

nanoGe Fall Meeting19 (NGFM19)

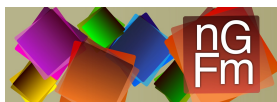
#Sol2D19. Two Dimensional Layered Semiconductors

Berlin, Germany, 2019 November 4th - 5th

Conference Chairs: Efrat Lifshitz, Cristiane Morais Smith and Doron Naveh

Conference Program

November 4th - Day 2 (Monday)	
08:45 - 09:00	Announcement of the day
	<p>Plenary Session 1 Chair: Roel van de Krol Room: Plenum</p>
09:00 - 09:30 1-K1	<p><u>Daniel Nocera</u> (<i>Harvard University</i>) Sustainable and Renewable Carbon and Nitrogen Cycles for Fuel and Crop Production</p>
	<p>Plenary Session 2 Chair: Doron Naveh Room: Breakout 1</p>
09:00 - 09:30 2-K1	<p><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</p>
	<p>Sol2D 1.1 Chair: Doron Naveh Room: Breakout 3</p>
09:30 - 10:00 1.1-11	<p><u>Christophe Delerue</u> (<i>IEMN, UMR-CNRS 8520, Villeneuve d'Ascq, France</i>), Maryam Alimoradi Jazi, Tim Prins, Niall Killilea, Wiel Evers, Peter Geiregat, Zeger Hens, Wolfgang Heiss, Arjan Houtepen, Daniel Vanmaekelbergh Theory of optical absorption in semiconductor nanocrystals: From single nanocrystals to superlattices</p>
10:00 - 10:30 1.1-12	<p><u>Gianluca Fiori</u> (<i>Dipartimento di Ingegneria dell'Informazione, Universita' di Pisa, Via Caruso 16, 56122, Pisa, Italy</i>) On the Perspectives of Graphene and Related Materials for Nanoelectronics Applications</p>
10:30 - 11:00	Coffee Break
	<p>Sol2D 1.2 Chair: Christian Klinké Room: Breakout 3</p>
11:00 - 11:30 1.2-11	<p><u>Xavier MARIE</u> (<i>Université de Toulouse, INSA-CNRS-UPS, Toulouse, France</i>) Control of the Exciton Radiative Lifetime in van der Waals Heterostructures</p>
11:30 - 12:00 1.2-12	<p><u>Maya Bar Sadan</u> (<i>Department of Chemistry, Ben Gurion University, Beer sheva, Israel</i>) Transition Metals Dichalcogenides: Growth mechanism, Structure and Catalytic Activity</p>
12:00 - 12:30 1.2-13	<p><u>Gloria Platero</u> (<i>Instituto de Ciencia de Materiales de Madrid, CSIC</i>) Simulation of Chiral Topological Phases in Driven Low Dimensional Systems</p>
12:30 - 14:00	Lunch
	<p>Sol2D 1.3 Chair: Daniel Vanmaekelbergh Room: Breakout 3</p>



14:00 - 14:15 1.3-O1	Riccardo Scott, Judith Specht, Juan Climente, Marta Corona-Castro, Anatol Prudnikau, Artsiom Antanovich, Nina Owschmikow, Sotirios Christodoulou, Laurens Siebbeles, Michael Quick, Guillaume Bertrand, Iwan Moreels, Mikhail Artemyev, Ulrike Woggon, Joseph Planelles, Marten Richter, <u>Alexander Achtstein</u> (<i>Institute of Optics and Atomic Physics, Technical University of Berlin, Strasse des 17. Juni 135, 10623, Berlin, Germany</i>) Tunable Emission Fine Structure and Origin of Quadratic TPA in 2D CdSe Nanoplatelets
14:15 - 14:30 1.3-O2	<u>Alina Schimpf</u> (<i>University of California San Diego</i>), Jessica Geisenhoff Modulation of Precursor Reactivity for Colloidally Synthesized WSe ₂ Nanocrystals and Heterostructures
14:30 - 15:00 1.3-I1	Patricia Gant, Riccardo Frisenda, <u>Andres Castellanos-Gomez</u> (<i>Materials Science Factory, Instituto de Ciencia de Materiales de Madrid (ICMM-CSIC), Madrid E-28049, Spain.</i>) Strain Engineering in 2D Materials: Towards Strain Tunable Optoelectronic Devices
15:00 - 15:30 1.3-I2	<u>Ariel Ismach</u> (<i>Department of Materials Science and Engineering, Tel Aviv University</i>) Chemical Vapor Deposition of 2D Materials and Heterostructures
15:30 - 16:00	Coffee Break

Sol2D 1.4
Chair: Efrat Lifshitz
Room: Breakout 3

16:00 - 16:30 1.4-I1	<u>Eduardo Marino</u> (<i>Institute of Physics, UFRJ, Cx.P. 68528, Rio de Janeiro, Brazil</i>), Leandro O. Nascimento, Van Sérgio Alves, N. Menezes, C. Morais Smith The Exciton Spectrum in Transition-Metal Dichalcogenides: a Quantum-Electrodynamics Approach
16:30 - 16:45 1.4-O1	<u>Juan Ignacio Climente</u> (<i>University Jaume I, Spain</i>), José Luis Movilla, Josep Planelles Signatures of Molecular Coupling between Semiconductor Colloidal Nanoplatelets
16:45 - 17:00 1.4-O2	<u>Hans Tornatzky</u> (<i>Technische Universität Berlin</i>), Roland Gillen, Hiroshi Uchiyama, Janina Maultzsch Phonon Dispersion in MoS ₂ by Inelastic X-ray Scattering

November 5th - Day 3 (Tuesday)

Plenary Session 3
Chair: Marcus Scheele
Room: Plenum

08:30 - 09:00 3-K1	<u>William Tisdale</u> (<i>Massachusetts Institute Of Technology</i>) Nonequilibrium Dynamics of Excitons and Charges in Semiconductor Nanomaterials
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Plenary Session 4
Chair: Pablo P. Boix
Room: Breakout 4

08:30 - 09:00 4-K1	<u>Juan Bisquert</u> (<i>Universitat Jaume I, Institute of Advanced Materials (INAM) - Spain</i>) Understanding Time Scales of Ionic and Electronic Phenomena in Perovskite Solar Cells
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Sol2D 2.1
Chair: Efrat Lifshitz
Room: Breakout 3

09:00 - 09:30 2.1-I3	<u>Gerd Bacher</u> (<i>Werkstoffe der Elektrotechnik and CENIDE, University Duisburg-Essen</i>) Growth and Device Integration of 2D Materials for Optoelectronic Applications
09:30 - 10:00 2.1-I1	<u>Paulina Plochocka</u> (<i>Laboratoire National des Champs Magnétiques Intenses, CNRS (FR)</i>) Excitons in MoS ₂ /MoSe ₂ Van der Waals heterostructures
10:00 - 10:30 2.1-I2	<u>Daniel Vanmaekelbergh</u> (<i>Debye Institute for Nanomaterials Science, Utrecht University, The Netherlands</i>), T. Prins, M. Alimoradi Jazi, A. J. Houtepen, W. Heiss, C. Delerue Quantum and Dielectric Confinement Effects on the Absorption Strength in Semiconductors

10:30 - 11:00 **Coffee Break**

Sol2D 2.2
Chair: Maya Bar Sadan
Room: Breakout 3

11:00 - 11:30	<u>Anna Rodina</u> (<i>Ioffe Institute</i>)
2.2-11	Bright and Dark Exciton Emission in Two Dimensional Nanostructures
11:30 - 12:00	<u>Christian Klinke</u> (<i>University of Rostock</i>)
2.2-12	Synthesis and Optoelectronic Properties of Two-dimensional Colloidal Nanomaterials
12:00 - 12:30	<u>Michele Failla</u> (<i>Delft University of Technology (TU Delft), The Netherlands</i>), Bastiaan Salzmann, Daniel
2.2-01	Vanmaekelbergh, Laurens Siebbeles Room Temperature Evidence of Multiple Heavy-hole Excitonic States and Biexciton-phonon Coupling in CdSe Nanoplatelets
12:30 - 14:00	Lunch
	Sol2D 2.3 Chair: Xavier MARIE Room: Breakout 3
14:00 - 14:30	<u>Laurens Siebbeles</u> (<i>Delft University of Technology (TU Delft), The Netherlands</i>)
2.3-11	Nature and Dynamics of Charge Carriers and Excitons in Colloidal 2D Materials
14:30 - 14:45	<u>Faris Horani</u> (<i>Technion, Schulich Faculty of Chemistry, Solid State Institute, Russell Berrie Nanotechnology</i>
2.3-01	<i>Institute</i>), Efrat Lifshitz Deciphering the evolution mechanism of 3D β -In ₂ S ₃ nanoclusters
14:45 - 15:00	Giorgio Giuffredi, Alessandro Mezzetti, Andrea Perego, Piero Mazzolini, Greta Tirelli, Mirko Prato, Francesco
2.3-02	Fumagalli, Yu-Chuan Lin, Chenze Liu, Ilia Ivanov, Alex Belianinov, Alex Poretzky, Gerd Duscher, David Geohegan, <u>Fabio Di Fonzo</u> (<i>Center for Nano Science and Tecnology, Istituto Italiano di Tecnologia</i>) Nanocrystalline, Mixed-Phase Transition Metal Oxide/Oxy-Chalcogenide Nanostructures for Efficient Hydrogen Evolution Electrocatalysis
15:00 - 15:30	<u>Xiaoyang Zhu</u> (<i>Department of Chemistry, Columbia University, New York, New York 10027, United States</i>)
2.3-12	Excitons, Phonons, and Electrons in Two-dimensional Semiconductors and Heterojunctions
15:30 - 16:00	Coffee Break
	Sol2D 2.4 Chair: Efrat Lifshitz Room: Breakout 3
16:00 - 16:30	<u>jacky even</u> (<i>Univ Rennes, INSA Rennes, CNRS, Institut FOTON - UMR6082, F-35000 RENNES</i>)
2.4-11	Physical Properties of Pure 2D Layered Hybrid Perovskites: Recent Results
17:00 - 19:00	Poster Session