Special Issue

Supercapacitors: Emerging Electrode and Electrolyte Materials

Message from the Guest Editors

Supercapacitor emerged as an electrochemical power source used in different applications from portable electronics to hybrid vehicles. Research efforts has been put toward the development of the novel electrode and electrolyte materials. Starting from carbon based electrode materials to transition metal oxides, 2D materials and hybrid materials we have come a long way to extend the scope of improvement for charge storage. Main focus is toward improvement of charge storage capacity by tuning the structure, morphology, and surface area and conductivity. Electrolyte is an important part of supercapacitor and affects the device performance. To address the progress in the research and development of supercapacitor electrode/electrolyte materials.

This special issue covers the theoretical and experimental work dealing with novel electrode and electrolyte materials. We invite you to submit the research and review articles on, but not limited to, the following topics:

- Carbon based materials;
- Transition metal oxides;
- 2D semiconductor materials;
- Hybrid materials;
- Polymer electrolytes (gel/solid);
- Conducting polymers.

Guest Editors

Dr. Anurag Gaur

Department of Physics, Netaji Subhas University of Technology (NSUT), Delhi, India

Dr. Anil Arya

Department of Physics, Kurukshetra University, Kurukshetra, India

Deadline for manuscript submissions

closed (20 November 2023)

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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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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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