



## Solar Energy Storage: Materials, Devices, Designs and Systems Level

Guest Editor:

**Dr. Ashim Gurung**

Department of Electrical  
Engineering and Computer  
Science, 1250 8th st, South  
Dakota State University,  
Brookings, SD 57007, USA

Deadline for manuscript  
submissions:

**closed (31 August 2022)**

### Message from the Guest Editor

Dear Colleagues,

For this Special Issue, we encourage the submission of relevant papers (communications, full research articles, review articles) on designs that implement solar energy storage focusing on device (materials, processes, device architectures and structures) and system level (microgrids), aiming at better performance and a lower cost.

We encourage the submission of papers exploring material, device, and system levels. Potential topics include but are not limited to:

- Solar/battery combination or architecture;
- Solar/supercapacitor combination or architecture;
- High-efficiency solar cells (silicon, thin films, perovskites, organic);
- High-energy and -power-density energy storage (batteries: lithium-ion, solid-state, beyond Li-ion; supercapacitors: EDLC, pseudo, hybrid; Li-ion capacitors);
- Solar storage and battery charging algorithms for performance optimization;
- System-level design, operation, and control of solar-storage for microgrid optimization.

Dr. Ashim Gurung

*Guest Editor*





# energies



an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Enrico Sciubba**

Department of Mechanical and Industrial Engineering, University Niccolò Cusano, 00166 Roma, Italy

## 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.

## 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 Compindex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

**Journal Rank:** CiteScore - Q1 (Control and Optimization)

## Contact Us

---

*Energies* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/energies](http://mdpi.com/journal/energies)  
[energies@mdpi.com](mailto:energies@mdpi.com)  
[X@energies\\_mdpi](https://twitter.com/energies_mdpi)