SYMPOSIUM ED5

Photoactive Nanoparticles and Nanostructures
April 18 - April 21, 2017

Symposium Organizers
Feng Bai, Henan University
Ying-Bing Jiang, Angstrom Thin Film Technologies LLC
Binsong Li, Tsinghua Innovation Center in Dongguan
Dong Qin, Georgia Institute of Technology

Symposium Support
Dongguan-RITS Innovation Center
Henan University

Proceedings Statement
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* Invited Paper

SESSION ED5.1: Photocatalysis I
Session Chairs: Dong Qin and Yang Qin
Tuesday Morning, April 18, 2017
PCC North, 100 Level, Room 129 A

10:30 AM *ED5.1.01
Interfacial Self-Assembly of Hierarchically Structured Nanoparticles with Photocatalytic Activity Hongyou Fan[1, 2]; [1]Sandia National Laboratories, United States; [2]University of New Mexico, United States.

11:00 AM *ED5.1.02
Effects of Nano-Scale Surface Modifications on Photoelectrochemical Solar Fuel Production Tsutomu Minegishi[1, 2]; [1]The University of Tokyo, Japan; [2]JST, Japan.

11:30 AM ED5.1.03
Ferroelectric Field Tuned Photoelectrochemical Water Splitting Using Graphene as Electrode Xiaobo Chen[1, 2]; [1]University of Wisconsin-Madison, United States; [2]Lanzhou University, China.

11:45 AM ED5.1.04
Twin Defects Control the Shape of Ternary Silver Halide Nanocrystals for Photocatalytic Reactions Bo Yin[1, 2]; [1]Washington University in St. Louis, United States; [2]Washington University in St. Louis, United States.

SESSION ED5.2: Nanocrystal I
Session Chairs: Feng Bai and Zaicheng Sun
Tuesday Afternoon, April 18, 2017
PCC North, 100 Level, Room 129 A

1:30 PM *ED5.2.01
Gold Nanocages as Photothermal Transducers for Controlled Release and Sensing Applications Younan Xia; Georgia Institute of Technology, United States.

2:00 PM *ED5.2.02
Nanoscale Optical Interactions in Precise Assemblies Paul S. Weiss; University of California, Los Angeles, United States.

2:30 PM ED5.2.03
Permanent Excimer Superstructures by Supramolecular Networking of Metal Quantum Clusters Sergio Brovelli; University of Milano Bicocca, Italy.

2:45 PM ED5.2.04
ALD-Grown Secondary Electron Emission Layer Studies for Microchannel Plates for Photodetection Omkar B. Shende[1, 2]; [1]Argonne National Laboratory, United States; [2]Princeton University, United States.

3:00 PM BREAK

3:30 PM *ED5.2.05
Nanostructured Conjugated Polyelectrolyte Films—Properties and Applications Kirk S. Schanze; University of Texas, San Antonio, United States.

4:00 PM *ED5.2.06
Advanced Near-Infrared Fluorescence In Vivo Imaging—Seeing is Believing Qiangbin Wang; Chinese Academy of Sciences, China.

4:30 PM ED5.2.07
Phenoxazone-Based Pigments Isolated from Cephalopods Enhance Light Scattering in Bio-Derived Nanostructured Materials Leila Deravi; Northeastern University, United States.

4:45 PM ED5.2.08
Energetic Alignment and Charge Transfer Excitation in Nanoassembly of Qyantum Dot and Metalorganic Dye Svetlana V. Kilina; North Dakota State University, United States.

SESSION ED5.3: Poster Session I
Tuesday Afternoon, April 18, 2017
8:00 PM - 10:00 PM
Sheraton, Third Level, Phoenix Ballroom

ED5.3.01
Solution-Based Self-Assembly and Nanoengineering of Multifunctional Nanoparticle Coatings Kaifu Bian; Sandia National Laboratory, United States.

ED5.3.02
Construction of Enhanced Photocurrent Generation Systems by Nanocomposite Layers of Silver Nanoparticles and Dyes Katsuhiko Kanaizuka; Yamagata University, Japan.

ED5.3.03
Pyrolysis of Self-Assembled Iron Porphyrin on Carbon Black as Core/Shell Structured Electrocatalysts for Highly Efficient Oxygen Reduction in both Alkaline and Acidic Medium Yujiang Song; Dalian University of Technology, China.

ED5.3.04
Graphene Quantum Dots in High Performance Organic Photovoltaic Devices Zheling Zhang[1, 2]; [1]Guilin University of Electronics and Technology, China; [2]Beijing Institute of Technology, China.

ED5.3.05
Highly Stable Transparent Electrode Based on Copper Nanowire@Graphene Core@Shell Nanostructure Yumi Ahn; Daegu Gyeongbuk Institute of Science and Technology, Korea (the Republic of).

ED5.3.06
Low Dimensional Multilayered Nanostructures for Plasmonic Applications Ezgi Abacioglu; Middle East Technical University, Turkey.

ED5.3.07
Porphyrin-Based Composites Controllable Self-Assembly and Photodynamic Therapy Research Jiefei Wang[1, 2]; [1]Henan University, China; [2]Key Laboratory for Special Functional Materials of the Ministry of Education, China.

ED5.3.08
3D Core-Shell Porous Structures for Photoelectrochemical Water Splitting Kiwon Kim; Sogang University, Korea (the Republic of).

ED5.3.09
Enhanced Optical Stability of All-Inorganic Perovskite Nanocrystals Embedded in Polymer Yuan Chih Chang; National University of Tainan, Taiwan.

ED5.3.10
Synthesis and Characterization of Novel Copper-Manganese Based Oxides Chun-Yi Lu; National Tsing Hua University, Taiwan.

ED5.3.11
Hierarchical TiO_2-Based Nanostructures for Photoelectrochemical Water Splitting Luca Mascaretti; Politecnico di Milano, Italy.

ED5.3.12
Tunable-Photoluminescence 2D Materials Quantum Dots Bedanga Sapkota; Northeastern University, United States.

ED5.3.13
A Quantitative Analysis of the Reduction Pathways of a Salt Precursor in the Synthesis of Metal Nanocrystals Tung Han Yang[1, 2]; [1]Georgia Institute of Technology and Emory University, United States; [2]National Tsing Hua University, Taiwan.

ED5.3.14
Optical Properties of Nano-Structured Semiconductors Fabricated by Ion Implantation Angelica Hernandez; CINVESTAV, Mexico.

ED5.3.15
Tip-Enhanced Photovoltaic Effects in Pd Substituted PZT Thin Films Shalini Kumari; University of Puerto Rico, United States.

ED5.3.16
A Systematic Study of the Effect of CdS Shell Thickness on the Complex Index of Refraction of CdSe/CdS Core/Shell Nanocrystal Solids Mayank Puri; University of Minnesota, United States.

ED5.3.17
Development of Al^{3+} and Fe^{3+} Co-Doped TiO_2 Compact Films and their Application in Hybrid Solar Cells with a Mixed Tin-Lead Perovskite and Sb_2S_3 Photoabsorbing Nanoparticles Jose Garcia Cerrillo; UNAM, Mexico.

ED5.3.18
A Porphyrin Protein Maquette-Based Photovoltaic Device David L. Officer; University of Wollongong, Australia.

ED5.3.19
Nitrogen-Doped Carbon Nanodots for Photoacoustic Imaging and Photothermal Therapy Songeun Beack; POSTECH, Korea (the Republic of).

ED5.3.20
Development of a Filter Loaded with the Various and Nanocomposite Catalyst for the Optimum Indoor Air Purification via Photocatalytic Oxidation Arda Kucuksari; Istanbul Technical University, Turkey.

ED5.3.21
Microwave—Assisted Synthesis and Characterization of SnS Nanoparticles with Different Morphologies Evelyn B. Diaz-Cruz; UNAM, Mexico.

SESSION ED5.4: Solar Cell
Session Chairs: Ying-Bing Jiang and Yang Qin
Wednesday Morning, April 19, 2017
PCC North, 100 Level, Room 129 A

8:30 AM *ED5.4.01
Hot Carrier Transfer in Nanoparticles—Quantum Dots to Perovskites David S. Ginger; University of Washington, United States.

9:00 AM *ED5.4.02
Ultrasensitive and Fast Monolayer WS_2 Phototransistors Realized by SnS Nanosheet Decoration Yongjun Tian; Yanshan University, China.

9:30 AM ED5.4.03
Bottom-Up Approaches for Precisely Nanostructuring Hybrid Organic/Inorganic Multi-Component Composites for Organic Photovoltaics Yang Qin; University of New Mexico, United States.

9:45 AM ED5.4.04
A Bio-Inspired and Self-Assembled Water Oxidation Photoelectrode Based on Moth-Eye Photonic Architecture Artur Braun; Empa-Swiss Federal Laboratories for Materials Science and Technology, Switzerland.

10:00 AM BREAK

SESSION ED5.5: Nanocrystal II
Session Chairs: Ying-Bing Jiang and Yang Qin
Wednesday Morning, April 19, 2017
PCC North, 100 Level, Room 129 A

10:30 AM *ED5.5.01
Rational Design of Photoactive Titania Nanostructures Yadong Yin; University of California, Riverside, United States.

11:00 AM ED5.5.02
Formation of Silicon Nanocrystals in Silica Films via Double Implantation James M. Gaudet; University of Western Ontario, Canada.

11:15 AM ED5.5.03
Enhancing Photocatalytic Performance by Tailor-Made Iron Oxide Nanoshells in Advanced Oxidation Process Wenjing Xu; University of California, Riverside, United States.

11:30 AM ED5.5.04
Morphology Dependence of Photocatalytic Methane Oxidation in Shape-Controlled $BiVO_4$ Microcrystals Wenlei Zhu; Washington University in St. Louis, United States.

11:45 AM ED5.5.05
Ultrathin Dielectrics as the Carrier Blocking Layer for Amorphous Selenium (a-Se) MISIM Photodetectors of High Signal Contrast Cheng-Yi Chang; National Chaio Tung University, Taiwan.

SESSION ED5.6: Photocatalysis and Nanostructures
Session Chairs: Yujiang Song and Jian Zhang
Wednesday Afternoon, April 19, 2017
PCC North, 100 Level, Room 129 A

1:30 PM *ED5.6.01
Interfacing Nanomaterials for Solar-to-Fuel Conversion Peidong Yang[1, 2]; [1]University of California, Berkeley, United States; [2]Kavli Energy Nanosciences Institute, United States.

2:00 PM *ED5.6.02
Scattering-Enhanced Absorption in Catalysts Yugang Sun; Temple University, United States.

2:30 PM BREAK

SESSION ED5.7: Photoactivie Polymer Materials
Session Chairs: Yujiang Song and Jian Zhang
Wednesday Afternoon, April 19, 2017
PCC North, 100 Level, Room 129 A

3:30 PM ED5.7.01
Enhanced Visible Light Photocatalytic Activity of $BiVO_4$ Photoelectrodes Produced By Magnetron Co-Sputtering Osmary Depablos-Rivera[1, 2]; [1]Instituto de Investigaciones en Materiales, Universidad Nacional Autónoma de México, Mexico; [2]Posgrado en Ciencia e Ingeniería de Materiales, Universidad Nacional Autónoma de México, Mexico.

3:45 PM ED5.7.02
Photophysics of New Nanomaterials for Organic and Hybrid Solar Cells Alberto Privitera; University of Padova, Italy.

4:00 PM *ED5.7.03
Interface Engineering in Organic and Hybrid Photovoltaic Cells with Photoactive Nanomaterials Jian Zhang; Guilin University of Electrical Technology, China.

4:30 PM ED5.7.04
Plasmonic Nanoprobes as Labelling Agents in Optical Nanoscopy Emiliano Cortes; Imperial College London, United Kingdom.

4:45 PM ED5.7.05
Free Electron Photogeneration in Plasma-Synthesized ZnO Nanocrystals Benjamin Greenberg; University of Minnesota, United States.

SESSION ED5.8: Poster Session II
Wednesday Afternoon, April 19, 2017
8:00 PM - 10:00 PM
Sheraton, Third Level, Phoenix Ballroom

ED5.8.01
Stress-Induced Phase Transformation, Consolidation and Optical Coupling of Quantum Dots Kaifu Bian; Sandia National Laboratories, United States.

ED5.8.02
Effect of Plasma Modification on Surface Chemical Analysis and Photocatalytic Properties of Zinc Oxide Yu-Ting Chiang; National University of Tainan, Taiwan.

ED5.8.03
Synthesis and Photoelectrochemical Properties of Mesoporous Materials Embedded with Metallic Nanoparticles Nelly Couzon; University of Lyon, France.

ED5.8.04
Electrical and Optical Properties of Novel Tin-Nickel Based Oxide Yuying Chu; National Tsing Hua University, Taiwan.

ED5.8.05
Radiative Defects, Emission and Structure of ZnO Nanocrystals Obtained by Electrochemical Method Tetyana Torchynska; Instituto Politecnico Nacional, Mexico.

ED5.8.06
Enhanced Self-Enhanced Self-Cleaning Surface by Atomic Layer Deposition of Photoactive TiO_2 Nanocomposite Joseph Jiang[2, 1]; [1]Angstrom Thin Film Technologies LLC, United States; [2]Sandia National Labs, United States.

ED5.8.07
Spontaneous Self-Assembly of Silver Nanoparticles into Lamellar Structured Silver Nanoleaves Qiangbin Wang; Chinese Academy of Sciences, China.

ED5.8.08
Remarkably Enhanced Photocatalytic Activity in Bi1-xBaxFeO3 Prepared by Sol-Gel Method J.R. Cheng; Shanghai University, China.

ED5.8.09
Electrochemical Reduction of Hydrogen Carbonate Using Porous Diodes Yevedzo E. Chipangura; College of St. Scholastica, United States.

ED5.8.10
Visible-Light Nanoscale Photoconductivity of Grain Boundaries in Self-Supported ZnO Platelets Nastaran Faraji; University of New South Wales, Australia.

ED5.8.11
Visible Light Emission from Implanted III-V Semiconductors Angelica Hernandez; CINVESTAV, Mexico.

ED5.8.12
PhotoCatalytic Performance and Electronic Structures of SnO_2 Nanoparticles Modified by Transition Metal Doping Hangil Lee; Sookmyung Women's University, Korea (the Republic of).

ED5.8.13
Near Infrared Laser Triggered NO Generators for Reversal of Multidrug-Resistant Cancer Ranran Guo[1, 2]; [1]Fudan University, China; [2]State Key Laboratory of Molecular Engineering of Polymers, China.

ED5.8.14
The Coupling between Two Heterogeneous InAs Quantum Dot Families and Its Effect into Optical Properties Subhananda Chakrabarti; IIT Bombay, India.

ED5.8.15
Magnetically Rewritable and Thermally Reversible-Showing Photonic Crystal Paper Huiru Ma[1, 2]; [1]Wuhan University of Technology, China; [2]Wuhan University of Technology, China.

ED5.8.16
Surface-Coated Responsive Polymer Superparamegnetic Nanoparticles for Photonic Crystal Sensors Ke Chen[1, 2]; [1]Wuhan University of Technology, China; [2]Wuhan University of Technology, China.

ED5.8.17
1D Flexible Photonic Nanochains-Based Magnetically Responsive Photonic Crystals Yun Liu; Wuhan University of Technology, China.

ED5.8.18
Self-Oriented Magnetochromatic Photonic Crystal Balls Yali Tan; Wuhan University of Technology, China.

SESSION ED5.9: Photoactive Biomaterials
Session Chairs: Ying-Bing Jiang and Xinhe Zheng
Thursday Morning, April 20, 2017
PCC North, 100 Level, Room 129 A

8:30 AM *ED5.9.01
Gallium Oxyhydroxide Containing Composites for Biointerface Studies Albena Ivanisevic; North Carolina State University, United States.

9:00 AM *ED5.9.02
Controlled Synthesis of Electrocatalysts by Using Photo- and Electro-Active Porphyrin Yujiang Song; Dalian University of Technology, China.

9:30 AM ED5.9.03
Relations between Morphology and Photoluminescence Properties in Single Colloidal Nanoplatelets Zhongjian Hu; Los Alamos National Laboratory, United States.

9:45 AM ED5.9.04
Fluorescence Enhancement in Quantum Dot Coupled Plasmonic Nanocup Structures Akshit Peer[1, 2]; [1]Iowa State University, United States; [2]Ames Laboratory, United States.

10:00 AM BREAK

SESSION ED5.10: Photocatalysis II
Session Chairs: Yujiang Song and Xinhe Zheng
Thursday Morning, April 20, 2017
PCC North, 100 Level, Room 129 A

10:30 AM *ED5.10.01
Engineering of Semiconducting Heteronanostructures for Solar Energy Conversion Shu-Hong Yu; University of Science and Technology of China, China.

11:00 AM *ED5.10.02
Tailoring Titania Nanostructures for Solar Cell Applications Peter Muller-Buschbaum; Technical University of Munich, Germany.

11:30 AM ED5.10.03
Hierarchical Micropost Array for Enhancement of Photoactive TiO_2 for Catalytic Microreactor Applications Duncan Z. Ashby; University of California, Riverside, United States.

11:45 AM ED5.10.04
Controlled Synthesis of Metal-Semiconductor Hybrid Plasmonic Nanocrystals and Their Photothermal Applications Jiang Jiang; Chinese Academy of Sciences, China.

SESSION ED5.11: Quantum Dots
Session Chairs: Feng Bai and Zaicheng Sun
Thursday Afternoon, April 20, 2017
PCC North, 100 Level, Room 129 A

1:30 PM *ED5.11.01
Design and Synthesis of New Non-Blinking Structure, Composition and Shape-Controlled Quantum Dots Jennifer Hollingsworth; Los Alamos National Laboratory, United States.

2:00 PM *ED5.11.02
Syntheses of Nanoparticles and Nanowires Using Charged Nanoparticles Spontaneously Generated in the Gas Phase during Chemical Vapor Deposition Nong-Moon Hwang; Seoul National University, Korea (the Republic of).

2:30 PM ED5.11.03
Reversible, Tunable, Electric Field-Driven Aggregation and Assembly of Silver Nanocrystals Yixuan Yu; Lawrence Livermore National Laboratory, United States.

2:45 PM ED5.11.04
Interface Chemistry of Colloidal Quantum Dots in Photonic Applications Weon-Kyu Koh; Samsung Advanced Institute of Technology, Korea (the Republic of).

3:00 PM BREAK

SESSION ED5.12: Carbon Dots
Session Chairs: Feng Bai and Zaicheng Sun
Thursday Afternoon, April 20, 2017
PCC North, 100 Level, Room 129 A

3:30 PM *ED5.12.01
Construction of Theraonstic Agent Based on Fluorescent Carbon Dots Zaicheng Sun; Beijing University of Technology, China.

4:00 PM *ED5.12.02
Metal/Semiconductor Hetero-Nanocrystals—Surface/Interface Control and Photocatalysis Applications Jiatao Zhang; Beijing Institute of Technology, China.

4:30 PM ED5.12.03
Optical Properties of Metal-Semiconductor Janus Nanoparticles Templated on Genetically and Morphologically Manipulated Bacteriophage Joshua M. Plank; University of California, Riverside, United States.

4:45 PM ED5.12.04
Nucleation and Growth of CdS Quantum Dots by SAXS, WAXS and MD Andreas Magerl; University of Erlangen-Nurnberg, Germany.

SESSION ED5.13: Poster Session III
Thursday Afternoon, April 20, 2017
8:00 PM - 10:00 PM
Sheraton, Third Level, Phoenix Ballroom

ED5.13.01
Pressure-Directed Folding and Unfolding Self-Assembly of New Classes of Multi-Dimensional Nanostructures Kaifu Bian; Sandia National Laboratory, United States.

ED5.13.02
PEALD-Grown AlN Films with Sharp Interface and Good Uniformity on Silicon Substrates Xinhe Zheng; University of S&T Beijing, China.

ED5.13.03
Synthesis and Applications of Photoactive α-$Ag_{2-3x}Eu_xWO_4$ Nanorods Ivo M. Pinatti; Federal University of São Carlos, Brazil.

ED5.13.04
Fabrication and Characterization of Platinum Coated with Solution Processed Graphene Yinghe Zhang; Helmholtz Association of German Research Centre, Germany.

ED5.13.05
Hybrid Silicon Honeycomb/Polymer Solar Cells with Enhanced Efficiency Using Surface Etching Ruiyuan Liu[1, 2]; [1]Soochow University, China; [2]Georgia Institute of Technology, United States.

ED5.13.06
Block Copolymer Templated Nanostructured Metal Oxides through Atomic Layer Deposition Charles Fan; Albuquerque Academy, United States.

ED5.13.07
Nitrodopamine-PEG Grafted Iron Oxide Nanocubes for Magnetic Resonance Imaging Probe Bibek Thapa[1, 2]; [1]University of Puerto Rico, United States; [2]Molecular Sciences Research Center, United States.

ED5.13.08
Path Programmable Droplet Manipulations on a Light-Responsive Surface Surjith Kumaran; University of Alberta, Canada.

ED5.13.09
Selective Area Atomic Layer Deposition of Platinum on Patterned Peeling Graphene Weier Lu; Chinese Academy of Sciences, China.

ED5.13.10
Heterovalent-Doped Quantum Dots—Synthesis, Doped Impurities Control and Their Dispersion in Bulk Polymer for LSC Applications Jiatao Zhang; Beijing Institute of Technology, China.

ED5.13.11
Synthesis of Nanostructures with Controllable Plasmonic Resonance by Deposition of Metals onto Porous Silicon Hanna V. Bandarenka; Belarusian State University of Informatics and Radioelectronics, Belarus.

ED5.13.12
New Absorbent Semi-Conductor Spinel Oxide M_xCO_2-$_xMnO_4$ Nanoparticles and Films with Tunable Band Gap for Photovoltaic Application Sophie Guillemet-Fritsch[2, 1]; [1]Toulouse Midi-Pyrénées, France; [2]CNRS, France.

ED5.13.13
Porphyrin Controllable Self-Assembly and Photocatalytic Structure-Activity Relationship Study Yong Zhong[1, 2]; [1]Henan University, China; [2]Key Laboratory for Special Functional Materials of the Ministry of Education, China.

ED5.13.14
Evidence for Small Polaron Formation Leading to Intrinsic Photoexcited Charge Trapping in α-Fe_2O_3 Scott K. Cushing[1, 2]; [1]University of California, Berkeley, United States; [2]Lawrence Berkeley National Laboratory, United States.

ED5.13.15
Novel Route for the Preparation of Bi_2O_3 Nanostructures with Photocatalytic Activity Karen Valencia Garcia[1, 2]; [1]Universidad Nacional Autonoma de Mexico, Mexico; [2]Universidad Nacional Autonoma de Mxico, Mexico.

ED5.13.16
Silver@Anatase TiO_2-Coated Light-Diffusing Polymer Optical Fibres by Atmospheric-Pressure Plasma-Enhanced CVD for Antibiotic Degradation and Water Decontamination Kamal Baba; Luxembourg Institute of Science and Technology (LIST), Luxembourg.

ED5.13.17
Earth Abundant Zn-Sn Based Oxide Ferroelectric Nanostructures as Effective Solar Cell Materials Anuja Datta; Department of Materials Science, University of Cambridge, United Kingdom.

ED5.13.18
Characterization of Titanium Dioxide Thin Films Prepared by Dip-Coating Method Followed with Hydrothermal Treatment Zhen-Yu Lin; National University of Tainan, Taiwan.

ED5.13.19
Photoluminescent Silicon Nanoparticles—Synthesis, Stabilization, Size-Dependent Properties and Applications beyond Optoelectronics Chenxi Qian; University of Toronto, Canada.

ED5.13.20
Electrodeposition of Single-Crystalline ZnO Nanorods on Graphene for Tin Oxide-Free Photoanodes Claudia C. Villarreal[1, 3]; [1]University of California, Riverside, United States; [3]Instituto Tecnologico de Costa Rica, Costa Rica.

ED5.13.21
Engineering Gold Nanoconstructs for Photoactivatable Controlled Release of Antibiotics Jingyi Chen; University of Arkansas, United States.

ED5.13.22
Enhanced Efficiency of Self-Organized TiO_2 Nanotubes Films due to Secondary Materials—Towards Applications Milos Krbal; University of Pardubice, Czech Republic.

ED5.13.23
Photoelectric Properties of Visible Light Photodetectors Based on Crystalline Selenium Jye-Yow Liao; National Chiao-Tung University, Taiwan.

ED5.13.24
Formation of Doped and Undoped ZnO Nanostructures by Liquid Phase Deposition Vitaly Bondarenko; Belarusian State University of Informatics and Radioelectronics, Belarus.

ED5.13.25
Enhancing Light Absorption in CZTS Solar Cell Using Plasmonics Back Scattering Nanostructures Omar A. Abdelraouf; The American University in Cairo, Egypt.

ED5.13.26
Nanovectors Based on Glycosylated Materials for Targeting Anticancer Drug Jose Andre-i Sarabia-Sainz; University of Sonora, Mexico.

ED5.13.27
Real-Time Characterization of Nanoparticle Interactions using MP-SPR Annika Jokinen; BioNavis Ltd., Finland.

ED5.13.28
Morphological and Structural Study of Nanostructured SnS Obtained by a Liquid-Gas Reaction in a Closed System Omar A. Castelo; Universidad Nacional Autonoma de México, Mexico.

ED5.13.29
Superaerophobic Electrode with Metal@Metal-Oxide Powder Catalyst for Oxygen Evolution Reaction JinLing He; Henan University, China.

ED5.13.30
Effect of Deposition Parameters on ZnO Nano-Islands Using Thermal Atomic Layer Deposition Nazek El-Atab; Masdar Institute of Science and Technology, United Arab Emirates.

ED5.13.31
Confinement Barrier Induced Enhancement in Thermal Stability of the Optical Response of InAs/InGaAs/GaAs Submonolayer Quantum Dot Heterostuctures Subhananda Chakrabarti; IIT Bombay, India.

ED5.13.32
Photothermal and Combination Cancer Therapy—Consideration about the Biodegradation and Therapeutic Efficiency Linlin Li; Chinese Academy of Sciences, China.

SESSION ED5.14: Photocatalysis III
Session Chairs: Hongyou Fan, Ying-Bing Jiang and Yang Qin
Friday Morning, April 21, 2017
PCC North, 100 Level, Room 129 A

8:00 AM *ED5.14.01
Artificial Photosynthesis Using Powdered Metal Oxide and Sulfide Materials Akihiko Kudo[1, 2]; [1]Tokyo University of Science, Japan; [2]Tokyo University of Science, Japan.

8:30 AM *ED5.14.02
Composition-Performance Correlation of Catalytically Functionalized $SrTiO_3$ in Overall Water Splitting Guido Mul; University of Twente, Netherlands.

9:00 AM ED5.14.03
Soft-Templating Strategies for Anisotropic Au Nanomaterials and Hollow Multi-Au@SiO_2 Nanosystems Hyojong Yoo[1, 2]; [1]Hallym University, Korea (the Republic of); [2]University of Pennsylvania, United States.

9:15 AM ED5.14.04
Rapid Water Disinfection Using Vertically Aligned MoS_2 Nanofilms and Visible Light Chong Liu; Stanford University, United States.

9:30 AM BREAK

10:00 AM ED5.14.05
Colloidal Synthesis towards High Quality Luminescent Giant Quantum Dots Amita Joshi; Los Alamos National Lab, United States.

10:15 AM ED5.14.06
All-Optical Switching of Doped Semiconductor Nanocrystals Benjamin T. Diroll; Argonne National Laboratory, United States.

SESSION ED5.15: Photoelectric Conversion
Session Chairs: Ying-Bing Jiang, Chong Liu and Yang Qin
Friday Morning, April 21, 2017
PCC North, 100 Level, Room 129 A

10:30 AM *ED5.15.01
Low-Dimensional Inorganic Optoelectronic Nanomaterials and Micro/Nano Devices Tianyou Zhai; Huazhong University of Science and Technology, China.

11:00 AM ED5.15.02
Tuning the Energy Transfer Process in Mn^{2+}-Doped Lead Halide Perovskite Nanocrystals Jeffrey M. Pietryga; Los Alamos National Laboratory, United States.

11:15 AM ED5.15.03
Electrical Properties of Nanocrystalline Li-Doped SnO_2 and Its Applications in CO_2 Reduction Allen Chaparadza; The College of St. Scholastica, United States.

11:30 AM ED5.15.04
On the Possibility of Using Sintering to Synthesize Materials with Low Structural Defects for Opto-Electronic Applications Amit Samanta; Lawrence Livermore National Laboratory, United States.

SESSION ED5.16: Organic Solar Cell
Session Chairs: Binsong Li and Zaicheng Sun
Friday Afternoon, April 21, 2017
PCC North, 100 Level, Room 129 A

1:30 PM ED5.16.01
A Combined Experimental and Theoretical Study Into the Performance of Vanadium Dioxide Nano-Composites for Energy Saving Applications Christian Sol; University College London, United Kingdom.

1:45 PM ED5.16.02
Multicomponent Metal Oxide Mesocrystals—Synthesis, Characterisation and Application in Photocatalysis Darinka Primc[1, 2]; [1]ETH Zurich, Switzerland; [2]Imperial College London, United Kingdom.

2:00 PM ED5.16.03
Population Inversion in Electrically Pumped Colloidal Quantum Dots with a Continuously Graded Layer Jaehoon Lim; Los Alamos National Laboratory, United States.

2:15 PM ED5.16.04
Liquid-Phase Laser Ablation for the Controlled Synthesis of Graphene Quantum Dots Rosemary L. Easterday; University of Kentucky, United States.

2:30 PM ED5.16.05
Thin Film H:TiO2-Silicon Tandem Cell Structures Helmut Karl; University of Augsburg, Germany.

2:45 PM ED5.16.06
NIR Quantum Dot Luminescent Solar Concentrators Hunter McDaniel; UbiQD, LLC, United States.

3:00 PM BREAK

SESSION ED5.17: Photocatalysis IV
Session Chairs: Binsong Li and Zaicheng Sun
Friday Afternoon, April 21, 2017
PCC North, 100 Level, Room 129 A

3:30 PM ED5.17.01
Monitoring the Formation of Conductive PbS Nanocrystal Superlattices at the Liquid/Air Interface in Real Time by X-Ray Scattering Marcus Scheele; University of Tubingen, Germany.

3:45 PM ED5.17.02
Plasmonic Nanohemisphere Monolayers Cagri O. Topal; Oklahoma State University, United States.

4:00 PM ED5.17.03
TiO_2 Film as Visible-Light Active Photocatalyst by Designing the Multilayer Structure with WO_3 Film Junjun Jia; Aoyama Gakuin University, Japan.

4:15 PM ED5.17.04
Spatially Resolved Charge Distribution and Its Impact on Plasmonic Property of Doped Metal Oxide Nanocrystals Omid Zandi; University of Texas at Austin, United States.