

**March 26-28, 2019**

**Hiroshima, Japan**

Address: International Conference Centre Hiroshima

1-5, Nakajima-cho, Naka-ku, Hiroshima, Japan

<http://www.pcf.city.hiroshima.jp/icch/english.html>

# **2019 the 3rd International Conference on Materials Engineering and Nano Sciences (ICMENS 2019)**

*with workshop*

**2019 the 3rd International Conference on Metallurgical  
Fundamentals and Science**

**(ICMFS 2019)**

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# Welcome Message from Conference Chair

Materials Engineering based on Nano Sciences is a key ingredient of current advanced technologies supporting modern society, especially Information and Energy Technologies. The tremendous rapid growth of these fields makes them highly interdisciplinary and then inevitably demands their mutual interactions. Under these circumstances, the 2019 the 3rd International Conference on Materials Engineering and Nano Sciences (ICMENS 2019) was organized as a series of successful international conferences held in Singapore (2017) and Hong Kong (2018).

The main goal of ICMENS 2019, which will be held from 26 to 28 March 2019, in Hiroshima, is to address latest original results in Materials Engineering and Nano Sciences, including both theoretical advances and practical implementations, which are becoming more and more popular in industry and in our daily lives. The ICMENS 2019 will provide a premier interdisciplinary platform for scientists, researchers, industry leaders, engineers and educators throughout the world to present and discuss the most recent innovations, trends, concerns, as well as practical challenges encountered, and streamline solutions in the fields of Materials Engineering and Nano Sciences. The meeting will provide an opportunity to highlight recent developments and to identify emerging and future areas of growth in Quantum Technology.

Towards this end, the Technical Programme Committee has assembled an excellent programme comprising of 2 excellent Keynote Speeches and 2 Plenary Talks from renowned scientists from the world, 6 parallel technical sessions comprising of more than 40 presentations. A total of 28 full papers was selected from 46 original contributions after a rigorous review process. In addition to the regular sessions, a special session was set with 4 Invited Talks leading to the quantum manipulation technology, which is a newly emerging research field.

On behalf of the Organising Committee, I wish to thank the keynote speakers, invited speakers and authors of selected papers for their outstanding contributions. I would also like to thank members of the organizing committee, anonymous reviewers and volunteers for their great efforts. Without their contribution, dedication and commitment, we would not have achieved so much. Thanks also go to the Conference Secretaries (Dana Chan & Jessi Mars) for their dedicated cooperation. We sincerely hope that you will find the ICMENS 2019 beneficial and fruitful for your professional development. We also hope that you will enjoy our hospitality and will have an enjoyable and memorable time in Hiroshima.

**Professor Toshikazu Ekino**  
**Hiroshima University, Japan**

# Conference Committees

## Conference Advisory Committees

Prof. Richard Haverkamp, Massey University, New Zealand

Prof. C. W. Lim, City University of Hong Kong, Hong Kong

## Conference Chairs

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Assoc. Prof. Amarendra Hj, Malnad College of Engineering, India  
Prof. Srinath M S, Malnad College of Engineering, India

# Instructions

## Registration Guide:

Arrive at the Conference Venue→Inform the conference staff of your paper ID→Sign your name on the Participants List→Check your conference materials.

## Checklist:

1 receipt, 1 name card, 1 printed conference abstract, 1 lunch coupon, 1 dinner coupon, 1 computer bag, 1 USB stick (paper collection).

## Devices Provided by the Conference Organizers:

Laptops (with MS-Office & Adobe Reader)

Projectors & Screen

Laser Sticks

## Materials Provided by the Presenters:

PowerPoint or PDF files

## Duration of Each Presentation:

Regular Oral Session: 15 Minutes of Presentation including 2-3 Minutes of Q&A

## Notice:

\*Certificate of Listener can be collected in the registration counter.

\*Certificate of Presentation can be collected from the session chair after each session.

\*The organizer will not provide accommodation, so we suggest you make an early reservation.

\*One best presentation will be selected from each session. The best one will be announced when each session ends and will be awarded by the session chair after each session in the meeting room.

## Contact Us:

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# Agenda Overview

※Note:

CMR 1, CMR 2, CMR 3—B1F

Cosmos 2, Ran—B2F

## March 26, 2019

10:00-17:00 Participants check-in & Materials Collection—CMR 1

## March 27, 2019-Morning Schedule

Venue: Ran (B2F)

09:00-09:05 Opening Remarks

**Prof. Toshikazu Ekino, Hiroshima University, Japan**

09:05-09:45 Speaker I

**Prof. Richard Haverkamp, Massey University, New Zealand**

Speech Title: Iridium Oxide and Iridium-Ruthenium Oxide for Oxygen Evolution

09:45-10:25 Speaker II

**Prof. C. W. Lim, City University of Hong Kong, Hong Kong**

Speech Title: Thermoacoustic Modeling and Applications of CNT Thin Film Arrays

10:25-10:50 Coffee Break and Group Photo

10:50-11:30 Speaker III

**Prof. Syuma Yasuzuka, Research Center for Condensed Matter Physics,  
Hiroshima Institute of Technology, Japan**

Speech Title: Interplay between Vortex Dynamics and Superconducting Gap Structure in Organic Superconductors with D-Wave Pairing Symmetry

11:30-12:10 Speaker IV

**Prof. Josip Brnić, University of Rijeka, Croatia**

Speech Title: Behavior of Materials Used in Design of Highly Stressed Engineering Components at Different Temperatures

12:10-13:10 Lunch at Cosmos 2

## March 27, 2019-Afternoon Schedule


### Special Session: Quantum Foundation and Technology

Venue: Ran (B2F)

- 13:10-13:15**      **Opening Remarks**  
**Asst. Prof. Leo Matsuoka, Hiroshima University, Japan**
- 13:15-13:40**      **Speaker I**  
**Assoc. Prof. Hiroshi Kohguchi, Hiroshima University, Japan**  
Speech Title: Dynamical Alignment of Photoeliminated Ligands from Transition Metal Complexes
- 13:40-14:05**      **Speaker II**  
**Asst. Prof. Leo Matsuoka, Hiroshima University, Japan**  
Speech Title: Development of Highly Efficient Laser-based Method of Radioactive Cs Isotope Separation Utilizing Light-induced Drift
- 14:05-14:30**      **Speaker III**  
**Asst. Prof. Shin-ichi Wada, Hiroshima University, Japan**  
Speech Title: Non-contact Evaluation of Molecular Conductivity of Organic Monolayers Utilizing Core-excitation Dynamics Measurements
- 14:30-14:55**      **Speaker IV**  
**Asst. Prof. Masataka Iinuma, Hiroshima University, Japan**  
Speech Title: Observation of Nonclassical Correlation between Two Noncommuting Polarizations in Sequential Quantum Measurements

### Parallel Presentation Sessions

- 14:55-16:25**      **Oral Session 1A: Nanomaterials and Composites**  
**[Ran (B2F)]**  
Presentation: M0002 M034 M037 M053 M025 M070
- 14:55-16:25**      **Oral Session 1B: Nanomaterials and Composites**  
**[CMR 2 (B1F)]**  
Presentation: M040 M019 M006-A M012 M010-A M015-A

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- 14:55-15:55**      **Poster Session: Material Physics and Optical Physics**  
[CMR 3 (B1F)]  
Presentation: M046-A M047-A M048-A M059-A M062-A M064
- 16:25-16:40**      **Coffee Break at Ran (B2F)**
- 16:40-19:00**      **Oral Session 2: Functional Materials and Computational Materials Science**  
[Ran (B2F)]  
**Invited Speaker: Prof. Rakesh Chand Ramola, HNB Garhwal University, India**  
Speech Title: Analysis of Ion Beam Irradiated ZnO:Ga Thin Film for Gas Sensing  
Presentation: M032 M044-A M016 M004 M036-A M017-A M038-A M063
- 16:40-18:55**      **Oral Session 3: Building Materials and Biomedical Materials**  
[CMR 2 (B1F)]  
Presentation: M028 M066 M029 M024 M009-A M041 M049 M055 M065
- 16:40-18:55**      **Oral Session 4: Material Chemistry and Chemical Engineering**  
[CMR 3 (B1F)]  
Presentation: M013 M030 M018 M026 M042 M039-A M043 M027 M067
- 19:00-21:00**      **Dinner at Cosmos 2**

## **March 28, 2019**

- 09:00-17:00**      **One-Day Tour in Hiroshima**  
Onsite registration cannot be accepted. (registration deadline is Mar. 5)



# Venue Map

