

EDITORIAL

Open Access



Editorial: Low-carbon Materials and Green Construction

Xuwen Xiao¹, Surendra P. Shah^{2,3} and Jianzhuang Xiao^{1*}

Dear colleagues,

Welcome to the inaugural issue of *Low-carbon Materials and Green Construction (LMGC)*. This journal is a new international journal concerned with the materials and construction in civil engineering to cope with the challenges raised by climate change, together with resources and energy consumption, which is dedicated to the widest dissemination of high-quality original research and insights.

Low-carbon Materials and Green Construction plays a major role in the vigorous development of civil engineering, orienting the achievement of global sustainable development. Currently, there is an absence of journals devoted solely to publishing research and technological advances in the field of low-carbon civil engineering. We believe that this journal's scope is very critical and urgent concerning climate change issues, which could better promote the carbon emission reduction and the global sustainable development of civil engineering.

Tongji University, together with partner of China State Construction Engineering Corporation, will sponsor *Low-carbon Materials and Green Construction* as an international and open platform for researchers and engineers in the field of low-carbon civil engineering, which covers the intersection of materials, construction, environment and energy, and establish a bridge that can connect both industry and academia.

*Correspondence:

Jianzhuang Xiao
jzx@tongji.edu.cn

¹ Department of Structural Engineering, College of Civil Engineering, Tongji University, Siping Road 1239, Shanghai 200092, China

² University of Texas at Arlington, Arlington, TX, USA

³ Northwestern University, Evanston, IL, USA

Low-carbon Materials and Green Construction publishes creative and original research articles and review papers in the field of civil engineering within the context of a much broader multi-disciplinary scope. It focuses on the spatial-temporal dynamic evolution of building performances, structural behaviors, and carbon emissions within the structure-environment symbiosis. And the related carbon emission reduction and sustainability issues are also high concerned.

Targeted to be one of the flagship international journals, *Low-carbon Materials and Green Construction* welcomes submissions related to issues about new construction, renovation, maintenance, rehabilitation and recycling of civil engineering projects, which will cover the following topics (but not limited to):

- Construction materials innovation focusing carbon emission reduction
- Life cycle analysis of civil engineering
- Green construction design and implementation
- Structural design for climate change adaptation and mitigation
- Interactions between buildings and environment
- Methods for quantifying carbon emissions in the construction industry
- Building information modelling (BIM) in green construction
- Construction engineering automation and artificial intelligence (AI)
- Clean energy utilization and multi-energy coupling for buildings
- Deconstruction and reuse
- Waste disposal and recycling
- Construction robots and systems
- Construction big data and machine learning



- Integrated building services systems for built environment
- Sustainability evaluation on pavements and transportation infrastructures
- Carbon capture and storage technologies
- Carbon footprint and low carbon policy in buildings
- Construction on other planetary objects, such as the Moon and Mars

Low-carbon Materials and Green Construction has a renowned, interdisciplinary and international editorial board to maintain its high scientific standards. Our highly self-motivated editorial team will provide a high author satisfaction on paper submission and publishing experience. We sincerely invite you to submit your research work to this journal. For more detailed information, please refer to the following journal website: <https://www.springer.com/journal/44242>.

With the official publication of the inaugural issue of *Low-carbon Materials and Green Construction*, we would like to express our sincere gratitude to the editorial board members, authors, reviewers, and editorial office staff for their supports and contributions to the journal. We strongly believe that with the joint efforts from all researchers and research communities, *Low-carbon Materials and Green Construction* will achieve its visions very soon and establish a frontier chain containing all essential issues in the life cycle of civil engineering, lead and promote the progress of all issues to better achieve the harmony between human and nature.

Wish *Low-carbon Materials and Green Construction* much success for years to come!

Authors' contributions

The author(s) read and approved the final manuscript.

Declarations

Competing interests

The authors declare that they have no competing interests.

Published online: 01 February 2023

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.