Journal of Nanomaterials

Special Issue on

Applications of Advanced Nanomaterials to Microelectronic and Photonic Devices

Call for Papers

Nanomaterials which provide one of the greatest potentials for improving performance and extended capabilities of products in a number of industrial sectors are a new class of materials, having dimensions in the 1~100 nm range. Nanostructures can be divided into zero-dimensional, one-dimensional, and two-dimensional ones based on their shapes. The recent emphasis in the nanomaterials research is put on 1D nanostructures at the expense of 0D and 2D ones, perhaps due to the intriguing possibility of using them in a large number of short-term future applications. The most successful examples are seen in the microelectronics, where "smaller" has always meant a greater performance ever since the invention of transistors (e.g., higher density of integration, faster response, lower cost, and less power consumption).

In recent years, applications of advanced nanomaterials on microelectronic and photonic devices have been a highly developing field, due to the flexibility and light weight for daily use, which has the potential to be deployable. Thus, we invite investigators to contribute original research articles as well as review articles that will stimulate the continuing efforts to understand the microelectronic and photonic devices with nanostructure. Potential topics include, but are not limited to:

- Recent development in nanostructures with new optical and photoelectric properties
- Nanoparticles, nanowires, or nanosheets: preparation and applications
- Nanostructures for microelectronic and photonic Devices applications
- Nanostructures for energy applications
- Combinatorial methods for photoactive material design and optimization

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Manuscript Due	Friday, 25 July 2014
First Round of Reviews	Friday, 17 October 2014
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