

Special Issue

Advances in Composite Structures for Sustainable Building Solutions

Message from the Guest Editors

As global construction turns to low-carbon and high-performance strategies, composite structures have rapidly advanced, offering sustainable solutions. These advanced composite structures reduce material consumption, improve mechanical performance, and enhance durability. Yet, challenges remain: developing new composites, innovating structures, optimizing designs, and assessing long-term performance. This Special Issue, “Advances in Composite Structures for Sustainable Building Solutions,” aims to collect leading research across the full life cycle of composite structures. We welcome original articles and reviews that encompass a wide range of topics, including but not limited to:

- Development and application of novel composite materials;
- Innovation and performance of advanced composite structures;
- Analytical methods and design theories tailored to composite structures;
- Structural health monitoring of composite structures;
- Innovative applications of artificial intelligence (AI) for composite structures.

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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

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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).