Special Issue

Electrochemical Applications of Carbon Materials

Message from the Guest Editors

This Special Issue welcomes both original research articles and comprehensive review papers. Topics of interest include, but are not limited to, the areas outlined below.

- Synthesis, processing, and functionalization of carbon materials for electrochemical applications.
- Structure–property–performance relationships in carbon-based electrochemical materials.
- Carbon-based electrode materials for lithium-ion, sodium-ion, lithium–sulfur, and next-generation battery systems.
- Carbon materials for supercapacitors and hybrid energy storage devices (e.g., battery–supercapacitor hybrids).
- Carbon-supported or carbon-based electrocatalysts for fuel cells, water electrolysis (HER/OER), and CO2 electroreduction.
- Advanced characterization techniques (e.g., in situ/operando spectroscopy and electron microscopy) for carbon electrochemical materials.
- Carbon materials for electrochemical sensors and environmental remediation (e.g., pollutant degradation and water purification).
- Computational modeling and theoretical studies (e.g., DFT calculations and machine learning) of carbon-based electrochemical materials.

We look forward to receiving your valuable contributions.

Guest Editors

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About the Journal

Message from the Editorial Board

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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