

Session Self-Assembled Nanomaterials I		
Monday Oct.21	Title	Chair: Zhenyang Zhong
8:20-8:40AM	01:Tuneability and applications of nanoholes created by self-assembled droplet etching during epitaxy	Christian Heyn Universität Hamburg, Germany
8:40-9:00AM	02:Growth Dynamics of Droplet Epitaxy Dots	Stefano Sanguinetti Laboratory for Nanostructure Epitaxy and Spintronics on Silicon, Italy
9:00 -9:20AM	03:Surface Electron Microscopy and Modeling of Droplet Epitaxy	David Jesson Cardiff University,United Kingdom
9:20-9:40AM	04:From the quantum dots to the quantum rings or some aspects to the kinetics of the droplet-epitaxial technique	Akos Nemesics Obuda University, Budapest Hungary
9:40-10:00AM	05:Atomic structure and electronic properties of GaSb/GaAs(001) quantum rings	Andrea Lenz Technische Universität Berlin, Germany
Session Break & Poster		
Session Self-Assembled Nanomaterials II		
Monday Oct.21	Title	Chair: Stefano Sanguinet
10:20-10:40AM	06:Promising manipulation of self-assembled GeSi nanostructures on miscut Si (001) substrates	Zhenyang Zhong Fudan University, China
10:40-11:00AM	07:Self-assembled growth of one-dimensional Ge nanostructures on Si(001)	JianJun Zhang University of New South Wales, Australia
11:00-11:20AM	08: Zein nanoribbons fabricated using a modified coaxial electrospinning for treatment of heavy metal contained wastewater	Deng-Guang Yu University of Shanghai for Science and Technology, China
11:20-11:40AM	09:Self assembly of DNA with inorganic materials	Enrique C. Samano Tirado Universidad Nacional Autónoma de México, México
11:40-12:00AM	10:Atomic structure and electronic properties of self-assembled magic clusters on silicon surfaces	Martin Franz Technische Universität Berlin, Germany
12:00-12:20PM	11:Chemical controlled 2D and 3D gold nanoparticles assembly	Fuke Wang Institute of Materials Research and Engineering, Singapore
Lunch Break		

Virtual Session I

Monday Oct.21	Title	Chair: Zhiming Wang
14:00-14:20PM	12:The investigation of electron transfer in organic molecule – TiO ₂ nanoparticle assemblies for dye sensitized solar cells	Agata Zdyb Lublin University of Technology, Poland
14:20-14:40PM	13:Physical and Functional Properties of III-V Core-Shell Nanowires for Photonic Devices	Paola Prete CNR-IMM Lecce Research Unit, Italy
14:40-15:00PM	14:Photonic metamaterials in semiconductor optical devices Presentation	Tomohiro Amemiya Tokyo Institute of Technology, Japan
15:00-15:10PM	15:Light absorption enhancement in organic solar cell by embedding Ag nanoparticles and nanochains within the active layer	Sheng-Qing Zhu Southeast University, China
15:10-15:20PM	16:Synthesis of silver nanostructures by multistep methods	Yuan-Jun Song Southeast University, China
15:20-15:40PM	17:White light emitting devices based on metal oxide nanocrystals	Ekaterina Nannen Universität Duisburg-Essen, Germany
15:40-16:00PM	18:Extreme Nanowires: Filled and Unfilled Carbon Nanotubes and Electrodeposition of 3nm Nanowires from Supercritical Fluids	David C. Smith University of Southampton, United Kingdom
16:00-16:20PM	19:Polymer-based nano-piezoelectric generators for energy harvesting applications	Sohini Kar-Narayan University of Cambridge, UK
16:20-16:40PM	20:Photonic-crystal route to EM superabsorbers	Stavroula Foteinopoulou University of Exeter, United Kingdom
Dinner Social	大妙火锅锦里店 (<i>Daimiu Chafing dish, Jinli Street</i>)	

ROOM A**Session Energy and Environmental Research I**

Tuesday Oct.22	Title	Chair: Xavier Marie
8:20-8:40AM	A01:Employing thermal energy Maps for In-vitro mechanics of energy materials	Vikas Tomar Purdue University, United States
8:40-9:00AM	A02:Efficient collection of photons and carriers for ultrathin c-Si solar cells	Dong-Wook Kim Ewha Womans University, Korea
9:00-9:20AM	A03:Semiconductor Bonding by Metal Nanoparticle Arrays: Application in Multi-Junction Solar Cells	Hidenori Mizuno National Institute of Advanced Industrial Science and Technology, Japan
9:20-9:40AM	A04:Nanorod photoanode for efficient solar-driven photoelectrochemical water splitting	Yanbo Li The University of Tokyo, Japan
9:40-10:00AM	A05:Construction and energy transfer of integrated dyes systems within solid-state two-dimensional nanospace	Kazuko FUJII National Institute for Materials Science,Japan

Session Break & Poster

Session Self-Assembled Nanomaterials III

Tuesday Oct.22	Title	Chair: Dong-Wook Kim
10:20-10:40AM	A06:Self-assembly of molecules and nanoparticles in inkjet-printed droplets	Enrico Sowade Chemnitz University of Technology, Germany
10:40-11:00AM	A07:Chirality-Organized Polyaniline-Unit Molecules by Introduction of Amino Acid Groups	Toshiyuki Moriuchi Osaka University Suita, Japan
11:00-11:20AM	A08:Physics of cheese making: viscoelastic properties of enzyme-induced milk protein networks	Hiroyuki Shima University of Yamanashi, Japan
11:20-11:40AM	A09:Chirality in two-dimensions induced by chiral molecules self-assembled on surfaces	Giorgio Contini Consiglio Nazionale delle Ricerche, Italy

11:40-12:00AM	A10:The control of microphase separation and properties of polystyrene-silica nanocomposites by using perhydropolysilazane	Reiko Saito Tokyo Institute of Technology, Japan
12:00-12:20PM	A11:Theory of H* Mesophase of the Chiral Block Copolymer	Chun-Yi David Lu National Taiwan University, Taiwan
Lunch Break		
Session Spintronics I with Virtual		
Tuesday Oct.22	Title	Chair: Giorgio Contini
14:10-14:40PM	A12:Gate Control of the Electron Spin In Semiconductor Quantum Wells	Xavier Marie Université de Toulouse, France
14:40-15:00PM	A13:Spin-Orbit Torque and Spin Transport in Ferromagnetic Hetero-Structures: a Rashba Model	Xuhui Wang King Abdullah University of Science and Technology (KAUST), Saudi Arabia
15:00-15:20PM	A14:Room temperature ferromagnetism in (Ti,Co)O ₂ : the electrical control and the mechanism	Tomoteru Fukumura The University of Tokyo, Japan
15:20-15:40PM	A15:Theory of electron refrigeration in superconductor/ferromagnet hybrids	Shiro Kawabata National Institute of Advanced Industrial Science and Technology, Japan
15:40-16:00PM	A16:THE POLYMER-DERIVED CERAMICS ROUTE: AN INNOVATIVE CONCEPT TOWARD THE PREPARATION OF NANOSTRUCTURED AND ARCHITECTURED BORON- AND SILICON-BASED NON-OXIDE CERAMICS	Samuel Bernard CNRS, France
16:00-16:20PM	A17:Nonlocal electronic spin transport in graphene	Ivan J. Vera Marun University of Groningen, The Netherlands
16:20-16:40PM	A18:Synthesis of Advanced Membrane-Electrode Assemblies for Operation in Photoelectrochemical Cells for Solar Hydrogen Production	Johan Martens Katholieke Universiteit Leuven, Belgium
Dinner Social	廊桥酒楼草堂店 (<i>Covered Bridge Restaurant, Du Fu Thatched Cottage</i>)	

ROOM B		
Session Oxide I		
Time	Title	Chair: Zaoli Zhang
8:40-9:00AM	B01:Self-Assembled Complex Oxide Heterostructures	Ying-Hao Eddie Chu National Chiao Tung University, Taiwan
9:00-9:20 AM	B02:The family of $\text{XTaO}_3/\text{SrTiO}_3$ (X = Na, K, Ag) perovskite oxide heterostructures	Udo Schwingenschlögl King Abdullah University of Science and Technology (KAUST), Saudi Arabia
9:20-9:40 AM	B03:Design of metal-insulator transition characteristics in size- and aspect ratio-controlled oxide thin films	Teruo Kanki Osaka University, Japan
9:40-10:00 AM	B04:Interface engineering at oxide and metal interfaces	Shijie Wang Agency for Science, Technology and Research, Singapore
Session Break & Poster		
Session Metamaterials		
Tuesday Oct.22	Title	Chair: Martina Schmid
10:20-10:40 AM	B05:Terahertz composite right/left handed transmission-line metamaterials	Zhijun Liu University of California, Los Angeles, USA
10:40-11:00 AM	B06:Large coercivity and exchange bias in Fe-Ti-O granular films	Yahui Cheng Nankai University, China
11:00-11:20 AM	B07:Tunable metamaterials based on phase-change materials	Tun Cao Dalian University of Technology, China
11:20-11:40 AM	B08:Atomic and electronic structure of the defects in metal nitride film by advanced transmission electron microscopy	Zaoli Zhang Austrian Academy of Sciences, Austria
11:40-12:00 AM	B09:Wave propagation in chiral metamaterials	Maoyan Wang University of Electronic Science and Technology of China, China

12:00-12:20PM	B10:Functional materials and structural design methods for EM problems	Peiheng Zhou University of Electronic Science and Technology of China, China
Lunch Break		
Session Optoelectronic Materials and Devices I		
Tuesday Oct.22	Title	Chair: Zhihun Liu
14:00–14:20 PM	B11:Silicon photonics for optical computing	Lin Yang Institute of Semiconductors, Chinese Academy of Sciences, China
14:20-14:40 PM	B12:Nonlinear photonic crystal nanocavities containing quantum dots	Yasutomo Ota The University of Tokyo, Japan
14:40-15:00 PM	B13: Semiconductor Quantum Dots and Their Metal-embedded Nanostructures	Ikuo Suemune Hokkaido University, Japan
15:00-15:20 PM	B14:Plasmonic and photonic scattering from nanoparticles and the application to solar cells	Martina Schmid Helmholtz-Zentrum Berlin, Germany
15:20-15:40 PM	B15:Gold Mushroom Array: A Plasmonic Refractive index Sensor with an Ultimate Figure of Merit	Chongjun Jin Sun Yat-Sen University, China
15:40-16:00 PM	B16:Impurity Doping and Adsorption Effects on Energetics and Electronic Properties of Graphene and Carbon Nanotubes	Yoshitaka Fujimoto Tokyo Institute of Technology, Japan
16:00-16:20 PM	B17:Enhancing radiative recombination in heteroepitaxial systems: three dimensional Ge-crystals	Fabio Pezzoli Università degli Studi di Milano-Bicocca, Italy
16:20-16:40 PM	B18:Planar Gold Nanoantennas for Terahertz Light	Luca Razzari Université du Québec, Canada

16:40-17:00 PM	B19:Nonlinear optical characteristic of Au nanoparticle-polymer composite film based on two-dimensional Au nanoparticle array	Longde Wang Huainan Normal College, China
Dinner Social	廊桥酒楼草堂店 (<i>Covered Bridge Restaurant, Du Fu Thatched Cottage</i>)	

ROOM C

Session Natubes, Nanofabrication, and Nanomaterials

Tuesday Oct.22	Title	Chair: Roberto Otero
8:20-8:40AM	C01:Highly ordered TiO ₂ nanotube arrays: fabrication, sensitization and applications	Shiwei Lin Hainan University, China
8:40-9:00 AM	C02:Design of Multi-walled Nanotube Arrays for Fuel Cell Catalysts	Gao-Ren Li Sun Yat-Sen University, China
9:00-9:20AM	C03:Three-Dimensional Micromachine and Stimuli-Responsive Hydrogel fabricated by MultiphotonNanofabrication	Meiling Zheng Chinese Academy of Sciences, China
9:20-9:40 AM	C04:Evaluation of nanomaterials using time-of-flight secondary ion mass spectrometry (ToF-SIMS)	Satoka Aoyagi Shimane University, Japan
9:40-10:00 AM	C05	Qinyong Zhang Xihua University, China
Session Break & Poster		

Session Surfaces, Interfaces, and Thin Films

Tuesday Oct.22	Title	Chair: Shiwei Lin
10:20-10:40 AM	C06:Interface Engineering in Resistive Switching Memories	Tseung-Yuen Tseng National Chiao Tung University, Taiwan
10:40-11:00 AM	C07:Dynamical aspects of molecular self-assembly at solid surfaces	Roberto Otero Universidad Autónoma de Madrid, Spain
11:00-11:20 AM	C08:Epitaxial relationship and nano-structures at GaN/Si interface	Nobuhiko Sawaki Aichi Institute of Technology, Japan
11:20-11:40 AM	C09:Bi based multiferroic thin films	Hiroshi Naganuma Tohoku University, Japan
Dinner Social	廊桥酒楼草堂店 (<i>Covered Bridge Restaurant, Du Fu Thatched Cottage</i>)	

ROOM A

Session Oxide II		
Wednesday Oct.23	Title	Chair: Sylwia Gieraltowska
8:20-8:40AM	A19:Preparation of oxide glass phosphor containing Sn(II) emission center	Hirokazu Masai Kyoto University, Japan
8:40-9:00 AM	A20:ynthesis of magnetic iron oxide shell using co-precipitation for multifunctional composite nanoparticles	Darinka Primc Eidgenössische Technische Hochschule Zürich, Switzerland
9:00-9:20 AM	A21:Unusual Coordination Chemistry in Iron Oxides	Hiroshi Kageyama Kyoto University, Japan
9:20-9:40 AM	A22:Light-induced transverse thermoelectric effect in layered cobalt oxide thin films	Shufang Wang Hebei University, China
9:40-10:00 AM	A23:Nanotechnology for high performance GdBCO coated conductors	Sang-Im Yoo Seoul National University, Korea
Session Break & Poster		
Session Optoelectronic Materials and Devices II		
Wednesday Oct.23	Title	Chair: Darinka Primc
10:20-10:40 AM	A24: Hybrid functional calculations of defect related optical properties in wide band gap semiconductors	Denis O Demchenko Virginia Commonwealth University, USA
10:40-11:00 AM	A25:Wide band gap oxides for electronic and photovoltaic applications	Sylwia Gieraltowska Polish Academy of Sciences, Poland
11:00-11:20 AM	A26:Hybrid photonic-crystal—Liquid-crystal structures for optoelectronic applications	Wei Lee National Chiao Tung University, Taiwan
11:20-11:40 AM	A27:Improvement of Emission Efficiency in GaN-based Light-emitting Diodes with nanostructures	Hyun Jeong Sungkyunkwan University, Korea
11:40-12:00 AM	A28:Sol-gel-derived alumina-phospho-silicate and barium titanate systems activated by rare earth ions: fabrication and spectroscopic assessment	Inas Kamal Battisha National Research Centre (NRC), Egypt

12:00-12:25PM	A29:Rare Earths Doped Oxide Semiconductors and Their Device Applications	Xinwei Zhao Tokyo University of Science, Japan
Lunch Break		
Virtual Session II		
Wednesday Oct.23	Title	Chair: Paola Prete
14:20-14:40 PM	A30:Advanced Self-assemblies based on Reversible Coordination Polymers	Yun Yan Peking University, China
14:40-15:00 PM	A31:In situ study of crystal symmetry and properties of epitaxial perovskites	Gertjan Koster University of Twente, The Netherlands
15:00-15:20 PM	A32:Fabrication and characterization of PZT ferroelectric thin films	Rachid Bouregba Université de Caen Basse Normandie, France
15:20-15:40 PM	A33:Plasmonic nanoantenna-metal oxide hybrids for ultrafast optical switches	Otto Muskens University of Southampton, United Kingdom
15:40-16:00 PM	A34:Control over the electrostatic self-assembly of nanoparticle semiflexible biopolyelectrolyte complexes	Eric Buhler Université Paris Diderot, France
16:00-16:20 PM	A35:Quantum Design of Graphene Nanoribbons for Energy-efficient Devices	Yvette Hancock The University of York, UK
16:20-16:40 PM	A36:Thermal conductivity of two-dimensional electron gases	Vijay Narayan University of Cambridge, United Kingdom
16:40-17:00 PM	A37:Puckering Stick-Slip Friction Induced by a Sliding Nanocontact at a Graphite Surface	Mircea Rastei Université de Strasbourg, France
17:00-17:20 PM	A38:Universal Electric-Field-Driven Resistive Transition in Narrow-Gap Mott Insulators	Pablo Stoliar Centre national de la recherche scientifique, France
Dinner Social	龙抄手总店春熙路 (Longchaoshou, Chunxi Road)	

ROOM B**Session Spintronics II**

Wednesday Oct.23	Title	Chair: Junfeng Dai
8:20-8:40AM	B20: Fabrication of a Ferroelectric Resistive Switching Memory with Dielectric/Ferroelectric Heterostructure	Atsushi Fukuchi National Institute of Advanced Industrial Science and Technology, Japan
8:40-9:00 AM	B21: Theory of spin-orbit coupling at LaAlO ₃ /SrTiO ₃ interfaces and SrTiO ₃ surfaces	Zhicheng Zhong Vienna University of Technology, Austria
9:00-9:20 AM	B22: Spin orbit induced spin generation in semiconductor nanostructures	Makoto Kohda Tohoku University, Japan
9:20-9:40 AM	B23: Spin generation and control in graphene	Kwok Sum Chan City University of Hong Kong, Hong Kong
9:40-10:00 AM	B24: Valence-band structure of (III,Mn)As ferromagnetic semiconductors	Shinobu Ohya The University of Tokyo, Japan

Session Break & Poster

Session Two-Dimensional Chalcogenides

Wednesday Oct.23	Title	Chair: Kwok Sum Chan
10:20-10:40 AM	B25: Novel catalytic functions driven by charges accumulated at subnano interface through strong electronic interaction between bi-metal subnano-cluster disk and solid substrate	Hisato Yasumatsu Toyota Technological Institute, Japan
10:40-11:00 AM	B26: Valley Polarization in Transition-metal Dichalcogenides Monolayers by Optical Pumping	Junfeng Dai South University of Science and Technology of China, China
11:00-11:20 AM	B27: Thin Film Growth of Fe-based Superconductors: From Fundamental Properties to Functional Devices. A comparative review	Silvia Haindl University of Tübingen, Germany

11:20-11:40 AM	B28: Is Silicene the Future of Silicon?	Guy Le Lay Aix-Marseille University, France
11:40-12:00 AM	B29: Origin of the first Hund rule in artificial atoms	Tokuei Sako Nihon University, Japan
12:00-12:20PM	B30: Probing Substrate Influence on Graphene by Analyzing Raman Lineshapes	Hsiang-Chen Chui National Cheng-Kung University (NCKU), Taiwan
Lunch Break		
Session Energy and Environmental Research II		
Wednesday Oct.23	Title	Chair: Guy Le Lay
14:20-14:40 PM	B31: Theoretical Study of Nanostructured Electrodes in Lithium-Ion Batteries	Payam Kaghazchi Universität Ulm, Germany
14:40-15:00 PM	B32: Polaron-Li vacancy complex diffusion in cathode materials of Li ion batteries	Van An Dinh National Institute for Materials Science, Japan
15:00-15:20 PM	B33: Photocatalytic Activity N-doped-TiO ₂ /Metal (Metal=Au, Cu, Ag, Pt) Obtained Using Nitrogen (N ₂) Plasma	Rudy Amilcar Trejo-Tzab Universidad Autónoma de Yucatán, México
15:20-15:40 PM	B34: Nano/microstructured (BiO) ₂ CO ₃ hierarchical architectures for environmental photocatalysis	Fan Dong Chongqing Technology and Business University, China
15:40-16:00 PM	B35: Field Effect Electroosmosis , Nano Separation Technique Audio Radio Frequency Spectroscopy of Electrolytes and water	Kiumars Ghowsi Islamic Azad University, Iran
16:00-16:10 PM	B36: Surface Modification of PTFE microporous film for use in Membrane Distillation of Dyeing Wastewater	Shu-Mei Chang National Taipei University of Technology, Taiwan
16:10-16:30 PM	B37: Flexible fiber energy conversion and storage system	Dechun Zou Peking University, China
16:30-16:50 PM	B38: Preparation of sensitizers for DSSC from renewable resources: the “furan” pathway	Husson Jérôme Université de Franche-Comté, France

16:50-17:10 PM	B39: Optical simulation of silver nanowire electrodes for thin film solar cells	Shuai Yan Universität Erlangen-Nürnberg, Germany
Dinner Social	龙抄手总店春熙路龙抄手总店春熙路 (<i>Longchaoshou, Chunxi Road</i>)	