Chair: Iván Mora-Seró Room: Breakout 4
16:00 - 16:15	<u>Marcello Righetto</u> (<i>Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological University 637371 Singapore</i>), Swee Sien Lim, David Giovanni, Melvin Lim, Tze Chien Sum
2.4-O1	Cooling and Trapping. A Complete Map of Hot Carrier Processes in Hybrid Perovskite Nanocrystals
16:15 - 16:30	<u>M. Yenal Yalcinkaya</u> (<i>Department of Materials Science and Engineering, Izmir Institute of Technology, Turkey</i>), C. Meric Guvenc, Sercan Ozen, Hasan Sahin, Mustafa M. Demir
2.4-O2	Enhanced stability and optical properties of Gd ³⁺ doped CsPbI ₃ nanocrystals