Plenary Speakers

"Plasma-liquid Interactions: New Opportunities for Plasma Physics and Organic Chemistry"
Prof. Felipe Itza
Loughborough Univ., UK

"Emerging Nanoassemblies and Their Functions"
Prof. Shu-Hong Yu
Univ. of Sci. and Tech. of China, China

"Plasma Biology and Chemistry for Innovations in Agriculture and the Food Cycle"
Prof. Peter Bruggeman
Univ. of Minnesota, USA

"Plasma Jets above or inside Liquids: Basic but Tricky and Promising Setups"
Prof. Eric Robert
Univ. Orleans, France

"Status of Research and Development for Demonstration of Fusion Energy"
Vice-President, Hyeon Gon Lee
NFRI, Korea

"Plasma Technology Trends in Semiconductor Equipment Industry"
CEO, Changjin Kang
SEMES, Korea

Keynote & Invited Speakers

0. 6th International Plasma Farming Workshop (IPFW)

Keynote: Wonho Choe (KAIST, Korea)

Keynote: Choncharoen Savangrat (Chiang Mai Univ., Thailand)

Keynote: Masaharu Shiratani (Kyuju University, Japan)

Gregory Fridman (AAPlasma, LLC, USA)

Cheorun Jo (Seoul Natl' Univ., Korea)

Young Sun Mok (Jeju Natl Univ., Korea)

Gyeungsoo Park (Kwangyang Univ., Korea)

Sangho Park (NFRI, Korea)

Chae Suk Yoon (Foodpolis, Korea)

1. Plasma Bioscience & Medicine

Ihn Han (Kwangyang Univ., Korea)

Dong Ping Liu (Dalian Univ. of Tech., China)

Masaharu Shiratani (Kyuju University, Japan)

2. Plasma Processing for Semiconductor and Display Devices

Keynote: Hyungscheol Kwon (SK Hynix, Korea)

Keynote: Jong Chul Park (Samsung Electronics Co., Ltd, Korea)

Raidolphe Mauchauffe (Jeonbuk Natl Univ., Korea)

3. Plasma Processes for Nanomaterial Development

Sooseok Choi (Jeju Natl' Univ., Korea)

Ye Daqi (South China Univ. of Tech., China)

Jae Hong Kim (KAIST of Advanced Inst. of Sci. and Tech., Japan)

Chang Jun Li (Tianjin Univ., China)

Takashi Nozaki (Tokyo Inst. of Tech., Japan)

4. Plasma Diagnostics and Process Monitoring Technology

Jianping Zhao (TEI, USA)

5. Plasma Sources and Technology

Keynote: Mark Kushner (Univ. of Michigan, USA)

Birk Berger (Ruhr-Universität Bochum, Germany)

Hyo-Chang Lee (KUSS, Korea)

Yong Xin Liu (Dalian Univ. of Tech., China)

Thomas Musserbrock (Univ. of Cottbus, Germany)

6. Plasma Modeling and Simulation Techniques

Keynote: Julian Schütze (Ruhr-Universität Bochum, Germany)

Yan Feng (Soochow Univ., China)

Satoshi Uchida (Tokyo Metropolitan Univ., Japan)

Haiqing Wang (Beihang Univ., China)

Yuan-Tao Zhang (Shandong Univ., China)

Yun Zhou (Dalian Univ. of Tech., China)

7. 2D Materials and Their Application to Nano/Micro Devices

Jaebum Choo (Chung-Ang Univ., Korea)

Maxime Daron (Univ. de Sherbrooke, Canada)

Seonggi Im (Yonsei Univ., Korea)

Atul Kulkarni (Symbiosis Centre for Nanosci. and Nanotech., Symbiosis Int'l Univ., India)

Jae Dong Lee (DGIST, Korea)

Won Jong Yoo (Sungkyunkwan Univ., Korea)

8. Flexible and Stretchable Displays & Sensors

Shimaoe Kengo (Kyushu Univ., Japan)

Taeyeon Lee (Yonsei Univ., Korea)

Andreas Ruediger (Univ. du Quebec, Canada)

9. Energy Related Devices

Keynote: Lu Li (NUS, Singapore)

Ruediger A. Echt (RWTH Aachen Univ. & Research Inst. Juelich, Germany)

Chong Kwook Feng (Universiti Malaysia Pahang, Malaysia)


Keynote: Myoung Heon Song (UNIST, Korea)

Shinik Cho (Univ. of Ulster, Korea)

Teichim Kimura (Japan Fine Ceramics Center, Japan)

Seokin Na (Jeonbuk Natl Univ., Korea)

Dongfeng Xue (CAS, China)

Shu Yin (Tohoku Univ., Japan)

As of March 5, 2020

Call for Abstract
icmap2020.org

Joint International Conference on
ICMAP 2020
& ISFM 2020

6th International Plasma Farming Workshop
The 8th International Conference on Microelectronics and Plasma Technology
August 16 – 20, 2020 / Phoenix JEJU Hotel & Resort, Jeju, Korea
The 9th International Symposium on Functional Materials
August 16 – 19, 2020 / Phoenix JEJU Hotel & Resort, Jeju, Korea

Important Dates

Abstract Submission
From February 3, 2020 to May 15, 2020

Notification of Abstract Acceptance
From March 16, 2020

**Notification of acceptance will be sent by email within one month after submission.

Pre-Registration
From May 1, 2020 to June 30, 2020

Organized by

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ICMAP 2020 & ISFM 2020 Secretariat
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Welcome Message
The Joint Conference on the 9th International Conference on Microelectronics and Plasma Technology (ICMAP 2020) and the 9th International Symposium on Functional Materials (ISFM 2020) will be held during August 16-19, 2020 at Phoenix JEJu, Jeju, Korea.
The ICMAP 2020 is initiated to provide an open forum for the discussion of the current status of scientific and technological achievements in the various fields of plasma applied research and developments including microelectronic devices. The ISFM2020 is a biennial multidisciplinary meeting bringing together scientists, researchers, and engineering applications of functional materials, and will cover a broad spectrum of key topics related to energy, environmental, biomedical, electronic, and nanomaterials.

On behalf of the organizing committee, we would like to express our warmest welcome to all of you who are participating in ICMAP 2020 & ISFM 2020. We believe that the conference will provide wonderful scientific and social programs with your active participation in beautiful Jeju Island to remain as long lasting memories.

We thank you for your participation in advance and look forward to seeing you at ICMAP 2020 & ISFM 2020 in Jeju, Korea.

Conference Chairs of ICMAP 2020 & ISFM 2020
Suk Jae Yoo (NFR1, Korea)
Jin Hyo Bae (Sungkyunkwan Univ, Korea)

Organizing Committee
Honorary Chair
Chi Kyu Choi (Jeju Natl Univ, Korea)

Conference Chair
ICMAP 2020: Suk Jae Yoo (NFR1, Korea)
ISFM 2020: Jin-Hyo Bae (Sungkyunkwan Univ, Korea)

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Hee-Hwan Choi (Korea Aerospace Univ, Korea)
Bert Ellingsen (Dublin City Univ, Ireland)
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ISFM: Chang Lyul Lee (GIST, Korea)
ISFM: Jeehyeong Lee (Sungkyunkwan Univ, Korea)
ISFM: Changsik Song (Sungkyunkwan Univ, Korea)

Conference Topics
6th International Plasma Farming Workshop (IPFW)
Wonho Choe (KAIST, Korea)
Seong Bong Kim (NFR1, Korea)
- Overviews of Plasma Agriculture and Food Cycle
- Plasma Sources and Characterization for Agriculture and Food Cycle
- Case Studies, Diagnostics, Modeling and Mechanism Studies
- Application Feasibility and Commercialization Issues

1. Plasma Bioscience & Medicine
Session Chairs
Eun-Ha Choi (Kwangwoon Univ, Korea)
Sungmo Moon (KIMS, Korea)
- Fundamentals of Atmospheric Plasmas
- Plasma Sources for Biomedical Applications
- Plasma-cell and Plasma-tissue Interactions - Biological and Biochemical Reactions
- Plasma-surface Interactions/Modifications for Biomedical Applications
- Plasma-based Decontamination and Sterilization
- Plasma for Pharmaceutical Applications, Biochemical and Biomedical Engineering
- Plasma Modeling and Numerical Simulation

2. Plasma Processing for Semiconductor and Display Devices
Session Chairs
Hyegeoup Chae (Sungkyunkwan Univ, Korea)
Hyeongtaeg Jeon (Hanyang Univ, Korea)
Junghoon Joo (Kunsan Nat’l Univ, Korea)
Sehun Kwon (Pusan Nat’l Univ, Korea)
- Plasma-Enhanced Chemical Vapor Deposition (PECVD)
- Plasma-Enhanced Atomic Layer Deposition (PEALD)
- Plasma Sputtering for TSV Applications
- Plasma Etching
- Atomic Layer Etching (ALE)/Plasma Atomic Layer Etching
- Atomic Layer Cleaning
- Plasma Ashing
- Environment-friendly Plasma Processing

3. Plasma Processes for Nanomaterial Development
Session Chairs
Goo-Hwan Jeong (Kangwon Nat’l Univ, Korea)
Li Qi Lian (Pusan Nat’l Univ, Korea)
- Plasma-Assisted Nanomaterial Synthesis and Functionalization
- Atmospheric Plasma Processes for Nanomaterial Development
- Solution Plasma Processes for Nanomaterial Development

4. Plasma Diagnostics and Process Monitoring Technology
Session Chair
Shin Jae You (Chungnam Nat’l Univ, Korea)
- Plasma Parameter Diagnostics
- Processing Monitoring (Film Thickness, Collision Frequency, Wafer Temperature, etc.)
- AI Based Plasma Diagnostics/Monitoring

5. Plasma Sources and Technology
Session Chair
Julian Schultze (Ruhr Univ. Bochum, Germany)
- Plasma Sources (RF Plasma, DC Plasma, Plasma Propulsion, Thermal Plasma, Laser Plasma, Magnetized Plasma, etc.)

6. Plasma Modeling and Simulation Techniques
Session Chair
Yuan-Hong Song (Dalian Univ. of Tech, China)
Sub Session Chair
Mi-Young Song (NFR1, Korea)
- Sheaths / Plasma Physics / Plasma Kinetics / Fundamental Plasma Physics
- Modeling / Numerical Analysis / Plasma Simulations
- Dusty Plasmas / Strongly Coupled Plasmas
- Fundamental Processes in Plasma

7. 2D Materials and Their Application to Nano/Micro Devices
Session Chairs
Taerung Kim (Sungkyunkwan Univ, Korea)
Won Jong Yoo (Sungkyunkwan Univ, Korea)
- Issues on Plasma Processing of 2D Materials
- Characterization of 2D Materials and Devices
- Application to Flexible Devices
- Application to Energy Devices

8. Flexible and Stretchable Displays & Sensors
Session Chair
Nae-Eung Lee (Sungkyunkwan Univ, Korea)
Sub Session Chairs
Munpyo Hong (Korea Univ, Korea)
Sungsoo Kim (Paichai Univ, Korea)
Wansoo Yun (Sungkyunkwan Univ, Korea)
- Flexible and Stretchable Display Devices
- Flexible and Stretchable Physical, Chemical and Biological Sensors
- Flexible and Stretchable Thin-film Transistors
- Flexible and Stretchable Materials for Soft Electronics

9. Energy Related Devices
Session Chairs
Dong Chan Lim (KIMS, Korea)
Dongguk Lim (Korea Nat’l Univ. of Transportation, Korea)
- Energy Harvesting Materials and Devices
- Power to Gas (Fuel cell, Hydrogen, CO, Conversion)
- Energy Storage and Conversion: Materials and Devices

Session Chair
Chang Lyul Lee (GIST, Korea)
Sub Session Chairs
Eun-Ha Choi (Kwangwoon Univ, Korea)
Min Seok Jeong (Sungkyunkwan Univ, Korea)
Yong-Cheol Kang (Pukyong Nat’l Univ, Korea)
Joo-Hyang Kim (Inha Univ, Korea)
Young Dok Kim (Sungkyunkwan Univ, Korea)
Jeehyeong Lee (Sungkyunkwan Univ, Korea)
- Perovskite Materials and Devices
- Organic and Inorganic Transistor
- Display (OLED, Phosphorescent LEDs, II-VI, III-V Devices)
- Organic and Inorganic Memories
- Epitaxial & Chemically Synthesized Dots
- Hybrid Organic/Inorganic QDs and Devices
- Emerging Organic and Inorganic Electronics

Submission Guideline
- You are required to submit abstract via Online Abstract Submission System. Please input your abstract into the system directly.
- Abstract should be written a minimum of 200 words (with space).
- Before the submission, please select your preferred type of your presentation (Oral or Poster).
- The accepted presentation and type will be notified after review process accordingly.

Online Abstract Submission System:
https://www.cy-mice.org/icmap2020

Manuscripts for Proceedings