



Advanced Materials and Systems for Low-Carbon Buildings

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Message from the Guest Editors

Dear Colleagues,

The objective of the Section “Advanced Materials and Systems for Low-Carbon Buildings” is to present cutting-edge research on materials and systems for low-carbon building applications. Due to the increasingly prominent energy and environmental problems, low-carbon development has been deeply rooted in today’s society, and low-carbon building application is an indispensable part of the realization of social low-carbon development. For low-carbon buildings, the research of advanced materials and advanced system concepts and design methods combined with solar energy, which is a renewable energy, is an important research topic.

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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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