



Preliminary Announcement

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 44 technical symposia, 10 plenary lectures and several theme, keynote, invited, contributed oral and poster presentations with the expected participation of 3,500 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 10th edition and our continuing efforts in advancing materials research.

Chair

B. V. R. Chowdari

Nanyang Technological University
Singapore
Tel: +65 6592 7812 / 6790 4626
Email: chowdari@ntu.edu.sg

Co-Chairs

Yuan Ping Feng

National University of Singapore
Singapore
Tel: +65 6516 2960
Email: phyfyp@nus.edu.sg

Tim White

Nanyang Technological University
Singapore
Tel: +65 6790 4586
Email: tjwhite@ntu.edu.sg

Contact Materials Research Society Singapore
Tel : +65 6316 8919
Email : info@mrs.org.sg

Secretariat INMEET CMS Pte Ltd
Tel : +65 6900 7183
Email : icmat2019@inmeetcms.com

Organized by

In association with

Supported by

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), Jun-Ming Liu (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**
Arseniy 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)
- NN) Fiber-based Technologies and Applications**
Lei Wei (S'pore), Ping Shum (S'pore), Fabien Sorin (Switzerland), Xiaoting Jia
(USA), Dora Juanjuan Hu (S'pore)
- OO) Mid-infrared and Terahertz Science and Technology**
Qijie Wang (S'pore)
- PP) Hybridized and Tunable Micro-Nano-Photonics**
Cheng Wei Qiu (S'pore); Jinghua Teng (S'pore)
- QQ) Diamond Photonics**
Jason Ching Eng Png (S'pore)
- RR) Ultrafast Optics**
Dawn Tan (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), Jana Zaumseil (Germany),
Jianpu Wang (China)

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), Alex van Herk (S'pore),
Zhen Gu (USA), Dae-Hyeong Kim (South Korea)
- L) Protein-based Materials: From Fundamentals to Applications**
Sierin Lim (S'pore), Takafumi Ueno (Japan), Diannan Lu (China),
Julie Champion (USA), David Paramelle (S'pore)
- M) Biomechanics in Human Diseases - Research and Applications**
Chwee Teck Lim (S'pore), Ming Dao (USA), Han Wei Hou (S'pore),
Linhong Deng (China), Igor V. Pivkin (Switzerland)

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), Jung-Yong Lee (South Korea)
- 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 Dhallia (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), Qiang Guo (China)
- 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), Jean-Christophe P. Gabriel
(France), Wanqin Jin (China), Stéphane Pellet-Rostaing (France)

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), Nguyen T. K. Thanh (UK), 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), Daniele Zink (S'pore),
Julian McClements (USA), Flemming Cassee (The Netherlands)
- 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),
Ajyan 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),
Tianio 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), Kazunari Domen (Japan)
- 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),
Jayashree Bijwe (India), Marina Y. Koledintseva (USA)
- EDUCATION**
- MM) Educating and Mentoring Young Materials Scientists for Career Development**
Daniel Chua (S'pore), Federico Rosei (Canada), John Baglin (USA),
Eva Hemmer (Canada)