MRM2019（横浜）熱電シンポジウムのお知らせ（アブス〆切 5/25）

国際交流委員会委員長
森　孝雄

熱電材料関連のシンポジウムが開催される MRM2019 のお知らせです。日本に、アメリカの MRS 会議と並ぶような材料研究の会議ということで発足した MRM2019 ですが、大きな F-3 熱電シンポジウムが開催され、世界中から熱電研究者が集まります。奮ってご参加下さい。

国際会議名：MRM2019
　　F-3 Symposium

日時：　2019 年 12 月 10 日～14 日

場所：　横浜

ホームページ：
　　http://mrm2019.jmru.org/

アブストラクト〆切：　5 月 25 日 2019 年

Invited Speakers

Mercouri Kanatzidis, Northwestern University, USA (Energy Cluster Speaker)
Jeff Snyder, Northwestern University, USA
Zhifeng Ren, University of Houston, USA
Jihui Yang, Washington University, USA
Asegun Henry MIT, USA
Xueyan Song, West Virginia University, USA
Prashun Gorai, Colorado School of Mines, USA
Holger Kleinke, Waterloo University, Canada
Yuri Grin, Max Planck Institute for Chemical Physics of Solids, Germany
Franck Gascoin, CRISMAT, France
Dario Narducci, University of Milano, Italy
Philippe Jund, Montpellier University, France

Theodora Kyratsi, University of Cyprus, Cyprus
Slavko Bernik, Jozef Stefan Institute, Slovakia
Ernst Bauer, Technical University of Vienna, Austria
Yaniv Gelbstein, Ben-Gurion University, Israel
Pawel Ziolkowski, DLR, Germany
Ivana Savic, Tyndall National Institute, Ireland
Jan-Willem G. Bos, Heriot-Watt University, UK
Huaizhou Zhao Institute of Physics Beijing, China
Guodong Li, IP Beijing, China
JingFeng Li, Tsinghua University, China
Ling Chen, Beijing Normal University, China
Peng Jiang, Dalian Institute of Chemical Physics, China
PengFei Qiu, SICCAS, China
Xiaoyuan Zhou, Chongqing University, China
Yanzhong Pei, Tongji University, China
Xun Shi, Shanghai University, China
Kuei-Hsien Chen, National Taiwan University
Jong-Soo Rhyee, Kyung Hee University, Korea
SuDong Park, KERI, Korea
In Chung, Seoul National University, Korea
D. K. Aswal, National Physics Laboratory, India
Zhi-Gang Chen, University of Southern Queensland, Australia
Kedar Hippalgaonkar, Agency for Science, Technology and Research, Singapore
Koji Miyazaki, Kyushu Tech. Univ., Japan
Masao Ogata, Univ. Tokyo, Japan
Priyanka Jood, AIST, Japan
Naohito Tsujii, NIMS, Japan
Taishi Takenobu, Nagoya Univ., Japan
Tsunehiro Takeuchi, Toyota Technological Institute, Japan
Teruyuki Ikeda, Ibaraki Univ., Japan
Hirokazu Takaki, Univ. Tsukuba, Japan
Yoshiyuki Nonoguchi, Nara Institute of Science and Technology, Japan

Organizers

Overseas organizers: Lidong Chen (SICCAS, China), Franck Gascoin (CRISMAT, France), Yuri Grin (Max Planck CPfS, Germany), Jong-Soo Rhyee (Kyung Hee Univ., S.

Korea), Jeff Snyder (Northwestern Univ., USA).
Japan organizers: Takao Mori (NIMS) (representative), Michihiro Ohta (AIST) (secretariat), Yuzuru Miyazaki (Tohoku U.), Michitaka Ohtaki (Kyushu U.), Tsunehiro Takeuchi (Toyota Tech. Inst.), Takahiro Yamamoto (Tokyo U. Sci.)

Yokohama is a beautiful and interesting harbour city. The conference has an emphasis on SDGs for the future, which can be insightful to us TE researchers.
I hope anybody interested can join.
I apologize for short warning but the abstract deadline has been extended but still soon with a final deadline of May 25.

Scope

More than half of the primary energy that we consume is lost as waste heat. In the 20th century, humankind learned to achieve unprecedented control over charge carriers (electrons), spins, and photons, however, advanced control over phonons and thermal energy is still not satisfactory and remains one of the important scientific challenges for the 21st century. Thermoelectrics, which can reliably and compactly convert heat to electricity through solid-state devices using the Seebeck effect without scaling is a promising technology in this regard. (1) Recent advancements in classical and novel materials and (2) theoretical understanding of the thermoelectric phenomena, (3) discovery and implementation of enhancement principles which challenge the conventional tradeoff between the Seebeck effect and electrical conductivity and the paradoxical requirement of conducting electricity but not heat, (4) processing of materials (bulk, thin film, heterostructures, nanostructures, and nanocomposites), (5) development of measurement technologies for thermal conductivity, Seebeck effect, power generation, (6) advances in applicative technology and device design, and applications, ranging from energy harvesting for IoT to mid-high and high temperatures, and refrigeration, all indicate the approach of the breakthrough to the first wide scale application of thermoelectric power generation and further utilization of thermoelectric refrigeration. In this symposium, we call for papers which deal with these different aspects of thermoelectrics.

Keywords and Topics

1 Recent advancements in classical and novel materials
2 Theoretical understanding of the thermoelectric phenomena
3 Discovery and implementation of enhancement principles which challenge the

conventional tradeoff between the Seebeck effect and electrical conductivity and the paradoxical requirement of conducting electricity but not heat

4 Processing of materials (bulk, thin film, heterostructures, nanostructures, and nanocomposites)

5 Development of measurement technologies for thermal conductivity, Seebeck effect, power generation

6 Advances in applicative technology and device design, and applications, ranging from energy harvesting for IoT to mid-high and high temperatures, and refrigeration