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VENUE



Jeju is proud of its unique cultural folk heritage as well as its geographical and historical relevance. The island itself is an extinct volcano with its peak jutting skyward at the center and a broad, gentle littoral all the way around, a very unique geographical condition. There are bountiful forests and ravines, fantastic rock formations and volcanic craters, and caves and grasslands that together paint a natural scene of breathtaking beauty. Sparkling seas and tiny islets surround Jeju, with jutting rocks set amidst sandy beaches to create a magnificent view virtually everywhere you look. In June 2007, the volcanic island and lava tube cave systems were designated as UNESCO World Natural Heritage Sites for their natural beauty and geographical value. Jeju Island is not only Korea's most prestigious destination and top honeymoon location but it has been the venue for several political joint summit talks and other major international meetings.

PROGRAM

Date	Nov. 7 (Mon.)	Nov. 8 (Tue.)	Nov. 9 (Wed.)	Nov. 10 (Thu.)
AM	Registration Opening Ceremony Keynote Speech	Keynote Speech Oral Session	Keynote Speech Oral Session	Keynote Speech Oral Session
PM	Keynote Speech Oral Session Welcome Reception	Poster Session Oral Session	Technical Tour Banquet	Poster Session Oral Session

KEYNOTE SPEAKERS

- Prof. Harry L. Tuller (MIT, USA)
- Dr. Xiao-Qing Yang (Brookhaven National Lab., USA)
- Prof. Jisoon Ihm (Seoul National University, Korea)
- Prof. Hulya Kirkici (Auburn University, USA)
- Prof. E. Fred Schubert (Rensselaer Polytechnic Institute, USA)
- Prof. Masanori Okuyama (Osaka University, Japan)

ABSTRACT SUBMISSION

1. Prospective authors are solicited to submit abstracts (in DOC and PDF) by **June 30, 2011**.
2. Each abstract should contain original work.
3. The length of abstract is 500 words or less and must not exceed one page.
4. Abstract format can be downloaded from the website.
5. Abstracts are to be submitted electronically via the website.
6. Acceptance notification will be sent to the corresponding author by **July 29, 2011**.

MANUSCRIPT SUBMISSION

1. Authors whose abstracts are accepted will be requested to submit the full paper to the Journal directly by **November 7, 2011**.
2. After peer review and author's revision, all accepted papers will be published as a special issue of the following leading Journals.
 - Journal of Nanoscience and Nanotechnology (SCI 1.44)
 - Journal of Electroceramics (SCI 0.996)
 - Journal of Ceramic Processing Research (SCI 0.4)
 - Key Engineering Materials (SCOPUS, EI)
 - Japanese Journal of Applied Physics (SCI 1.138)
 - IEEE Transactions on Dielectrics and Electrical Insulation (SCI 1.082 / in progress)
 - Transactions on Electrical and Electronic Materials (Compendex, KCI)

IMPORTANT DATES

- Abstract Submission: June 30, 2011
- Acceptance Notice: July 29, 2011
- Early Registration: August 19, 2011
- Manuscript Submission: November 7, 2011

CONFERENCE SECRETARIAT

For registration & inquires: ICAE2011 Secretariat
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ICAE 2011

International Conference on Advanced Electromaterials

November 7-10, 2011
Ramada Plaza Jeju Hotel, Jeju, Korea

Organized by: KIEEME

Technically sponsored by: IEEE KIEE KERS KIST ETRI KERI KIMS KIET KETI

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INVITATION

On behalf of the Organizing Committee, I have to say it is indeed a great honor and pleasure to invite you to the International Conference on Advanced Electromaterials (ICAE 2011), which is to be held on November 7th to 10th, 2011 in Jeju, Korea.

The ICAE 2011 is intended to provide an open forum to all participants with an opportunity to present the latest important findings in research activities and to discuss and share them with experts and renowned scholars from all over the world. It consists of 15 symposiums in the field of electrical and electronic materials such as semiconductors, electronic ceramics, high voltage technology and insulating materials, sensors, displays, nano-materials and devices, and energy materials.

In these symposiums, stimulating lectures and presentations by distinguished speakers from all over the world are planned for the ICAE 2011. In addition to the professional exchange of ideas, it will be a place to meet friends who share common research objectives and to have chances for further co-work that may result in mutual achievements.

Jeju, the venue of the ICAE 2011 is a beautiful volcanic resort island. Each year, more than 6.5 million people visit Jeju to enjoy exotic natural beauties, local culture and various leisure activities. As the Chairman of the ICAE 2011, I have no doubt that this conference will prove itself to be a memorable experience for you both on personal and professional grounds. We look forward to seeing you in November when ripened yellow sweet Jeju tangerines will be waiting for you!

Prof. Dae-Hee Park
Chairman of Organizing Committee



SYMPOSIUM TITLES

1. Nanostructured Materials for Sensor Applications (SE)

This symposium is devoted to chemical sensor materials and devices for environmental monitoring, air quality control, health, medical, safety and security, and e-nose applications. It will provide a fruitful encounter platform whereby exchange of ideas and scientific collaboration can be promoted among all researchers involved in all numerous areas that benefit from nanostructured materials including metal oxides, carbon, and polymers. It can highlight current progress and discuss future prospects in the synthesis, properties control, modifications, and modeling of nanostructured materials for sensor applications.

Organizer: Dr. Seok-Jin Yoon (KIST, Korea, sjyoon@kist.re.kr)

2. Advanced Materials for Energy Conversion: fuel cell and solar cell (EC)

The aim of this symposium is to establish an information platform in the science and technology related to advanced materials for energy conversion. The symposium will cover issues relevant to materials for cell components for fuel cells and solar cells to improve performance and durability as well as to reduce cost of the devices.

Organizer: Dr. Tae-Hoon Lim (KIST, Korea, thlim@kist.re.kr)

3. Energy Storage Materials (ES)

This symposium invites contributions to the understanding of the fundamental and applied aspects of energy storage materials. Of particular interest are new materials and designs, performance studies, and modeling of all types of batteries including aqueous, non-aqueous, polymer electrolyte, ionic liquids, solid electrolyte systems, metal air systems, and super-capacitors.

Organizer: Dr. Hyun-Soo Kim (KERI, Korea, hskim@keri.re.kr)

4. Nanostructured Materials for Energy Devices (ED)

This symposium aims to explore recent advances in various state-of-the-art nanostructured materials and their applications for energy devices such as light emitting diodes, organic thin film transistors, thermoelectrics and power conversion devices. In particular, the symposium will focus on the challenge and potential of current knowledge in the field of nanostructured materials and their energy device applications. Furthermore, the fabrication and design of energy devices which plays a crucial role in efficient energy conversion technology will be emphasized.

Organizer: Dr. Eun Dong Kim (KERI, Korea, edkim@keri.re.kr)

5. Emerging Nano-based Device Technologies (ND)

It is our pleasure to welcome you to the symposium on Emerging nano-based Circuits and Systems Technologies. The semiconductor industry is at a turning point. New materials, novel fabrication methods and innovative device technologies are introduced at an increasing pace to keep up with the expectation of improved cost-performance at each technology generation. At the same time, the global focus on energy efficiency calls for innovations in device and circuit design that are distinct from the historical focus on performance. This opens up new opportunities for research community to have a long and lasting impact upon the industry. In this symposium, the focus will be on the behavior, integration and testing in emerging circuits and systems based on nano-technologies. Discussion of alternatives to Si CMOS scaling paths together with the leverage that can be provided through the properties of emerging technologies in delivering new capabilities in future SoC applications at the nanoscale.

Organizer: Dr. Kamran Eshraghian (Chungbuk Nat'l Univ., Korea, k.eshraghian@elabs.com.au)

6. Ferroelectric, Piezoelectric Materials and Device Applications (FM)

This symposium will focus on fundamental understanding of ferroelectric and piezoelectric materials, and their application to sensors, actuators, and energy harvesting devices. Topics include new ferroelectric and piezoelectric materials, relaxors with large strain, piezoelectric ceramic-polymer composites, ultrasonic sensors, piezoelectric actuators, ultrasonic motors, and piezoelectric energy harvesting applications.

Organizer: Prof. Jae-Shin Lee (University of Ulsan, Korea, jslee@ulsan.ac.kr)

7. Superconducting and Magnetic Materials and Devices (SM)

The objective of this symposium is to exchange leading-edge information about superconductor and electromagnetic composites. This symposium covers recent science and technology about superconductors, electromagnetic materials, electric power devices, functional composites etc. It can highlight current progress and discuss future prospects in the synthesis, properties control, modifications, and modeling of superconductor and magnetic materials for applications.

Organizer: Prof. Sang-Heon Lee (Sunmoon Univ., Korea, shlee@sunmoon.ac.kr)

8. Thin Film Processing and Devices (TF)

The session will be focused on the various electronic ceramic thin films and devices including graphene. In addition, metal, organic, and ceramic thin films are included. Thin film process, characterization, and electrical properties were widely included in the thin film division.

Organizer: Prof. Soon-Gil Yoon (Chungnam Nat'l Univ., Korea, sgyoon@cnu.ac.kr)

9. Advanced Insulating Materials and Condition Monitoring Diagnosis for HV Power Apparatus (HV)

The purpose of this symposium is to provide a forum for presentation and discussion of the advanced insulating materials and condition monitoring diagnosis technologies for high voltage power apparatus on the practical applications of electrical insulating systems and nano-dielectrics including field use for all types of electrical and electronic equipments. Topics within the scope of the symposium are tools for diagnostics and tests for predictive maintenance, advanced materials for high voltage engineering such as cables, rotating machines, variable speed drives, transformers, outdoor insulation, aerospace, switchgear, capacitors, etc.

Organizer: Dr. Sang-Jin Kim (KEPCO KDN, Korea, sjkim@kdn.com)

10. LED & OLED Lighting Technology (LT)

The purpose of this symposium is to provide a forum for presentation and discussion of the LED & OLED devices for lighting source application. Topics within the scope of the symposium are Lamp and luminaire design, Modeling and simulation (optical, thermal, electronic, plasma), Novel light source technologies, Diagnostics, Driver design, Standardization, Light source quality and metrology, Phosphors and other light source related materials, Special lighting applications including automotive, medical applications and horticultural, etc.

Organizer: Prof. Sung-Jin Park (University of Illinois at Urbana-Champaign, USA, sjinpark@illinois.edu)

11. Nanoscale Interface Devices and Materials for Organic Electronics (OE)

In this symposium, an introduction to nanoscale interface is presented in field of organic

materials, organic electronics as well as molecular electronics. In contrast to scale-down technology, so-called "top-down" technology, "bottom-up" technology is a key in this field. Using this technique, artificial molecular systems comprised of organic molecules are designed, and utilized to fruition novel functions at nanoscale. As a recent research result, understanding of alignment of molecules and properties of molecule, interaction between molecules and substrates and so forth are getting important in nano-device and organic electronic devices. As has been described above, nano-interface control is a key in the field of nanoscale organic electronics, as well as in molecular electronics, where we need to make clear the behind physics of nanoscale interface from viewpoints of actual space as well as energy space, in field of nanoscale fabrication technology.

Organizer: Dr. Hoon-Kyu Shin (POSTECH, Korea, shinhk@postech.ac.kr)

12. Flexible and Printable Electronic Materials and Devices (FE)

This symposium aims to cover all aspects of flexible and printed electronics including materials, device physics, and manufacturing process. The symposium topics will include the following areas. (1) Advances in printable conjugated molecules, oxide and organic semiconducting materials, transparent conducting and insulating materials. (2) Substrates for printed and flexible electronic systems. (3) Flexible and printed displays and related topics. (4) Printed photovoltaic cell and related topics. (5) Printed RFID tags and related topics. (6) Advances in devices physics and operating mechanism. (6) Advances in manufacturing process technologies for flexible and printed electronic devices.

Organizer: Dr. Byoung-Gon Yu (ETRI, Korea, bgyu@etri.re.kr)

13. Advanced Technology for LEDs (LE)

Light-emitting diodes (LEDs) have achieved great attention for use in solid-state lighting applications such as general lighting, automobile lighting, smart lighting system, and back light units in display applications. This symposium focuses on the recent researches about advanced materials and device characteristics of light-emitting diodes. The research field includes these areas:

- Material Characterizations for III-Nitrides and ZnO
- Growth of nitride semiconductors for LED applications
- New approaches for enhancing optical power & efficiency of LEDs
- Processing technologies for high-efficiency LEDs
- Novel and hybrid structured LEDs
- Packaging materials for LEDs
- Reliability characteristics of LEDs

Organizer: Prof. Ja-Soon Jang (Yeungnam Univ., Korea, jsjang@ynu.ac.kr)

14. Thermal Management Materials, Devices, Packages, and Processing Technologies (TM)

Recently, thermal management becomes an important issue in the field of 3D integrated electronics, especially in the high power LED lighting device and packages. This symposium will cover the topics including synthesis of high thermal conductivity materials and thermal barrier materials, thermal interface materials (TIM), heat dissipation, heat dissipation packages, thermal design & simulation, processing of thermally effective materials and devices, microstructure and property relations in thermal managing materials.

Organizer: Dr. Hyo-Tae Kim (KICET, Korea, hytek@kicet.re.kr)