Special Issue

Recent Scientific Developments in Building Envelope Materials

Message from the Guest Editors

The building envelope is an essential building component that serves to provide a comfortable and healthy indoor environment.....On-going scientific development of building envelope materials plays a critical role, not only towards ensuring compliance with codes and standards, but also to meet expected performance challenges arising from a changing climate and to fulfill their expected service life. Failure in satisfying functional performance requirements can lead to premature degradation of the building envelope, costly repairs, and health and safety risks to occupants. Moreover, scientific developments of building envelope materials are now needed to encourage low-carbon construction solutions. This Special Issue is intended to provide a platform for multidisciplinary researchers to highlight their contributions focused on the most recent developments in building envelope materials to achieve a sustainable and low-carbon future. For further reading, please follow the link to the Special Issue Website at: https://www.mdpi.com/journal/buildings/special_issues/ Scientific_Envelope

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Deadline for manuscript submissions

closed (31 December 2023)

Buildings

an Open Access Journal by MDPI

Impact Factor 3.1
CiteScore 4.4

mdpi.com/si/119924

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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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