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.

Guest Editors

Dr. Yang Cai
Dr. Weiwei Wang
Prof. Dr. Fuyun Zhao

Deadline for manuscript submissions

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Buildings
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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.

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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