Special Issue

Nanostructured Porous Silicon: Fundamentals and Applications

Message from the Guest Editor

In 1990, Canham observed the visible photoluminescence phenomenon of nanostructured porous silicon (PSi) at room temperature. Later, by adjusting the parameters of the relevant electrochemical process, including electrolyte composition and manufacturing current density, a variety of nanostructured PSi with different surface morphologies have been proven efficient to increase the functionality in photoanode for water splitting applications. This special issue mainly hopes that researchers can contribute their research work on nanostructured PSi, including fundamental problems and related applications. It will be helpful to collect different ways to fabricate nanostructured PSi in one special issue. Also surface-modified PSi with different functionality used in optical measurement systems, such as Raman and biosensor, is another interesting topic here. The research areas of nanostructured PSi with improved photoelectronics, thermoelectrics, and photoelectrochemistry are highly appreciated for contributing to this special issue. Related research on silicon nanostructures, such as silicon nanowires, is also very welcome.

Guest Editor

Dr. Vincent K.S. Hsiao
Department of Applied Materials and Optoelectronic Engineering, National Chi Nan University, Puli Township, Nantou 54561, Taiwan

Deadline for manuscript submissions

closed (20 October 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
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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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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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