

GOLDEN ACADEMY

Message from the organizers

Dear Colleagues and Friends,

2018 Global Research Efforts on Energy and Nanomaterials (GREEN 2018) will be held in Taipei, Taiwan during December 21–24 2018.

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



Yours Sincerely,

GREEN 2018 Committee

Asia Pacific Society for Materials Science (APSMR)

www.apsmr.org



GOLDEN ACADEMY

Conference organizing committee

CONFERENCE CHAIRS

Prof. Naohisa TAKESUE (Fukuoka University)

Prof. King-Chuen LIN (National Taiwan University)

Prof. Dah-Shyang TSAI (National Taiwan University of Science and Technology)

Prof. Akihiro YAMASAKI (Seikei University)

Prof. Masaki TANEMURA (Nagoya Institute of Technology)

Prof. Hui-Hsin HSIAO (National Taiwan Normal University)

CONFERENCE PROGRAM DIRECTORS

Dr. Yingxue SONG (APSMR)

Prof. Shih-Chieh HSU (Tamkang University)

CONFERENCE SECRETARIAT

Ms. Yaru WU (APSMR)

Ms. Yangjun HU (APSMR)

Mr. Chenhuan HSU (APSMR)

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. *Rechargeable 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. *Electronics, Magnetics and Nanomaterials*
5. *Polymer Science and Molecular Chemistry*
6. *Organic Materials and Biomaterials*
7. *Theory, Characterization and Computational Modeling of Materials*

	FRI, 12/21	SAT, 12/22	SUN, 12/23	MON, 12/24
9:20 – 10:40	Pre-session technical and discussion forums on international collaboration	Oral Presentation		
10:40 – 10:50		Coffee & Tea Break		
10:50 – 12:20		Oral Presentation		
12:20 – 13:20		Lunch Break		Optional Excursion
13:20 – 14:50		Oral Presentation		
14:50 – 15:00		Coffee & Tea Break		
15:00 – 16:00		Oral Presentation	Oral Presentation	
16:00 – 16:30			Poster Session	
16:30 – 17:00		Conference Registration		
18:00 – 19:30	Conference Reception		Conference Banquet (Approx. 1.5 hrs)	

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Presentation List (No. 303 Meeting Room)

	FRI, 12/21	SAT, 12/22	SUN, 12/23	MON, 12/24
9:20 – 10:40	Pre-session technical and discussion forums on international collaboration	1. S. NOMURA 2. Y.L. CHENG	12. J. OTOMO 13. N. SONOYAMA	22. I.H. HONG 23. H. KUBO
10:40 – 10:50		Coffee & Tea Break		
10:50 – 12:20		3. H. LEE 4. J.Y. LEE 5. P.H. FU	14. W.S. LIAO 15. J.C. JIANG 16. M.H. YEH	24. L.Y. CHEN 25. Y.C. CHENG 26. Z.H. XIE 27. S.H. CHAO
12:20 – 13:20		Lunch Break		Optional Excursion
13:20 –14:50		6. A. IIZUKA 7. M. NOGUCHI 8. M. ABE	17. C.H. LU 18. P. VEERAKUMAR 19. D. NAMASIVAYAM	
14:50 – 15:00		Coffee & Tea Break		
15:00 – 16:00		9. S. OGATA 10. H. ISHIDA 11. Q. ZHANG	20. A. YAMASAKI 21. Y.L. CHEN	
16:00 – 16:30		Poster Session		
16:30 – 17:00	Conference Registration			
18:00 – 19:30	Conference Reception		Conference Banquet (Approx. 1.5 hrs)	

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Presentations for GREEN 2018

SATURDAY 12/22

1. Generation of vector-shaped light pulses and its application to spin control of semiconductor two-dimensional electron system (S. NOMURA)
2. 3D Printing Photocurable Biodegradable Materials for Tissue Engineering Applications (Y.L. CHENG)
3. Nanoimprint Lithography for highly efficient photonic devices (H. LEE)
4. Linear control of light scattering with coherent waves excitation (J.Y. LEE)
5. Optimization for ultrabroadband optical directional-coupler-type waveguide devices using a genetic algorithm (P.H. FU)
6. Mineral Carbon Capture and Utilization by Concrete Waste (A. IIZUKA)
7. Thirdhand smoke: time changes of VOC emissions and odor (M. NOGUCHI)
8. Effect of sorbitan fatty acid ester on fractionation of saturated fatty acid methyl esters from biodiesel fuel for improvement of low temperature flow property (M. ABE)
9. Large-scale electronic-level simulation of adhesion strength between Al and epoxy in a moist environment (S. OGATA)
10. Fabrication of Non-firing solidified silica bodies by wet granule compression method (H. ISHIDA)
11. ZnO nanorod arrays with sharp tips for the enhancement of electroluminescence (Q. ZHANG)

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SUNDAY 12/23

12. Recent advances in highly efficient fuel cell systems with proton-conducting solid electrolytes and their applications (J. OTOMO)
13. Application of Layered Double Hydroxide for the Energy Storage Device Materials (N. SONOYAMA)
14. From Nanofabrication to Analytical Devices: Chemical Lift-Off Lithography (W.S. LIAO)
15. Computational-Aided Investigation and Design of Materials (J.C. JIANG)
16. Ultralight Triboelectric Nanogenerators for Portable Self-charging Power Unit and Self-powered Sensing Platform (M.H. YEH)
17. Non- vacuum process: Fabrication and characterization of Cu(In, Ga)Se₂ solar cell (C.H. LU)
18. Natural-Precursor-Derived Carbon Nanomaterials: Catalysis, Sensors, and Supercapacitor (P. VEERAKUMAR)
19. Transition Metal Dichalcogenides Nanomaterials-Based Fluorescent Sensors (D. NAMASIVAYAM)
20. A Formation of ettringite-like structures and their removal performances of toxic anions in water (A. YAMASAKI)
21. Plasmonic energy and charge transfer (Y.L. CHEN)

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POSTER SESSION

- P1. Study of Molecular Orbital Calculation on Electric Conduction and Insulation of Bismuth Ferrite and Its Solid Solutions (N. TAKESUE)
- P2. Synthesis of Nanocube Crystals of Barium Titanate - toward the integration through Stirring (K. KIBA)
- P3. Experimental Study of Solid Solutions of ferroelectric Bismuth Sodium Titanate (K. ASAKURA)
- P4. Development of artificial intelligence tool based on high-throughput screening (W.Y. CHEN)
- P5. Theoretical Study of CO oxidation on IrO₂(110) surface (B.C. JI)
- P6. Origin of Polysulfide-free Sulfur-Polyacrylonitrile in Lithium-sulfur Batteries (C.J. HUANG)
- P7. Doped graphene as a Counter Electrode for Iodine Reduction in Dye-Sensitized Solar Cells—A Theoretical Study (K.Y. LIN)
- P8. Electrochemical Promotion of Ammonia Synthesis with Iron and Ruthenium Catalysts on Yttrium-doped Barium Cerate (C.I. LI)
- P9. Electrochemical characterizations LiFePO₄/C cathode materials synthesized via a sol-gel route for Li- ion battery applications (C.Y. OU)
- P10. Spectroscopic characterizations of CeO₂: Sm³⁺ phosphors synthesized via modified sol- gel approach for white LEDs (S. SOM)
- P11. Plasmonics in near-UV range for enhanced TiO₂ photocatalysis (Y. ICHIKAWA)

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- P12. Structure and Electrochemical Performances of Li_3MnO_4 for Lithium Ion Battery Cathode Material (Q. WEN)
- P13. Optical band gap of Cu-Zn-O films using RF magnetron sputtering (T. HIRANO)
- P14. Zn-doped SnOx nanoparticles prepared by Laser Ablation in Liquid (H. MORI)
- P15. Towards high signal-to-background ratio plasmonic Raman-enhancing substrates (H. KE)
- P16. The effects of C addition on the mechanical properties of Al-10.6Si-2.5Cu - 0.3Mg casting alloys. (S.H. WU)
- P17. Hydrogen embrittlement characteristics of carbon steels (L.L. YANG)
- P18. Examination of the lattice and microstructural characteristics of PZT ceramic during heating to 1000 °C (T. OGAWA)

MONDAY 12/24

22. Template-directed self-organization of mesoscopically-ordered C60 molecular nanowire arrays on Si(110) (I.H. HONG)
23. Gene of the Landau expansion theory in structural transformation (H. KUBO)
24. Nanostructural Hematite Photoanodes for Solar Water Splitting (L.Y. CHEN)
25. Near-field flat focusing reflectors using photoinc crystals (Y.C. CHENG)
26. On the thermal diffusion conditions of electroplated Pt-diffusion bond coat for thermal barrier coatings (Z.H. XIE)
27. Using WSe2 powder mixture to Improve Centrifugation Efficiency on Cyclone System (S.H. CHAO)