

GOLDEN ACADEMY

Message from the organizers

Dear Colleagues and Friends,

2016 International Conference for Leading and Young Materials Scientists (IC-LYMS 2016) will be held in Sanya, China, during December 25-28 2016.

IC-LYMS is being held every year and intends to provide a platform for the exchange and networking between top scientists, emerging young researchers, and students across a wide spectrum of materials science and engineering.

We would like to invite you to participate in IC-LYMS 2016. Your active participation is the key to the success of this conference.



Yours Sincerely,

IC-LYMS 2016 Committee

Asia Pacific Society for Materials Science (APSMR)

www.apsmr.org



GOLDEN ACADEMY

Conference organizing committee

CONFERENCE CHAIRS

Prof. Weidong HE (University of Electronic Science and Technology of China)

Prof. Chengbin LIU (Hunan University)

Prof. Xijun HU (The Hong Kong University of Science and Technology)

Prof. Wen-Yong LAI (Nanjing University of Posts & Telecommunications)

Prof. Hui XU (Heilongjiang University)

Prof. Yongqin CHANG (University of Science & Technology Beijing)

Prof. Haitao HUANG (The Hong Kong Polytechnic University)

Prof. Yao HE (Soochow University)

Prof. Chuanbao CAO (Beijing Institute of Technology)

Prof. Moses L.F. NG (The Hong Kong University of Science and Technology)

CONFERENCE PROGRAM DIRECTORS

Dr. Yingxue SONG (APSMR)

CONFERENCE SECRETARIAT

Ms. Yaru WU (APSMR)

Ms. Yangjun HU (APSMR)



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Conference topics

1. **Structure materials and Functional Coatings (metals, ceramics, and composites)**
2. **Materials for energy (saving, conversion, transfer, storage) and environment plus electrochemistry**
 - 2.1. **Photovoltaics**
 - 2.2. **Batteries and Fuel Cells**
 - 2.3. **Materials for Thermal Management and Thermal Energy Utilization**
 - 2.4. **Materials for Energy and Environmental Applications**
3. **Optics and Photonic Materials**
4. **Electronic, Magnetic and Nanomaterials**
5. **Polymer Science and Molecular Chemistry**
6. **Organic Materials and Bio-materials**
7. **Materials Characterization and Computational Modeling**

	SUN, 12/25	MON, 12/26	TUE, 12/27	WED, 12/28
9:00 – 10:20	Pre-session technical and discussion forums	Plenary Presentation		
10:20 – 10:30		Coffee & Tea Break		
10:30 – 12:00		Oral Presentation		
12:10 – 13:00		Lunch Break		Conference Excursion
13:10 – 14:40		Oral Presentation		
14:40 – 14:50		Coffee & Tea Break		
14:50 – 16:30		Oral Presentation		
17:00 – 18:30	Conference Registration		Poster Session	
19:00 – 20:30			Conference Banquet (Approx. 1.5 hrs)	
20:30 – 22:00	Reception			

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Presentation List (Room A)

	SUN, 12/25	MON, 12/26	TUE, 12/27	WED, 12/28
9:00 – 10:20	Pre-session technical and discussion forums	1. J.X. GENG 2. Frank L.Y. LAM	12. L.J. CHEN 13. J.M. LU	23. 24.
10:20 – 10:30		Coffee & Tea Break		
10:30 – 12:00		3. Z.P. HAO 4. J.L. GONG 5. J.L. HUANG	14. Z.Y. YANG 15. X.M. LI 16. L. YE	25. 26. 27.
12:10 – 13:00		Lunch Break		Conference Excursion
13:10 – 14:40		6. Y.P. ZOU 7. Z.H WEN 8. W. ZHU	17. J. ZHANG 18. H. HIRAO 19. S.H. CAI	
14:40 – 14:50		Coffee & Tea Break		
14:50 – 16:30		9. 10. 11.	20. 21. 22.	
17:00 – 18:30	Conference Registration		Poster Session	
19:00 – 20:30			Conference Banquet (Approx. 1.5 hrs)	
20:30 – 22:00	Reception			

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Presentation List (Room B)

	SUN, 12/25	MON, 12/26	TUE, 12/27	WED, 12/28
9:00 – 10:20	Pre-session technical and discussion forums	1. Y.W. ZHU 2. M.H. JIANG	12. Y. HE 13. H. XU	23. 24.
10:20 – 10:30		Coffee & Tea Break		
10:30 – 12:00		3. Y.W. LI 4. S.Y. ZHANG 5. B.L. PENG	14. P.H. TAN 15. S.P. SONG 16. X.D. PI	25. 26. 27.
12:10 – 13:00		Lunch Break		Conference Excursion
13:10 – 14:40		6. H.Y. WANG 7. Y.L. ZHONG 8. S.M. KE	17. C.M. HAN 18. Y. LI 19. J. HUANG	
14:40 – 14:50		Coffee & Tea Break		
14:50 – 16:30		9. 10. 11.	20. R.W. LI 21. J. JIANG 22. R. WU	
17:00 – 18:30		Conference Registration	Poster Session	
19:00 – 20:30			Conference Banquet (Approx. 1.5 hrs)	
20:30 – 22:00	Reception			

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Presentations for IC-LYMS 2016

MONDAY 12/26

LIST ROOM A

1. Graphene-Based Composites with Controlled Structures for High-Performance Energy Storage Materials (J.X. GENG)
2. Transition Metal-Loaded Zr-SBA-15 Catalysts for the Selective Catalytic Reduction of NO with Propane in Lean-Burn Engine Exhaust (Frank L.Y. LAM)
3. TBA (Z.P. HAO)
4. Engineered nanomaterials and the environment: application, fate and toxicity (J.L. GONG)
5. Microorganism-mediated, surfactant-directed synthesis of Au and AuPd nanostructures with SERS and catalytic applications (J.L. HUANG)
6. New Polymers for High Efficiency Solar Cell and NIR-II Imaging (Y.P. ZOU)
7. PH-universal Electrocatalyst for Oxygen Reduction Reaction (Z.H. WEN)
8. Determination of interfacial adhesion energies of thermal barrier coatings by compression test combined with a cohesive zone finite element model (W. ZHU)

LIST ROOM B

1. Three-dimensional Carbon Architectures for High-Performance Electrical Energy Storage (Y.W. ZHU)

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2. Development of crystal growth technology and SFSSCG of $K_{0.5}Na_{0.5}NbO_3$ single crystal (M.H. JIANG)
3. High-efficiency Robust Perovskite Solar Cells on Ultrathin Flexible Substrate (Y.W. LI)
4. ic Optoelectronics for Visible Light Communications (S.Y. ZHANG)
5. Strain induced large electrocaloric effect in a broad temperature range and high pyroelectric energy harvesting performance in the PLZST relaxor antiferroelectric thin film on the $LaNiO_3/Pt$ composite base electrode (B.L. PENG)
6. Silicon Nanomaterials-Based Optical Biosensors for Biological and Biomedical Applications (H.Y. WANG)
7. The design and synthesis of high-quality fluorescent silicon nanomaterials (Y.L. ZHONG)
8. Transparent oxide electrodes on mica for high-temperature-processed flexible optoelectronic devices (S.M. KE)

TUESDAY 12/27

LIST ROOM A

12. Effect of Ionic Liquids on the Phase Behavior of Methane Hydrate: Experiment and Modeling (L.J. CHEN)
13. Study on Hydrogen Storage Capacities of Several Porous Materials at low temperature and low pressure (J.M. LU)

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14. Carbon composite film electrode for Li-ion batteries and Supercapacitors (Z.Y. YANG)
15. The study on carbon nanotubes as bone repair materials (X.M. LI)
16. The Small Diameter TEVG Scaffold Based on Heparin-PCL conjugate (L. YE)
17. Facile Construction of Structured Film by Atmospheric Non-Thermal Plasma Chemical Vapor Deposition (J. ZHANG)
18. Computational Exploration of Chemistry: From Homogeneous to Heterogeneous Catalysis (H. HIRAO)
19. Tailored microstructure of thermal barrier coatings by EB-PVD (S.H. CAI)

LIST ROOM B

12. Silicon Nanostructures and Their Use for Biological and Biomedical Applications (Y. HE)
13. Phosphine-Containing Materials for Thermally Activated Delayed Fluorescence (H. XU)
14. Stacking configuration of multilayer graphenes probed by Raman spectroscopy (P.H. TAN)
15. Tunable Surface-Enhanced Raman Scatterers with Interior Nanogap for Biosensing Applications (S.P. SONG)
16. High-performance photodetection based on silicon quantum dots (X.D. PI)
17. Selectively Optimizing Optoelectronic Properties of Phosphine Oxide Materials for Electroluminescence (C.M. HAN)

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18. Poly(3,4-ethylenedioxythiophene): methylnaphthalene sulfonate formaldehyde condensate : a case study on the effect of work function and structural homogeneity on hole injection/extraction property (Y. LI)
19. CO₂ reforming of methane for Ni/Mo/M-SBA-15 catalysts (J. HUANG)
20. Modulation of physical properties by ion transport under an electric field in oxide films (R.W. LI)
21. Flexible Ferroelectric Element Based on van der Waals Heteroepitaxy (J. JIANG)
22. Materials for Thermal Insulation and Thermal Management (R. WU)

POSTER SESSION

- P1. Pd over Co-functionalized SBA-15 as catalysts for liquid phase solvent-free selective oxidation of benzyl alcohol by molecular oxygen (Y.Y. LI)
- P2. Mixture interlayer for high performance organic-inorganic perovskite photodetectors (F. TANG)
- P3. Pre-synthesis process, structure and properties of K_{0.5}Na_{0.5}NbO₃ single crystal grew by seed-free solid-state crystal growth method (J.G. SONG)
- P4. Electrodeposited NiFe hydroxide as electrocatalyst for full water splitting (Q.Z. HU)
- P5. Preliminary Study on the State of Charge (SOC) of Lithium Battery (S. JIN)
- P6. Synthesis and Hydrogen Storage Capacity of Ni(II)-doped MOF-5 (F. CAO)

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P7. Mechanisms and mitigation of volcanic ash attack on yttria stabilized zirconia thermal barrier coatings (M. LIU)

P8. The effects of substrate composition of bond coat and substrate on its spallation life in thermal barrier coating systems (R.C. LI)

P9-A. Dioxygen Binding in Fe-MOF-74: First-principles Parametrization and Application for Multiscale Studies (H. HIRAO)

P9-B. Partial Hessian Fitting for Quick Determination of Force Constant Parameters in Molecular Mechanics (H. HIRAO)

P9-C. Mechanistic Insight into an Asymmetric Ring-Opening Reaction of Epoxide with Amine Catalyzed by a Metal-Organic Framework (MOF) (H. HIRAO)