



## Preliminary Announcement

[icmat2019.mrs.org.sg](http://icmat2019.mrs.org.sg)

Encouraged by the success of the **International Conference on Materials for Advanced Technologies (ICMAT)** series held since 2001 and the impact it has created among the materials science and engineering research community both in the region and elsewhere, the Materials Research Society of Singapore (MRS-S) will be organizing the 10th edition of the conference series from 23 to 28 June 2019 in Singapore.

The first 9 conferences in this biennial ICMAT series attracted more than 23,000 participants including 25 Nobel Laureates and hundreds of distinguished plenary & keynote speakers, in addition to thousands of invited speakers

The upcoming 10th conference will have 39 technical symposia, 10 plenary lectures and several theme, keynote, invited, contributed oral and poster presentations with the expected participation of 3,000 delegates internationally.

One of the largest conferences of its kind, each and every edition of this series has proved to be a premier scientific platform for both local and international materials scientists, engineers and technologists to share their expertise and knowledge.

We welcome you to join us at ICMAT 2019, to celebrate its 10<sup>th</sup> edition and our continuing efforts in advancing materials research.

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## CHARACTERIZATION

- A) Investigation of Materials at the Nanoscale using Electrons and X-rays**  
(Jointly organized with Australian MRS)  
Yeng Ming Lam (S'pore), Joanne Etheridge (Australia), Steve Pennycook (S'pore),  
Chris Boothroyd (S'pore), Martial Duchamp (S'pore), Sara Sandin (S'pore)
- B) Surface, Interface and Thin Film Growth**  
Xuesen Wang (S'pore), Shijie Wang (S'pore), Bent Weber (S'pore), Haiming Guo (China)

## PHOTONICS / OPTICAL MATERIALS

- C) Semiconductor Photonics**  
(Jointly organized with Australian MRS)  
Dao Hua Zhang (S'pore), C. Jagadish (Australia), Stephen Sweeney (UK), Boon S. Ooi  
(Saudi Arabia), Hao Gong (S'pore), Weijun Fan (S'pore)
- D) Optically Resonant Nanostructures**  
Arseny Kuznetsov (S'pore), Boris Luk'yanchuk (S'pore), Yuri Kivshar (Australia),  
Mark Brongersma (USA), Nikolay Zheludev (UK)
- E) Applications of Soft and Nonlinear Materials in Electronics and Optics**  
Eng Huat Khoo (S'pore), Yanjun Liu (China), Ai Qun Liu (S'pore), Din Ping Tsai  
(Taiwan), Aaron Danner (S'pore)

## ELECTRONIC MATERIALS

- F) Magnetic and Spintronic Materials and Devices**  
S. N. Piramanayagam (S'pore), Jun Ding (S'pore), Anjan Soumyanarayanan (S'pore),  
Victorino Franco (Spain), Pallavi Dhagat (USA)
- G) Progress and Challenges in Molecular Electronics II**  
Christian Albertus Nijhuis (S'pore), Nikodem Tomczak (S'pore), Herre van der Zant  
(The Netherlands), Daniel Frisbie (USA), Damien Thompson (Ireland)
- H) Organic- and Bio-Electronics**  
Lay Lay Chua (S'pore), Peter Ho (S'pore)

## BIOMATERIALS

- I) Stimuli Sensitive and Responsive Polymer Biomaterials**  
Terry Steele (S'pore), Jing Yu (S'pore), Harm-Anton Klok (Switzerland), Kandalam V  
Ramanujachary (USA), Xavier Banquy (Canada)
- J) Micro/nano-technology for Drug Delivery and Imaging**  
Chenjie Xu (S'pore), Michinao Hashimoto (S'pore), Chester Drum (S'pore),  
Jane Wang (Taiwan), Lifeng Kang (Australia)
- K) Drug/Gene/Cellular Delivery Systems**  
Mary Chan (S'pore), Thuy Tram Dang (S'pore)
- L) Protein-based Materials: From Fundamentals to Applications**  
Sierin Lim (S'pore), Takafumi Ueno (Japan)
- M) Biomechanics in Human Diseases - Research and Applications**  
Chwee Teck Lim (S'pore), Ming Dao (USA), Han Wei Hou (S'pore), Linhong Deng (China)

## ENERGY MATERIALS

- N) Towards Safe High Power Rechargeable Batteries**  
(Jointly organized with Chinese MRS)  
Stefan Adams (S'pore), Qing Wang (S'pore), Byoungwoo Kang (South Korea),  
Zhaoyin Wen (China), A. J. Bhattacharyya (India)
- O) Advances in Perovskite Materials: Photovoltaics, Optoelectronics and  
Frontier Phenomena**  
(In collaboration with Aseanian Conference on Nano-Hybrid Solar Cells)  
Subodh Mhaisalkar (S'pore), Nripan Mathews (S'pore), Songyuan Dai (China),  
Nam-Gyu Park (South Korea), Tsutomu Miyasaka (Japan)
- P) Advanced Inorganic Materials and Thin Film Technology for Solar Energy  
Harvesting and Electronic Application**  
Goutam Kumar Dalapati (S'pore), Lydia Helena Wong (S'pore), Wladyslaw  
Walukiewicz (USA), Alberto Vomiero (Sweden)
- Q) Advanced Materials for Thermoelectrics**  
Kedar Hippalgaonkar (S'pore), Alex, Qingyu Yan (S'pore), Xun Shi (China), Kanishka  
Biswas (India), Jeffrey Snyder (USA)
- R) Extreme PV: Materials & Design for Next Generation Solar PV (Photovoltaics)  
Systems**  
Arief Budiman (S'pore), Joel Li (S'pore), Dauskardt Reinhold (USA), Shankar  
Sridhara (S'pore), Armin Aberle (S'pore)

## TECHNOLOGY

- S) Innovations in Membrane Technology - Discovery, Process and Applications**  
Adil Minoo Dhalla (S'pore), Chakravarthy S. Gudipati (S'pore), Neal, Tai Shung  
Chung (S'pore), Dibakar Bhattacharyya (USA), Luuk Rietveld (The Netherlands)

- T) Stretchable Materials and Devices for Wearables and Robotics**  
Benjamin Tee (S'pore), Zhuangjian Liu (S'pore), Pooi See Lee (S'pore), Tsuyoshi  
Sekitani (Japan), Chwee Teck Lim (S'pore)
- U) Materials and Devices for Harsh Environment**  
Chee Lip Gan (S'pore), Christopher A. Schuh (USA), Francis Presseccq (France), Zehui Du (S'pore)
- V) Additive Manufacturing: From Fundamentals to Applications**  
Matteo Seita (S'pore), Yong-Wei Zhang (S'pore), Jun Wei (S'pore), Kai Chen (China),  
Christian Leinenbach (Switzerland), John Lewandowski (USA)
- W) Materials Life Cycle and Sustainability**  
Claude Guet (S'pore), Alex Qingyu Yan (S'pore)

## NANOMATERIALS

- X) Von Hippel Award Symposium in Honour of Prof CNR Rao FRS**  
(Jointly organized with MRS)  
B.V.R. Chowdari (S'pore), C. Jagadish (Australia), Sean J. Hearne (USA),  
Mike Fitzsimmons (USA), D. D. Sarma (India)
- Y) Colloidal Nanoparticle-Based Probes and Sensors**  
(Jointly organized with MRS Japan)  
Xiaodi Su (S'pore), Kaoru Tamada (Japan), Yin Thai Chan (S'pore), Hedi Mattoussi  
(USA), Yang Xu (S'pore)
- Z) Nanomaterials for Biointerfacial Science**  
Nam-Joon Cho (S'pore), Paul S. Weiss (USA), Gert Storm (The Netherlands),  
Wolfgang Knoll (Austria), Katsuhiko Ariga (Japan)
- AA) Sustainable Nanotechnology - Bringing together Environment and Health  
Impacts and Novel Applications of Engineered Nanomaterials**  
Kee Woei Ng (S'pore), Philip Demokritou (USA)
- BB) 2D Materials and Heterostructures**  
Kuan Eng Johnson Goh (S'pore), Dongzhi Chi (S'pore), Kah Wee Ang (S'pore),  
Le Lay Guy (France), Artem Mishchenko (UK)
- CC) Novel Solution Processing of Advanced Functional Nanomaterials for Energy,  
Environmental and Biomedical Applications**  
Yanli Zhao (S'pore), K. Byrappa (India), Zheng Liu (S'pore), Sanjay Mathur  
(Germany), Aryan Vinnu (Australia)

## FUNCTIONAL MATERIALS

- DD) Advanced Composites and Hybrid Materials for Structural and Functional  
Applications**  
(Jointly organized with MRS Japan)  
Xiao 'Matthew' Hu (S'pore), Sridhar Idapalapati (S'pore), Atsushi Takahara (Japan),  
Yiu-Wing Mai (Australia), Tong Earn Tay (S'pore), Ton Peijs (UK)
- EE) Materials Design**  
(Jointly organized with Chinese MRS)  
Yuan Ping Feng (S'pore), Yi Liu (China), Haiqing Yin (China), Michael Sullivan  
(S'pore), Tamio Oguchi (Japan), Martin L. Green (USA)
- FF) Computational Advanced Material Science and Application**  
Hua Li (S'pore), Fangsen Cui (S'pore), Zishun Liu (China), Nimal Rajapakse  
(Canada), Shantanu S. Mulay (India)
- GG) Advanced Nanomaterials for Green Energy and Environmental Applications**  
Ghim Wei Ho (S'pore), Hongjin Fan (S'pore), Rong Xu (S'pore)
- HH) Functional pi-Systems, Materials and Devices**  
Chunyan Chi (S'pore), Jishan Wu (S'pore), Kazuo Takimiya (Japan), Juan Casado  
(Spain), Dmitrii F. Perepichka (Canada)
- II) Advanced Ceramics and Nanohybrids for Energy, Environment and Healthcare**  
John Wang (S'pore), Xu Li (S'pore), Jerome Claverie (Canada), Hong Liu (China),  
Adrian Lowe (Australia)
- JJ) Aggregation Induced Emission: Materials, Mechanisms and Applications**  
Bin Liu (S'pore), Ben Zhong Tang (Hong Kong)
- KK) Polarization-crucial Materials for Sensing, Transduction and Energy**  
Kui Yao (S'pore), Andrew J. Bell (UK), Thirumany Sritharan (S'pore), Vinay Gupta  
(India), Geoff Brennecke (USA)
- LL) Multifunctional Ceramics and Composites for EMI Shielding and Tribological  
Applications**  
Santiranjan Shannigrahi (S'pore), Mohit Sharma (S'pore), K. N. Rozanov (Russia)

## EDUCATION

- MM) Educating and Mentoring Young Materials Scientists for Career Development**  
Daniel Chua (S'pore), Federico Rosei (Canada), John Baglin (USA),  
Eva Hemmer (Canada)