

第29回日本MRS年次大会

テーマ：次世代マテリアルスイノベーションの夜明け

2019年11月27日(水)～29日(金)

【開催趣旨】

昨今、SDGsに象徴される経済・産業の持続的な成長と地球環境問題のグローバルな視点とを両立させうる革新的な材料研究開発が必要とされており、本会議では新材料探索・新機能開拓・新プロセス創製を可能とする分野融合的なテーマについて議論いたします。超スマート社会の実現に向けた材料開発が進み行く中で、データ駆動科学に基づいた材料探索のような強力なツールが出現し、実用化研究のレベルに近づいたことにより、材料研究そのもののあり方が大きく転換し、従来とは別次元でのマテリアルイノベーションが起きつつあります。そこで本会議では多様な材料の専門家が領域・分野を超越し、融合的な情報・技術交換を行うことによって、日本の材料研究の強みを再認識するとともに、それらを礎にした今後の材料研究戦略のあり方を議論することによって、このマテリアルズイノベーションを我が国の産業のイノベーションへとつなげることを目指します。

なお、下記の創立30周年記念シンポジウムに加えて、「創造性のある実践的技術者」育成の中核を担う高専機構の活動にフォーカスしたシンポジウムも企画しています。

【開催日と会場】

2019年11月27日(水)～29日(金)

横浜情報文化センター、横浜市開港記念会館、他

【各種締切】

★講演申込 締切 2019年 8月 8日

★早期参加登録締切 2019年 9月 30日

★アブストラクトHP掲載 2019年 11月 20日

【査読付き英語論文誌】

★「*Transactions of the Materials Research Society of Japan*」にご投稿ください。

年次大会での発表に関連した論文は各シンポジウムにて査読が行われます。

論文はJ-Stageに搭載し、DOIを付与の上、各種データベースに採録。

出版から半年後にはオープンアクセスとなり、多くの研究者が閲覧可能。

本年より年6号に増え、掲載までのスピードがアップ。

主催：日本MRS

後援：横浜市

日本MRS

検索

併催 日本MRS創立30周年記念シンポジウム

2019年11月29日(最終日) 横浜情報文化センター 6F 情文ホール

プログラム

1. 記念式典・特別講演・懇親会

2. 記念講演会、ポスターセッション

3. 祝賀パーティー 19:00～ ホテルメルパルク横浜 2階Etoile (参加費7,000円)

■新刊紹介 Transactions of the Materials Research Society of Japan

2018 Vol.43 No.6

Memorial Article

• Obituary: Professor Shigeoyuki Sōmiya, M.Yoshimura, Y.Ikuma

Regular Papers

• Local Disorder in Proton Conductor BaSn_{0.5}In_{0.5}O_{2.75} Analyzed by Neutron Diffraction/ Atomic Pair Distribution Function, N.Igawa, K.Kodama, T.Taguchi, Y.Yoshida, T.Matsukawa, A.Hoshikawa, T.Ishigaki

• Spontaneous localization of two kinds of hard spheres in giant vesicles, Y. Natsume, Y. Komori, K. Itoh, K. Kurihara

• Fluorescence from Dyes Adsorbed on Organic Nanoparticles, K.Kasatani, Y.Morita

• Environmentally Friendly Plating Pretreatment for ABS Plastic Using Electrolyzed Sulfuric Acid, Y. Nakabayashi, Y. Umeda, T. Nagai, K. Tashiro, H. Honma, H. Kouzai

• Seed layer morphology influencing on ZnO nanorod growth by hydrothermal synthesis, Q.Zhang, M.Honda, Y.Ichikawa

• Biotransformation of citronellal, geraniol, citral and their analogs by fungus and their antimicrobial activity, M.Nagaki, T.Nara, S.Sakaya, K.Yamanouchi, T.Tsujiguchi, Y.Choutan

• Minority carrier lifetime in ultrananocrystalline diamond/hydrogenated amorphous carbon composite films, N.Nishikawa, S.Takeichi, T.Hanada, S.Tategami, A.Fukuyama, T.Yoshitake

2019 Vol.44 No.1

Review Paper

• Development of Hybrid-Anvil-Cell for Polarized and Unpolarized Neutron Diffraction Study, N.Terada

Regular Paper

• Effect of excess oxygen supply on reaction products of a direct ethanol fuel cell, K.Niwa, S.Hisamatsu, T.Hakuro, R.Miura, M.Minakawa, Y.Ikuma

• Development of Environmental-Friendly Biodegradable Polymers with Antibacterial Properties, R.Sakuma, K.Sawada, K.Nakashima, T.Tsukegi, S.Osawa, O.Yoshimura

• Diopside Synthesized by Sol-gel Method as Phosphorus Adsorption Material: Evaluation of Apatite Deposition in Pseudo Body

Solution, S.Yamamoto, N.Kawamura, T.Nonami

• Solvent crystallization and Heat Resistance of amorphous PET film with ethyl acetate, M.Ishinabe, K.Tsutsumiuchi, K.Imaeda

• Biotransformation of indanol, fluorenone and their analogs using tissue-cultured cells and their antimicrobial activity, M.Nagaki, N.Soma, K.Ono, K.Yamanouchi, T.Tsujiguchi, J.Kawakami, Y.Choutan

• Hydrophilization of PP Resin and ABS Resin by Applying Electrolyzed Sulfuric Acid, Y.Umeda, Y.Nakabayashi, T.Nagai, K.Tashiro, H.Honma, Y.Sakamoto

• Polymer-Supported Tetrapyrrole-Palladium Complex for the Allylic Alkylation with Arylboronic Acid in Water, T.Suzuka, N.Takayama, M.Unten, K.Onda, K.Ogihara

• Synthesis of Carbon Nitride Films by Unbalanced Magnetron Sputtering Method and The Sliding Characteristics under Oil Lubrication, H.Kamiyama, O.Takai

2019 Vol.44 No.2

Review Paper

• Modeling the nonthermal relaxation processes of photoexcited solids: A short review, S.Ono

Regular Papers

• Conductivity Modulation by CaVO₃-based All-solid-state Redox Transistor with Ion Transport of Li⁺ or H⁺, M.Takayanagi, T.Tsuchiya, W.Namiki, Y.Kitagawa, D.Etoh, D.Nishioka, T.Yamada, T.Higuchi, K.Terabe

• Observation of Simulated Fuel Debris using Synchrotron Radiation, Y.Yoneda, M.Harada, M.Takano

• Single-walled carbon nanotube growth at low temperature by alcohol gas source method using Co catalyst: enhancement effects of Al₂O₃ buffer layer on carbon nanotube yield, T.Okada, T.Saida, S.Naritsuka, K.Fukuda, T.Maruyama• Benzo-fused BODIPY Derivative as a Fluorescent Chemosensor for Fe³⁺, Cu²⁺, and Al³⁺, J.Kawakami, Y.Sasaki, K.Yanase, S.Ito• Cluster Size Effect of X-Ray Fluorescence Hologram Simulation Using Sr_{0.95}La_{0.05}TiO₃, Y.Ebisu, T.Matsushita, N.Happo, T.Ozaki

MRS-J

THE 30th ANNIVERSARY

INTERNATIONAL CONFERENCE MRM2019

5th E-MRS/MRS-J Bilateral Symposium

MATERIALS RESEARCH MEETING 2019

MATERIALS INNOVATION FOR SUSTAINABLE DEVELOPMENT GOALS



MRM2019

http://mrm2019.jmru.org

★ Conference 7 Plenary Speakers



Michael COEY
Trinity College Dublin, Ireland
Magnetic Materials



Hans-Joachim FREUND
Fritz-Haber-Institute, Germany
Catalyst



Easo P George
UT/ORNL, USA
Structural Materials



David GINLEY
NREL Fellow, USA
Electronic Materials



Marius GRUNDMANN
Universität Leipzig, Germany
Semiconductors



Jean-Marie TARASCON
College de France, France
Battery



Shinji TSUNEYUKI
University of Tokyo, Japan
Computational Materials Design

Deadline Abst. Submission

: May 10, 2019

Early Bird Registration

: August 31, 2019

Venue : Yokohama Symposia, Japan

★ Interdisciplinary 9 Clusters, Composed of Several Symposia (across the traditional boundaries of research field)

★ Tutorial ★ Luncheon Seminar
★ Exhibition

★ 36 Symposia and more than 30 Keynote Speakers

A. FUNDAMENTALS FOR MATERIALS

CLUSTER KEYNOTES : T. MIZOGUCHI(The Univ. of Tokyo), T. NORBY (Univ. of Oslo), K. OHOYAMA (Ibaraki Univ.)

- A-1 Local Atomic Structure Analysis on the Active Center of Functional Materials
- A-2 Hydrogen in Functional Materials
- A-3 Recent Advances in Computational Materials Science: Bridging Computations and Experiments
- A-4 Neutrons for Materials Research

B. NEW TREND OF MATERIALS RESEARCH

CLUSTER KEYNOTES : E. EFRATI(Weizmann Institute of Science), M. SCHEFFLER (Fritz-Haber-Institut der Max-Planck-Gesellschaft), I. TANAKA(Kyoto University)

- B-1 Data-Centric Science for Materials Research
- B-2 Materials Integration: Fusion of Materials Science and Experiments through Data Science
- B-3 Mathematical Materials Science -Mathematical Approaches for Materials Designs in the Data Driven Society—
- B-4 Topological Materials Science for Innovative Functions

C. NOVEL STRUCTURAL MATERIALS BASED ON NEW PRINCIPLES

CLUSTER KEYNOTES : C. CRETON(ESPCI Paris), Y. KAWAMURA(Kumamoto University), T. OHJI(AIST Chubu)

- C-1 Fundamental Issues of Structural Materials
- C-2 Mille-feuille Structured Light-weight Materials
- C-3 Hard and Tough Ceramics
- C-4 Tough Polymers

D. ADVANCED ELECTRONIC MATERIALS

CLUSTER KEYNOTES : T. SHINOHE(FLOSFA INC.), Qi-kun XUE(Tsinghua University)

- D-1 2D Layered Materials
- D-2 Novel Concepts of Electronic Materials Inspired from Complementary and Competing Fields
- D-3 Science and Technology of Superconductivity
- D-4 5th E&J BLS Wide-bandgap and 2-dimensional Materials

E. MAGNET AND SPINTRONICS

CLUSTER KEYNOTES : T. JUNGWIRTH(University of Nottingham), M. MANSSON (Royal Institute of Technology)

- E-1 New Aspects of Understanding Magnetic Materials
- E-2 Spin Conversion Phenomena in Spin Orbit Materials
- E-3 Quantum State in Low Symmetry Environment Probed by Advanced Spin Polarized Quantum Beam

F. ENERGY

CLUSTER KEYNOTES : M. G. KANATZIDIS(Northwestern University), Y. S. MENG (University of California), Y. TAKAHASHI(Osaka University)

- F-1 Battery Materials for Sustainability
- F-2 Catalysis and Catalyst Materials for Energy and Environment
- F-3 Advancements in Thermoelectric Materials and Applications
- F-4 Synchrotron X-ray Probes for Mesoscale Materials Science

G. MATERIALS FOR SMART SYSTEMS

CLUSTER KEYNOTES : M. KALTENBRUNNER(Johannes Kepler University Linz), T. KAMIYA (Tokyo Institute of Technology), L. M. LIZ-MARZÁN(CIC biomaGUN), NamGyu PARK(Sungkyunkwan University)

- G-1 In-field Molecules for Next-generations Flexible Electronics
- G-2 5th E&J BLS Materials Frontier for Transparent Advanced Electronics
- G-3 Perovskite and Metal Halide Materials Based Photovoltaics and Optoelectronics
- G-4 Plasmonic Materials: from Fundamentals to Applications
- G-5 Synchrotron X-ray Characterization of Function Material Thin Films and Fine Particles

H. GREEN TECHNOLOGY AND PROCESSING

CLUSTER KEYNOTES : E. CHIKOIDZE(CNRS / Paris Saclay University), K. DOMEN (The University of Tokyo), A. FRIDMAN(Drexel University)

- H-1 Advanced Water Science and Technology
- H-2 Plasma-Based Synthesis, Processing and Characterization of Materials for Energy and Environment
- H-3 5th E&J BLS Advanced Functional Oxides: Processing, Characterization and Devices
- H-4 A3+ Lead-free Piezoelectric Materials and Applications
- H-5 Intelligent Material Processes with Low Environmental Load and Energy Consumption

I. BIOPOLYMERS

CLUSTER KEYNOTES : Hui-suk YUN(Korea Institute of Materials Science)

- I-1 Bio-based Polymers
- I-2 Environmentally Degradable Polymers
- I-3 Biodegradable Polymers for Biomedical Applications

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