



WCSM

BIT's 2nd Annual World Congress of Smart Materials

Develop New Path of Smartness

BIT's 2nd Annual World Congress of Smart Materials-2016

Time: March 4-6, 2016

Place: Singapore

Highlights of WCSM-2016

- 250+ Oral Presentations Covering the Hot Topics and Cutting-edge Technology in the Whole Field of Smart Materials
- 50+ Exhibitors Showcasing the Emerging New Products and Technologies to an Audience of over 300 People
- 100+ Posters Demonstrating
- Cutting-edge Keynote Addresses by Prominent Leaders from All over the World
- Creating a Harmonious Environment for Project Matchmaking and Promotion
- Opportunities to Visit Korean Natural and Cultural Landscapes

Register online at:

<http://www.bitcongress.com/wcsm2016/Register.asp>

Contact Us:

ada@wcsm-con.com or snowy@wcsm-con.com

Tel: 0086-411-84799609-814

Hosting Organization

BIT Congress Inc.



Foreign Experts Databank of SAFEA-Dalian Branch, China

Supporting Organization



Institute of Microengineering and Nanoelectronics(IMEN), The National University of Malaysia, Malaysia



Welcome Message

Dear Friends and Colleagues,

On behalf of the Organizing Committee of BIT's 2nd Annual World Congress of Smart Materials-2016 (WCSM-2016), we cordially invite you to participate in this initiative congress.

WCSM-2016 will be held at Singapore during March 4-6, 2016. It is intended to provide a platform for professionals around the world to exchange state-of-the-art research and development and identify research needs and opportunities in this emerging field. And it is the Asian Branch of WCAM (World Congress of Advanced Materials).

Smart materials are one of the most important researching directions in development of High-tech new materials. Their properties can react to reversible changes in their environment by an external condition. Smart materials help in removing the boundaries between structural and functional materials, which may result in significant revolution in materials science development. Based on its significance, WCSM will bring about enormous benefits as well as open up a new and broader pathway for information and experience exchange all over the world.

The 2nd WCSM-2016 plans to shoot for 250+ oral presentations in breaking research of Adaptive Structures and Intelligent Systems, Structural Materials, Smart Nanomaterials, Optical and Electronic Materials, Smart Biomaterials, Multifunctional Materials, Characterization of Multifunctional and Smart Materials, other Smart Materials and Industrial Symposia. More than 300 world-renowned experts, academicians, senior scientists, industry executives and project leaders from 50+ countries

will get together to address the topics, issues, best practices and trends necessary to make the right decisions to guide their business strategies, and future science and technology direction.

Based on the huge success of last event of WCSM-2015, we are strongly confident WCSM-2016 will be a great success and meet our expectations.

Sincerely Yours,

Xiaodan Mei, Ph.D.
Executive Chair of WCSM-2016
President, BIT Congress Inc.

Media
Partners



Conference Programme

(subject to amendment)

WCSM-2016 Programme

Overview (subject to amendment)

For the latest programme please go to our website:

<http://www.bitcongress.com/wcsm2016/ScientificProgramme.asp>

Thursday 3 March 2016

Registration : 08:30-17:00

Friday 4 March 2016

08:30-12:00 Opening Ceremony & Keynote Forum

12:00-13:30 Lunch

13:30-17:00 Afternoon Parallel Sessions

18:30-20:30 Welcome Banquet

Saturday 5 March 2016

08:30-12:00 Morning Parallel Sessions

12:00-13:30 Lunch

13:30-17:00 Afternoon Parallel Sessions

18:30-20:30 Social Dinner

Sunday 6 March 2016

08:30-12:00 Morning Parallel Sessions

12:00-13:30 Lunch

13:30-17:00 Afternoon Parallel Sessions

18:30-20:30 Social Dinner

Friday 4 MARCH 2016

Morning Plenary Sessions

Opening Ceremony & Keynote Forum

08:30-12:00 Opening Ceremony & Keynote Forum

12:00-13:30 Lunch

Afternoon Parallel Sessions

13:30-17:00

Focus 101: Breaking Research of Smart Materials Science and Technologies

Focus 102: Micro-systems and Nano-systems

Focus 201: Carbon, Graphite and Graphene Technologies

Focus 301: Nanopowders and Nanoparticle

Focus 401: Smart Optical Materials

Focus 402: Smart Electronic and Optoelectronic Materials

Focus 501: Biological and Bio-inspired Composite Materials

Focus 601: Programmable Matters

Focus 701: Modeling, Simulation, Control, Evaluation, Synthesis, and Processing of Smart Materials

Focus 801: Smart Materials in Mechanical Manufacturing and Optimization

Focus 802: Smart Materials for Energy Harvesting, Conversion, Storage, Saving and Transistors

18:30-20:30 Welcome Banquet

Saturday 5 MARCH 2016

Morning Parallel Sessions

08:30-12:00

Focus 103: Smart Actuators, Sensors and Smart Material Systems

Focus 104: Smart Robots

Focus 202: Smart Metals

Focus 203: Smart Glass and Ceramics

Focus 302: Nanofiber, Nanotube and Nanowire

Focus 403: Photonic Crystals

Focus 502: Smart Materials for Pharmacy and Drug Delivery

Focus 602: Smart Coatings and Coating Technology

Focus 702: Mechanical Properties of Smart Materials

Focus 803: Smart Materials for Environment

Focus 804: Metallurgy and Welding

12:00-13:30 Lunch

Afternoon Parallel Sessions

13:30-17:00

Focus 105: SPM Technologies & Atomic Force Microscope (AFM)

Focus 204: Plastics and Synthetic Plastics

Focus 303: Nanofilm

Focus 404: Semiconductors and Superconductors

Focus 503: Smart Materials for Medical Devices and Medical Imaging

Focus 603: Nanocomposite and Bionanocomposite

Focus 703: Magnetic Properties of Smart Materials

Focus 704: Optical Properties of Smart Materials

Focus 805: Laser Materials

Focus 806: Smart Materials for ICT, Display, Imaging Devices

Symposium 9: Young Investigator Forum

Conference Programme – Continued

Sunday 6 MARCH 2016

Morning Parallel Sessions

08:30-12:00

- Focus 106: Smart Structures in Mechatronics
- Focus 205: Smart Polymers
- Focus 206: Smart Rubber and Fiber
- Focus 304: Nanocrystalline Materials
- Focus 405: Terahertz Technologies
- Focus 604: Piezoelectric, Ferroelectric and Electrostrictive Materials
- Focus 605: Shape Memory Alloys, Polymers and Composites
- Focus 705: Thermal Properties Smart Materials
- Focus 706: Structural Health Monitoring
- Focus 807: Automation Techniques in Material Processing
- Focus 808: Smart Home

12:00-13:30 Lunch

Afternoon Parallel Sessions

13:30-17:00

- Focus 107: Devices and Integrated Systems
- Focus 207: Smart Catalytic Materials
- Focus 305: Microtech and Nanotechnology
- Focus 406: Claytronics
- Focus 407: Smart Magnetorheological Fluid and Electro-magnetorheological Fluid
- Focus 606: Self-healing Materials
- Focus 607: Smart Hydrogels and Phase Change Materials
- Focus 707: Heat Insulating Material
- Focus 708: Refractory Materials
- Focus 809: Building Materials
- Focus 8010: Automotive and Aerospace Applications

18:30-20:30 Social Dinner

Tour in Singapore

Singapore is a modern city-state and island country in Southeast Asia, known as world's fourth leading financial centre, the world's second largest casino gambling market, one of the world's top three oil-refining centers, the world's largest oil-rig producer, and a major hub for ship repair services.



Singapore's rapid development has given it significant influence in global affairs, leading some analysts to identify it as a middle power. Outline of Singapore and the surrounding islands and waterways. Singapore consists of 63 islands. Close to 10 percent of Singapore's land has been set aside for parks and nature reserves. The network of nature reserves, parks, park connectors, nature ways, tree-lined roads and other natural areas have also enhanced the sense of green space in the city. Singapore was ranked fourth in the 2014 Environmental Performance Index



Past Event Report

Past Event-WCSM-2015

BIT's 1st Annual World Congress of Smart Materials-2015 (WCSM-2015), successfully held in Busan Exhibition & Convention Center on March 23-25, 2015. The theme of this conference is "Co-creating Dream of Smartness". Totally, there were nearly 280 participants from more than 24 countries and areas have attended the WCSM-2015.

This annual congress comprised 10 paths following the opening ceremony, including "Breaking Research of Smart Materials Science and Technologies"; "Properties Characterization of Smart Materials"; "Piezoelectric Materials"; "Smart Fluid, Hydrogels and Phase Change Materials"; "Shape-Memory Alloys & Shape-Memory Polymers"...etc.

Meanwhile, the Young Scientists Forum is very successful as well as the exhibition and poster showcase. After the conference many participants expressed their satisfaction with the content of the congress and had fine memories of Busan. Depending on the warmly support and good suggestions from all of the participants, we are quite confident in organizing WCSM-2016 which would be better and more successful than WCSM-2015. All of us are looking forward to meeting you again in 2016



List of Renowned Speakers

2015



Dr. David Cardwell, Professor,
University of Cambridge, UK



Dr. Carl M. Lampert, Technical Director, SVC
Society of Vacuum Coaters, USA



Dr. Chengbao Jiang, Dean, Materials
Science and Engineering, Beihang
University, China



Dr. Seung-Bok Choi, Professor, Inha
University, Republic of Korea



Dr. Kwang-Bum Kim, Professor, Yonsei
University, Vice president, Korean
Electrochemical Society, Republic of
Korea



Dr. Il Kim, Professor, BK 21 PLUS Center for
Advanced Chemical Technology, Department
of Polymer Science and Engineering, Pusan
National University, Republic of Korea



Dr. Roland Milker, CEO, Poly-Chem AG,
Germany



Dr. Qichao Hu, Founder and CEO, SolidEnergy
Systems Corp., USA



Dr. Piotr Kula, Vice-Rector, Lodz
University of Technology, Poland



Dr. Kun-Hong Lee, Dean, Pohang University of
Science and Technology, Republic of Korea



Dr. Junhui Hu, Professor/Deputy
Director, Nanjing University of
Aeronautics and Astronautics, China



Dr. Peter Wellmann, Professor, Head of
Crystal Growth Lab, University of
Erlangen-Nuremberg, Germany



Dr. Jan K. G. Dhont, Director,
Forschungszentrum Juelich, Germany



Dr. Nobuyuki Osakabe, CTO of Healthcare
Company, Hitachi, Ltd., Japan



Dr. Sang Beom Lee, Co-CEO, LIG
Sciences, Inc., USA



Dr. Joseph Ganem, Professor and Chair of the
Physics Department, Loyola University
Maryland, USA



Dr. Alison McMillan, Professor, Glyndwr
University, UK



Dr. Kurt Manigatter, CEO, ELMET GmbH,
Austria



Dr. Wooyoung Lee, Professor, Yonsei
University, Republic of Korea



Dr. Patricia Segonds, Professor, Institut Neel,
CNRS/UJF, France



Dr. Tindaro Ioppolo, Professor,
Southern Methodist University, USA



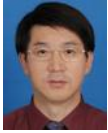
Dr. Dae Joon Kang, Professor, Sungkyunkwan
University, Republic of Korea



Dr. Karin Larsson, Professor, Uppsala
University, Sweden



Dr. Ik Jin Kim, Professor, Hanseo University,
Republic of Korea



Dr. Baojun Li, Professor, Sun Yat-Sen
University, China



Dr. Yoshiki Tsunekawa, Professor, Toyota
Technological Institute, Japan



Dr. Larissa V. Panina, Professor,
National University of Science and
Technology, Russia



Dr. Zheng Hong Zhu, Professor, Department of
Earth and Space Science and Engineering, York
University, Canada



Dr. Manfred Martin, Professor, RWTH
Aachen University, Germany



Dr. Rama Bansil, Professor, Boston University,
USA



Dr. Kihyung Song, Professor, Korea
National University of Education,
Republic of Korea



Dr. Mohamed Ichchou, Professor, Ecole
Centrale de Lyon, France



Dr. Roberto Paoluzzi, Director, National
Research Council of Italy, Italy



Dr. Andrea Pucci, Contract Professor, the
University of Pisa, Honorary Fellow and
Lecturer of the Australian Institute of High
Energetic Materials, Italy



Dr. Etsuji Ohmura, Professor, Osaka
University, Japan



Dr. Rupa Dasgupta, Vice President,
CSIR-Advanced Materials and Processes
Research Institute, India



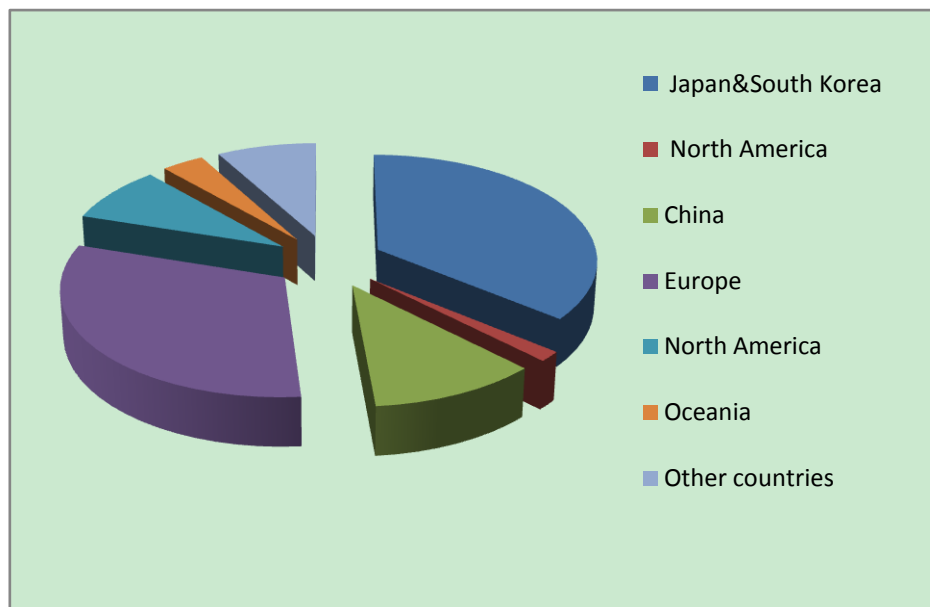
Dr. P.A.F.M. Doevendans, Professor,
head department of Cardiology,
Chairman and medical manager division
Heart and Lungs, UMC Utrecht, the
Netherlands



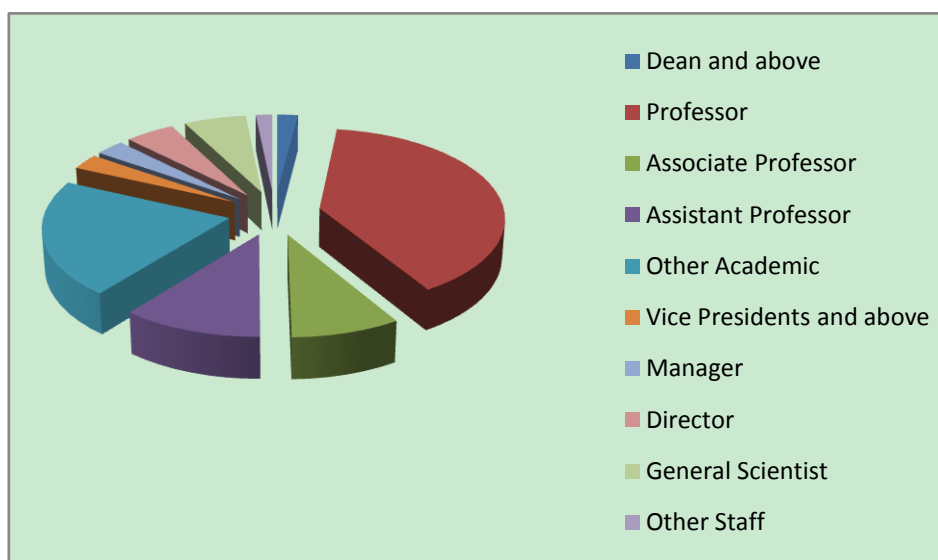
Dr. Sung Joo Lee, Professor, Sungkyunkwan
University, Republic of Korea

Analysis of Attendees

Analysis of Attendees by Regions



Analysis of Attendees by Title Levels



Conference Receptions and Event

Poster Abstract

There will be an exhibition of posters at the conference and the abstracts of accepted posters will be published in the conference program. You will be notified if your abstract has been accepted for poster presentation as soon as it has been reviewed by the organizing committee. All accepted posters will be presented during the Poster Viewing Session. Posters will be reviewed for oral presentation 4-6 weeks prior to the conference. Oral presenters will be notified by email or telephone at least 3 weeks before the conference. The selected presenters will be posted on the agenda.

Materials to hang your poster will be available at the poster area. The set-up time is TBA. You will receive your poster number 4-6 weeks prior to the conference.

Your presence is recommended during lunches and coffee breaks for discussion with those who are interested in your research.

Poster abstracts format

Posters will be judged during the conference. You are invited to submit a poster abstract on one of the themes from the conference for presentation in poster format. Posters should be based upon original and ongoing research. Abstracts should be submitted online by December 31, 2015 to ada@wscm-con.com



Grasp your Future @ WCSM-2016

Welcome Banquet

Welcome Banquet is the most symbolic social event of this year's conference. It is our expectation that all the friends present here get to know more including the aspects of economic, science and technology, education, culture and so on. Thus the dishes with ethnic and traditional characteristics are prepared. And the show with typical traditional culture is presented. The attendees from all over the world could exchange ideas, share experiences with each other, and propose valuable advice to look forward to the future in such a relax, friendly and harmonious environment. We believe that the smart materials industry will present us a flourishing future.



Post-conference Tour

All participants will have the opportunity to join the post-conference tour in Singapore and bring home with inspiring ideas and beautiful memories of its sightseeing spots. The post-conference tour will introduce participants to Singapore's beautiful landscape and history as well as natural wonders. Our designated travel agency has set up a few tourist routes in Singapore. Please visit our website <http://www.bitcongress.com/wscm2016> for more details.

Join Us

Call for Speakers

WCSM-2016 with the theme of “Develop New Path of Smartness” is intended to provide a platform for professionals around the world to exchange state-of-the-art research and development, and identify research needs and opportunities. And it is the Asian Branch of World Congress of Advanced Materials.

Smart materials are one of the most important researching directions in development of High-tech new materials which may result in significant revolution in materials science development. Based on its significance, WCSM will bring enormous benefits as well as a new pathway for information and experience exchange all over the world.

The 2nd WCSM-2016 plans to shoot for 250+ oral presentations and more than 300 world-renowned experts, senior scientists, industry executives and project leaders from 50+ countries will get together. We are strongly confident WCSM-2016 will be a great success and we look forward to your active support and participation.

Call for Conference Sponsorship

WCSM-2016 is one of the most effective international marketing platforms in the field of advance materials, which offers a wide range of sponsoring categories for branding and highlighting your company in order to achieve the best publicity.

Exhibition Opportunities

A supporting exhibition will be held in conjunction with the conference enabling companies to exhibit their products and service in front of a professional audience.

Standard exhibition booth include:

- ✓ Carpet
- ✓ Exhibitor name board
- ✓ 2 spot lights per stand
- ✓ 1 table
- ✓ 2 chairs
- ✓ 1 main power socket(230V/1KM MAX)
- ✓ 2 Exhibitor passes(Not available for conference access)
- ✓ Listing on NEF website

Call for Media Partnership

WCSM-2016 invites accredited media organizations working on scientific news to apply for a complimentary press pass. Press passes are limited and are granted only to working journalists who intend to report the relevant events of the conferences.

To qualify for press credentials, you are required to be affiliated with an internationally, nationally or regionally recognized media outlet, and hold an editorial title and/ or hold a position as an industry analyst.

Call for Co-organizers

The SAB is tasked with providing advice on the matter of science and technology to the conference, guiding its program and providing overall strategic vision, and focusing on strengthening the interface between science, policy and society in areas relevant to smart materials.

On behalf of organizing committee, we sincerely invite you to join in the Scientific Advisory Board of the 2nd Annual World Congress of Smart Materials-2016 as one of the SAB Member.

For Speech Opportunity and Media Partnership

Ms. Ada Sun and Ms. Snowy Liang

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For Exhibitor, Sponsorship and Business Development

Ms. Amy Guo

BIT Congress Inc.

BIT Group Global

---Your Think Tank

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