

EMN MEETING on Photovoltaics
January 12th – January 15th
DoubleTree by Hilton Hotel Orlando, FL, USA

Monday Jan.12
Room A

7:00-8:00A M

Breakfast

Session: Hybrid Solar Cells I Chair: Jean-Christophe Lacroix

8:00-8:25AM

A01: Highly Efficient and Bending Durable Flexible Perovskite Solar Cells: Toward Power Solution for Wearable Electronic Devices

Hyun Suk Jung
Sungkyunkwan University, Korea

8:25-8:50AM

A02: Tailoring Titania Nanostructures for Solar Cell Applications

Peter Mueller-Buschbaum
Technology University Munchen, Germany

8:50-9:15AM

A03: Synthesis and characterization of P₃HT/ZnO nanorods hybrid bulk heterojunction solar cells

Min Zhong
China Jiliang University, China

9:15-9:40AM

A04: Application of Polymers in Carbon Nanotube Silicon Heterojunction Solar Cells

Joe Shapter
Flinders University, Australia

9:40-10:05 AM

A05: Hole-transporting molecular glasses for hybrid solar cells

Juozas Vidas Grazulevicius
Kaunas University of Technology,
Lithuania

10:05-10:20AM

Session Break

Session: Dye-Sensitized Solar Cell I Chair: Peter Mueller-Buschbaum

10:20 -10:45 AM

A06: Nanostructured PEDOT based counter electrode and EDOT-based cobalt complex used as an efficient co-mediator and in dye-sensitized solar cells

Jean-Christophe Lacroix
Paris Diderot University, France

10:45-11:10 AM

A07: Quantum dots/dye-sensitized solar cells for BIPV

Xiujian Zhao
Wuhan University of Technology (WUT),
China

11:10-11:35 AM	A08: Controlling electron recombination in nanowire-based DSSCs	Kirk J. Ziegler University of Florida, USA
11:35-12:00 PM	A09: Femtosecond Study of the Anomaly in Electron Injection for Dye-sensitized Solar Cells: Influence of isomerization employing Ru (II) sensitizers with anthracene and phenanthrene ancillary ligands	Ahmed El-Shafei North Carolina State University, USA
12:00-12:25 PM	A10: The Application of Electrolytes in Dye-Sensitized Solar Cells	Jihuai Wu Huaqiao University, China
12:25-13:25 PM	Lunch Break	
Session: General I Chair: Momoji Kubo		
13:25-13:50 PM	A11: Nano-structured thick-film permanent magnets	Masaki Nakano Nagasaki University, Japan
13:50 -14:15 PM	A12: Si-based conversion frequency layer for Si Solar Cell	Fabrice Gourbilleau CIMAP, France
14:15 -14:40 PM	A13: Electron-Cyclotron-Resonance Ar Plasma Chemical Vapor Deposition for Group-IV Semiconductor Quantum-Heterostructure	Masao Sakuraba Tohoku University, Japan
14:40 -15:05PM	A14: Elucidating orientation, aggregation and buried interface in small molecule solar cells	Sandrine Heutz Imperial College London, UK
15:05-15:20PM	Session Break	
Session: Nano-Structured Materials For Energy Conversion And Storage I Chair: Masaki Nakano		
15:20-15:45PM	A15: Novel Layer Nanostructured Materials for Energy Storage Applications	Ram Gupta Pittsburg State University, USA
15:45-16:10PM	A16: Quantum Chemical Molecular Dynamics Simulations on Synthesis Process of Silicon-Based Solar Cell	Momoji Kubo Tohoku University, Japan
16:10-16:35PM	A17: Nanoscale and atomistic analyses of interfaces in sensitized solar cells	Man-Jong Lee Konkuk University, Korea
16:35-17:00PM	A18: Expedited Quasi-Updated Gradient Based Optimization Techniques for Energy Conversion Nano-Material	Shima Hajimirza California State Polytechnic University, USA

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Tuesday Jan.13		
Room B		
7:00-8:00A M	Breakfast	
Session: Hybrid Solar Cells II Chair: Chih-hung Chang		
8:00-8:25AM	B01: Perovskite Solar Cells with Enhanced Reproducibility and Stability	Xudong Yang Shanghai Jiao Tong University, China
8:25-8:50AM	B02: Energy Level Alignment at Organic-Inorganic Interfaces	Juergen Ristein University of Erlangen, Germany
8:50-9:15AM	B03: Functional layers and OPVs – the power of in-situ X-ray studies	Stephan V. Roth Deutsches Elektronen Synchrotron (FS-PE), Germany
9:15-9:40AM	B04: Organic/inorganic Hybrid Solar Cells	Weining Wang Seton Hall University, USA
9:40-10:05 AM	B05: Luminescent solar concentrators based on organic-inorganic hybrids for flexible waveguiding photovoltaics	Paulo Sergio de Brito Andre University of Aveiro, Portugal
10:05-10:20AM	Session Break	
Session: General II Chair: Xudong Yang		
10:20 -10:45 AM	B06: Scalable Nanomanufacturing for Photovoltaics using Microreactor-Assisted Nanomaterial Synthesis and Deposition Processes	Chih-hung Chang Oregon State University, USA
10:45-11:10 AM	B07: Bandgap Science for Organic Solar Cells	Masahiro Hiramoto Institute for Molecular Science, Japan
11:10-11:35 AM	B08: An Analog MPPT Controller Used for DMPPT PV System	Fang Liu Zhejiang University, China
11:35-12:00 PM	B09: Relationship between microstructure and magnetic domain structure of Nd-Fe-B melt-spun ribbon magnets	Masaaki Takezawa Kyushu Institute of Technology, Japan

12:00-12:25 PM	B10: Hybrid polymer photovoltaic solar cells	Ana Flavia Nogueira University of Campinas, Brazil
12:25-13:25 PM	Lunch Break	
Session: Quantum-Dot Solar Cells I Chair: Sukgeun Choi		
13:45 -14:10 PM	B11: Nanoscale Interface Control for Quantum-Dot-Sensitized Solar Cell	Byungwoo Park Seoul National University, Korea
14:10 -14:35 PM	B12: PbS Quantum Dots Capped with Amorphous ZnS for Bulk Heterojunction Solar Cells	Lidong Sun Chongqing University, China
14:35 -15:00PM	B13: InAs/GaAs quantum solar cells with ideality factor approaching unity	Guillaume Zoppi Northumbria University, UK
15:00-16:00PM	Poster Session	
Session: General III Chair: Byungwoo Park		
16:00-16:25PM	B14: Factors Affecting the Microstructure, Phase Composition and Electronic Properties of Cu ₂ ZnSnS ₄ Thin Films synthesized via Sulfidation of Cu-Zn-Sn Alloys	Eray Aydil University of Minnesota, USA
16:25-16:50PM	B15: Optical characterization of emerging photovoltaic absorber materials	Sukgeun Choi National Renewable Energy Laboratory(NREL), USA
16:50-17:15PM	B16: Flourination of conjugated polymers for high efficient polymer solar cells	Won Ho Jo Seoul National University, Korea
17:30PM	Dinner Social	

Tuesday Jan.13		
Room C		
7:00-8:00A M	Breakfast	
Session: General IV Chair: Ching-Ting Lee		
8:00-8:25AM	C01: Organic photovoltaics with Nano-structures	Jong-Lam Lee POSTECH, Korea
8:25-8:50AM	C02: Design of Small Molecules for High Voltage and High Current in Bulk Heterojunction Solar Cells	Fernando Langa De La Puente University of Castilla-La Mancha, Spain
8:50-9:15AM	C03: Suitable Properties of Solar Cells for Electrochemical Water Splitting to Store Hydrogen (Concentrated Photovoltaic Solar Cell as an Example)	Katsushi Fujii The University of Tokyo, Japan
9:15-9:40AM	C04: Kirigami Photovoltaics	Pei-Cheng Ku University of Michigan, USA
9:40-10:05 AM	C05: Techniques for the Optimal Configuration of Dynamic Photo-Voltaic Arrays	Peter R. Wilson University of Southampton, UK
10:05-10:20AM	Session Break	
Session: OPV Materials and Systems I Chair: Fernando Langa De La Puente		
10:20 -10:45 AM	C06: The Progress of Organic Solar Cells	Ching-Ting Lee National Cheng-Kung University, Taiwan
10:45-11:10 AM	C07: Exciton Dissociation at Small Molecule Donor-Acceptor Interfaces in Organic Photovoltaics	Steven W. Robey National Institute of Standards and Technology, USA
11:10-11:35 AM	C08: Probing the ultrafast evolution of exciton and polaron coherent size in organic semiconductors	Wai-Lun Chan University of Kansas, USA
11:35-12:00 PM	C09: Resonant X-rays revealing the effects of molecular orientation and domain structure in organic solar cells	Brian A. Collins Washington State University, USA
12:00-12:25 PM	C10: Organic step-flow growth – a route towards long-range ordered organic thin film for (opto) electronic applications	Pengpeng Zhang Michigan State University, USA
12:25-13:20 PM	Lunch Break	

Session: Nano-Structured Materials For Energy Conversion And Storage II Chair: Dmitri Kilin		
13:20 -13:45PM	C11: Efficient Hybrid Solar Cells Based on Conjugated Polymer: PbS_xSe_{1-x} Nanocrystal Composites ---Benefiting from Vertical Phase Segregation	Wanli Ma Soochow University, China
13:45 -14:10 PM	C12: Black silicon for solar cells	Joerg Schilling Martin-Luther University Halle-Wittenberg, Germany
14:10 -14:35 PM	C13: Multilayer organic solar cells using soluble photoprecursors	Ken-ichi Nakayama Yamagata University, Japan
14:35 -15:00PM	C14: Semiconductor nanostructures for IR photovoltaics	Iris Visoly-Fisher Ben Gurion University of the Negev, Israel
15:00-16:00PM	Poster Session	
Session: Quantum-Dot Solar Cells II Chair: Joerg Schilling		
16:00-16:25PM	C15: Constructing high efficiency CdS/CdSe quantum dot sensitized solar cells	Jianjun Tian University of Science and Technology Beijing, China
16:25-16:50PM	C16: Photo-induced charge transfer at the interfaces of nanostructures	Dmitri Kilin University of South Dakota, USA
17:30PM	Dinner Social	

Tuesday Jan.13		
Room D		
7:00-8:00A M	Breakfast	
Session: Nano-Structured Materials For Energy Conversion And Storage III Chair: Erik D. Spoerke		
8:00-8:25AM	D01: Incorporating Quantum Dots Into Photovoltaic Device Structures	Irving P. Herman Columbia University, USA
8:25-8:50AM	D02: N-TiO ₂ /Carbon Dots composite for high performance Li-ion and Na-ion Batteries anodes	Xiaobo Ji Central South University, China
8:50-9:15AM	D03: Enhancement of thin-film solar cells by non-resonant and weakly resonant metamaterials	Simovski Konstantin Aalto University, Finland
9:15-9:40AM	D04: Nanophotonics for ultrathin solar cells: light trapping and luminescent concentration	Vivian E Ferry University of Minnesota, USA
9:40-10:05 AM	D05: Double-side textured c-Si films with advanced nanophotonic light trapping for thin film photovoltaics	Jolly Xavier Helmholtz-Zentrum Berlin, Germany
10:05-10:20AM	Session Break	
Session: Dye-Sensitized Solar Cell II Chair: Ahmed El-Shafei		
10:20 -10:45 AM	D06: Solar MOFs: Supramolecular Materials to Enable Next Generation Dye-Sensitized Solar Cells	Erik D. Spoerke Sandia National Laboratories, USA
10:45-11:10 AM	D07: Application of Versatile TiO ₂ in Sensitized Solar cell	Xingfu Zhou Nanjing University of Technology, China
11:10-11:35 AM	D08: Nanoscale Engineering of Gel-like Electrolyte and Carbide Electrode for Dye Sensitized Solar Cells	Jung-Kun Lee University of Pittsburgh, USA
11:35-12:00 PM	D09: Dye-sensitized solar cells based on aqueous electrolytes	Wanchun Xiang Wuhan University of Technology, China
12:25-13:25 PM	Lunch Break	
Session: Ternary and Multinary Compounds and Related Solar Cells I Chair: Prasanta Kumar Biswas		

13:45 -14:10 PM	D10: Understanding Electronic Transport in Thin Film Pyrite FeS ₂	Chris Leighton University of Minnesota, USA
14:10 -14:35 PM	D11: Bandgap optimization of submicron thick Cu(In,Ga)Se ₂ solar cells	Xudong Xiao The Chinese University of Hong Kong, China
14:35 -15:00PM	D12: Development of Cu-Sb and Ag-Sb chalcogenides as photovoltaic absorber materials	Bindu Krishnan Autonomous University of Nuevo Leon, Mexico
15:00-16:00PM	Poster Session	
Session: General V Chair: Xudong Xiao		
16:00-16:25PM	D13: Controlling nanoscale morphology and improving materials properties for bulk heterojunction solar cells	Bruno Pignataro University of Palermo, Italy
16:25-16:50PM	D14: Templated Hierarchical Nanostructures for Enhancing Printable Dye Solar	Dunbar P. Birnie Rutgers University, USA
16:50-17:15PM	D15: Soft chemistry based sponge-like indium tin oxide (ITO)–a prospective component of photoanode for solar cell application	Prasanta Kumar Biswas Indian Institute of Technology Roorkee (IITR), India
17:30PM	Dinner Social	

Wednesday Jan.14		
Room B		
7:00-8:00A M	Breakfast	
Session: General VI Chair: Yasuhiro Nishioka		
8:00-8:25AM	B17: Photovoltaics on chip: materials to system	Jurriaan Schmitz University of Twente, The Netherlands
8:25-8:50AM	B18: Comparison of performance models in respect to degradation studies and yield prediction	Marzella Goerig Forschungszentrum Juelich, Germany
8:50-9:15AM	B19: Stroboscopic Microscopy – Direct Imaging of Microscale Structural Developments During Spin-coating	Daniel Toolan University of Sheffield, UK
9:15-9:40AM	B20: Strongly correlated materials: very promising new candidates for efficient solar cells	Adam Gali Hungarian Academy of Sciences, Hungary
9:40-10:05 AM	B21: Black silicon solar cells	Aimin Liu Dalian university of technology, China
10:05-10:20AM	Session Break	
Session: Nano-Structured Materials For Energy Conversion And Storage IV		
Chair: Jurriaan Schmitz		
10:20 -10:45 AM	B22: Ternary Blend Bulk-Heterojunction Solar Cells based on PTB7: PC ₆₁ BM with Small Amounts of P3HT	Yasuhiro Nishioka Nihon University, Japan
10:45-11:10 AM	B23: Photoelectrochemical hydrogen production: pathways for higher conversion efficiency and better device durability	Tadashi Ogitsu Lawrence Livermore National Laboratory, USA
11:10-11:35 AM	B24: Influence of SWCNT Purity and Processing on the Performance of Nanotube-Silicon Solar Cells	Erik K. Hobbie North Dakota State University, USA
11:35-12:00 PM	B25: Near-IR Spectroscopy and Charge Transfer in isolated Lead Sulfide/Cadmium Sulfide Nanocrystals	Mircea Cotlet Brookhaven National Laboratory, USA
12:25-13:25 PM	Lunch Break	
Session: Nano-Structured Materials For Energy Conversion And Storage V Chair: Svetlana Kilina		

13:25-13:50 PM	B26: Nanoscale characterization of polycrystalline photovoltaic materials	Nikolai Zhitenev National Institute of Standards and Technology, USA
13:50 -14:15 PM	B27: Imaging Open-Circuit Voltage in Photovoltaic Materials with Nanoscale Resolution	Marina S. Leite University of Maryland, USA
14:15 -14:40 PM	B28: Nanostructures for polymer solar cells	Yu-Chiang Chao Chung Yuan Christian University, Taiwan
14:40 -15:05PM	B29: Micro- and nano-scale optics for solar cells	Jeremy Munday University of Maryland, USA
15:05-15:20PM	Session Break	
Session: Quantum-Dot Solar Cells III Chair: Nikolai Zhitenev		
15:20-15:45PM	B30: Role of surface ligands in directed assembly and photophysics of quantum dots as energy materials	Svetlana Kilina North Dakota State University, USA
15:45-16:10PM	B31: Direct electronic properties and high-resolution elemental mapping of a PbS quantum dot-based photovoltaic device	J. Scott Niezgoda Vanderbilt University, USA
16:10-16:35PM	B32: Photoluminescence Quantum Efficiency and Energy Tuning in Dye - Quantum Dot Nanoassemblies	Christian von Borczyskowski Chemnitz University of Technology, Germany
16:35-17:00PM	B33: Quantum Dot Solar Cells: Are they commercially viable?	Kimberly Sablon United States Army Research Laboratory, USA
17:30PM	Dinner Social	

Wednesday Jan.14		
Room C		
7:00-8:00A M	Breakfast	
Session: Nano-Structured Materials For Energy Conversion And Storage VI		
Chair: Andriy Zakutayev		
8:00-8:25AM	C17: High-performance TiO ₂ nanowire-based collectors and their use in emerging nanocrystalline depleted heterojunction solar cell architectures	Sylvain G. Cloutier ETS, Canada
8:25-8:50AM	C18: Novel 3D Nb ₃ O ₇ (OH) Nanostructured Electrodes for Energy Conversion Systems	Christina Scheu MPIE, Germany
8:50-9:15AM	C19: Effect of the Laser Prameters on Synthesis of Tin Sulfide Nanoparticles by Pulsed Laser Ablation in Liquid	Sadasivan Shaji Autonomous University of Nuevo Leon, Mexico
9:15-9:40AM	C20: Photon Management with Luminescent Materials and Photonic Structures for High Efficiciency Silicon Solar Cells	Jan Christoph Goldschmidt Fraunhofer-Institute for Solar Energy Systems ISE, Germany
9:40-10:05 AM	C21: Resonant Waveguiding in Semiconductor Nanowires for Energy Harvesting Applications	Jaspreet Walia University of Waterloo, Canada
10:05-10:20AM	Session Break	
Session: Ternary and Multinary Compounds and Related Solar Cells II		
Chair: Sylvain G. Cloutier		
10:20 -10:45 AM	C22: Accelerated development of thin film PV on the example of Cu-M-S (M = Sb, Sn)	Andriy Zakutayev National Renewable Energy Laboratory, USA
10:45-11:10 AM	C23: Electronic and Compositional Properties of Cu ₂ ZnSn(S _x Se _{1-x}) ₄ Surfaces, Interfaces and Grain Boundaries: Routes to Increasing Open Circuit Voltage	Richard Haight IBM T.J. Watson Research Center, USA
11:10-11:35 AM	C24: Nitride ternary (InGaN, InAlN) alloys for photovoltaic applications	Pierre Ruterana CIMAP, France
11:35-12:00 PM	C25: A comparative operando XPS study of photovoltage in CZTSe and CIGS solar cells	Glenn Teeter National Renewable Energy Laboratory(NREL), USA

12:00-12:25 PM	C26: Effect of thermal annealing on layer morphology and electrical properties of printed CdS/CuInSe ₂ solar cells	Samira Khelifi University of Gent, Belgium
12:25-13:25 PM	Lunch Break	
Session: Ternary and Multinary Compounds and Related Solar Cells III Chair: Jinkyong Yoo		
13:25-13:50 PM	C27: Noble solid state selenization technology for a large area CIGS absorber	Chan-Wook Jeon Yeungnam University, South Korea
13:50 -14:15 PM	C28: The Zn-IV-Nitride Semiconductors; Growth, Lattice Ordering, Band Structure, and Optical Properties	Kathleen Kash Case Western Reserve University, USA
14:15 -14:40 PM	C29: Device Characteristics and Modelling of CZTSSe Solar Cells	Tayfun Gokmen IBM T. J. Watson Research Center, USA
14:40 -15:05PM	C30: Highly Efficient (10%) CZTSSe Thin Film Solar Cells Prepared via Electrochemical Deposition	Jin Young Kim Korea Institute of Science and Technology (KIST), Korea
15:05-15:20PM	Session Break	
Session: Nano-Structured Materials For Energy Conversion And Storage VII Chair: Kathleen Kash		
15:20-15:45PM	C31: Silicon nanoepitaxy for photovoltaic applications	Jinkyong Yoo Los Alamos National Laboratory, USA
15:45-16:10PM	C32: Recent developments in the catalyst modified photoelectrodes for solar fuel generation	Satyananda Kishore Pilli University of Nevada, USA
16:10-16:35PM	C33: Nano-patterned Si absorbers for ultrathin solar cell applications	Dong-Wook Kim Ewha Womans University, Korea
16:35-17:00PM	C34: A novel inductively coupled plasma source (Plasma Jet Deposition) for TiO ₂ hierarchically structured thin film deposition	Claudia Riccardi University of Milano-Bicocca, Italy
17:30PM	Dinner Social	

Wednesday Jan.14		
Room D		
7:00-8:00A M	Breakfast	
Session: OPV Materials and Systems II Chair: Giuseppe Gigli		
8:00-8:25AM	D16: Characterization of the charge carrier motion dynamics in OPV materials by ultrafast optical probing of electric field	Vidmantas Gulbinas Vilnius University, Lithuania
8:25-8:50AM	D17: Highly Efficient BHJ Organic Photovoltaic Cells Through Integrating Cathode Interlayers	Ana Maria Matos Charas Institution of Telecom, Portugal
8:50-9:15AM	D18: Two-dimensional conjugated BDT-based conjugated polymers and their applications in highly efficient polymer solar cells	Jianhui Hou Chinese Academy of Sciences, China
9:15-9:40AM	D19: Photophysics of organic donor-acceptor blends: from thin-film devices to single molecules	Oksana Ostroverkhova Oregon State University, USA
9:40-10:05 AM	D20: Nanoscale Electrical Characterization of Organic Solar Cell Materials	Jeffrey M. Mativetsky Binghamton University, State University of New York, USA
10:05-10:20AM	Session Break	
Session: Hybrid Solar Cells III Chair: Vidmantas Gulbinas		
10:20 -10:45 AM	D21: Hybrid materials for Photovoltaics and Photovoltachromics	Giuseppe Gigli University of Salento, Italy
10:45-11:10 AM	D22: Ionic Transport in Organo-metal Halide: Origin of Anomalous Electric Polarization in Perovskite Solar Cells	Tae-Youl Yang Max Planck Institute for Solid State Research, Germany
11:10-11:35 AM	D23: Fabrication of Silicon Nanocone/PEDOT:PSS Heterojunction Hybrid Solar Cell	Rusli Nanyang Technological University, Singapore
11:35-12:00 PM	D24: Highly efficient perovskite hybrid solar cells with >20 % of power conversion efficiency	Sang Hyuk Im Kyung Hee University, Korea
12:00-12:25 PM	D25: Micro and nano structure used for hybrid solar cells	Meicheng Li North China Electric Power University, China

12:25-13:25 PM	Lunch Break	
Session: General VII Chair: Theodoros Dimopoulos		
13:25-13:50PM	D26: Investigation of time-resolved photovoltage in third generation solar cells by KFM and XPS	Lukasz Borowik CEA, France
13:50-14:15PM	D27: The genetic approach to search for novel Intermediate-Band Solar Cells based on the X-doped chalcopyrite CuAlSe ₂ (X=Si-Sn, P-Sb)	Neng Li Wuhan University of Technology, China
14:15-14:40PM	D28: Semiconductor Oxides as hole and transport layers in Photovoltaic Applications	Monica Lira-Cantu Catalan Institute of Nanoscience and Nanotechnology (ICN2-CSIC), Spain
14:40-15:05PM	D29: Ripple Correlation and Model Reference Adaptive Control for Maximum Power Point Tracking in PV Systems	Raghav Khanna Bucknell University, USA
15:05-15:20PM	Session Break	
Session: Polymer and Thin Film Photovoltaic Cells Chair: Lukasz Borowik		
15:20-15:45PM	D30: Solution-processed metal oxides as transparent electrodes and absorbers for low-cost, thin film solar cells	Theodoros Dimopoulos AIT Austrian Institute of Technology, Austria
15:45-16:10PM	D31: ZnO in Inverted Polymer Based Solar Cells – Fabrication and Interface Formation	Gunther Andersson Flinders University, Australia
17:30PM	Dinner Social	

Thursday Jan.15		
Room B		
7:00-8:00A M	Breakfast	
Session: OPV Materials and Systems III Chair: Michael Z. Hu		
8:00-8:25AM	B34: Increasing the charge separating properties of molecular OPV materials	Jan C. Hummelen University of Groningen, The Netherlands
8:25-8:50AM	B35: Controlled chemical modification of carbon nanostructures for OPV materials	Enzo Menna University of Padua, Italy
8:50-9:15AM	B36: Morphological characterization of solar cell materials using neutron scattering	Ezzeldin Metwalli Technology University Munchen, Germany
9:15-9:40AM	B37: Post deposition activation of latent hydrogen bond networks as a tool to control the bulk heterojunction morphology in OPV devices	Luca Beverina State University of Milano-Bicocca, Italy
9:40-10:05 AM	B38: Towards controlled growth of low-dimensional organic semiconductors on substrates: a theoretical understanding of their interaction mechanisms	Mina Yoon Oak Ridge National Laboratory, USA
10:05-10:20AM	Session Break	
Session: Nano-Structured Materials For Energy Conversion And Storage VIII		
Chair: Jan C. Hummelen		
10:20 -10:45 AM	B39: Semiconductor, Graphene, Oxide, and Their Organic Hybrid Nanomaterials for Energy Applications	Michael Z. Hu Oak Ridge National Laboratory, USA
10:45-11:10 AM	B40: Surface Reaction Controlled Synthesis of Novel Manganese Oxides Based Nanomaterials for Energy Storage Applications	Hao Jiang East China University of Science and Technology, China
11:10-11:35AM	B41: Controllable preparation of nanomaterials for new energy application via flames	Yanjie Hu East China University of Science and Technology, China
11:35-12:00 PM	B42: Hybrid-dimensional approaches for energy storage	Seong Chan Jun Yonsei University, Korea
12:25-13:25 PM	Lunch Break	

Thursday Jan.15 Room C		
7:00-8:00A M	Breakfast	
Session: General VIII Chair: Hao Gong		
8:25-8:50AM	C35: Tin-based Group IV Semiconductors: Applications in Microelectronics, Photonics, and Solar Cell	Genquan Han Chongqing University, China
8:50-9:15AM	C36: Photoelectric properties in some perovskite oxides and heterostructures	Kexin Jin Northwestern Polytechnical University, China
9:15-9:40AM	C37: Thermal-Photovoltaic Hybrids: New Geometries	David Carroll Wake Forest University, USA
9:40-10:05 AM	C38: Anisotropic Mobilities in Organic Semiconductors	Keli Han Chinese Academy of Sciences(Dalian), China
10:05-10:20AM	Session Break	
Session: General IX Chair: David Carroll		
10:20-10:45AM	C39: Nanowire-based infrared photodetectors	Hakan Pettersson Halmstad University, Sweden
10:45-11:10AM	C40: On $\text{Cu}_2\text{ZnSn}(\text{SSe})_4$ (CZTSSe) Films for Photovoltaic Applications	Hao Gong National University of Singapore, Singapore
12:25-13:25 PM	Lunch Break	

Tuesday Jan.13

15:00-16:00PM

Poster Session

P1	Composite Separator Membranes with Triple layered Structures and Improved Interfacial Contact for Sustainable Dye-sensitized Solar Cells	Sung Chul Hong Sejong University, Korea
P2	Synthesized $\text{CH}_3\text{NH}_3\text{PbI}_3$ for Solid State Solar Cells	Hong-Wen Wang Chung-Yuan Christian University, Taiwan
P3	High Open Circuit Voltage Planar Type Solar Cells Using $\text{CH}_3\text{NH}_3\text{PbBr}_3$ Perovskite	Jin Hyuck Heo Kyung Hee University, Korea
P4	Fabrication of solid-state electrochemi-luminescence cells using TiO_2 nanoparticles and silica-based gel type solvents	Hye-Soo Choi Kyungsoong University, Korea
P5	Preparation of solid-state electrochemi-luminescence cells using ZnO nanorods and silica-based gel type solvents	Youl-Moon Sung Kyungsoong University, Korea
P6	Nanostructured TiO_2 film deposition by Supersonic Plasma Jet Source for energetic application	Elisa Camilla Dell'Orto University of Milan Bicocca, Italy
P7	Modulating Band Structure of GeSn by Si_3N_4 Liner Stress for Optoelectronic Applications	Mingshan Liu Chongqing University, China