

## Special Issue

# New Technologies in Photovoltaic Solar Cells

### Message from the Guest Editor

Photovoltaics (PV) solar cells are an exciting and promising approach for sustainable and clean renewable energy generation, offering different approaches in terms of device PV system design, modelling, fabrication, and analysis for conversion efficiency improvement. For sustainable PV systems, nano-structured solar cells have a great potential to reduce the cost by eliminating wafer slicing and reducing material consumption by a factor of higher than ten. The current progress of PV systems is causing the demand for silicon wafers to outstrip the capacity to supply, creating a market entry opportunity for PV technology and nano-structured PV cells. For large-area devices required for realistic applications, a proper understanding of the processes can assist in achieving high conversion efficiency for different nano-structured or PV cells. Research and development are focusing on new, exotic, and simple materials and devices, providing sustainable energy systems. However, there is a need to pursue simple manufacturing processes for PV in a focused manner.

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### Guest Editor

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### Deadline for manuscript submissions

closed (25 March 2026)



## Energies

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*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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