Special Issue

Semiconductor Nanowires: Properties and Applications

Message from the Guest Editors

Semiconductor nanowires is an important research area. Nanowires have promising applications for optoelectronics including LEDs, lasers, solar cells and microelectronics as each individual nanowire can be a complete device if control over nanowire growth can be achieved. Nanowire device applications rely on control over crystal structure, composition (in the case of ternary or quarternary semiconductors), doping, precise control over heterostructure interfaces or junctions for doped nanowires, radial and axial growth.

Apart from the growth issues, semiconductor devices face their own challenges, in particular electrical contact formation, limited by their small dimensions in an array or individually as a standalone p-n junction or as a channel within field effect transistors (FETs). Nanowire research has pushed the boundaries in characterisation techniques.

In this special issue, we invite submissions of original research papers as well as review articles on semiconductor nanowire growth, synthesis, characterisation, device fabrication and characterisation.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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