

Special Issue

Advances in Nanowires: Growth, Properties and Applications

Message from the Guest Editor

The past decade has witnessed a continuous boom of research in nanowires. While phenomenal progress has been made in nanowire research with various material systems, this Special Issue intends to capture the exciting process in semiconductor group-III nitride nanowires throughout the process, from materials synthesis to device applications. Group-III nitrides include InN, GaN, and AlN. The uniqueness of this material system is the ultrawide, direct, and tunable bandgaps, making them highly suitable for both photonic and electronic device applications. In the past decade, large-scale epitaxial tools have been utilized in the synthesis of group-III nitride nanowires, which makes it possible to produce wafer-scale devices which are more compatible with modern semiconductor device processing. A wide range of substrates have been used, such as Si, diamond, graphene, and flexible metal foils. A wide range of photonic devices have also been developed. While this Special Issue mainly focuses on experiments, theoretical studies on nanowire structures showing interesting physical properties will also be considered for submission.

Guest Editor

Dr. Songrui Zhao

Department of Electrical and Computer Engineering, McGill University, Montreal, QC H3A0E9, Canada

Deadline for manuscript submissions

closed (20 June 2023)



Materials

an Open Access Journal
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Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



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Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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About the Journal

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.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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