

# Special Issue

## Advanced Solar Building Technology

### Message from the Guest Editors

Presently, buildings have become one of the main contributors to global energy consumption, and their energy consumption has reached one-third of that of total global consumption, with almost 28% of the global annual greenhouse gas emission coming from the building sector. To cope with this situation, the development of renewable energy technology, such as solar energy, is an effective and promising solution to dealing with the global energy crisis. Solar building technology not only contributes to a reduction in fossil fuel usage but also accelerates the realization of dual-carbon targets, making them suitable for residential building applications. Critical review articles, original research, and case studies are welcome in this Special Issue, covering relevant up-to-date topics related to the prospects of solar building technology. This Special Issue aims to present and disseminate the most recent advances related to the theory, design, analysis, modelling, optimization, and application of all types of effective and promising solutions to dealing with the global energy crisis.

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### Guest Editors

Dr. Yang Cai

Dr. Weiwei Wang

Prof. Dr. Fuyun Zhao

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### Deadline for manuscript submissions

closed (20 June 2025)



## Buildings

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*Buildings*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[buildings@mdpi.com](mailto:buildings@mdpi.com)

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## About the Journal

### Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

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### Editor-in-Chief

Prof. Dr. David Arditi

Construction Engineering and Management Program, Department of Civil, Architectural, and Environmental Engineering, Illinois Institute of Technology, 3201 South Dearborn Street, Chicago, IL 60616, USA

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

#### Journal Rank:

JCR - Q2 (Construction and Building Technology) /  
CiteScore - Q1 (Architecture)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.9 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).