

Preface to Special Topic: International Symposium on Integrated Functionalities 2012, Hong Kong, June 17-21 2012

Cite as: J. Appl. Phys. **114**, 026901 (2013); <https://doi.org/10.1063/1.4812228>

Submitted: 27 March 2013 . Accepted: 25 April 2013 . Published Online: 09 July 2013

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Preface to Special Topic: International Symposium on Integrated Functionalities 2012, Hong Kong, June 17-21 2012

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(Received 27 March 2013; accepted 25 April 2013; published online 9 July 2013)

[<http://dx.doi.org/10.1063/1.4812228>]

This special issue of Journal of Applied Physics focuses on publishing selected papers from the International Symposium on Integrated Functionalities (ISIF). The ISIF 2012 was held in the summer time at The Hong Kong Polytechnic University, and more than 250 participants from more than 25 countries presented papers. The technical program featured oral and poster presentations of high quality covering a broad range of topics on the science and technology of multifunctional materials and applications to a new generation of multifunctional devices.

The International Symposium on Integrated Functionalities (ISIF), previously well-known as International Symposium on Integrated Ferroelectrics (ISIF), has been held every year since its creation in 1987, initially at two main sites (Colorado Springs and Monterey in the USA), and in later years was held in sites in Europe and Asia. The ISIF has gathered researchers and engineers from academia, national laboratories, and industry, initially focused on fundamental and applied science of ferroelectric and high-dielectric constant thin films, materials integration, and design & fabrication of advanced devices, such as non-volatile ferroelectric

random access memories (FeRAMs), ferroelectric thin film-based tunable microwave components and devices, sensors, photovoltaic ferroelectrics for solar cells, and micro-electro-mechanical and nano-electro-mechanical systems (MEMS/NEMs).

The ISIF conference has broadened its scope to address the scientific and technological paradigm shift towards inclusion of additional exciting scientific topics and technologies involving new multifunctional materials (e.g., nanocarbons, polymers) in addition to the multicomponent oxides (ferroelectrics, high-dielectric constant oxides, piezoelectrics) for applications to a new generation of multifunctional devices in electronics, renewable energy systems, and biomedical devices among other emerging scientific and technological fields. The ISIF 2012 was held in Hong Kong from June 18 to 21, 2012 and attracted researchers from academia, national laboratories, and industry from all over the world. This focus issue contains some selected papers from the conference.

We express our appreciation to all participants for the high standards achieved, and we look forward to ISIF-25 in Dallas in 2013.