

# Asia Academic Seminar 2015

: Advanced Material Processes, System for Sustainable Development

Seminar Agenda

**Wednesday, December 2, 2015**

**Venue: Hotel Forest Hongo, Lever Son Verre**

**Welcome Reception 17:00-20:00**

**Thursday, December 3, 2015**

**Venue: Eng. Bldg. 2 Room 213, The University of Tokyo**

9:00                    **Registration**

**Opening 9:30-9:50**

*Chair: Yasuyuki Yokono*

9:30                    **Opening Remarks**

*Mamoru Mitsuishi*

Symposium Chair, Dean of School of Engineering, The University of Tokyo

*Astushi Suzuki*

Symposium Chair, Professor, Faculty of Environment and Information Sciences, Yokohama National University

*Pradeep Thalappil*

Symposium Chair, Institute Professor and Professor of Chemistry, Department of Chemistry, Indian Institute of Technology Madras

**Advanced Material 1 9:50-12:30**

*Chair: Astushi Suzuki*

9:50                    **Energy Materials**

*Vijayamohanan Kunjkrishna Pillai*

Central ElectroChemical Research Institute, Karaikudi

10:30                    **1D Hexagonal Mesoporous Thin-Films and Nanoparticles:**

**Orientalional Control and Applications in Biomedicine and Energy**

*Chia-Wen Wu*

National Taiwan University

11:10 **Break**

11:30 **Tribology Research in Hydrogen Energy Systems**

*Yoshinori Sawae*

Department of Mechanical Engineering, Kyushu University

12:00 **Materials challenges at the energy-environment nexus: a perspective**

*Tiju Thomas*

Indian Institute of Technology Madras

12:30 **Lunch & Break**

**Processes 14:00-15:00**

Chair: *Nagasaki Yukio*

14:00 **Evaluation of batch processes for continuous flow synthesis of metal and metal oxide nanomaterials**

*Lakshmi Vara Prasad Bhagavatula*

National Chemical Laboratory

14:30 Microbial Biofilms and Medical Devices

*A Maya Nandkumar*

Department of Microbial Technology, Bio Medical Technology Wing,  
Sree Chitra Tirunal Institute for Medical Sciences and Technology

15:00 **Break**

**UTokyo Lab. Tour 15:10-17:40**

Mitsubishi Sugita Laboratory, Department of Mechanical Engineering

<http://www.nml.t.u-tokyo.ac.jp/en/index-e.html>

Maruyama Chiashi Laboratory, Department of Mechanical Engineering

<http://www.photon.t.u-tokyo.ac.jp/index.html>

Ikuhara Shibata Laboratory, Institute of Engineering Innovation

<http://interface.t.u-tokyo.ac.jp/english/index.html>

Facilities of Department of Mechanical Engineering

<http://www2.mech.t.u-tokyo.ac.jp/eng/>

17:40 **Break**

18:00            **Dinner**

**Friday, December 4, 2015**

**Venue: Main Auditorium, Embassy of India, Tokyo**

Jointly with 6th ISAJ Symposium: Recent Advances in Science and Technology

9:00            **Registration**

9:15            **Lighting of the lamp**

9:20            **Welcome Address**  
ISAJ Chairman and Symposium Conveners

**INAUGURAL SESSION 9:30-9:50**

9:30            Guest of Honor  
*H.E. Ms. Deepa Gopalan Wadhwa*  
The Ambassador of India to Japan  
Guest of Honor  
*Prof. Michinari Hamaguchi,*  
President, JST, Japan (TBC)  
Guest of Honor  
*Prof. Yuichiro Anzai,*  
President, JSPS, Japan (TBC)

**Keynote 9:50-10:20**

9:50            **Frontier of Marine Science and Technology- the Role of JAMSTEC-**  
*Asahiko Taira*  
President, JAMSTEC, Japan

10:20          **Vote of Thanks**  
ISAJ Vice-chairman and Secretary

10:25          **GROUP PHOTO**

10:30          **COFFEE BREAK**

**Plenary Session 1 10:50-12:30**

Chair: *Drs. Alok Singh, Sunil Kaul, Prof. T. Pradeep*  
*Dr. K. Vijayamohanam, and Prof. M. Mitsuishi*

10:50          **Materials Technology for Safe and Secure Social Infrastructures**  
*Koichi Tsuchiya,*

Director, Research Center for Strategic Materials, NIMS, Japan

11:10 **Efficient production of active form of vitamin D3 by microbial conversion**

*Tomohiro Tamura*

Director, Bioproduction Research Institute, AIST, Japan

11:30 **Highly Decoupled Graphene Multilayers**

*Giridhar Udapi Rao Kulkarni*

Director, Centre for Nano and Soft Matter Sciences, India

12:00 Lecture

*Subi Jacob George*

Associate Professor, Jawaharlal Nehru Centre for Advanced Scientific Research, India

12:20 **First principles based phase field crystal model**

*Bhattacharyya Swastibrata*

Postdoctoral fellow, Department of Physics, Yokohama National University

12:30 **Lunch & Poster Session**

**Poster Session 13:20-14:00**

**Plenary Session 2 14:00-14:30**

Chair: *Prof. Sakthi Kumar*

14:00 Dr. Manako Tanaka,  
Tokyo University of Arts, Japan

14:10 Dr. Satyaban Ratna,  
JAMSTEC

14:20 Dr. Baiju Nair,  
RIKEN

**Young PIs and Student Session 1: 14:30-15:30**

Chairs: Prof. Bhuvanesh Gupta, Prof. Satish Vasu Kailas,  
Prof. N Venkat Reddy and Manish Biyani

14:30 Poster Short Presentation  
15 talks (4 mins each) TBD

15:30 **COFFEE BREAK**

**Young PIs and Student Session 2: 15:50-16:50**

Chairs: *Drs. Swadhin Behera, Kedarnath Mahapatra and Renu Wadha*

15:50           Poster Short Presentation  
15 talks (4 mins each)   TBD

**Plenary Session 3 16:50-17:30**

Chair: TBD

16:50           **A new era of electron microscopy for materials science**  
*Eiji Abe*  
Professor, Department of Materials Engineering, The University of Tokyo

17:10           Employment opportunities in S&T sector and scope of research in Japan  
Guest Speaker: (TBD)

**Closing 17:30-18:30**

17:30           **Concluding remarks**  
Drs Swadhin Behera,  
Mahendra Kumar  
Prof. Atsushi Suzuki

17:40           **Cultural program**

18:30           **Banquet**

**Saturday, December 5, 2015**

**Venue: Fukutake Learning Theater, The University of Tokyo**

9:00            **Registration**

**Advanced Material 2 9:30-11:10**

Chair: *Yoshinori Sawae*

9:30            **Nanomaterials and Sustainable Water**

*Pradeep Thalappil*

Indian Institute of Technology Madras

10:00          **TBD**

*Tatsuya Tsukuda*

School of Science, The University of Tokyo

10:40          **Towards the Creation of Functionalized Metal Nanoclusters and  
Highly Active Photocatalytic Materials Using Precisely Synthesized  
Gold Clusters**

*Yuichi Negishi*

Department of Applied Science, Tokyo University of Science

11:10          **Break**

**Advanced Material 3 11:30-12:30**

Chair: *Tatsuya Tsukuda*

11:30          **Towards wearable energy devices and sensors integrated onto clothing**

*Subramaniam Chandramouli*

Indian Institute of Technology Bombay

12:00          **TBD**

*Kwang Seon Shin*

Seoul National University

12:30          **Lunch & Break**

**Systems 1 14:00-15:50**

Chair: *Mamoru Mitsuishi*

14:00          **Closing the Loop; Materials and Manufacturing Sustainability**

*Satish Vasu Kailas*

Indian Institute of Science

14:40

**Mechanical Engineering**

*Shinichi Warisawa*

The University of Tokyo

15:10

**Break**

15:40

**Flexible Manufacturing Processes for Customization**

*Venkata Reddy Nallagundla*

Indian Institute of Technology Hyderabad

16:20

**Guest from Asia**

17:00

**Break**

18:00

**Dinner**

**Sunday, December 6, 2015**

**Venue: Fukutake Learning Theater, The University of Tokyo**

9:00            **Registration**

**Processes 2 9:30-12:30**

Chair: *Tsukuda Tatsuya*

9:30            **Bioactive Hydrogels for Wound Care System**

*Bhuvanesh Gupta*

Indian Institute of Technology Delhi

10:10          **Biocompatible Phosphorylcholine-based Copolymer For Biomedical Applications**

*Madoka Takai*

The University of Tokyo

10:40          **Semiconducting Nanotube by Assembly of Folded Polymer**

*Suhrit Ghosh*

Indian Association for the Cultivation of Science

11:10          **Break**

11:30          **Redox Polymer Therapeutics**

*Yukio Nagasaki*

Graduate School of Pure and Applied Sciences, University of Tsukuba

12:00          **Bioactive Nanogels as Infection Resistant Materials for Human Healthcare Systems**

*Sadiya Anjum*

Indian Institute of Technology New Delhi

12:30          **Lunch & Break**

**Special Lecture 14:00-15:50**

Chair: *Shinichi Warisawa*

14:00          **Oscillation in Peeling of Thin Films from Soft Adherend Induced by Repeated Elastic-Plastic Buckling**

*Atsushi Suzuki*

Yokohama National University



14:30           **TBD**  
*Mamoru Mitsuishi*  
The University of Tokyo

15:00           **Water photolysis and photocatalysis** Special Lecture  
*Akira Fujishima*  
Tokyo University of Science

16:00           **Break**

**Closing 16:30-16:50**  
Chair: *Yasuyuki Yokono*

16:30           **Certificate Ceremony**  
*Mamoru Mitsuishi*  
Symposium Chair, Dean of School of Engineering, The University of Tokyo

16:45           **Closing Remarks**  
*Mamoru Mitsuishi*  
Symposium Chair, Dean of School of Engineering, The University of Tokyo  
*Astushi Suzuki*  
Symposium Chair, Professor, Faculty of Environment and Information  
Sciences, Yokohama National University  
*Pradeep Thalappil*  
Symposium Chair, Institute Professor and Professor of Chemistry,  
Department of Chemistry, Indian Institute of Technology Madras

17:30           **Dinner & Farewell**

**Monday, December 7, 2015**

**Meeting Point: Eng. Bldg. 2, The University of Tokyo**

**Japanese Industrial & Cultural Visit 9:00-20:00**

9:00            **Registration**

9:10            **Departure**

**Tuesday, December 8, 2015**

**Meeting Point: Hotel Forest Hongo**

**Japanese Research Laboratories Visit in Tsukuba 9:10-17:00**

9:00            **Registration**

9:10            **Departure**

10:40          **Okura Frontier Hotel Tsukuba**

## List of Poster Presentation

Poster Session 12:30-14:00 Friday, Dec. 4, 2015

Poster short Presentation 14:30-15:30 Friday, Dec. 4, 2015

Venue: Main Auditorium, Embassy of India, Tokyo

- No.1      **TBD**  
*Ghosh Atanu*  
Indian Institute of Technology Madras
- No.2      **Highly stable low-cost transparent conducting electrodes and their applications**  
*Shanmuga Sundaram Kiruthika*  
Jawaharlal Nehru Centre for Advanced Scientific Research
- No.3      **TBD**  
*Maheswary Kavirajan Mahitha*  
Indian Institute of Technology Madras
- No.4      **Controlled Aggregation of Nanoparticles for Qualitative and Reproducible SERS Platforms**  
*Maku Moronshing*  
Indian Institute of Technology Bombay
- No.5      **TBD**  
*Jash Madhuri*  
Indian Institute of Technology Madras
- No.6      **Interaction of  $\pi$ -Gelators with Carbon Nanotubes**  
*Balaraman Vedhanarayanan*  
Chemical Sciences and Technology Division (CSTD),  
National Institute of Interdisciplinary Science and Technology (NIIST-CSIR)
- No.7      **Preparation of ultra-small transition metal nanoparticles and their catalytic applications**  
*Seth Jhumur*  
National Chemical Laboratory
- No.8      **In-Plane Gap-Closing MEMS Vibration Electret Energy Harvester on Thick Box Layer**  
*Fu Qianyan*  
Department of Mechanical Engineering, School of Engineering, The University of Tokyo

- No.9      **Formation of Lubricious Carbon Films by Added Carbon Nanoparticles for Water Lubrication**  
*Sato Hirotsuna*  
Tohoku University
- No.10     **Self-formation of Thin Tribo-layer for Low Friction in Sliding of Carbon Nitride Coatings**  
*Yamada Naohiro*  
Tohoku University
- No.11     **Relationship between Traction loading by roller and ECM production in regenerated cartilage tissue**  
*Fukuda Keisuke*  
Kyushu University
- No.12     **In-situ Observation of Plastic Flow Behavior during Scuffing by Long Time and Short Interval Observation System**  
*Matsuzaki Yasuo*  
Kyushu University
- No.13     **Fabrication of homogeneous hollow silica-alumina composite spheres and their activity for hydrolytic dehydrogenation of ammonia borane**  
*Toyama Naoki*  
Nihon University
- No.14     **CO<sub>2</sub> Reduction using Metal Sulfide Photocathodes under Sunlight Irradiation**  
*Takayama Tomoaki*  
Tokyo University of Science
- No.15     **Conformational Dynamics of  $\pi$ -Conjugated Molecular Assemblies**  
*Takai Atsuro*  
NiMS
- No.16     **MEMS Active Space Radiator Using Near-field Thermal Radiation**  
*Ai Ueno*  
The University of Tokyo
- No.17     **Metal-assisted vapour HF etching of silicon dioxide**  
*Takahiro Murakami*  
The University of Tokyo
- No.18     **An optical wavelength detection device with two-interface surface plasmonic structure on nano-mechanical resonator**  
*Masataka Goto*

The University of Tokyo

- No.19      **TBD**  
*Shang-Chin Chou*  
National Taiwan University
- No.20      **TBD**  
*Jung-Tsai Chen*  
National Taiwan University
- No.21      **TBD**  
*Yu-Te Liao*  
National Taiwan University
- No.22      **TBD**  
*Sang Jun Park*  
Seoul National University
- No.23      **TBD**  
*Jae Cheol Jang*  
Seoul National University