

Contents lists available at [ScienceDirect](http://www.sciencedirect.com)

Materials Science and Engineering R

journal homepage: www.elsevier.com/locate/mser

Special issue editorial

The 3rd IEEE International NanoElectronics Conference (INEC) held in City University of Hong Kong from January 3 to 8, 2010 was one of the most successful of its kind and attended by more than 800 scientists, engineers, and practitioners. In particular, more than forty of the best known and most prominent scientists in the fields gave plenary and invited talks about the current state-of-the-art and future prospects of nanoscience and nanotechnology. Extensive research on nanomaterials has unveiled many interesting and promising materials properties for novel applications in electronics, photonics, and biology. To realize the full potential, it is necessary to cross the chasm between nanomaterials and nanodevices and their applications, and this effort will require a multi-disciplinary approach combining research in materials design, processing, modeling, characterization, and metrology. Commercialization of nanotechnology is also important to fuel future research. In order to reap the full benefits of this conference and identify various paths between fundamental research and potential electronic, photonic,

and biological applications, plenary and invited speakers were invited to contribute comprehensive review articles to this special issue. The 19 review papers in this special issue discuss the current status and identify future research needs so that nano-research can be brought closer to its immense potential.

As editor of this special issue, I sincerely thank SS Lau, editor, for making it a reality. My sincere gratitude also goes to Brian Korgel, Tom Kuech, Steve Pearton, Rick Register, and Franky So, who handled the refereeing as guiding editors, as well as contributors and reviewers of these articles.

Paul K. Chu Special Issue Editor
City University of Hong Kong, Hong Kong
E-mail address: paul.chu@cityu.edu.hk

Available online 14 July 2010