

# CCMST 2018 PROGRAM

**Sept. 25**

General I Chair: Victor Kagalovsky			
8:30 - 9:00	Vladimir Sobolev	South Dakota School of Mines and Technology, USA	Influence of mesoscopic nanostructures on physical properties and functional parameters in ferroelectrics with coexisting phases
9:00 - 9:30	Mohamed Chaker	INRS-EMT, Canada	Undoped and doped vanadium dioxide thin films: synthesis, characterization and applications
9:30 - 10:00	Teofil Jesionowski	Poznan University of technology, Poland	Bio-based advanced functional hybrid materials: design, production and applications
10:00 - 10:30	Federico Rosei	INRS-EMT, Univ. du Quebec, Canada	Multifunctional materials for emerging technologies
10:30 - 10:50	Session Break		
General II Chair: Vladimir Sobolev			
10:50 - 11:20	Kohei Soga	Tokyo University of Science, Japan	Fluorescent materials design for near infrared biomedical photonics.
11:20 - 11:40	Andreea Madalina Pandeale	University Politehnica of Bucharest, Romania	Polysulfone/crown ethers immobilized onto graphene oxide composite membranes for hemodialysis
11: 40 - 12: 10	Denis Buttard	Université Grenoble Alpes, France	Forest of structured nanowires for energy storage and production
Lunch			
General III Chair: Filip Ciesielczyk			
14:00 - 14:30	Saim Emin	University of Nova Gorica, Slovenia	Electrocatalytic hydrogen evolution with tungsten-based materials
14:30 - 15:00	Hidetomo Usui	Osaka University, Japan	Power factor enhancement of 122 Zintl phase compounds due to specific electronic band structure
15:00 - 15:30	Kyoichi Suguro	Carlit Holdings Co. Ltd, Japan	Science of Material Processing and Application to Industries
15:30 - 16:00	Chrysanthos Maraveas	University of Liege, Belgium	High temperature mechanical properties of High and Very High Strength Steel
16:00 - 16:30	Anil Dhawan	Anand International College of Engineering, India	Corrosion behaviour of metallic glasses for various engineering applications
16:30- 16:50	Session Break		
Characterization, Theory and Modelling I Chair: Hidetomo Usui			
16:50 - 17:20	Victor Kagalovsky	Shamoon College of Engineering, Israel	Stability of a topological insulator: interactions, disorder and parity of Kramers doublets
17:20 - 17:50	Filip Ciesielczyk	Poznan University of Technology, Poland	Multifunctional inorganic hybrids - synthesis, surface chemistry and activity, potential application
17:50 - 18:20	Igor Yurkevich	Aston University, UK	How to directly observe quantum discord.
Dinner			

## Sept. 26 ROOM A

Nanoscale Materials I Chair: Katsuaki Konishi			
8:45 - 9:15	Yuichi Negishi	Tokyo University of Science, Japan	Precise Synthesis and Application of Thiolate-Protected Gold Clusters
9:15 - 9:30	Tianci Chang	Shanghai Institute of Ceramics, CAS, China	A New Strategy for Robust Extended Service Life of Vanadium Dioxide Films
9:30 - 10:00	Kenji Ueda	Nagoya University, Japan	Graphene/diamond heterojunctions as novel photo-switching memory devices
10:00 - 10:15	Lifeng Gan	Harbin Institute of Technology, China	Mass and stiffness spectrometry by shape memory alloy based nanomechanical resonators
10:15 - 10:35	Session Break		
Nanoscale Materials II Chair: Yuichi Negishi			
10:35 - 11:05	Katsuaki Konishi	Hokkaido University, Japan	Aggregation-induced Photoluminescence Switching of Small Ligand-protected Gold Clusters
11:05 - 11:35	Yang Sheng	Changzhou University, China	Luminescent nanoparticles for dual-modal fluorescent/photoacoustic imaging
11:35 - 12:05	Liran Ma	Tsinghua University, China	Confinement-induced nano-sandwich of liquid crystal in Thin Film Lubrication
Lunch			
Nanoscale Materials III Chair: Liran Ma			
14:00 - 14:30	Chiaki Terashima	Tokyo University of Science, Japan	TiO <sub>2</sub> nanomaterials treated by in-liquid plasma enhanced the photocatalytic degradation of gaseous organics
14:30 - 15:00	Fengyan Hou	Cirrus Materials Science Ltd, Auckland, New Zealand	Innovative, Hybrid™ drag reduction coatings for Aluminium substrates
15:00 - 15:30	Xinwei Zhao	Tokyo University of Science, Japan	Room temperature ferromagnetism of Mn-doped ZnO thin films
15:30 - 16:00	Shinsuke Ishihara	National Institute for Materials Science, Japan	Wearable toxic gas sensor based on carbon nanotubes
16:00 - 17:00	<b>Session Break &amp; POSTERS SESSION</b>		
General V Chair: Shinsuke Ishihara			
17:00 - 17:30	Hu Yan	Zhengzhou University, China	Extremely Flexible PEDOT/PSS-HNTs Hybrid Thin Films: Preparation and Functions
17:30 - 17:50	Stefan Ioan Voicu	University Politehnica of Bucharest, Romania	New method for cellulose acetate membranes covalent functionalization using aminopropyl triethoxy silane as linker
17:50 - 18:20	Aijun Yang	Xi'an Jiaotong University, China	The Research Status and Prospect of Gas Sensors Based on Nanomaterials in State Monitoring and Fault Diagnosis of Power Equipment
Dinner			

## Sept. 26 ROOM B

General IV Chair: Shanshan Chen			
8:40 - 9:10	Masaaki Sadakiyo	Kyushu University, Japan	Design and Synthesis of Ion-Conductive Metal-Organic Frameworks
9:10 - 9:30	Sujun Guan	Tokyo University of Science, Japan	Effect of anneal temperature in molten salt of KNO <sub>3</sub> on potassium doped ZnO thin films
9:30 - 10:00	Werner Bauer	Karlsruhe Institute of Technology, Germany	Water-induced influences on active materials in lithium-ion batteries
10:00 - 10:15	Shiwei Long	Shanghai Institute of Ceramics, CAS, China	Application-Oriented VO <sub>2</sub> Thermo-chromic Coatings with Composite Structures: Optimized Optical Performance and Robust Fatigue Properties
10:15 - 10:35	Session Break		
<b>2D Materials, Heterostructures and Devices &amp; Materials, Devices And Systems For Gas Separation, Purification And Syngas Production</b> Chair: Driss Mgharaz			
10:35 - 11:05	Yuliang Mao	Xiangtan University, China	Computational design of heterostructures based on GeSe monolayer from first-principles
11:05 - 11:35	Shanshan Chen	Renmin University of China, China	Toward precise thickness control of h-BN and graphene/h-BN heterostructures
11:35 - 12:05	Xingjian (Chris) Xue	University of South Carolina, USA	An asymmetrical hollow fiber membrane for oxygen permeation
Lunch			
Photonics/ Optoelectronic Materials And Devices Chair: Yuliang Mao			
14:30 - 15:00	Xin Gai	City University of Hong Kong, Hong Kong	The integrated photonic circuits from mid-infrared optical materials
15:00 - 15:30	Antoine Barnabe	CIRIMAT - Université de Toulouse UPS - INP - CNRS, France	Copper based delafossite Cu(M)O <sub>2</sub> with M = {Fe, Cr} materials revisited : from thermodynamic calculation to p-type TCO thin films optimization
15:30 - 16:00	Driss Mgharaz	Laboratory of Engineering Sciences, Ibn Zohr University, Morocco	Modelling the nonlinear dynamics and instability in Tm-doped fiber laser
16:00 - 17:00	<b>Session Break &amp; POSTERS SESSION</b>		
Dinner			

**Sept. 27 ROOM A**

<b>Sept. 27 ROOM A</b>			
	<b>Magnetic Structures and Materials</b>		<b>Chair: Hu Yan</b>
8:30 - 9:00	Kyyoul YUN	Gifu University, Japan	Magnetic Properties of Silicon Steel Sheet Core with Heat Treatment
9:00 - 9:30	Shengcan Ma	Jiangxi University of Science and Technology, China	Magnetic-field-induced metamagnetic martensitic transformation and giant magnetocaloric effect in Ni <sub>36.0</sub> Co <sub>14.0</sub> Mn <sub>35.7</sub> Ti <sub>14.3</sub> alloy ribbons
9:30 - 10:00	Chaoyang Wei	Shanghai Institute of Optics and Fine Mechanics, CAS, China	Progress of Magnetorheological fluid materials for polishing optics
10:00 - 10:20	Session Break		
	<b>Characterization, Theory and Modelling II</b>		<b>Chair: Shengcan Ma</b>
10:20 - 10:50	Yu-Li Lee	National Changhua University of Education, Taiwan	Effects of Coulomb interactions on a two-dimensional tilted Dirac fermions
10:50 - 11:20	Tarmo Nuutinen	University of Eastern Finland (UEF), Joensuu, Finland	Polarization controlled Raman scattering with a linear bilayer silver grating
11:20 - 11:50	Hanyu Zhao	Hebei University of Technology, China	The Loss Separation Concept in Soft Magnetic Materials: Recent Applications
11:50 - 12:20	Tshwafo E. Motaung	University of Unizulu, South Africa	Characterization and comparison of maize stalk and sugar cane bagasse residues
Lunch			
	<b>Semiconductors &amp; General VI</b>		<b>Chair: Yu-Li Lee</b>
15:00 - 15:15	Yijie Zhou	Shanghai Institute of Ceramics, CAS, China	Tungsten oxides-based Transparent Composites with Controllable Photochromic Responding Time
15:15 - 15:45	Sergey Kravchenko	Northeastern University, USA	Fermion condensation in a strongly correlated electron system
15:45 - 16:15	Seiichi Sato	University of Hyogo, Japan	Crystal structure distortion of silicon and germanium nanocrystals: Tendency toward compact phase formation
16:15 - 16:45	Isaac Balberg	The Hebrew University Jerusalem, Israel	The Phototransport Properties of the Halide Perovskites and Their Practical Consequence
Dinner			

<b>POSTERS SESSION ROOM A Sept. 26 16:00 -17:00 PM</b>			
P01	Malgorzata Franus	Lublin University of Technology, Poland	Microstructure and properties of lightweight aggregate manufactured from sewage sludge
P02	Marius Andrei OLARIU	Technical University of Iasi, Romania	Evaluation of carbon nano-onions (CNOs) selectivity to various gasses
P03	Danuta Barnat-Hunek	Lublin University of Technology, Poland	Surface free energy and frost resistance of lightweight mortars with addition of clinoptilolite
P04	Hanxiang Jia	Shanghai Institute of Ceramics, CAS, China	Dual-response and Li <sup>+</sup> -insertion induced phase modulation based on Thermochromic and electrochromic combined device
P05	Jaroslaw Madej	Lublin University of Technology, Poland	Hydrogen storage of zeolite Na-X produced from waste by two different methods
P06	Jian Zhao	Zhengzhou University, China	Synthesis and Characterization of Strontium Titanate Nanorods by Reverse Microemulsion Method
P07	Wojciech Franus	Lublin University of Technology, Poland	Production of lightweight aggregate from used zeolitic materials after spent motor oil sorption
P08	Fang Xu	Shanghai Institute of Ceramics, CAS, China	Strategies for High Optical Performance of Vanadium Dioxide Films
P09	Bin-Bin Cheng	Zhengzhou University, China	Preparation of Extremely Flexible PEDOT/PSS Thin Films
P10	Rafal Panek	Lublin University of Technology, Poland	New zeolite-vermiculite composites - synthesis
P11	Yang Wang	Shanghai Institute of Ceramics, CAS, China	Tunable Optical Properties in VO <sub>2</sub> films with Localized Surface Plasmon Using Acid Etching Approach
P12	Chen-Xu Ma	Zhengzhou University, China	Novel Waterborne Superhydrophobic Coatings
P13	Shuhe Tsubota	University of Hyogo, Japan	Production, structural and electrical characterization of silicon and germanium nanoparticle inks
P14	Zhen-Zhen Zhang	Zhengzhou University, China	Synthesis of Strontium Titanate Nanoparticles
P15	Xiao-Qing Guo	Zhengzhou University, China	Anisotropic Expansion of PEDOT/PSS-PAM Hybrid Films in Water
P16	Anna Voznesenskaya	Vladimir State University, Russia	Research on the tribological properties of periodic micro- and nanostructures on the molybdenum surface obtained as a result of laser action
P17	Yang Yang	Shanghai Institute of Ceramics, CAS, China	Epitaxial Growth and Thermochromic Properties of B-phase VO <sub>2</sub> Thin Films on SrTiO <sub>3</sub> Substrate
P18	Zewei Shao	Shanghai Institute of Ceramics, CAS, China	Strain dependent phase-transition properties in VO <sub>2</sub> epitaxial films
P19	Antti Matikainen	Aalto University, Finland	Plasmonic surface-core fibers for refractive index sensing
P20	Simona Condurache-Bota	Dunarea de Jos University of Galati, Romania	Optical Parameters of Pulsed Laser Deposited Bismuth Oxide Thin Films
P21	Pinlei Lv	Xi'an Jiaotong University, China	Triboelectric Nanogenerator for Energy Harvesting and Self-Powered Monitoring System
P22	Fengyan Hou	Cirrus Materials Science Ltd, Auckland, New Zealand	Innovative, Hybrid™ functional coatings for Aluminium and Titanium substrates