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Microstructures and Durability of Cement-Based Materials

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Message from the Guest Editors

Dear Colleagues,

By understanding the microstructure of cement-based materials using the latest analytical techniques, it is possible to enhance our understanding of the mechanical properties and durability of cement-based materials, which are closely related to the microstructure of these materials. Therefore, topics of interest include but are not limited to the following:

The characterization of Portland cement-based materials and those derived from alternative binders;
Materials design for enhanced durability;
Cementitious composites including advanced nano- and bio-materials;
Hydration and microstructural formation;
Durability of cement-based materials (e.g., chloride attack, carbonation, sulfate attack, acid attack, alkali-silica reaction, freeze/thaw, and bio-degradation);
Durability and sustainability assessment;
Life cycle assessment.

The aim of this Special Issue is to showcase the latest research and advances in this area, particularly on the microstructures and durability of various types of cement-based materials. Original research papers, state-of-the-art reviews, communications, and discussions are welcomed.

Prof. Dr. Jeong Gook Jang
Dr. Solmoi Park
Guest Editors



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Special Issue



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Message from the Editor-in-Chief

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