Special Issue

Perovskite Nanomaterials for Energy-Related Applications

Message from the Guest Editor

Supplying energy to meet the growing demand is among the most critical scientific challenges nowadays. Developing renewable and clean sources of energy is therefore essential to move towards a sustainable world. Perovskite solar cells have taken the world of photovoltaics with efficiency beyond 25% in just over a decade. Their remarkable optoelectronics properties coupled with ease of processing from solution at room temperature could enable mass production. However, the exact physical properties behind material and device functioning, along with the nanoscale morphology of the film are not yet fully understood. Moreover, hybrid perovskite nanomaterials suffer from rapid degradation upon exposure to water, oxygen, and heat, a challenge to tackle to with established PV technologies. This Special Issue is devoted to the applications of hybrid perovskite materials for photovoltaic devices and to the exploration of their optoelectronic characterization at the nanoscale. Particularly welcome will be original, in-depth studies on the stability of those cells and on the fundamental understanding on the structure-function relationship and mitigations strategy of degradation mechanisms.

Guest Editor

Dr. Giulia Grancini

Department of Chemistry and INSTM, University of Pavia, 27100 Pavia, Italy

Deadline for manuscript submissions

closed (16 August 2021)

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/59178

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

mdpi.com/journal/energies

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/journal/energies

About the Journal

Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Industrial Engineering, University Niccolò Cusano, 00166 Roma, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

CiteScore - Q1 (Control and Optimization)

MDPI