

IUMRS-ICA2020 Summary

The 21st International Union of Materials Research Societies- International Conference in Asia (IUMRS-ICA 2020) was organized by Materials Research Society of Thailand (MRS-Thailand), and Materials Science Research Center, Faculty of Science, Chiang Mai University during February 23 - 26, 2021 as an online conference. The onsite venue of the conference is the Faculty of Science, Chiang Mai University, Chiang Mai.

There are 28 symposia covering a wide range of current topics in materials research. Participants include 6 plenary speakers, 38 keynote speakers, 80 invited speakers, 241 oral presentations, 252 poster presentations and 84 attendees (with no presentation). There are 14 proceeding and journals available for full paper submission.

Summary of presentations in all symposia

Symposium Topics	Oral	Poster	PL	KN	INV	TOTAL
A. Electronic and Optical Materials						
A1. Advanced Ferroic Materials (Piezoelectrics, Ferroic Materials)	2	7		1	2	12
A2. Photonic Materials and Applications	7	2		2	2	13
A3. Thermoelectric Materials and Devices	1	2		1	3	7
A4. Quantum Materials	10	5		0	12	27
B. Energy and Environment Materials						
B1. Catalyst Materials	9	15	1	2	3	30
B2. Emerging Solar PV	5	3		0	2	10
B3. Energy Storage (Batteries and Supercapacitors)	11	22		2	2	37
C. Bioplastics, Biomaterials and Medical Devices						
C1. Biomaterials for Regenerative Medicine and Tissue Engineering	13	11	1	2	2	29
C2. Biosensing and Medical Devices	6	10	1	2	2	21
C3. Functional Nanomaterials for Therapeutic Delivery, Diagnosis, and Detection	4	8		1	0	13
C4. Bio-based Materials and Applications	38	49		2	3	92
D. Advanced Functional Materials						
D1. Advanced Carbon Materials (Graphene and Carbon Materials)	16	6		1	2	25
D2. Magnetic Materials and Applications	5	9	1	1	1	17
D3. Advanced Ceramic Materials (Ceramic and Glass Technology)	3	31		1	2	37
D4. Advanced Polymeric Materials (Rubber, Plastics)	13	16		1	2	32
E. Advanced Structural Materials						
E1. Composites and Construction Materials	13	14		1	2	30
E2. Metal, Material Processing and Corrosion	6	4		2	2	14
E3. Materials Joining and Additive Manufacturing Technology	5	0		2	2	9
F. Computational Materials Science, Modelling and Simulations with joint Asian Consortium on Computational Materials Science Theme Meeting 2021 (ACCMS-Theme Meeting 2021)						
F1. Modelling of Materials Structure, Defects and Properties	11	4		2	13	30
F2. Data-driven Materials Discovery and Design	2	2		1	0	5
F3. Computational Catalysis and Materials for Energy and Environment	14	6		2	4	26
G. Advanced Fabrication, Characterization and Devices						
G1. Sensors, Printed Electronics	12	6		1	2	21
G2. Thin-film and Tribology Technology	5	12		2	2	21
H. Instrumentation and Materials Characterization						
H1. Synchrotron Radiation and Applications	2	2		1	2	7
H2. Novel Methods of Material Characterization	2	1		1	1	5
I. Special Symposium						
I1. Materials Enterprises and Industries	4	0	0	0	0	4
I2. Symposium in Recognition of Lifetime Achievement of Prof. Dr. Vittaya Amornkit	0	0	1	3	11	15
R. Rheology						
R1. Rheology	26	5	1	1	2	35
Total presentations	245	252	6	38	83	624

The conference brings together a multi-disciplinary group of scientists from all over the world to present and exchange ideas relating to fundamental and applications of materials as well as the future trends in materials science research. The online conference was organized in one meeting room for plenary session & ceremonies and 16 meeting rooms for all parallel sessions. Over 700 participants of IUMRS-ICA2020 were from 25 countries as summarized in the following table.

Country	Number of Participants	Country	Number of Participants
Thailand	601	Canada	1
Japan	42	Brazil	1
China	16	Pakistan	1
Korea	12	Austria	1
Taiwan	5	Czech	1
UK	4	Russia	1
Germany	3	Spain	1
Indonesia	3	Turkey	1
Malaysia	3	Sweden	1
USA	2	France	1
India	2	Portugal	1
Philippines	2	Colombia	1
Singapore	1	Total Number	708

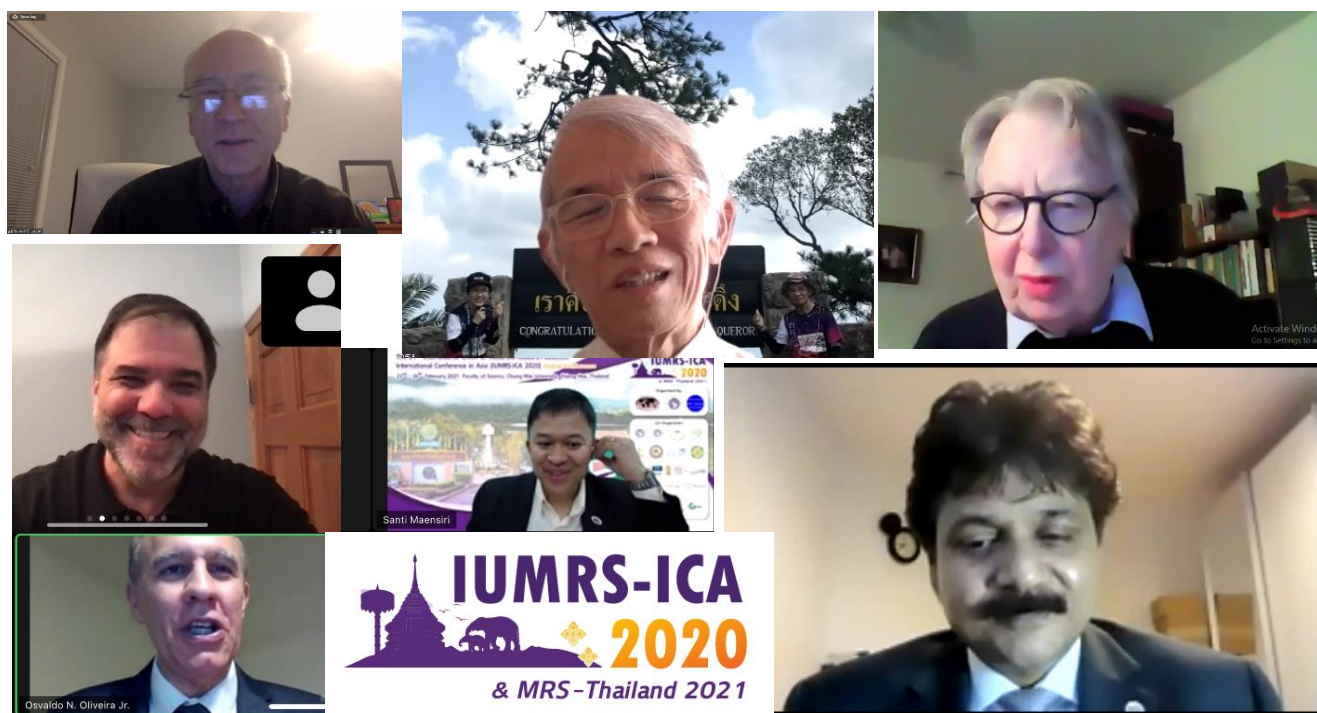
*This number excludes some organizing committees who did not registered through the conference website.

The conference was successfully organized by over 200 local organizing committee members from Materials Science Research Center, Faculty of Science, Chiang Mai University in partnership with several universities and research institutes in Thailand, including Suranaree University of Technology, Kasetsart University, Chulalongkorn University, Naresuan University, Silpakorn University, Rajamangala University of Technology Thanyaburi, Synchrotron National Lab and National Science and Technology Development Agency. The support from industries and private sectors also includes Seagate Technology, Abex Technology, Cerntek Co. Ltd., RI Technologies and LMS Instruments Co. Ltd.

Opening Ceremony



Plenary Session & Parallel Session



Closing Ceremony

