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Design and Characterization of Energy Catalytic Materials

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Deadline for manuscript submissions:
closed (20 April 2024)

Message from the Guest Editors

The rapid growth of global energy demand has greatly promoted the utilization of various energy systems and the development and transformation of energy catalytic materials. Photocatalysis, electrochemical catalysis, thermal catalysis, and photo–electrochemical/thermal coupled catalysis systems offer potential routes to address the increasing environmental and energy-related issues. The Special Issue, Design and Characterization of Energy Catalytic Materials, will include a comprehensive overview and in-depth research paper addressing recent progress in energy catalysis. Studies of advanced characterization techniques and design methods in this field are highly encouraged.

Potential topics include, but are not limited to:

- Photocatalysis;
- Electrochemical catalysis;
- Photo-electrochemical/Photo-thermal catalysis;
- Carbon dioxide reduction;
- Hydrogen evolution;
- Nitrogen reduction;
- Fuel cells;
- Hydrogen peroxide production;
- Pollutants removal;
- Biomass conversion;
- Thermodynamics;
- In situ techniques;
- Fabrication methodology.

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Special Issue

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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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