Special Issue

Advances in High-Performance Buildings: Comfort, Energy Efficiency and Sustainability Opportunities

Message from the Guest Editors

Given the challenging goal of achieving climate neutrality by 2050, and considering that the construction sector is responsible for a significant amount of the global energy consumption and GHG emissions, the need for innovative and sustainable strategies to improve building efficiency while enhancing both indoor and outdoor comfort levels is crucial. Furthermore, in the near future, buildings should not only meet higher energy performance standards, but also serve as opportunities for renewable energy production. In this context, the present Special Issue aims to explore new opportunities in the application of advanced techniques for both new and existing buildings. This includes leveraging analyses conducted at various scales, from building materials to the urban level. This Special Issue welcomes original research articles and reviews. Research areas may include (but are not limited to) the following: 1. Low-impact building materials; 2. Microclimate mitigation strategies; 3. Renewable energy systems and PtX for buildings; 4. Occupants' environmental comfort. We look forward to receiving your contributions.

Guest Editors

Prof. Dr. Franco Cotana

Dr. Veronica Lucia Castaldo

Dr. Ilaria Pigliautile

Deadline for manuscript submissions

20 August 2025

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/211531

Applied Sciences
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

mdpi.com/journal/applsci

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/journal/applsci

MDPI

About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

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

Journal Rank:

JCR - Q1 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)