

# GOLDEN ACADEMY

## Message from the organizers

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Dear Colleagues and Friends,

We would like to invite all of you to join the 2018 International Interdisciplinary Conference on Materials Science & Engineering and Computational Information Technology, which will be held in Zhuhai, China, during December 23-26 2018.

The conference is intended to serve as an interdisciplinary platform for the exchange and networking between top scientists, experienced engineers, frontier researchers, and students across a wide spectrum of research fields

Your active participation and discussion is the key to the success of this conference.



Yours Sincerely,

Organizing Committee

2018 International Interdisciplinary Conference on Materials Science & Engineering and Computational Informatics

IC-LYMS 2018 (APSMR) / CICCAT 2018 (APSCIT)

# GOLDEN ACADEMY

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## Conference organizing committee

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### CONFERENCE CHAIRS

#### MATERIALS SCIENCE & ENGINEERING:

Prof. Guoying WEI (China Jiliang University)

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

Prof. Masaki TANEMURA (Nagoya Institute of Technology)

Prof. Qing-Hua XU (National University of Singapore)

Prof. Bo DAI (Southwest University of Science and Technology)

#### COMPUTATION & IT:

Prof. Shigeo AKASHI (Tokyo University of Science)

Prof. Xiaofeng LIAN (Beijing Technology and Business University)

Prof. He YAN (Chongqing University of Technology)

### CONFERENCE PROGRAM DIRECTORS

Dr. Yingxue SONG (APSMR)

### CONFERENCE SECRETARIAT

Ms. Yaru WU (APSMR)

Ms. Yangjun HU (APSCIT)

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## Conference topics

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### **MATERIALS SCIENCE & ENGINEERING:**

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**

### **COMPUTATION AND IT:**

- 1: **Theory, Algorithms, Programming**
- 2: **Database, Cloud Computing, Data Mining, Big Data**
- 3: **Communications, Networking, Security, and Internet of Things**
- 4: **Multimedia, Image Processing and Recognition (Virtual Reality)**
- 5: **High Performance Computing and Intelligent Systems (AI, Robotics)**
- 6: **Software Engineering and Applications**
- 7: **Electronics (Analog/Digital Circuits, Signal Processing, System Architectures)**

	SUN, 12/23	MON, 12/24	TUE, 12/25	WED, 12/26
9:00 – 10:20	Pre-session technical and discussion forums on international collaboration	Oral Presentation		Conference Excursion
10:20 – 10:30		Coffee & Tea Break		
10:30 – 12:00		Oral Presentation		
12:10 – 13:10		Lunch Break		
13:20 – 14:50		Oral Presentation		
14:50 – 15:00		Coffee & Tea Break		
15:00 – 16:30		Oral Presentation		
17:00 – 18:30	Conference Registration	Poster Session		
19:00 – 20:30	Reception	Conference Banquet (Approx. 1.5 hrs)		

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## Presentation List (No. 1 Meeting Room)

	SUN, 12/23	MON, 12/24	TUE, 12/25	WED, 12/26
9:00 – 10:20	Pre-session technical and discussion forums on international collaboration	1. G.J. CHANG 2. M.H. YAN	12. Q.H. XU 13. D.E. SUN	Conference Excursion
10:20 – 10:30		Coffee & Tea Break		
10:30 – 12:00		3. C.F. HU 4. M.J. HENDERSON 5. J. COURTOIS	14. K. YU 15. X.F. JIANG 16. M. GU	
12:10 – 13:10		Lunch Break		
13:20 – 14:50		6. L. ALMASY 7. C.G. ZHOU 8. S.H. CAI	17. S. SHARMA 18. H. ISHIDA 19. B. PAUDEL JAISI	
14:50 – 15:00		Coffee & Tea Break		
15:00 – 16:30		9. M. LIU 10. R.C. LI 11. W. SHAO	20. J.Y. ZHAI 21. X. JIAN 22. L. LI	
17:00 – 18:30	Conference Registration	Poster Session		
19:00 – 20:30	Reception	Conference Banquet (Approx. 1.5 hrs)		

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## Presentation List (No. 2 Meeting Room)

	SUN, 12/23	MON, 12/24	TUE, 12/25	WED, 12/26
9:00 – 10:20	Pre-session technical and discussion forums on international collaboration		12. Y.Z. SONG 13. Y. HIJIKATA	Conference Excursion
10:20 – 10:30		Coffee & Tea Break		
10:30 – 12:00			14. J. WANG 15. Y. CHIBA 16. Reserved	
12:10 – 13:10		Lunch Break		
13:20 – 14:50		6. L.X. LI 7. M. NISHIGUCHI 8. H. KIM		
14:50 – 15:00		Coffee & Tea Break		
15:00 – 16:30		9. J. WATADA 10. X. LI 11. Reserved		
17:00 – 18:30	Conference Registration	Poster Session		
19:00 – 20:30	Reception	Conference Banquet (Approx. 1.5 hrs)		

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**MONDAY 12/24**

**Meeting Room No. 1**

1. Functional high performance indole-based polymers via cation- $\pi$  interactions (G.J. CHANG)
2. Direct Measurement of Ultra-thin Polymer Coating on Superparamagnetic Nanoparticle in Aqueous Medium by Small-Angle Scattering and Application of the Nanoparticles in Uranium (VI) Removal (M.H. YAN)
3. New ternary layered ceramics (C.F. HU)
4. Sorption of Plutonium on (Ce-Al)-Oxide Pillared Gaomiaozi Bentonite (M.J. HENDERSON)
5. Janus multi-responsive superparamagnetic nanoparticles functionalized with two on-demand and independently cleavable ligands for Actinide separation (J. COURTOIS)
6. Structural changes in polyurethane upon accelerated aging – a neutron and X-ray scattering study (L. ALMASY)
7. Oxidation and Interdiffusion behavior of Mo-Si-B coating on Nb-Si based superalloy (C.G. ZHOU)
8. Influence of bond coat pretreatment conditions on the microstructure and interfacial adhesion of 8YSZ top coat prepared by EB-PVD (S.H. CAI)
9. On the mitigation of Al<sub>2</sub>O<sub>3</sub> modified YSZ thermal barrier coating against volcanic ash corrosion (M. LIU)

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10. The preparation of Rare-earth doped thermal barrier coatings and their resistance to corrosion by volcanic ash (R.C. LI)
11. Diffusion Paths of Silicide Coatings on Nb-Si Based Superalloy during Pack Cementation Process (W. SHAO)

## **Meeting Room No. 2**

6. P-tensor Product Compressed Sensing (L.X. LI)
7. Examination of human auditory masking and improved audio coding efficiency (M. NISHIGUCHI)
8. Study for Operation Teaching Machine Using 3D V.R. System (H. KIM)
9. Building an Image Processing-based Safety and Security Assist System in Petronas Refineries by Using IoT Big Data of Video Pictures (J. WATADA)
10. TBA (X. LI)
11. Reserved

## **POSTER SESSION**

- P1. TBA (Y.W. XU)
- P2. Preparation of thermal barrier coatings(TBCs) corrosion resistant protective coatings by SOL-GEL method (Z.M. LI)
- P3. Study of TGO residual stress by PLPS (W.H. LI)
- P4. Introduction to environmental barrier coatings and PLPS (Y. CHEN & M.M. WANG)
- P5. A highly efficient PVDF-HFP-La<sub>2</sub>O<sub>3</sub> // PVDF-HFP-BN bi-layer separator for high-rate lithium-ion batteries (M. WAQASA)

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P6. Carbon–Tungsten Disulfide Composite Bilayer Separator for High-Performance Lithium–Sulfur Batteries (N. CHEN)

**TUESDAY 12/25**

**Meeting Room No. 1**

12. Aggregation Induced Two-photon Photoluminescence of Metal Nanoparticles and Their Applications (Q.H. XU)
13. Tribo-corrosion property of Cr-Si-N coatings prepared via magnetron sputtering (D.E. SUN)
14. Acoustic Waves in Plasmonic Resonators (K. YU)
15. Enhanced Amplified Spontaneous Emission in Solution-processed Organic or Perovskite Film by Employing Polymer and Gold Nanostructures (X.F. JIANG)
16. Advanced Synthesis and Characterization of Energy Storage Materials (M. GU)
17. Controllable synthesis of Y Junction Carbon nanotube (CNT) in in-situ TEM (S. SHARMA)
18. Effect of solid bridges on strength of Non-firing ceramics (H. ISHIDA)
19. Tuning isotropic and anisotropic graphene growth in a solid source Chemical Vapor Deposition (CVD) with carrier gases flow rate (B. PAUDEL JAISI)
20. Piezophototronic Based Sensors and Applications (J.Y. ZHAI)
21. 3D graphene capsules for microwave and energy storage (X. JIAN)
22. TBA (L. LI)



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## Meeting Room No. 2

12. Difference matters: Multiagent system benefits from heterogeneity (Y.Z. SONG)
13. Growth Rate Simulations of Oxide Films on Silicon Carbide based on the Si and C Emission Model (Y. HIJIKATA)
14. On Mac Protocol Optimization for Marine Wireless Sensor Network (J. WANG)
15. Creating single photon sources in SiC pn diodes using proton beam writing (Y. CHIBA)
16. Reserved