

**Program for EMN Meeting on Smart and Multifunctional Materials 2017
June 24-28, 2017**

Saturday, June 24

14:00-18:00

Onsite Registration & Sign up

**Sunday, June 25
Morning**

8:10-8:25

Opening Ceremony

Session: Hybrid Organic-inorganic Materials I

Chair: Brandon A. Kemp

8:25-8:50

A01: Nanophotonic Applications of Small Metal Clusters and Chromophores

Theodore Goodson III, University of Michigan, USA

8:50-9:15

A02: Transparent OMO electrode and smart metal nanocluster for highly efficient and stable transparent organic photovoltaics

Dong Chan Lim, Korea Institute of Materials Science (KIMS), Korea

9:15-9:40

A03: Structural functionalization of polymeric carbon nitride for efficient photocatalytic hydrogen generation

Can Xue, Nanyang Technological University, Singapore

9:40-10:05

A04: Printed conjugated polymer wrapped carbon nanotube gas sensors

Yong-Young Noh, Dongguk University, Korea

10:05-10:25

Session Break

Session: General I

Chair: Theodore Goodson III

10:25-10:50

A05: Preparation and Characterization of Anion Conducting Ionomer Binder Solutions for Fuel Cells

Jin-Soo Park, Sangmyung University, Korea

10:50-11:15

A06: Modeling anomalous electromagnetic interactions with materials via theoretical advances in the energy momentum debate

Brandon A. Kemp, Arkansas State University, USA

11:15-11:40

A07: Silver Nanowire Networks: Versatile nanomaterials for energy applications

Daniel Bellet, Université Grenoble Alpes, France

11:40-12:05

A08: A new processing route for achieving titanium architected microstructure by coupling EBM and SPS

Damien Fabrègue, Université de Lyon, France

Sunday, June 25
afternoon

Session: General II

Chair: Jinhee Heo

14:10-14:40	A09: Artificial Spores: Cytoprotective Nanoencapsulation of Individual Living Cells	Insung Choi , Korea Advanced Institute of Science and Technology (KAIST), Korea
14:40-15:05	A10: Magnetic ordering in the system of particles with high spins $S=3/2$ ions	Elena Orlenko , Peter the Great St.PETERSBURG Polytechnic University, Russia
15:05-15:30	A11: Super-stretchable, transparent, and fatigue-free electrodes	Chuanfei Guo , South University of Science and Technology of China, China
15:30-16:00	A12: Development of Smart Materials/Structures and Their Novel Application Field Aiming at Disaster Mitigation	Hiroshi Asanuma , Chiba University, Japan
16:00-16:20	Session Break	
Session: Energy Materials and Electrochemical Energy Storage I		Chair: Elena Orlenko
16:20-16:45	A13: Hierarchical porous carbons as electrodes for electrochemical capacitors	Daniel Carriazo , CIC EnergiGUNE, Parque Tecnológico de Álava , Spain
16:45-17:10	A14: Study on the Wavelength Effect on Photovoltaic Property of poly-Si based Solar Cell by Employing Photoconductive Atomic Force Microscopy(PC-AFM)	Jinhee Heo , Korea Institute of Materials Science (KIMS), Korea
17:10-17:35	A15: Performance optimization of water based energy harvesting triboelectric generator	Walid A. Daoud , City University of Hong Kong, Hong Kong
17:35-18:00	A16: Investigation of natural dyes for textile based dye-sensitized solar cells	Irén Juhász Junger , Bielefeld University of Applied Sciences, Germany

Monday, June 26**Morning****Session: General III****Chair: Federico Spizzo**

8:20-8:50	A17: Multicomponent nanomaterials for environmental catalysis	Marco Piumetti , Polytechnic University of Turin, Italy
8:50-9:15	A18: Electrically Controllable Terahertz Metamaterial based on the VO ₂ and BSTO Thin Films	Han-Cheol Ryu , Sahmyook University, Korea
9.15-9:40	A19: Enhanced Nonlinear Optical Properties of Hybrid Quantum – Plasmonic Nanostructures	Emmanuel Paspalakis , University of Patras, Greece
9.40-10:05	A20: Colloidal Photonic Crystals of Hollow Microspheres	Kai Song , Technical Institute of Physics and Chemistry, CAS, China
10:05-10:25	Session Break	
Session: Magnetic nano-materials and metamaterials		Chair: Marco Piumetti
10:25-10:50	A21: 3D Metamaterials: nanofabrication and unique physical properties	Changzhi Gu , Institute of Physics, CAS, China
10:50-11:15	A22: Tailoring the exchange coupling in IrMn/NiFe films and nanodots by interface confinement	Federico Spizzo , University of Ferrara, Italy
11:15-11:40	A23: Multifunctional magnetic nanoparticles for therapy and diagnostics	Yuko Ichiyanagi , Yokohama National University, Japan
11:40-12:05	A24: Metamaterial Description of 2D Ferromagnetic Nanostructures	Roberto Zivieri , University of Ferrara, Italy

Monday, June 26**Afternoon****Session: General IV****Chair: Kazuo Akagi**

13:30-14:00	A25: Multifunctional network of graphene-augmented nanofibers: from structural ceramics to scaffolds for cell growth	Irina Hussainova , Tallinn University of Technology, Estonia
14:00-14:25	A26: ZnO/polymer nanocomposites for photocatalytic applications	Impellizzeri Giuliana , University of Catania, Italy
14:25-14:50	A27: Preparation and Characterizations of Pore-filled Anion-exchange Membranes for Alkaline Direct Liquid Fuel Cells	Moon-Sung Kang , Sangmyung University, Korea
14:50-15:15	A28: Electrocaloric materials for energy efficient cooling applications	Emmanuel Defay , Luxembourg Institute of Science and Technology(LIST), Luxembourg
	Session Break & Poster Session	
15:15-15:40	P01: Electrospun Graphene-Enriched Nitrogen-Doped Carbon Fibers for Electrochemical Water Desalination	Saveria Santangelo , University "Mediterranea", Italy
	P02: Ionic liquid-derived activated carbon with retransformed graphitic porous structure for ultracapacitors	Kwang Chul Roh , Korea Institute of Ceramic Engineering & Technology, Korea
	P03: Three-Dimensional Porous Raman Enhancing Substrate by Periodically Honeycomb-patterned Polymeric Films Immobilized with Gold Nanoparticles Arrays	Chia-Yen Chiang , National Taiwan University, Taiwan
	P04: Low-temperature solution processable perovskite solar cell	Yang-Yen Yu , Ming Chi University of Technology, Taiwan
	P05: Preparation and characterization of pH- and temperature-responsive amphiphilic diblock copolymers	Yang-Yen Yu , Ming Chi University of Technology, Taiwan
	P06: Fabrication and characterization of thiol-norbornene schizophyllan hydrogels	Chang Seok Ki , Seoul National University, Korea
	P07: Alignment of nematic liquid crystals on the graphene layer	Yoonseuk Choi , Hanbat National University, Korea
	P08: Flexible Au Nanoparticles and Tungsten Disulfide SERS Substrate for Biomolecules Detection	Chang-Yi Lee , Ming Chi University of Technology, Taiwan

	P09: Raman Enhancing Detection of Biomolecules by Nanohybrids of Silver Nanoparticles and Mesoporous Silica	Wan-Tzu Chen , Ming Chi University of Technology, Taiwan
	P10: Flexible Magnetic SERS Substrates by Nanoparticle Arrays of Silver and Iron Oxide Nanoparticles Grown on Two-Dimensional Nanosheets	Kuan-Syun Wang , Ming Chi University of Technology, Taiwan
	P11: Thermo-Sensitive Nanoparticle Arrays by Silver Nanoparticle Grown on Nanoclays with Poly (N-isopropylacrylamide) for Anti-Bacteria and SERS Detection	Ting-Yu Liu , Institute of Atomic and Molecular Sciences, Taiwan
	P12: Highly sensitive and reliable surface-enhanced Raman spectroscopy biosensor based on hetero-aggregation of periodic and aperiodic nanostructures	Kyung Min Byun , Kyung Hee University, Korea
Session: General V Chair: Irina Hussainova		
15:40-16:10	A29: Conjugated Polymers-Based Multifunctional Materials with Photoresponsive Helical Structures and Chiroptical Properties	Kazuo Akagi , Kyoto University, Japan
16:10-16:35	A30: New Copper Group Complexes Based on Phosphinoaminopyridines as the Base for Stimuli Responsive Luminescent Materials	Andrey A. Karasik , Russian Academy of Sciences, Russia
16:35-17:00	A31: Synthesis and molecular modelling of functionalized mesoporous silica nanoparticles for drug delivery applications	Adam Skelton , University of KwaZulu-Natal, South Africa
17:00-17:25	A32: Plasma Enabled Metamaterials and Nanoporous Membranes for Electric Propulsion Applications	Jinghua Fang , University of Technology Sydney, Australia

Tuesday, June 27

Morning

Session: General VI

Chair: Mauro Carraro

8:25-8:50	A33: Magnetically aligned graphene for photonic and other novel device applications	Jiming Bao , University of Houston, USA
8:50-9:15	A34: Programmable growth of upconversion nanocrystals and their luminescent properties	Xiaoxue Xu , Macquarie University, Australia
9:15-9:40	A35: Spontaneously rolled polymer film as a novel material for encapsulation of catalytic particles and macromolecular drugs	Valeriy Luchnikov , Institute of Materials Science of Mulhouse, France
9:40-10:05	A36: High Thermoelectric Performance of Bi ₂ S ₃ Through Two Different Nano Approaches	Wei-Shu Liu , Southern University of Science and Technology (SUSTec), China
10:05-10:25	Session Break	
Session: Hybrid Organic-inorganic Materials II		
Chair: Jiming Bao		
10:25-10:50	A37: Towards new approaches in polybenzoxazine-based nanocomposites synthesis	Horia Iovu , University Politehnica of Bucharest, Romania
10:50-11:15	A38: Hybrid polymers containing molecular metal oxides as oxidation catalysts	Mauro Carraro , Università degli Studi di Padova, Italy

Tuesday, June 27
afternoon

Session: Energy Materials and Electrochemical Energy Storage II Chair: Vladimir V. Tsukruk

13:20-13:45	A39: Electrospun nanomaterials for energy and environment applications	Saveria Santangelo , Università “Mediterranea”, Italy
13:45-14:10	A40: Synthesis and Characteristic of High-capacity Silicon Inverse Opal As a Lithium-ion Anodic Materials	Eun-Suok Oh , University of Ulsan, Korea
14:10-14:35	A41: Biochemistry-enabled functional materials for energy storage	Chao Deng , Harbin Normal University, China
14:35-15:00	A42: Probing nanoscale atomic ordering in relaxor ferroelectrics using advanced X-ray and neutron scattering techniques	Abhijit Pramanick , City University of Hong Kong, Hong Kong
15:00-15:25	A43: A smart innovation in sea water desalination	Nassir Chellou , Technical Office for mechanical engineering & numerical simulations TOMENS, Algeria

15:25-15:50 Session Break

Session: Multifunctional Material for Sensors and Smart Structures Technologies Chair: Saveria Santangelo

15:50-16:15	A44: Multifunctional Flexible Bionanocomposites for Sensing	Vladimir V. Tsukruk , Georgia Institute of Technology, USA
16:15-16:40	A45: Metal nanostructures photochemically coated on substrates: an effective approach to large-scale functional surfaces	Lavinia Balan , CNRS Institut de Science des Matériaux de Mulhouse (IS2M), France
16:40-17:05	A46: Fire safety and FRP composite structures in maritime applications	Franz Evegren , RISE Research Institutes of Sweden, Sweden

Wednesday, June 28

One day academic exchange & excursion