

ICMAT 2019

10th International Conference on
Materials for Advanced Technologies
23 - 28 June 2019 | Marina Bay Sands, Singapore



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 45 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

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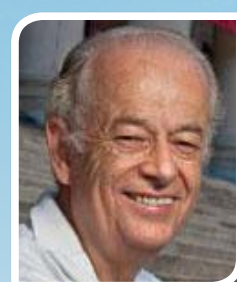
PLENARY SPEAKERS



Hiroshi AMANO
Nagoya University, Japan
The Nobel Prize in Physics 2014



Guillermo C. BAZAN
University of California at
Santa Barbara,
USA



Federico CAPASSO
SEAS, Harvard University,
USA



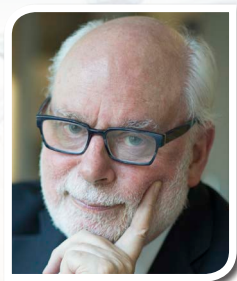
Andre GEIM
University of Manchester, UK
The Nobel Prize in Physics 2010



Prashant V. KAMAT
University of Notre Dame,
USA



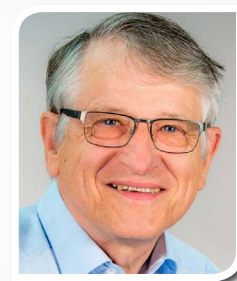
Stuart PARKIN
Max Planck Institute of
Microstructure Physics,
Germany



J. Fraser STODDART
Northwestern University, USA
The Nobel Prize in Chemistry 2016

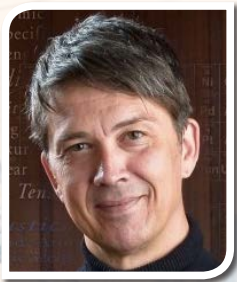


Subra SURESH
Nanyang Technological University,
Singapore



Klaus VON KLITZING
Max Planck Institute for
Solid State Research, Germany
The Nobel Prize in Physics 1985

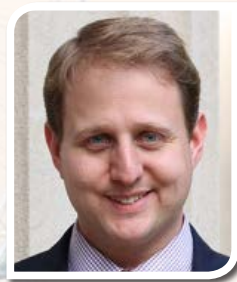
THEME SPEAKERS



Gerbrand CEDER
University of California at Berkeley,
USA



Linda F. NAZAR
University of Waterloo,
Canada



Christopher SCHUH
Massachusetts Institute of
Technology,
USA



Dongyuan ZHAO
Fudan University,
China

~ for the latest list of speakers, please visit: icmat2019.mrs.org.sg ~

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), Carlo Sirtori (France), Connie Chang (USA), Yan Zhang (China), Ranjan Singh (S'pore)

PP) Hybridized and Tunable Micro-Nano-Photonics

Cheng-Wei Qiu (S'pore), Jinghua Teng (S'pore), Federico Capasso (USA), Qihuang Gong (China), Byoung-ho Lee (South Korea)

QQ) Diamond and Single Photon Photonics Emitters

Jason Ching Eng Png (S'pore), Leonid A. Krivitskiy (S'pore), Igor Aharonovich (Australia), Alagappan Gandhi (S'pore)

RR) Ultrafast Optics

Dawn Tan (S'pore), Chee Wei Lee (S'pore), Doris Keh Ting Ng (S'pore), Jianji Dong (China), Yeshaiahu Fainman (USA)

SS) Advanced Optical Gain Materials towards Enhanced Light-Matter Interactions

Qihua Xiong (S'pore), Weibo Gao (S'pore), Qing Zhang (China), Hong-Gyu Park (South Korea), Ronen Rapaport (Israel)

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 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) Delivery Systems for Biomedical and Consumer Care Applications

Mary Chan (S'pore), Thuy Tram Dang (S'pore), Alex van Herk (S'pore), Zhen Gu (USA), Dae-Hyeong Kim (South Korea)

L) Bio-derived Materials: From Fundamentals to Applications

Sierin Lim (S'pore), Takafumi Ueno (Japan), Diannan Lu (China), Julie Champion (USA), David Paramelle (S'pore)

M) Biomechanics of Human Diseases: From Research to 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), Sebastien Martinet (France)

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 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 C. K. 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 Pressecq (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), Ton Peijs (UK), Stefanie FEIH (S'pore)

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), 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 for EMI Shielding and Materials for Tribological Applications

Santiranjana 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)

GENERAL INFORMATION



2001 - 2019

FORUMS

- **Materials for Sustainability**
Chair: Alexander J.B. Zehnder
Chair, Sustainable Earth Office,
Nanyang Technological University, Singapore
- **Why so Few Women in Science & Technology?**
Chair: Zee Upton
Executive Director (Covering),
Institute of Medical Biology, A*STAR, Singapore
- **Young Researcher Forum**
Chair: Evan L. WILLIAMS
Deputy Dept Head, Electronic Materials, Institute of Materials
Research & Engineering, Singapore
- **Editors' Forum**
Chair: Andrew Wee
Vice President (University and Global Relations),
National University of Singapore, Singapore

IMPORTANT DATES

- Abstract Submission Opens** >> 01 Sept 2018
- Abstract Submission Closes** >> 31 Jan 2019
- Acceptance Notification** >> from 15 Feb 2019
- Registration Opens** >> 15 Feb 2019
- Early Bird & Author Registration** >> 01 Apr 2019
- Materials Research Society – Singapore (MRS-S) Funding Support**
To help participants from developing countries, MRS-S has set aside funds, in the form of reduced registration fee or hostel accommodation for eligible participants.
Please check the website for details.

REGISTRATION RATES (IN SINGAPORE DOLLARS)

CATEGORY	Early Bird by 1 April 2019	Standard 2 April – 8 June 2019	Onsite 23 – 28 June 2019
<i>Fees listed does not include prevailing Goods & Services Tax (GST)</i>			
MRS-S Member¹	SGD 900	SGD 1,000	SGD 1,100
Other MRS Member²	SGD 950	SGD 1,050	SGD 1,150
Non-Member	SGD 1,000	SGD 1,100	SGD 1,200
Student³	SGD 600	SGD 650	SGD 700

¹ Members of the Material Research Society (Singapore)

² Members of the adhering bodies of IUMRS (refer to list at: <https://tinyurl.com/ycagsn7j>)

³ Applicable to full-time students from any university (local & overseas). Proof of student status will be required at the time of registration.

- Fees listed are in Singapore dollars (SGD 1 ~ USD 0.70)
- Each registration is meant for ONE (01) participant to attend the conference only.
- Co-author(s) who are also attending the conference will need to register separately.
- Each registration entitles the registered participant to present up to TWO (02) Abstracts/Presentations.
- Registration fee includes a copy of the conference programme, daily tea break & lunch.
- Please refer to the website for details on registration terms & conditions, and cancellation policy.

CONFERENCE VENUE

MARINA BAY SANDS, SINGAPORE

Sands Expo & Convention Centre
10 Bayfront Avenue,
Singapore 018956

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PACKAGE SPONSORSHIP

CATEGORY	AMOUNT (SGD)
Grand Premier	\$250,000
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Major	\$25,000
Privileged	\$15,000
Sponsor	\$6,000
Supporter	\$3,000

ITEM SPONSORSHIP

CATEGORY	AMOUNT (SGD)
Conference Bag (Sole Sponsor)	\$50,000
Conference Bag (Co-Sponsor)	\$30,000
Hosted Coffee Break	\$25,000

EXHIBITION

CATEGORY	AMOUNT (SGD)
Exhibition Booth (6sqm)	\$7,000
Table Top Display	\$3,000