

# GOLDEN ACADEMY

## Message from the organizers

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Dear Colleagues and Friends,

2018 International Symposium for Advanced Materials Research (ISAMR 2018) will be held in Sun Moon Lake, Taiwan during August 16-19 2018.

ISAMR 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 ISAMR 2018. Your active participation is the key to the success of this conference.



Yours Sincerely,

ISAMR 2018 Committee

Asia Pacific Society for Materials Science (APSMR)

[www.apsmr.org](http://www.apsmr.org)



# GOLDEN ACADEMY

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## Conference organizing committee

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### CONFERENCE CHAIRS

Prof. Ping-Szu TSAI (National Kaohsiung University of Science and Technology)

Prof. Gwo Chung TSAI (National I-Lan University)

Prof. Myung Kwan SONG (Korea Institute of Materials Science)

Prof. Ming-Yi LIN (National United University)

Prof. Chang-Tang CHANG (National I-Lan University)

Prof. Juhn-Jong LIN (National Chiao Tung University)

Prof. Ping SHENG (The Hong Kong University of Science and Technology)

Prof. Maohai XIE (The University of Hong Kong)

Prof. Er-Yuan CHUANG (Taipei Medical University)

Prof. Ya-Ping HSIEH (Academia Sinica)

Prof. Yung-Kang SHEN (Taipei Medical University)

Dr. Rudder WU (National Institute for Materials Science)

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# GOLDEN ACADEMY

## **Conference organizing committee (Continued from previous section)**

### **CONFERENCE PROGRAM DIRECTORS**

**Dr. Yingxue SONG (APSMR)**

**Prof. Chau-Chang CHOU (National Taiwan Ocean University)**

### **CONFERENCE SECRETARIAT**

**Ms. Yaru WU (APSMR)**

**Ms. Yangjun HU (APSMR)**

**Mr. Chenhuan HSU (APSMR)**

### **CONFERENCE SPONSOR**

**Looptherm Technology Co., Ltd**



# GOLDEN ACADEMY

## Conference topics

1. *Structure materials and Functional Coatings (metals, ceramics, and composites): No.H (1-5), No.2 (16-18)*
2. *Materials for energy (saving, conversion, transfer, storage) and environment plus electrochemistry*
  - 2.1. *Photovoltaics: No.2 (3, 28)*
  - 2.2. *Rechargeable Batteries and Fuel Cells: No.2 (6)*
  - 2.3. *Materials for Thermal Management and Thermal Energy Utilization: No.2 (7)*
  - 2.4. *Materials for Energy and Environmental Applications: No.2 (14-15), No.3 (19-21)*
3. *Optics and Photonic Materials: No.2 (9-13)*
4. *Electronics, Magnetics and Nanomaterials: No.2 (19-26), No.3 (9-13)*
5. *Polymer Science and Molecular Chemistry: No.2 (8), No.3 (3-5, 14-15)*
6. *Organic Materials and Biomaterials: No.2 (27), No.3 (16-18)*
7. *Theory, Characterization and Computational Modeling of Materials: No.3 (6-8, 24)*
8. *Two-Dimensional Material: Synthesis, Characterization and Application: No.2 (4-5), No.3 (22-23)*

	THU, 08/16	FRI, 08/17	SAT, 08/18	SUN, 08/19
9:00 – 10:20	Pre-session technical and discussion forums	Oral Presentation		
10:20 – 10:30		Coffee & Tea Break		
10:30 – 12:00		Oral Presentation		
12:00 – 13:10		Lunch Break		Conference Excursion
13:10 – 14:40		Oral Presentation		
14:40 – 14:50		Coffee & Tea Break		
14:50 – 17:20		Oral Presentation		
17:30 – 18:45	Conference Registration		Poster Session	
19:00 – 20:30	Reception		Conference Banquet (Approx. 1.5 hrs)	

# GOLDEN ACADEMY

## Presentation List (Hall)

	THU, 08/16	FRI, 08/17	SAT, 08/18	SUN, 08/19
9:00 – 10:20	Pre-session technical and discussion forums	1. Y.K. SHEN 2. M. HASEGAWA		
10:20 – 10:30		Coffee & Tea Break		
10:30 – 12:00		3. D.E. KIM 4. W.S. KUO 5. C.W. HUANG		
12:00 – 13:10		Lunch Break		Conference Excursion
13:10 – 14:40				
14:40 – 14:50		Coffee & Tea Break		
14:50 – 17:20	Conference Registration			
17:30 – 18:45			Poster Session	
19:00 – 20:30	Reception		Conference Banquet (Approx. 1.5 hrs)	

# GOLDEN ACADEMY

## Presentation List (No. 2 Meeting Room)

	THU, 08/16	FRI, 08/17	SAT, 08/18	SUN, 08/19
9:00 – 10:20	Pre-session technical and discussion forums		14. J. KURAWAKI 15. C.T. CHANG	27. A. HIGUCHI 28. J. SHIN
10:20 – 10:30		Coffee & Tea Break		
10:30 – 12:00		3. G.H. KIM 4. M. KALBAC 5. J. KALBÁČOVÁ VEJPRAVOVÁ	16. Y. MIYAMOTO 17. C.H. TSENG 18. C.M WU	
12:00 – 13:10		Lunch Break		Conference Excursion
13:10 – 14:40		6. H.L. CHOU 7. R. WU 8. E.Y. CHUANG	19. N. KAMATA 20. M.H. XIE 21. J. PAN	
14:40 – 14:50		Coffee & Tea Break		
14:50 – 17:20	Conference Registration	9. W.C. TU 10. V.C. SU 11. C.C. HUANG 12. T. MATSUSHITA 13. I. LO	22. H. OHTA 23. S.S. YEH 24. N. WANG 25. C.T. LIANG 26. Y.C. CHOU	
17:30 – 18:45			Poster Session	
19:00 – 20:30	Reception		Conference Banquet (Approx. 1.5 hrs)	

# GOLDEN ACADEMY

## Presentation List (No. 3 Meeting Room)

	THU, 08/16	FRI, 08/17	SAT, 08/18	SUN, 08/19
9:00 – 10:20	Pre-session technical and discussion forums		14. L.L. LAI 15. J. OTSUKI	
10:20 – 10:30		Coffee & Tea Break		
10:30 – 12:00		3. C.L. TSENG 4. Y.J. LU 5. Y.J. FAN	16. T.C. SUNG 17. C.H. LUO 18. S. IFUKU	
12:00 – 13:10		Lunch Break		Conference Excursion
13:10 – 14:40		6. Y.G. LIN 7. H. FUJIMORI 8. G.Y. GUO	19. Y.J. LIN 20. F. LIU 21. M. PASAWAN	
14:40 – 14:50		Coffee & Tea Break		
14:50 – 17:20	Conference Registration	9. W.H. WANG 10. W.L. LEE 11. S.P. CHIU 12. A. DJURISIC 13. J.N. WANG	22. M. HOFMANN 23. C. CHUANG 24. W.J. YE 25. Reserved 26. Reserved	
17:30 – 18:45			Poster Session	
19:00 – 20:30	Reception		Conference Banquet (Approx. 1.5 hrs)	

# GOLDEN ACADEMY

## Presentations for ISAMR 2018

### FRIDAY 08/17

#### Hall

1. Emerging application of characteristics and mechanism of stimuli-responsive shape memory composite on 4D printing (Y.K. SHEN)
2. Development of texture on alumina coating processed by aerosol deposition method (M. HASEGAWA)
3. Surface Design Concept for Enhancing Wear Resistance of Materials (D.E. KIM)
4. Fracture Behavior of Carbon Nano-tubes, Graphite Nano-Sheets, and Vapor-Grown Carbon Fibers (W.S. KUO)
5. Semiconductor-based photocatalysts for hydrogen production via photocatalytic water splitting (C.W. HUANG)

#### Meeting Room No 2

3. Reversible, full color luminescence by post-treatment of perovskite nanocrystals (G.H. KIM)
4. Utilization of functional groups on graphene (M. KALBAC)
5. Topographic states of graphene – consequences for physics and chemistry in flatland (J. KALBÁČOVÁ VEJPRAVOVÁ)



# GOLDEN ACADEMY

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6. Combined Experiment and DFT Investigations of Catalytic Activities into Pt-based alloy for Fuel Cell Applications (H.L. CHOU)
7. Materials for thermal insulation and thermal management (R. WU)
8. Biomimetic decellular ECM sponge containing graphene oxide as a novel therapeutic strategy for ACL partial tear rabbit model (E.Y. CHUANG)
9. Improved performance of optoelectronic devices by reduced graphene oxide composite films (W.C. TU)
10. A broadband achromatic GaN metalens for converging light in the visible (V.C. SU)
11. Modified Fourier series expansion method for the application of surface relief grating design of resonance quantum well infrared photodetectors (C.C. HUANG)
12. AlGaAs wavelength conversion devices for nonlinear integrated circuits (T. MATSUSHITA)
13. Growth and Characterization of M-plane GaN-based quantum wells by plasma-assisted molecular beam epitaxy (I.K. LO)

## **Meeting Room No 3**

3. The preparation of the dual drug (Cisplatin/EGCG) loaded nanoparticles for lung cancer treatment (C.L. TSENG)

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4. GRP-conjugated pH-sensitive magnetic graphene oxide for targeted delivery of Doxorubicin in glioma treatment (Y.J. LU)
5. High throughput and multi-color microfluidic cytometer (Y.J. FAN)
6. Interfacial Studies of Energy Materials Using Synchrotron X-ray Spectroscopy (Y.G. LIN)
7. Ultraviolet Raman Spectroscopic System for in situ Measurements in the Region of Low Frequency at High Temperatures (H. FUJIMORI)
8. From Large Spin Hall Metal to Topological Chern Insulator, Materials Discovery through First Principles Calculations (G.Y. GUO)
9. Exploring transport properties of 2D-semiconductor field-effect devices (W.H. WANG)
10. Determination of Spin-Orbit Scattering Lifetime at the Interface of LaAlO<sub>3</sub>/SrTiO<sub>3</sub> from the Superconducting Upper Critical Fields (W.L. LEE)
11. Ultralow 1/ f Noise in Superconducting Epitaxial Cobalt Disilicide Thin Films on Silicon (S.P. CHIU)
12. Metal oxide films and nanostructures for applications in energy conversion and storage (A. DJURISIC)
13. Interfacial bound exciton state in a hybrid structure of monolayer WS<sub>2</sub> and InGaN quantum dots (J.N WANG)

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**SATURDAY 08/18**

**Meeting Room No 2**

14. Novel Synthesis of Gold and Silver Clusters and Their Catalytic Activity for p-Nitrophenol Reduction (J. KURAWAKI)
15. The study on photodegradation of oxytetracycline and photocatalytic hydrogen production with dual cell simultaneously (C.T. CHANG)
16. Application of New Geo-Material to Reduce the Earthquake Response of Structure (Y. MIYAMOTO)
17. The Crystallization Kinetics of Nylon 66 by Using Solvents and CaF<sub>2</sub> (C.H. TSENG)
18. Melt Electrospun Reduced Tungsten oxide/Poly(lactic acid) Fiber Membrane as Photothermal Material for light-driven Interfacial Water Evaporation (C.M. WU)
19. Optical Characterization of Defect Levels in AlGaN Multiple Quantum Wells by Using Below-Gap Excitation Light (N. KAMATA)
20. Epitaxial Two-Dimensional Thin Films: Transition-Metal Dichalcogenides and Phosphorous (M.H. XIE)
21. Berry Curvature and Nonlocal Transport Characteristics of Antidot Graphene (J. PAN)
22. Thermopower of 2D electron systems (H. OHTA)
23. Probing nanocrystalline grain dynamics in nanodevices (S.S. YEH)
24. Probing electron transport in atomically thin MoS<sub>2</sub> and WSe<sub>2</sub> (N. WANG)

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- 25. Transport in Al nanofilms grown on GaAs by molecular beam epitaxy (C.T. LIANG)
- 26. New approach and the phase transformation kinetics of silicide formation in Si nanowires (Y.C. CHOU)

## **Meeting Room No 3**

- 14. The Study of Triazine-containing Dendrimers on Their Solid Stacking (L.L. LAI)
- 15. Coordination-Directed Self-Assembly of Porphyrins and Metal Complexes towards Photoelectroactive Systems (J. OTSUKI)
- 16. Differentiation of human embryonic stem cells into cardiomyocytes cultured on biomaterials immobilized nanosegments in optimal culture medium (T.C. SUNG)
- 17. Responsive Bio-interfaces: from Cell Attachment to Rare Cell Assays (C.H. LUO)
- 18. Preparation of chitin nanofibers extracted from crab shell for reinforcement filler of plastics (S. IFUKU)
- 19. Deciphering the adsorption mechanisms for As(III) removal with magnetic Nano particles doped Graphene Oxides and Titanium nano tubes (Y.J. LIN)
- 20. Synthesis of reduced graphene oxide over CNW for hydrogen production (F. LIU)

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21. A hybrid method for the removal of heavy metals, Ammonium nitrate from drilling effluent and hospital wastewater: Parametric study and Cost estimation (M. PASAWAN)
22. Unique aspects of charge transfer in graphene and their applications (M. HOFMANN)
23. Linear, non-saturating magnetoresistance in single layer chemical vapor deposition graphene with an h-BN capping layer (C. CHUANG)
24. Neural network based inverse design methods (W.J. YE)
25. Reserved
26. Reserved

## **POSTER SESSION**

- P1. Preparation of antibacterial sponge with demulsification and emulsions separation properties (J.Y. WU)
- P2. The antibacterial property of citrus essential oil loaded in chitosan microcapsules (Y.P. CHIU)
- P3. Thermal, Mechanical and Shape Memory Properties of Polyurethane/Halloysite Nanocomposites (M.H. PAN)
- P4. Photothermally Activated Noncontact Pyroelectric PVDF Energy Generator (M.H. CHOU)
- P5. Efficient NiO-based electrochromic devices by Arc (M.H. CHEN)

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- P6. The mechanism of defect reduction of GaN growing on a dome-shaped patterned-sapphire substrate (C.C. LEE)
- P7. Electrostatic control over the electrochemical reactivity of graphene (K.W. CHANG)
- P8. Patterned liquid metal contacts for high density, stick-and-peel 2D material device arrays (Y. NGUYEN)
- P9. Thin Film Deposition of 2D materials in Immersed Vertical Substrate (D.T. NGUYEN)
- P10. High-quality MoS<sub>2</sub> QDs for light-emitting diodes (G.Z. LU)
- P11. Impact of copper oxidation on CVD graphene quality (J.H. CHEN)
- P12. Tribological Properties of Nacre-like Carbon-based Nanocomposite Films (Y.J. MIN)
- P13. Tribological Properties of Thin Layered Coatings (K.H. KANG)
- P14. Differentiation of Human Pluripotent Stem Cells into Cardiomyocytes Cultured on Thermo-Responsive Polymer Coated with Extracellular Matrix (H.C. SU)
- P15. Simple synthesis and spectroscopic characterization of gold cluster in water/dodecanethiol (H. IKEMOTO)
- P16. Desorption/ionization of silver ions from gold-silver alloy nanoparticles (T. MIYAZAKI)
- P17. Two-photon excited fluorescence of rhodamine 6G on substrate modified with silver nanoplates (K. KAWAMURA)

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- P18. Measurement of peptide and Herceptin binding using by QCM and measurement amplification (Y. MOTOI)
- P19. Morphotropic Phase Boundary and Dielectric Property on K-substituted  $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$  with Suppressing Evaporation of Bismuth (K. YOSHIDA)
- P20. Effect of beta phase precipitation on fracture toughness in heat treated TiAl alloy (T. INUI)
- P21. Continuous Culture of hESCs on Thermoresponsive Polymer Surface (K.J. LIN)
- P22. Establishment of Patient-Specific Cancer Cell Lines from Colon Cancer Tissues by Membrane Filtration Method via Nylon Mesh Filter and PLGA-Silk Screen Membranes (W.L. HUANG)
- P23. Differentiation of Human Amniotic Fluid Stem Cells Cultured on Biomaterials Having Nanosegments (Y.R. HUANG)
- P24. Improved Arrangement of Deep UV LEDs for Water-Purification System (T. MIYA)

**SUNDAY 08/19**

**Meeting Room No 2**

27. Completely xeno-free generation of human induced pluripotent stem cells using non-integrating RNA Sendai virus vector and their characterization (A. HIGUCHI)
28. Lead Free Bismuth Based Perovskite Materials and Device for Solar Conversion and Light Emission (J. SHIN)