

Special Issue

Next-Generation Solar Energy Systems for Sustainable Power and Heat Recovery

Message from the Guest Editors

Photovoltaic systems are central to the transition to sustainable and low-carbon energy systems. While crystalline silicon remains the dominant technology, research is opening new directions in relation to tandem solar cells, bifacial modules, building-integrated photovoltaics (BIPV), and hybrid photovoltaic–thermal (PV/T) solutions. These advances are reinforced by progress in materials science, energy harvesting, and modelling approaches that optimize system design and integration. This Special Issue is dedicated to advanced PV research and applications, with emphasis on innovative cell architectures, the durability and recycling of modules, hybrid concepts that combine power generation with heat recovery, and analyses linking PV technologies to economic and policy frameworks. We also encourage contributions that underline the role of energetic education and new modelling strategies in developing integrated solar systems. By collecting a wide range of perspectives, the Special Issue seeks to provide a clear picture of the evolving role of photovoltaics as a leading renewable technology, as well as its integration into efficient, resilient, and sustainable energy systems.

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Deadline for manuscript submissions

16 August 2026



Sustainability

an Open Access Journal
by MDPI

Impact Factor 3.3
CiteScore 7.7



mdpi.com/si/258000

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Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in Sustainability, an international open access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full articles) and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

Editor-in-Chief

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