

<b>Monday Sep.22</b>		
<b>Room A</b>		
7:00-7:55 AM	Breakfast	
7:55-8:00 AM	<b>Opening Ceremony</b> Chairs: <b>Alexander Govorov, Albert Chin, Zhiming Wang</b>	
<b>Session: General I</b> Chair: <b>Yu-Lun Chueh</b>		
8:00-8:25 AM	A01: Photo-thermal effects and optical transparency window in plasmonic nanostructures	<b>Alexander Govorov</b> Ohio University, USA
8:25-8:50 AM	A02: High-Performance High-Power GaN MOSFET on Si Substrate Using High- $\kappa$ Gate Dielectric Technology	<b>Albert Chin</b> National Chiao Tung University, Taiwan
8:50-9:15 AM	A03: Semiconductor Nanowires for Optoelectronics and Energy Applications	<b>Chennupati Jagadish</b> Australian National University, Australia
9:15-9:40 AM	A04: Self-propelled Colloids: Towards an Intelligent Biomedical Platform	<b>Wei Wang</b> Harbin Institute of Technology, China
9:40-10:05 AM	A05: All Printable ZnO Nanowire Photodetectors with Ultra-High Detectivity	<b>Zhiyong Fan</b> Hong Kong University of Science and Technology, Hongkong
10:05-10:25 AM	Session Break	
<b>Session: "More than Moore" Materials I</b> Chair: <b>Gang Niu</b>		
10:25 -10:40 AM	A06: Resistive switching phenomena in cobalt oxide thin films	<b>Olivier Schneegans</b> CNRS, France
10:40-11:05 AM	A07: SiGe heterostructures for photonics interconnects	<b>Giovanni Isella</b> LNESS Como, Italy
11:05-11:30 AM	A08: MBE Growth Behavior of Si and Ge Nanowires in Comparison	<b>Jan Schmidtbauer</b> Leibniz Institute for Crystal Growth (IKZ), Germany
11:30-11:55 AM	A09: NOR-Type Schottky Barrier Nanowire Charge-Trapping Memories	<b>Chun-Hsing Shih</b> National Chi Nan University, Taiwan
11:55-13:30 PM	Lunch Break	

<b>Session: Magnetic Materials and Applications I</b>		<b>Chair: Sergi Gallego i Rico</b>
13:30-13:55 PM	A10: Multilayered Co alloy nitride granular films for high frequency electromagnetic application	<b>Hanae Kijima</b> Tohoku University, Japan
13:55 -14:10 PM	A11: Measurement of ac hysteresis curves of magnetic nanoparticles for biomedical applications	<b>Yasushi Takemura</b> Yokohama National University, Japan
14:10 -14:35 PM	A12: Size Dependent Magnetism in FeO/Fe <sub>3</sub> O <sub>4</sub> Core/Shell Nanoparticles	<b>Alejandro Gomez Roca</b> The Catalan Institute of Nanoscience and Nanotechnology, Spain
14:35 -15:00 PM	A13: Colloidal Hybrid Nanoparticles Fe <sub>3</sub> O <sub>4</sub> -Ag with Tunable Ag Domains and Magnetic Properties	<b>Yiwu Mao</b> China Academy of Engineering Physics, China
15:00-15:25 PM	A14: Magnetic Topological Insulators: Magnetisms and Physics	<b>Liang He</b> Nanjing University, China
15:25-15:55 PM	Session Break	
<b>Session: Polymer Materials and Engineering I</b>		<b>Chair: Nigel Clarke</b>
15:55-16:10 PM	A15: Selective dispersion of large-diameter single-wall carbon nanotubes through polymer wrapping	<b>Masayoshi Tange</b> National Institute of Advanced Industrial Science and Technology (AIST) , Japan
16:10-16:35 PM	A16: Bio-inspired Multi-gradient Surface Materials with Water Collection	<b>Yongmei Zheng</b> Beihang University, China
16:35-17:00 PM	A17: Novel characterization methods and applications for photopolymers	<b>Sergi Gallego i Rico</b> University of Alicante, Spain
17:00-17:25PM	A18: Laser nanostructuring of polymers	<b>Nikita Bityurin</b> Institute of Applied Physics RAS, Russia
17:25-17:50 PM	A19: Interface Engineering in Organic/Polymer Solar Cells	<b>Junliang Yang</b> Central South University, China
18:00 PM	Dinner Social	

<b>Monday Sep.22</b>		
<b>Room B</b>		
<b>Session: General II    Chair: Kazuaki Sakoda</b>		
13:30-13:55 PM	B01: Flexible Hollow $\gamma$ -Fe <sub>2</sub> O <sub>3</sub> Nanofibers via Electrospinning for Dye Absorption	<b>Qiang Gao</b> Jiangnan University, China
13:55-14:20 PM	B02: In Situ Synthesis and Characterization of CNTs@BaTiO <sub>3</sub> @PANI Nanocomposites for Microwave Absorbing Application	<b>Yaofeng Zhu</b> Zhejiang Sci-Tech University, China
14:20 -14:45 PM	B03: The Growth, Characterization and Properties of DAST Crystals	<b>Bing Teng</b> Qingdao University, China
14:45-15:00 PM	B04: Local electric field enhancement and Fano resonance caused by the interaction between metallic nanodisk and nanogap	<b>Tianqing Jia</b> East China Normal University, China
15:00-15:25 PM	B05: A new role of atomic processes for conduction band electrons: sample damage induced by intense short pulse X-ray radiation	<b>Frank Rosmej</b> Sorbonne University, France
15:25-15:55 PM	Session Break	
<b>Session: Metamaterials    Chair: Qiang Gao</b>		
15:55-16:20 PM	B06: Dirac Cones in Metamaterials and Photonic Crystals	<b>Kazuaki Sakoda</b> National Institute for Materials Science, University of Tsukuba, Japan
16:20-16:45 PM	B07: Friction and wear properties of Fe <sub>7</sub> Mo <sub>6</sub> -, alpha-FeSi <sub>2</sub> - and SiB <sub>6</sub> -based alloys	<b>Takashi Murakami</b> National Institute of Advanced Industrial Science and Technology (AIST) , Japan
16:45- 17:10 PM	B08: Unique Electromagnetic Response of Quantum Metamaterial with Superconducting Qubits	<b>Hidehiro Asai</b> National Institute of Advanced Industrial Science and Technology (AIST) , Japan
18:00 PM	Dinner Social	

**Monday Sep.22****Room C****Session: General III    Chair: Chennupati Jagadish**

13:30-13:55 PM	C01: Solar energy harvesting scheme utilizing three-dimensional hierarchical nanostructures	<b>Yu-Lun Chueh</b> National Tsing-Hua University, Taiwan
13:55-14:20 PM	C02: Optical spin manipulation in colloidal semiconductor quantum dots	<b>Donghai Feng</b> East China Normal University, China
14:20 -14:45 PM	C03: Rational Design of Inverted Nanopencil Arrays for Cost-Effective, Broadband and Omnidirectional Light Harvesting	<b>Johnny HO</b> City University of Hong Kong, Hong Kong
14:45 -15:10 PM	C04: Gas diffusivity measurement in energy conversion devices	<b>Weidong He</b> University of Electronic Science and Technology of China, China
15:35-15:55 PM	Session Break	
<b>Session: Magnetic Materials and Applications II    Chair: Donghai Feng</b>		
15:55-16:20 PM	C05: Size-dependent Exchange Bias Effect in Manganite (La,Ca)MnO <sub>3</sub> and (Sm,Ca)MnO <sub>3</sub> Nanoparticles	<b>Roman Puzniak</b> Institute of Physics, Polish Academy of Sciences, Poland
16:20-16:45 PM	C06: Magnetic Proximity Effects at Collinear-noncollinear Spin Interface of Co-Fe Nanoscale Contact	<b>Soo-hyon Phark</b> Center for Correlated Electron Systems IBS, Seoul National University, Korea
18:00 PM	Dinner Social	

<b>Tuesday Sep.23</b>		
<b>Room A</b>		
7:00-8:00 AM	Breakfast	
<b>Session: General IV    Chair: Tomohiro Yamaguchi</b>		
8:00-8:15 AM	A20: Biomass-derived porous carbon nanocomposites for electrochemical sensor, biosensor and energy storage applications	<b>Shen-Ming Chen</b> National Taipei University of Technology, Taiwan
8:15-8:40 AM	A21: Supercapacitors Based on Arrays of Vertically Oriented Gold Nanowire Electrodes	<b>Hideyuki Nakanishi</b> Kyoto Institute of Technology, Japan
8:40-9:05 AM	A22: Structures and Electronic Properties of Two-Dimensional Atomistic Layers	<b>Yoshitaka Fujimoto</b> Tokyo Institute of Technology, Japan
9:05-9:30 AM	A23: Hole-nuclear spin interactions in quantum dots	<b>Mikhail Glazov</b> Ioffe Physical-Technical Institute RAS, Russia
9:30-9:55 AM	A24: Synthesis and spectroscopic study on double-perovskite oxide thin films	<b>Kohei Yoshimatsu</b> Tokyo Institute of Technology, Japan
9:55-10:25 AM	Session Break	
<b>Session: Epitaxial Materials    Chair: Mikhail Glazov</b>		
10:25 -10:50 AM	A25: Molecular beam epitaxy of functional (Ce,Pr)O <sub>2-δ</sub> films on silicon	<b>Gang Niu</b> IHP, Germany
10:50-11:15 AM	A26: Electronic phase control in vanadium dioxide thin films	<b>Keisuke Shibuya</b> National Institute of Advanced Industrial Science and Technology(AIST), Japan
11:15-11:30 AM	A27: Growth and applications of epitaxial tungsten trioxide (WO <sub>3</sub> ) thin films	<b>Yingge Du</b> Pacific Northwest National Laboratory, USA
11:30-13:30 PM	Lunch Break	
<b>Session: Wide-Bandgap Materials    Chair: Kuniharu Takei</b>		
13:30-13:55 PM	A28: Theoretical Study of Optical Gain Characteristics in InGaN Pure-Green Laser Diodes on Semipolar GaN Substrates	<b>Atsushi Yamaguchi</b> Kanazawa Institute of Technology, Japan

13:55-14:10 PM	A29: Electrochemical Charge Transfer at the Interface of Wide Band gap Semiconductors	<b>Vidhya Chakrapani</b> Rensselaer Polytechnic Institute, USA
14:10-14:25 PM	A30: The atomic structure of edge dislocations in epitaxial ZnO nanostructures	<b>Pierre Ruterana</b> CNRS, France
14:25-14:50 PM	A31: Optical and electrical properties of Eu,Si-codoped GaN grown by organometallic vapor-phase epitaxy	<b>Atsushi Koizumi</b> Osaka University, Japan
14:50-15:15 PM	A32: Local Structural, Electrical, and Optical Properties of Ion-implanted ZnO Nanostructures	<b>Sang-Wook Han</b> Chonbuk National University, South Korea
15:15-15:55 PM	Session Break	
<b>Session: Advanced Functional Materials    Chair: Atsushi Koizumi</b>		
15:55-16:20 PM	A33: Photoinduced Mass Transport Observed for Azobenzene-based Photochromic Amorphous Molecular Materials	<b>Hideyuki Nakano</b> Muroran Institute of Technology, Japan
16:20-16:45 PM	A34: Inorganic Nanomaterial-Based Printable Flexible Devices	<b>Kuniharu Takei</b> Osaka Prefecture University, Japan
16:45-17:10 PM	A35: Black titania and advanced energy applications	<b>Fuqiang Huang</b> Peking University, China
17:10-17:35 PM	A36: Recycling Technology of Coal Fly Ash for Fabrication of Advanced Ceramics	<b>Hong C. Park</b> Puan National University, South Korea
18:00 PM	Dinner Social	

<b>Tuesday Sep.23</b>		
<b>Room B</b>		
7:00-8:00 AM	Breakfast	
<b>Session: Polymer Materials and Engineering II    Chair: Tseung-Yuen Tseng</b>		
8:00-8:25 AM	B09: Dynamics in polymer nanocomposites and the consequences for polymer processing	<b>Nigel Clarke</b> University of Sheffield, UK
8:25-8:50 AM	B10: Self organized highly oriented ferroelectric polymer nanostructures via controlled crystallization	<b>Dong Guo</b> Chinese Academy of Sciences, China
8:50-9:15 AM	B11: Impact of Molecular Weight on Quantum Yield of Polymer Films	<b>Masaru Nagai</b> Nanjing Tech University, Japan
9:15-9:40 AM	B12: Uniaxial orientation of semiconducting polymer films compressed on ionic liquids	<b>Hiroyuki Matsui</b> University of Tokyo, Japan
9:40-10:05 AM	B13: Solid state characteristics in morphology-controllable conjugated polymer photovoltaic materials	<b>Xiaotao Hao</b> Shandong University, China
10:05-10:25 AM	Session Break	
<b>Session: “More than Moore” Materials II    Chair: Chun-Hsing Shih</b>		
10:25 -10:40 AM	B14: Simplifying and speeding up delay learning with BiFeO <sub>3</sub> -based artificial synapses	<b>Nan Du</b> Chemnitz University of Technology, Germany
10:40-11:05 AM	B15: ZrO <sub>2</sub> -Based Resistive Switching Memory Devices	<b>Tseung-Yuen Tseng</b> National Chiao-Tung University, Taiwan
11:05-11:30 AM	B16: Gate Material and Blocking Layer Material Dependences on the Electrical Characteristics of Charge Trapping Type FinFET Flash Memory	<b>Yongxun Liu</b> National Institute of Advanced Industrial Science and Technology (AIST), Japan
11:30-11:55 AM	B17: CMOS Compatible AlGaN/GaN MOS-HEMTs for High Voltage Switching Application	<b>Xinke Liu</b> South University of Science and Technology, China
11:55-13:30 PM	Lunch Break	
<b>Session: General V    Chair: Takeshi Fukuda</b>		

13:30-13:55 PM	B18: Soft@hard bilayers nanoshell for an individual cell surface shellization	<b>Xiaoyu Yang</b> Wuhan University of Technology, China
13:55 -14:10 PM	B19: Efficient c-Si/PEDOT:PSS Heterojunction Solar Cells——Towards more cost-effective photovoltaics	<b>Qiming Liu</b> Saitama University, Japan
14:10-14:35 PM	B20: Genomics with Semiconductor Nanotechnology	<b>Jean-Pierre Leburton</b> University of Illinois, USA
14:35-15:00 PM	B21: Polyglycerol grafting on various nanoparticles for in vivo applications as a drug carrier and an imaging probe	<b>Naoki Komatsu</b> Shiga University of Medical Science (SUMS), Japan
15:00 -15:25 PM	B22: Two-Dimensional Semiconductors for Nonlinear Optical Applications	<b>Jun Wang</b> SIOM, CAS, China
15:25-15:55 PM	Session Break	
<b>Session: Polymer Materials and Engineering III Chair: Xiaoyu Yang</b>		
15:55-16:20 PM	B23: Electrospray as a polymer deposition method	<b>Takeshi Fukuda</b> Saitama University, Japan
16:20-16:45 PM	B24: Conductivity Enhancement by Controlled Percolation of Inorganic Salt in Multiphase Hexanoyl Chitosan/Polystyrene Polymer Blends	<b>Tan Winie</b> MARA University of Technology, Malaysia
16:45-17:10 PM	B25: Azophenylcarbazoles: isomerisation dynamics and formation of SAMs	<b>Rolandas Tomasiunas</b> Vilnius University, Lithuania
18:00 PM	Dinner Social	



**Tuesday Sep.23**  
**Virtual Meeting Room C**

7:00-8:00 AM	Breakfast	
8:00-8:25 AM (Sep.22 21:00-21:25 PM)	C07: Recent progress on the use of carbon-based films in piezo sensors	<b>Mariana Amorim Fraga</b> Faculty of Technology of Sao Paulo, FATEC-SP, Brazil
8:25-8:50 AM (Sep.22 20:25-20:50 PM)	C08: III-V Superlattice based Longer Wavelength Infrared Avalanche Photodiode	<b>Koushik Banerjee</b> Intel Corporation, USA
8:50-9:15 AM (Sep.23 10:50-11:25 AM)	C09: Semi-metallic polymers and nanocomposites from vapour phase polymerisation	<b>Drew Evans</b> University of South Australia, Australia
9:15-9:30 AM (Sep.23 11:15-11:30 AM)	C10: Oxide based flexible devices for electronics, photonics, and sensing	<b>Madhu Bhaskaran</b> RMIT University, Australia
9:30-9:55 AM (Sep.23 10:30-10:55 AM)	C11: Self-assembled epitaxial ferroelectric nanorods for large electromechanical response	<b>Tomoaki Yamada</b> Nagoya University, Japan
9:55-10:20 AM (Sep.23 13:55-14:20 PM)	C12: Rare Earth Nitrides: Novel Intrinsic Ferromagnetic Semiconductors	<b>Franck Natali</b> Victoria University of Wellington, New Zealand
10:25-13:30 PM	Session and Lunch Break	
13:30 -13:45 PM (Sep.23 8:30-8:45 AM)	C13: Magnetic Polymer Nanocomposites for Smart Sensing Applications	<b>Ahmed Alfadhel</b> King Abdullah University of Science and Technology, Saudi Arabia
13:45-14:10 PM (Sep.23 8:45-9:10AM)	C14: Systematic study of carrier transfer in DNA polymers	<b>Constantinos Simserides</b> National and Kapodistrian University of Athens, Greece
14:10-14:35 PM (Sep.23 9:10-9:35 AM)	C15: Metallic Alloys For Propeller Manufacturing By Casting	<b>Burcu Ertug</b> ITU Faculty of Chemistry and Metallurgy, Turkey
14:35-15:00 PM (Sep.23 8:35-9:00 AM)	C16: Thermoelectric properties of nano-intermetallics silicides	<b>Mickael Beaudhuin</b> University of Montpellier, France

15:00 -15:15 PM (Sep.23 9:00-9:15 AM)	C17: Multiple drug delivery hydrogel system for spinal cord injury repair strategy	<b>Filippo Rossi</b> Industrial and Information Engineering, Italy
15:15 -15:30 PM (Sep.23 9:15-9:30AM)	C18: Advances in the growth and characterization of III-V core-shell nanowire arrays for photovoltaics and photonics	<b>Paola Prete</b> CNR-IMM Lecce Research Unit, Italy
15:30 -15:45 PM (Sep.23 9:30-9:45AM)	C19: Melanin-like bio-polymer based devices characterization and performances: a novel route for environmental friendly devices engineering	<b>Marianna Ambrico</b> CNR-IMIP Sezione Territoriale di BARI, Italy
15:45-16:10 PM (Sep.23 9:45-10:10AM)	C20: Photoluminescence circular dichroism and spin polarization in Germanium	<b>Fabio Pezzoli</b> University of Milano-Bicocca, Italy
16:10-16:35 PM (Sep.23 10:10-10:35 AM)	C21: High-k Materials for Logic and Memory Applications	<b>Rosario Rao</b> Sapienza University of Rome, Italy
18:00 PM	Dinner Social	

**Wednesday Sep.24**  
**UESTC Campus**

**UESTC New Campus Chair: Zhiming Wang**

8:00-12:00 PM

**Youth Forum**

**UESTC Old Campus Chair: Zhiming Wang**

14:00-14:25 PM

01: Rare-earth oxides studied by in-situ x-ray diffraction

**Michael Hanke**  
Paul-Drude-Institute, Germany

14:25-14:50 PM

02: GaN MOSFET on AlGaN/GaN Heterostructure with Recess Structure

**Jin-Ping Ao**  
Institute of Technology and Science, The University of Tokushima, Japan

14:50-15:15 PM

03: Biophotopolymers for holographic and diffractive applications

**Manolo Ortuno-Sanchez**  
University of Alicante, Spain

15:15 -15:40 PM

04: Spin polarized HSE hybrid functional calculations of VO<sub>2</sub>

**Udo Schwingenschlogl**  
University of Augsburg, Saudi Arabia

15:40-16:00 PM

Session Break

16:00-16:25 PM

05: Strategies of Solar Energy Utilisation Based on Exergy Analysis

**Guangqing Zhang**  
University of Wollongong, Australia

16:25-16:50 PM

06: Hot injection synthesis of iron pyrite nanoparticles for solar energy harvesting

**Thirumany Sritharan**  
Nanyang Technological University, Singapore

16:50-17:15 PM

07: Growth of InGaN Alloys using DERI Method and Fabrication of LED structures

**Tomohiro Yamaguchi**  
Kogakuin University, Japan

17:15-17:40 PM

08: Self-induced Uniaxial Strain due to Local van der Waals-stacked Interlayer Interaction in MoS<sub>2</sub>

**Ning Dai**  
Chinese Academy of Sciences, China

**Wednesday Sep.24**

**UESTC New Campus**

# Poster Presentation

P1: Investigation on the structural variations of PAMAM dendrimer embedded by Au nanoparticles of different sizes	<b>Ying-Chen Chuang</b> National SunYat-Sen University, Taiwan
P2: Mechanical properties and thermal stability of ultrathin Molybdenum nanowires	<b>Bo-Yuan Liao</b> National Sun-Yat-Sen University, Taiwan
P3: Potential function fitting process of Fe-Cr-Mo-C BMG by basin-hopping method	<b>Shih-Hao Liu</b> National Sun-Yat-Sen University, Taiwan
P4: Gas phase and surface reactions in the growth of organic for organic/crystalline silicon heterojunction solar cells using the chemical mist deposition	<b>Tatsuya Ohki</b> Saitama University, Japan
P5: Rare-earth oxide DBR structures as a buffer layer for GaN growth on Si	<b>Rolandas Tomasiunas</b> Vilnius University, Lithuania