Topical Collection

Advances in Enhancing Properties of Concrete, Mortar, Gypsum, and Plaster Materials

Message from the Collection Editors

Concrete, mortar, gypsum, and plaster are fundamental materials in construction, playing a crucial role in shaping modern infrastructure and architectural advancements. This Special Issue will explore recent advancements in concrete, mortar, and plaster, including novel material formulations, advanced manufacturing techniques, and the integration of smart technologies. It will provide a platform for cutting-edge research that contributes to the development of sustainable, high-performance, and resilient construction materials. We invite the submission of high-quality original research papers and comprehensive review articles addressing, but not limited to, the following topics:

- Innovative binder materials (e.g., geopolymers, alkaliactivated materials, fibre-reinforced composites);
- Low-carbon and eco-friendly binders;
- Durability and performance of novel materials;
- Recycled and waste-based materials in binder composites;
- Lifecycle assessment and sustainability evaluation;
- Characterisation studies on concrete, mortar, gypsum, and plaster in building construction.

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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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