

Symposium A-3. Superconducting Materials and Applications

(3rd Bilateral MRS-J / E-MRS symposium)

Kyoto University, Japan Aug. 27 (Sun) - Sep. 1 (Fri), 2017

<http://www.iumrs-icam2017.org>

IMPORTANT DATES

- Abstract Submission Due
Feb. 28, 2017
- Notification of acceptance
Mar. 20, 2017
- Early bird registration due
Jun. 20, 2017
- Online registration closes
Aug. 14, 2017

CALL FOR PAPERS

SCOPE: Superconducting materials are an enabling technology for future sustainable energy production, transport and storage, as well as for medical applications, novel electronic devices and fundamental research.

Over the last 30 years, several new medium- and high-temperature superconducting materials have been discovered (cuprates, MgB₂, Fe-based superconductors) while the materials science of classical superconductors, including the metallic superconductors Nb-Ti and Nb₃Sn, has progressed. However, the majority of applications are still based on low-T_c superconductors that require cooling by liquid helium. Great efforts are still required to discover new superconducting materials for practical applications and to develop more effective materials processing, micro-fabrication and cryogenic technologies. Moreover, identifying and improving vortex pinning mechanisms in superconductors is one of the major challenges nowadays for its relevance in applications requiring manipulation of flux quanta or enhanced critical currents.

This symposium aims to bridge the gap between materials science and applications of superconductors, while being aware of the importance of understanding the fundamental phenomena underlying these materials. It will be an intensive forum offering opportunities for scientists, engineers, researchers, and students to share their ideas, experiences, and latest research results.

TOPICS OF INTEREST

1. New and unconventional superconducting materials
2. Applications and devices based on superconducting materials
3. Correlation between the material structure and superconducting properties
1. Modelling, theoretical and computational studies of superconductivity
2. Thin films, multilayers, single crystals and melt-textured oxide high-T_c superconductors
3. Thin films, single crystals and bulk Fe-based superconductors
4. Recent advances in Nb₃Sn, MgB₂ and other intermetallic superconductors
5. Coated conductors, wires, tapes and cables for practical applications
6. Vortex pinning, critical currents, anisotropy and other properties relevant for applications

ORGANIZING COMMITTEE

- Representative:** P. Mele (Murooran IT, Jp), J. Hänisch (Kalsruhe IT, Ger)
- Correspondence:** K. Iida (Nagoya U, Jp), C. Tarantini (FSU, USA)
- Organizers:** S. Arisawa (NIMS, Jp), A. Yamamoto (TUAT, Jp), K. Prassides (Tohoku U, Jp), S. Horii (Kyoto U., Jp), M. Miura (Seikei U, Jp), T. Endo (Gifu U, Jp), N. Iwata (Nihon U, Jp), K. Endo (Kanazawa IT, Jp), Y. Ma (CAS, Chn), M. Ainslie (U Cambridge, UK), A. Palau (ICMAB-CSIC, Barcelona, Sp), M. Eisterer (TU Wien, Aut), S. Lee (GIST, Kor), A. Weidenkaff (U Stuttgart, Ger)

KEYNOTE SPEAKERS:

- L. Civale (LANL, USA), J. Durrell (U Cambridge, UK), M. Eremets (MPI, Ger), C. Ferdeghini (U Genova, It), M. Golden (U Amsterdam, Ned), B. Holzapfel (Karlsruhe IT, Ger), F. Kametani (ASC, USA) P. Seidel (U. Jena, Ger.), K. van der Beek (Ecole polytechnique, Paris, Fr), X.X. Xi (Temple U, USA)

INVITED SPEAKERS :

- R. Arita (RIKEN, Jp) P. Baker (ISIS, UK) J. Bernardi (TU Vienna, Aut) M. Capone (SISSA, It) G. Celentano (ENEA, It) S. Chen (UPM, Mal) N. Chikumoto (Chubu U, Jp) T. Doi (Kyoto U, Jp) X. Dong (Inst. Phys. CAS, Chn) D. V. Efremov (IFW Dresden, Ger) H. Eisaki (AIST, Jp) J. Gazquez (ICMAB-CSIC Barcelona, Sp) A. Goldoni (Elettra, It) V. Grinenko (IFW Dresden, Ger) H. Hiramatsu (Tokyo IT, Jp) T. Horide (Kyushu IT, Jp) R. Hühne (IFW Dresden, Ger) M. Inoue (Kyushu U, Jp) K. Ishida (Kyoto U, Jp) T. Ishida (Osaka PU, Jp) T. Izumi (AIST, Jp) J. Jiang (ASC, USA) S.-G. Jung (Sung Kyun Kwan U, Kor) H. Kumakura (NIMS, Jp) Y. S. Kwon (DGIST, Kor) S. Lee (SuperOx, Jp) B. Maiorov (LANL, USA) A. Malagoli (CNR-Spin, It) K. Matsumoto (Kyushu IT, Jp) M. Miryala (SIT, Jp) L. Miu (NIMP, Bucharest, Rom) J. Mizuki (Kwansei GU, Jp) P. Moll (MPI, Ger) N. Momono (Murooran IT, Jp) A. Morawski (Pol. Acad. Sci., Pol) M. Nohara (Okayama U, Jp) K. Osamura (RIAS, Kyoto, Jp) A. Pan (Wollongong U, Aus) P. Paturi (U Turku, Fin) J. Robinson (U Cambridge, UK) S. Ruoß (MPI, Ger) M. Sakoda (Tokyo UAT, Jp) J. Shiogai (Tohoku U, Jp) Y. Takano (NIMS, Jp) M. Tian (HMField Lab CAS, Chn) J. Villegas (CNRS, Fr) S. Wimbush (Robinson RI, NZ) J. Wu (Kansas U, USA) C. Yao (IEE CAS, Chn), X. Yao (Shanghai JT U., Chn) Y. Yoshida (Nagoya U, Jp) and more!

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Designed by S. Horii