Special Issue

Semiconductor Nanowire Devices and Applications

Message from the Guest Editors

This special issue of *Materials* focuses on semiconductor nanowires, hosting a manuscripts collection on different aspects of nanowire physics and technology. The unique properties of nanowires, including large aspect ratio and surface area, strain relaxation allowing for uncharted material combinations, crystal phase engineering and facile quantum confinement, make these nanomaterials of rising interests for applications. Semiconductor nanowires bear in fact enormous potential as building blocks for next generation devices in different fields including electronics, optoelectronics, energy harvesting and sensing at the nanoscale.

Nanowire researchers are invited to contribute with original research paper as well as review-style articles on technological and scientific aspects - both experimental and theoretical - of semiconductor nanowires.

Main topics include: nanowire synthesis and growth modeling;
advanced microscopies/spectroscopies;
study of structure-properties relation; phonon engineering;
electronic and optoelectronic devices; gated devices based on nanowires; transport phenomena;
sensing and chem-FETs.

Guest Editors

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Prof. Giovanni Pennelli

Prof. Dr. Antonio Polimeni

Deadline for manuscript submissions

closed (31 March 2022)

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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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