

GOLDEN ACADEMY

Message from the organizers

Dear Colleagues and Friends,

Asia Pacific Society for Materials Research 2018 Annual Meeting (APSMR 2018 Annual Meeting) will be held in Hokkaido, Japan during July 19-22 2018.

APSMR 2018 Annual Meeting is a new symposium and aimed 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 APSMR 2018 Annual Meeting. Your active participation is the key to the success of this conference.



Yours Sincerely,

APSMR 2018 Annual Meeting Committee

Asia Pacific Society for Materials Science (APSMR)

www.apsmr.org



GOLDEN ACADEMY

Conference organizing committee

CONFERENCE CHAIRS

Prof. Kang Hyun PARK (Pusan National University)

Prof. Kyu-Jung CHAE (Korea Maritime and Ocean University)

Prof. Hayato MIYAGAWA (Kagawa University)

Prof. Shih-Chieh HSU (Tamkang University)

Prof. Masanobu KOBAYASHI (Chiba Institute of Technology)

Prof. Yasuyuki TSUBOI (Osaka City University)

Prof. Peng-Yuan WANG (Taipei Medical University)

Prof. Wei-Chen HUANG (Taipei Medical University)

Prof. Yoon Sung NAM (Korea Advanced Institute of Science and Technology)

Prof. Ming-Fa HSIEH (Chung Yuan Christian University)

Prof. Hsueh-Shih CHEN (National Tsing Hua University)

CONFERENCE PROGRAM DIRECTORS

Dr. Yingxue SONG (APSMR)

CONFERENCE SECRETARIAT

Ms. Yaru WU (APSMR)

Mr. Chenhuan HSU (APSMR)



Conference topics

1. **Structure materials and Functional Coatings (metals, ceramics, and composites): No.202 (4-5)**
2. **Materials for energy (saving, conversion, transfer, storage) and environment plus electrochemistry**
 - 2.1. **Photovoltaics: No.202 (21), No.206 (1-2), No.206 (9-10)**
 - 2.2. **Rechargeable Batteries and Fuel Cells: No.202 (1), No.206 (12)**
 - 2.3. **Materials for Thermal Management and Thermal Energy Utilization: No. 206(11)**
 - 2.4. **Materials for Energy and Environmental Applications: No. 202 (2-3), No. 206(25-26)**
3. **Optics and Photonic Materials**
4. **Electronics, Magnetics and Nanomaterials: No.202 (9-12), No.202 (18), No.206 (6-8), No.206 (15-17), No.206 (27-29)**
5. **Polymer Science and Molecular Chemistry: No.202 (6-8), No.202 (19), No.202 (22-24), No.206 (3-5), No.206 (13-14)**
6. **Organic Materials and Biomaterials: No.202 (13-17), No.202 (20), No.206 (18-23)**
7. **Theory, Characterization and Computational Modeling of Materials**

	THU, 07/19	FRI, 07/20	SAT, 07/21	SUN, 07/22
9:00 – 10:20	Pre-session technical and discussion forums on international collaboration	Oral 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 – 17:00		Oral Presentation		
17:15 – 18:30	Conference Registration		Poster Session	
19:00 – 20:30	Conference Reception		Banquet (Japanese convivial gathering)	

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Presentation List (No. 202 Meeting Room)

	THU, 07/19	FRI, 07/20	SAT, 07/21	SUN, 07/22
9:00 – 10:20	Pre-session technical and discussion forums	1. C.C. LI 2. H. BYUN	13. Y.S. NAM 14. M.F. HSIEH	
10:20 – 10:30		Coffee & Tea Break		
10:30 – 12:00		3. H.O. MOHAMED 4. S.A. HIRA 5. Y.G. KO	15. J.H. PARK 16. W.C. HUANG 17. C.W. CHANG	
12:10 – 13:00		Lunch Break		Conference Excursion
13:10 – 14:40		6. T. SHOJI 7. K. UENO 8. S. ITO	18. D. SUH 19. C. CHA 20. T.R. GER	
14:40 – 14:50		Coffee & Tea Break		
14:50 – 17:00		9. F.C.C. LING 10. H. MIYAGAWA 11. K. H. WEI 12. F. KHOERUNNISA	21. K. MUKAI 22. Y. KANEKIYO 23. S.Y. KIM 24. Y.H. CHU	
17:15 – 18:30	Conference Registration		Poster Session	
19:00 – 20:30	Reception		Conference Banquet (Approx. 1.5 hrs)	

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Presentation List (No. 206 Meeting Room)

	THU, 07/19	FRI, 07/20	SAT, 07/21	SUN, 07/22
9:00 – 10:20	Pre-session technical and discussion forums	1. S.H. CHEN 2. S.J. XU	13. T. OOYA 14. H. NAKANO	25. S. YAO 26. T.H. SHIN
10:20 – 10:30		Coffee & Tea Break		
10:30 – 12:00		3. K. KOKADO 4. T.A. ASOH 5. H. MINAMIMOTO	15. H. YAMANE 16. S. UCHIDA 17. H. NOMURA	27. T. SAITO 28. K. HALADA 29. N. ADACHI
12:10 – 13:00		Lunch Break		Conference Excursion
13:10 – 14:40		6. Y. S. JUNG 7. K. HONDOU 8. Y. ISHIDA	18. Y. MINAMI 19. J.H. JUNG 20. H.Y. CHEN	
14:40 – 14:50		Coffee & Tea Break		
14:50 – 17:00		9. K. YONG 10. Y.S. KANG 11. J. OUYANG 12. J.T. LEE	21. Y. KUBOTA 22. S.Y. YANG 23. R.E. SARDJONO	
17:15 – 18:30	Conference Registration		Poster Session	
19:00 – 20:30	Reception		Conference Banquet (Approx. 1.5 hrs)	

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Presentations for APSMR 2018 Annual Meeting

FRIDAY 07/20

Meeting Room No 202

1. Dispersion of Electrode Constituents and Its Importance to the Electrochemistry of Li-ion Batteries (C.C. LI)
2. Highly Controlled Modification of PAN-GO Composite Nanofiber Membranes (H. BYUN)
3. Fe/Fe₂O₃ nanoparticles as anode catalyst for exclusive power generation and degradation of organic compounds using microbial fuel cell (H.O. MOHAMED)
4. Synthesis of functionalized UiO-66 framework: metal immobilization, characterization, checking stability and catalytic activity in organic reactions (S.A. HIRA)
5. High Strength and Ductility of Light Metallic Materials Deformed by Differential Speed Rolling (Y.G. KO)
6. Molecular condensation and spectroscopic detection based on plasmonic optical trapping of thermoresponsive polymer (T. SHOJI)
7. Near-field spectral properties of the coupled plasmonic systems (K. UENO)
8. Three-dimensional Tracking of Single Guest Molecules in Polymer Solids (S. ITO)
9. Defects in the Multi-functional Material ZnO: Characterization and Functionality (F.C.C. LING)

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10. Carrier-doping effect on structure and physical properties of III-V based diluted magnetic semiconductor GaGdAs superlattice (H. MIYAGAWA)
11. Monolayer in-plane heterojunction and out-of-plane atom-heterojunction of transition metal dichalcogenides (K.H. WEI)
12. Scalable separation of metallic and semiconducting carbon nanotubes and adsorption properties of SWCNT NanoC (F. KHOERUNNISA)

Meeting Room No 206

1. III-V Solar Cell Using Virtual Germanium Substrate (S.H. CHEN)
2. Optical Probe of Internal Optoelectronic Processes in GaInP/GaAs Solar Cells (S.J. XU)
3. Stimuli-responsive polymer solution systems mediated by coexistent effectors (K. KOKADO)
4. Fabrication of Functional Architectures by Hydrogel Adhesion (T.A. ASOH)
5. Detailed Understanding of the Plasmon-Induced Charge Transfer Process Using Electropolymerization Reactions (H. MINAMIMOTO)
6. Novel 3-Dimensional Woodpile Nanostructures for Device and Catalyst Applications (Y.S. JUNG)
7. Appearance of ferromagnetism in water-immersed Cs₂Ni₃S₄ (K. HONDOU)
8. Supramolecular Photochemistry in Molecular Assemblies on 2D Inorganic Nanosheets (Y. ISHIDA)

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9. Combinational Bio-mimicking of Natural Leaf: Physical & Chemical Approach (K. YONG)
10. Environmentally Benign Quantum Dot-Sensitizers for Photovoltaics (Y.S. KANG)
11. Intrinsically Conductive Polymers with High Thermoelectric Power Factors (J. OUYANG)
12. Ultrafast-charging organic radical thin-film batteries: Diffusion coefficient enhanced by decreasing grafting density of polymer brushes (J.T. LEE)

SATURDAY 07/21

Meeting Room No 202

13. Immunologically Cloaked Bacteriophage for In vivo Anti-bacterial Therapy (Y.S. NAM)
14. In-vivo Evaluations of Additive Manufactured Scaffolds of Poly(caprolactone) and Hydroxyapatite for Osteochondral Defect (M.F. HSIEH)
15. Leveraging the Biological Transport to Improve Cancer Nanomedicine (J.H. PARK)
16. Materials and Process Design for Next-generation Brain-Machine Interfaces (W.C. HUANG)
17. Magnetic Nucleic Acid/Metal Nanocomplexes for mRNA Expression Analysis and Stem Cell Gene Delivery (C.W. CHANG)

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- 18. Etch characteristics of Al₂O₃/TiO₂ Stacks for Silicon Surface Passivation (D. SUH)
- 19. In situ forming hydrogels for biomedical applications (C. CHA)
- 20. Synthesis and Characterization of Dual-Responsive Magnetic Micelles Drug Carrier for Anti-inflammation Therapy (T.R. GER)
- 21. Colloidal Quantum-Dot Superlattice for Solar Cell Application (K. MUKAI)
- 22. Stimuli-Responsive Hydrogels that Recognize Various Molecules (Y. KANEKIYO)
- 23. Polymer Induced Interactions with Graphene Oxide Colloids (S.Y. KIM)
- 24. Chemoselective Ionic Liquid Materials (Y.H. CHU)

Meeting Room No 206

- 13. Polyglycerol-Based Supramolecular Chemistry: Analysis of Water States and Molecular Recognition (T. OOYA)
- 14. Photomechanical Behaviors Observed for Azobenzene-based Photochromic Amorphous Molecular Materials (H. NAKANO)
- 15. Magneto-plasmonics on perpendicular magnetic nanostructures consisting of CoPt nano-layer and noble-metal nanoparticles (H. YAMANE)
- 16. Multi-junction structures for a high efficiency solar cell and a photo-electrode cell of artificial photosynthesis (S. UCHIDA)
- 17. Macrospin simulation of recurrent neural network with nanomagnet array (H. NOMURA)

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18. Construction strategy of π -Electron Conjugated Molecules by a Combination of Alkynes with palladium/carboxylic acid catalyst (Y. MINAMI)
19. Mitochondria-Targeting Self-Assembled Nanoparticles Derived from Low Molecular-Weight Building Block Enabling Site-Specific Imaging Probe (J.H. JUNG)
20. Controlling Biointerface Activities by Using Vapor-Phased Functional Polymer Coatings (H.Y. CHEN)
21. Synthesis of solid-state fluorescent boron dyes (Y. KUBOTA)
22. A Bio-inspired microneedle patch for transdermal drug delivery (S.Y. YANG)
23. Synthesis of Silver Nanoparticles Using Mucuna pruriens Extracts and Its Activity in Lowering Blood Sugar Levels (R.E. SARDJONO)

POSTER SESSION

- P1. Synthesis of Pd/ α -Fe₂O₃@SiO₂ Nanospindle by free template for Oxygen Reduction Reaction (K. MOON)
- P2. Selection of suitable electrode for 1,4-dioxane wastewater treatment using DSAs and BDD electrode (W.C. CHO)
- P3. Surface modification of graphene oxide membrane for seawater desalination by atomic layer deposition (T. KIM)
- P4. Fabrication of spin-polarized light-emitting diodes using diluted magnetic semiconductor (S. KATO)

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- P5. Fabrication of transition metal line of Py/Cu/Fe magnetic multilayer for current induce domain wall motion (T. NAKAMURA)
- P6. Application of III-V compound semiconductor solar cell for high-efficiency optical wireless power transmission (F. TANAKA)
- P7. Dependence of CoPt magnetic thin film on AZO protective layer (K. TAKEDA)
- P8. Effect of noble metal and AZO underlayer on perpendicular magnetic properties (Y. ISAJI)
- P9. Design of a short linear peptide for fibrin-specific targeting (M.Y. YANG)
- P10. Genetically Engineered Ferritin Expressing Fibrin Binding Peptide for Enhanced Tumor Targeting and Therapy (D.J. LEE)
- P11. Protein Cage-directed Synthesis of Plasmonic Metal Nanostructures for Biosensing Applications (J. KIM)
- P12. Effect of microstructural characteristics on mechanical properties of γ - and α -stainless steels (D. ISHIDA)
- P13. Study on Solubility of Paclitaxel using Element Block Methacrylate-POSS-based 2-(Methacryloyloxy)ethyl Phosphorylcholine (MPC) Copolymer (C. SUCHISMITA)
- P14. Polyglycerol Dendrimer-Based Supramolecular Hydrogels in Combination with Glycol Chitosan (I. CHO)
- P15. Formation of Polyimide Nanofiber Membranes via Hot-Press Treatment for Li-ion battery separators (J. HOU)

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- P16. Photomechanical Behaviors of the Films of Azobenzene-based Photochromic Amorphous Molecular Materials Placed on Soft Surfaces (A. KITANO)
- P17. Novel Colorimetric Sensors for Hypochlorite Based on Thin Films Containing Various Functional Groups (Y. MITANI)
- P18. Hybrid Gold Nanoparticles as a Chemosensor for Visual Detection of Uranyl Ion in Aqueous Solution (J.H. JUNG)
- P19. Plasma electrolytic oxidation for protective materials (S. FATIMAH)
- P20. Exploiting Solvate Ionic Liquids for Amine Gas Analysis on a Quartz Crystal Microbalance (H.Y. LI)
- P21. Silver Nanoparticles Immobilized on Thermo-Sensitive Dendritic-Polymer Micelles for SERS Detections (W.H. CHUANG)
- P22. ZnO Nanoparticles Modified with Gold Nanoparticles for Photodegradation and SERS Detection of Water Pollutants (S. WIJANARKO)
- P23. Influence of machining condition on strain-induced martensite transformation of austenite stainless steel (R. KONDO)

SUNDAY 07/22

Meeting Room No 206

25. Recent Development of Plastic Material Recycle (S. YAO)
26. Advanced Materials for Next Generation Solid Oxide Electrochemical Devices (T.H. SHIN)

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27. New approaches to reduce the reliance on rare earths for permanent magnets
(T. SAITO)
28. Urban mined Olympic medals go toward Resource Efficient Circulation (K. HALADA)
29. Synthesis and Characterization of Magnetic Garnet film for Magneto-Optical Imaging (N. ADACHI)