

## Special Issue

# Advances in Low Carbon Concrete and Structures

### Message from the Guest Editors

The construction industry is undergoing a paradigm shift towards sustainability, with a particular focus on reducing carbon emissions associated with concrete production, construction activities, and structures. To this end, much more research endeavor is needed. We identify **NINE** key aspects benefiting the field: **(1)** low-carbon cement formulations; **(2)** alternative supplementary cementitious materials and aggregates; **(3)** optimization of concrete mixture for more sustainable or better durability; **(4)** innovative construction techniques such as 3D printing and prefabrication to improve construction efficiency; **(5)** carbon capture from industrial emissions and carbon sequestration in concrete; **(6)** innovations in carbon footprint reduction of construction activities such as adoption of green energy; **(7)** carbon footprint and cost estimation over the life cycle of materials and structures; **(8)** embracement of green structures through novel design, low-carbon materials, decarbonation techniques, and artificial intelligence; and **(9)** large-scale deployment and relevant regulations development. We are pleased to invite you to share your cutting-edge findings in this issue.

### Guest Editors

Dr. Wenyu Liao

Dr. Jihui Qin

Prof. Dr. Hongyan Ma

### Deadline for manuscript submissions

closed (20 July 2025)



## Materials

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### Message from the Editor-in-Chief

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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