



Second Call for Papers

19th International Conference on Ternary and Multinary Compounds

The ICTMC-19 continues the long tradition of previous meetings and covers the physics, chemistry, materials science, device engineering, and also growth and theory of various ternary and multinary compounds: chalcopyrite-type (I-III-VI₂, II-IV-V₂), kesterite-type (I₂-II-IV-VI₄), sphalerite-type and wurtzite-type (III-V, II-VI, etc.), perovskite-type, skutterudite-type, complex-oxides, complex-nitrides, and so on. We would like to exchange information and experience between relevant material fields in the interdisciplinary forum.

September 1 - 5, 2014

TOKI MESSE • Niigata Convention Center • Niigata • Japan

Sponsored by the Japan Society of Applied Physics

<http://annex.jsap.or.jp/tmc/ictmc19/index.html>

Abstract submission:

A one-page abstract should be submitted via the Internet. The abstract must contain a summary of the results to be presented, the name of the presenting author, affiliation, contact information and e-mail address. Presented papers will be published in a peer reviewed journal (phys. stat. sol. (a) and (c)). Detailed instruction can be found in the web site.

Key Dates:

- Start of abstracts submission: **March 25, 2014**
- Deadline of Abstracts Submission: **May 7, 2014**
- Notification of acceptance: **early June, 2014**
- Full paper submission: **September 20, 2014.**

Contributions are invited in the following topics:

1. Growth and preparation techniques; bulk materials, thin films, nanostructured materials, nanoscale structures
2. Characterization techniques, including large scale facilities
3. Computational material design and modeling
4. Photovoltaic materials and applications (CIGSSe, CZTS, CTS, etc.)
5. New high-efficiency solar-cell design based on multi-junction, nano-dots, mid-gap-state, and others
6. Light emitting materials and devices
7. Spintronic, thermoelectric, multiferroic and superconductive materials and applications
8. Miscellaneous



Symposium I: Any new photovoltaic materials superior to CIGS?

Symposium II: Advanced characterization of solar cells

Symposium III: Multinary materials in the next generation

Invited Speakers (tentative):

- [Plenary] Masafumi Yamaguchi (Japan): Fundamentals and R&D Status of III-V Compound Solar Cells and Materials
- [Plenary] Katsumi Kushiya (Japan): High efficiency and large volume production of CIS-based modules
 - Clemens Heske (the United States): Using soft x-rays and electrons to determine the electronic structure of multinary semiconductors for solar energy conversion
- Susan Schorr (Germany): Point defect characteristics of quaternary compound semiconductors
- S.-H. Wei (the United States): First-principles design of multinary compounds for energy applications
- Oki Gunawan (the United States): Development of high performance CZTSSe solar cells
- Dirk Poelman (Belgium): Persistent luminescence: materials and applications
- Masashi Ishii (Japan): Selective atomic-scale-evaluation of luminescent rare-earth dopants: Site-selective x-ray absorption fine structure using x-ray excited optical luminescence (XEOL-XAFS)
- Joachim Paier (Germany): Redox properties and reactivity of Au/ceria and VOx/ceria interfaces: Insights, pitfalls, and caveats born out of DFT
- Hideo Hosono (Japan): Hydrogen-bearing iron-based superconductors
- Jun Akimitsu (Japan): The new superconductor recently discovered by our group
- Koki Takanashi (Japan): Advanced spintronic materials based on ordered alloys
- Sadamichi Maekawa (Japan): Spin Current and Spin Seebeck Effect
- Takahisa Arima (Japan): Toward the electric-field control of magnetization in matter
- Yuji Sutou (Japan): Phase change characteristics of Cu-Ge-Te ternary film and its application to PCRAM
- Ion Tiginyanu (Moldova): Nanostructuring of Semiconductor Compounds by Design
- Nazim Mamedov (Azerbaijan): TiMeX₂: Band Structure, Optical Properties and Application

Conference organization:

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Conference Chair: Nozomu Tsuboi, Niigata University, 8050, Ikarashi 2-no-cho, Nishi-ku, Niigata, 950-2181, Japan.

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Program Chair: Kazuki Wakita, Chiba Institute of Technology, 2-17-1 Tsudanuma, Narashino, Chiba 275-0016, Japan.

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Registration: Registration can be made electronically through our web site after May 24, 2014.

Regular registration: 60,000 Japanese Yen (JPY) per person.

Early registration: 50,000 JPY before August 5, 2014 at the same conditions as the Regular registration.

Regular student rate: 35,000 JPY per person. **Early student rate:** 30,000 JPY before August 5, 2014 at the same conditions as the Regular student rate. A student ID is necessary to apply this fee.

Banquet: 6,000 JPY per person. (September 4 18:00-20:00 • Hotel Nikko Niigata)

Conference excursion: 2,500 JPY per person. (September 4 14:30-17:30 • North Culture Museum (a wealthy landowner's house of the olden days))

Accommodation:

For details on accommodation and hotel reservation, please visit the conference web site.

Access information:

TOKI MESSE (Niigata Convention Center), 6-1 Bandaijima, Chuo-ku, Niigata City, Niigata 950-0078, Japan.

(15 min. by buss, 5 min.by taxi, or 20 min. by walk from Niigata Station to TOKI MESSE)

<http://www.tokimesse.com/english/access/index.html>

Niigata City is the main island's first ordinance-designated city on the **west coast of Japan**. Niigata City's transportation infrastructure is equipped with an international airport and harbor, bullet train, and a network of highways. It takes **2 hours from Tokyo Station by bullet train (Joetsu Shinkansen)** or **an hour from Narita Airport by airplane**. Niigata City also has a rich natural environment with many bodies of water, including two large rivers, lagoons and wetlands. The fertile fields of the vast Echigo Plain produce a multitude of rice-based products and agricultural produce. You can enjoy good food and sake in the urban port city of Niigata.

Joetsu Shinkansen from Tokyo to Niigata

<http://www.jreast.co.jp/e/routemaps/joetsushinkansen.html>

Flight information of Niigata Airport

<http://www.niigata-airport.gr.jp/flight/?lang=en>

