

## Special Issue

# Advances in the Design and Application of Solar Energy in Buildings

### Message from the Guest Editor

Advances in solar energy utilization in buildings encompass a broad spectrum of topics, from photovoltaic (PV) and solar thermal systems to hybrid approaches that enhance energy efficiency and thermal comfort.

This Special Issue aims to present recent advancements in the design, modeling, and application of solar energy technologies in buildings. We welcome original research articles, reviews, and case studies that address key challenges and innovations in this field, including but not limited to the following:

- Integration of photovoltaic (PV) systems in building envelopes (BIPV, BAPV);
- Solar thermal energy storage and its applications in heating and cooling;
- Hybrid solar energy systems combining PV, solar thermal, and heat pumps;
- Advanced materials and coatings for enhanced solar energy absorption;
- Passive solar design strategies for energy-efficient buildings;
- Phase change materials (PCMs) for thermal energy storage in solar applications;
- Techno-economic and environmental assessments of solar-powered buildings;
- Smart control systems and optimization of solar energy utilization;
- Case studies of net-zero energy buildings (NZEBS) and solar-powered districts.

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### Guest Editor

Dr. Barbara Król

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### Deadline for manuscript submissions

30 September 2025



## Energies

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## 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.

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### Editor-in-Chief

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