Message from the organizers

Dear Colleagues and Friends,

2016 Global Research Efforts on Energy and Nanomaterials (GREEN 2016) will be held in Taipei, Taiwan during December 22–25 2016.

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 2016. Your active participation is the key to the success of this conference.

Yours Sincerely,

GREEN 2016 Committee

Asia Pacific Society for Materials Science (APSMR)

www.apsmr.org
Conference organizing committee

CONFERENCE CHAIRS

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Prof. Wai-Yeung WONG (The Hong Kong Polytechnic University)

Prof. Hitoshi MIZUNO (Shimane University)

Prof. Chung-Jen TSENG (National Central University)

Prof. Seungbum HONG (Argonne National Laboratories, Materials Science Division)

Prof. Chia-Jyi LIU (National Changhua University of Education)

Prof. Byoung-Suhk KIM (Chonbuk National University)

Prof. Wei-Hung CHIANG (National Taiwan University of Science and Technology)

Prof. Kiyoshi KOBAYASHI (University of Yamanashi)

Prof. Kiyokazu NAKAGAWA (University of Yamanashi)

Prof. Jun-Ichi KADOKAWA (Kagoshima University)

Prof. Shigeru YAO (Fukuoka University)

Prof. Po-Han LEE (The Affiliated Senior High School of National Taiwan Normal University)

Continue to next page..........
Conference organizing committee (Continued from previous section)

CONFERENCES PROGRAM DIRECTORS
Dr. Yingxue SONG (APSMR)
Prof. Chau-Chang CHOU (National Taiwan Ocean University)

CONFERENCES EXECUTIVE SECRETARY
Prof. Shih-Chieh HSU (tamkang University)

CONFERENCES SECRETARIAT
Ms. Yaru WU (APSMR)
Ms. Yangjun HU (APSMR)
Conference topics

2. Materials for Energy (saving, conversion, transfer, storage) and Environment plus Electrochemistry
   2.1. Photovoltaics: No. 204(2-5, 11, 13, 23, 24, 26, 27), No. 202(11, 22)
   2.2. Rechargeable Batteries and Fuel Cells: No. 205(3), No. 202(9, 10, 18, 19, 21)
   2.3. Materials for Thermal Management and Thermal Energy Utilization:
   2.4. Materials for Energy and Environmental Applications: No. 205(4-5, 12-22), No. 202(3)
3. Optics and Photonic Materials: No. 204(1, 12, 20-22), No. 202(2, 25)
4. Electronics, Magnetics and Nanomaterials: No. 204(6-10, 14-19), No. 202(12)
5. Polymer Science and Molecular Chemistry: No. 205(1, 2), No. 202(4, 5, 11-8, 14-16, 23)
6. Organic Materials and Biomaterials: No. 204(25), No. 202(1, 13, 20)

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<td>Pre-session technical and discussion forums</td>
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## Presentation List (No. 204 Meeting Room)

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| 9:00 – 10:20 | Pre-session technical and discussion forums     | 1. D.P. TSAI
2. Z.L. TSENG               | 12. P.K. WEI
13. H. MIZUNO              | 23. J.C. LIOU
24. Z.C. HE               |
| 10:20 – 10:30 | Coffee & Tea Break                             |                             |                             |                             |
| 10:30 – 12:00 | 3. F.R. ZHU
4. M. HARUTA
15. S. HATA
16. K. SAWANO         | 25. B.E. YOON
26. Y.T. CHANG
27. C.L. HO           |
| 12:10 – 13:00 | Lunch Break                                    |                             |                             |                             |
7. J. YAMANAKA
8. C. HSU            | 17. M. SASAKI
18. K. ARIMOTO
19. Y. NISHIOKA         |                             |                             |
| 14:40 – 14:50 | Coffee & Tea Break                             |                             |                             |                             |
| 14:50 – 16:30 | 9. A. MIURA
10. K.O. HARA
11. S.H. CHANG       | 20. S. NOMURA
21. P.C. WU
22. H. SAIGO           | Conference Excursion                        |
| 17:00 – 18:30 | Conference Registration                       |                             |                             |                             |
| 19:00 – 20:30 |                              |                             | Conference Banquet (Approx. 1.5 hrs) |                             |
| 20:30 – 22:00 | Reception                                      |                             |                             |                             |
## Presentation List (No. 202 Meeting Room)

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| **9:00 – 10:20** | Pre-session technical and discussion forums | 1. H. IMANAKA  
2. T. OKA                          | 12. Y. CHANG  
13. H. AOKI                          | 23. K.W. CHEAH  
24. T. IMAE                          |
| **10:20 – 10:30** |                                         |                                     | Coffee & Tea Break                  |                                     |
| **10:30 – 12:00** |                                         | 3. T. KAWAI  
4. Y. KATSUMOTO  
15. M. YAMAGUCHI  
26. R. WU  
27. RESERVED                      |
| **12:10 – 13:00** |                                         |                                     | Lunch Break                         |                                     |
| **13:10 – 14:40** |                                         | 6. P.H. LEE  
7. Y.K. WANG  
8. G.M. HU                          | 17. J. KIM  
18. I. M. HUNG  
19. C.T WANG                          |                                     |
| **14:40 – 14:50** |                                         |                                      | Coffee & Tea Break                  |                                     |
| **14:50 – 16:30** |                                         | 9. K. CHO  
10. Y.G. LEE  
11-A. A.L.R. VELLAISAMY  
11-B. T. NISHINO | 20. K. HARA  
21. C.Y. CHEN  
22. Y. MORITOMO                     | Conference Excursion               |
| **17:00 – 18:30** | Conference Registration                |                                     |                                     | Poster Session                     |
| **19:00 – 20:30** |                                         |                                     | Conference Banquet  
(Approx. 1.5 hrs)                    |                                     |
| **20:30 – 22:00** | Reception                               |                                     |                                     |                                     |
Presentations for GREEN 2016

FRIDAY 12/23

Meeting Room No 205

1. Fabrication and Application of Self-assembled Chitin Nanofibers Through Gelation with Ionic Liquid (J.I. KADOKAWA)

2. The Basic Mechanism and Application of Crystalline Supramolecular Interaction of Side Chain Crystalline Block Co-Polymer (S. YAO)

3. Development of Supported Catalyst for Fuel Cells (C. PAK)

4. Coupling of Bi5O7I and Sr2TiO4 for Photocatalytic Degradation of Organic Pollutant Irradiated with Visible Light (C.C. HU)

5. Densely Distributed Sensing Enabled by Multifunctional Materials Coupled with Tomographic Algorithms (K. LOH)

Meeting Room No 204

1. Plasmonic Metasurface for Photonic Applications in Demand (D.P. TSAI)

2. Low-temperature ZnO Films as Electron Transporting Layers for Perovskite-Based Solar Cells (Z.L. TSENG)

3. An Insight on Metal Oxide Interlayer in Organic Photovoltaics: From Light Harvesting, Charge Recombination and Collection Perspectives (F.R. ZHU)
4. An Implantable Imaging Device for Observing the Recovery Process from Cerebrovascular Disease in Small Animal Brains (M. HARUTA)

5. Advanced Perovskite and Plasmonic Solar Cells via Unconventional Strategies (D.H. KIM)


7. STEM Moiré Observation of Ge/Si Produced by MBE and New Heating Method Using Plasma Technique (J. YAMANAKA)


9. Structure, Properties and Exfoliation of LaOBiS2 and Related Materials (A. MIURA)

10. Close Relationship between Electrical Properties and Microstructure of Semiconducting BaSi2 Films (K.O. HARA)

11. Inverted Lead Halide Perovskite Thin-Film Based Solar Cells (S.H. CHANG)

Meeting Room No 202

1. Influence of Orientation and Spatial Arrangement of Ligand Biomolecules on Functionality after Immobilization on Solid Materials (H. IMANAKA)

2. Enhancement of Two-Photon Absorption in a Molecule by Plasmonic Nanoantenna (T. OKA)
3. Photochemical Approach for Efficient Use of Photons; Highly Photosensitive Photochromic Compounds and Photoacid Generators (T. KAWAI)

4. Impact of the Primary Structure on the Thermoresponsiveness of Amphiphilic Polymers in Water (Y. KATSUMOTO)

5. Simple Functionalization of Polymeric Materials by Charge-Transfer Interaction Method and Fuel Cell Application (M. NISHIHARA)


7. Large-gap Topological Insulators A2TePoO6 (A = Ca, Sr, Ba) with Effective Spin-Orbit Coupling (Y.K. WANG)

8. A Computational Study of Photosynthesis Proteins: Network Views of Photosystem Complexes from Sequence Similarity (G.M. HU)

9. Materials by Design for Li ion battery and fuel cell Applications (K. CHO)

10. Thixotropic Gel Polymer Electrolytes Based on Poly(vinylidene fluoride-co-hexafluoropropylene)/Hydroxypropyl Cellulose Blend for Screen-Printing Process of 4V-Class Flexible Lithium Rechargeable Batteries (Y.G. LEE)


11-B. Adhesion and Interphase of Polyolefins (T. NISHINO)

13. Enhancement of Thermoelectric Properties of Oxide And Intermetallic Materials and Modules (R. FUNAHASHI)

14. Fabrication of High Performance Cable-Type Supercapacitor Using NiCo2S4 Nanosheets Decorated 3D-Ni/Ni Wire (B. SARAVANAKUMAR)

15. Fabrication of Biomass-Derived Composite Electrodes for Supercapacitors (D. LEI)

16. Fabrication and Supercapacitive Properties of Polyprrole@NiCo2O4 Nanoneedles/Carbon Fiber Papers via Hydrothermal and Electrochemical Depositon Methods (T.H. KO)

17. MWCNT Interconnected Binary, Ternary Metal Oxide Aerogel Electrodes for Supercapacitor Applications (S.S. JAYASEELAN)


19. Developments of Titanium Dioxide Mesocrystals for Heterogeneous Photocatalysis (T. TACHIKAWA)
20. Stable N-Doped CNTs with Enhanced Thermoelectric Properties (Y. NONOGUCHI)


22. Improvement in the Thermal Resistance of Polymers by the Addition of Carbon Nanotubes as a Thermally Stable Radical Scavenger (S. ATA)

Meeting Room No 204

12. Aluminum-based Plasmonic Nanostructures for Highly Sensitive Biosensors (P.K. WEI)

13. Photoconversion Properties of Thin Film Photovoltaics Using a Soluble Zinc Phthalocyanine (H. MIZUNO)


16. Anisotropic Strain Engineering of Si/Ge Heterostructures (K. SAWANO)

17. Hydrogen Adsorption on Electron-Doped Fullerenes Observed with Helium Atom Scattering (M. SASAKI)
18. Growth of (110)-Oriented SiGe-Based Heterostructures for High Hole Mobility Devices (K. ARIMOTO)


21. Light Manipulation with Aluminum Plasmonic Metasurfaces (P.C. WU)

22. Who Has Seen a Free Photon? (H. SAIGO)

Meeting Room No 202

12. High-K Dielectric and Metal Gate Materials for Low Power Consumption III-V FinFETs (Y. CHANG)

13. Integrated Sensor Array Chips for Simple and Rapid Diagnosis of Biologically-Significant RNA Sequences (H. AOKI)

14. Surfactant-Polymer Templates In Morphology Modification Of Precipitated Calcium Carbonate Particles (K. KUPERKAR)

15. Migration of a Third Component Between Immiscible Polymers and Its Application to Material Design (M. YAMAGUCHI)

16. Synthesis and Electrorheology of Polyaniline@Attapulgite Nanoparticles (H.J. CHOI)
17. Computational Modeling and Screening of Metal Organic Frameworks (J. KIM)

18. Performance of High Temperature Sr(Ce0.6Zr0.4)1-xYxO3-δ Ceramic Proton Conductor (I.M. HUNG)


20. High-Density Monolayer of Metal Complex: Preparation and Catalysis (K. HARA)

21. Characteristic Studies of a PBI/H3PO4 High Temperature PEMFC under Various Conditions (C.Y. CHEN)

22. Carrier Formation Dynamics in Prototypical Organic Solar Cells as Investigated by Transient Absorption Spectroscopy (Y. MORITOMO)

**POSTER SESSION**

P1. Efficient Inverted-Type Perovskite Solar Cells Using UV-Ozone Treated MoOx and WOx as Hole Transporting Layers (Z.J. LIN)

P2. Low-Temperature ZnO Films as Electron Transporting Layers for Perovskite-Based Solar Cells (H.H. CHEN)

P3. High-Transparent MoO3 Films for Hole Transporting Applications of Perovskite Solar Cells (Y.J. WU)
P4. Low-Temperature Deposited AZO/Ag AZO used as Transparent Electrodes of Organic Polymer Solar Cell (W.W. LIN)

P5. Multi-area Imaging Device by Using Implantable Image Sensors for Simple Brain Functional Imaging (H. HAYAMI)

P6. A New Design of Convergent-Type Serpentine Flow Slab on Enhancing the Power Performance of Proton Exchange Membrane Fuel Cells (Y.T. OU)


P8. Fabrication of Flexible Transparent Electrodes based on Nylon-6 Nanofiber-reinforced Cellulose Acetate Thin Films for Electrochromic Application (I.C. KIM)


P10. Effects of Ni Seed Layer and Annealing on Supercapacitive Properties of Hierarchical NiCo2O4-Decorated Ni Foams for High Performance Supercapacitor Electrodes (J. PARK)

P11. Direct writing for highly stretchable electrode based on atmospheric pressure AC microplasma (T.H. KIM)


P14. Time Resolved Magneto Photoluminescence Study of Inter-Well Excitation Transfer via Optical Near Field Interactions in Diluted-Magnetic/Nonmagnetic Triple Quantum Wells (S. KUBOTA)

P15. Collective Excitation Transfer Dynamics Due to Locally Non-Thermal Phonon Environment (R. OKADA)

P16. Fractal Dimensional Analysis of the Self-Accommodation in the SMA (M. NOMOTO)

P17. Multipole Mode Selection and Phase Measurement of Plasmonic Particles Using STEM Cathodoluminescence (Z. THOLLAR)

P18. Spectral Properties Of Hexagonal Plasmonic Nanohole Arrays (T. OHNO)

P19. Study on the Hysteresis of Hydration and Dehydration Processes for PNiPAm and PNdEAm in Water by Fluorescence Probe Method (R. IKEMOTO)
P20. Hysteresis in the Thermo-Responsiveness of the α, ω-hydroxyl telechelic poly(2-isopropyl-2-oxazoline) in Water (T. BEKKI)

P21. Influence of Self-Organization Process to the Polyimide Membrane Properties Formed by Using a Different Substrate (N. NISHIKAWA)


P23. The Modeling of Phonons for Near Constant Electricity of High-Entropy Metals (Y.A. CHEN)


P25. Cellulose Fibers Functionalized by Metal Nanoparticles Stabilized in Dendrimer for Formaldehyde Decomposition and Antimicrobial Activity (M.A. KEBEDE)


SATURDAY 12/25

Meeting Room No 204
23. Design and Fabrication of Low Power Consumption Inkjet Nanomaterials with Identification Circuit (ID) Fuse System (J.C. LIOU)

24. Interfacial Engineering of Polymer Solar Cells (Z.C. HE)

25. Glia and Gliotransmitters on Carbon Nano Tubes (B.E. YOON)

26. Graphene Oxide Cathode of Field Emission Emitter with Square Lattice Island Array (Y.T. CHANG)

27. Functional Materials for Energy Conversion (C.L. HO)

**Meeting Room No 202**

23. Harmonics Generation from Mata-surface (K.W. CHEAH)


26. Materials for Thermal Insulation and Thermal Management (R. WU)