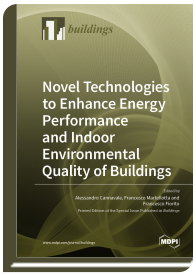
buildings

IMPACT FACTOR 3.1

CITESCORE 3.4

*Special Issue Reprint*

# Novel Technologies to Enhance Energy Performance and Indoor Environmental Quality of Buildings




www.mdpi.com/books/reprint/4530

Edited by
Alessandro Cannavale
Francesco Martellotta
Francesco Fiorito

ISBN 978-3-0365-2339-2 (Hardback)
ISBN 978-3-0365-2340-8 (PDF)

This SI aims at reporting current investigations on emerging materials and devices taking up the challenge of pursuing a significant improvement in the energy performance of buildings and indoor comfort. What is the contribution of innovative technologies in the epochal transition to low environmental impact buildings? This is the question addressed in this SI, in order to offer a wide and heterogeneous amount of data to readers, along with results of high scientific impact concerning the application of innovative technologies in construction. The 2015 Paris Agreement on climate change following the COP 21 Conference on Climate Change, organized by United Nations, required the States to reduce carbon emissions in the building stock. In the European Union, almost 50% of final energy consumption is used for heating and cooling; out of this huge amount, 80% is used in buildings. It makes sense, then, that the Union's goals are inherently linked to the real effort to renovate the building stock. To do this, in the EU and worldwide, the priority is to enhance energy efficiency, by deploying low-cost renewable energies and innovative technologies, especially those derived from recent achievements in the field of nanomaterials research, with special reference to building integration of novel technologies, spanning from chromogenics to semitransparent photovoltaics, super-insulating materials, and phase change materials. Articles here proposed deal with every construction or plant component of the building ng advantage of novel technologies to improve their performance, from the tructures, HVAC, and other technical systems, as well as indoor climate ildings and indoor environmental quality (IEQ), as well as visual comfort indoors.

# MDPI Books

Publishing Open Access Books & Series

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.

**Open Access**

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.

**Author Focus**

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.

**High Quality & Rapid Publication**

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.

**High Visibility**

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).

**Print on Demand and Multiple Formats**

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.

MDPI AG
Grosspeteranlage 5
4052 Basel
Switzerland
Tel: +41 61 683 77 34
www.mdpi.com/books
books@mdpi.com