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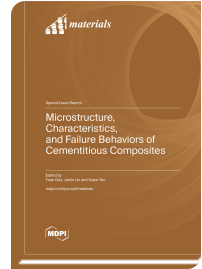


Special Issue Reprint

Microstructure, Characteristics, and Failure Behaviors of Cementitious Composites

www.mdpi.com/books/reprint/10150

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ISBN 978-3-7258-2511-0 (Hardback)
ISBN 978-3-7258-2512-7 (PDF)

Microstructural properties and failure behaviors of cementitious composites provide essential information about the underlying causes of their mechanical performance and durability. A systematic understanding of the microstructure and failure behaviors of cementitious composites can help us better analyze their mechanics and durability and optimize materials during the fabrication processes. Currently, many advanced technologies have been applied to characterize microstructure and failure behaviors of cement-based materials, including X-ray diffraction (XRD), scanning electron microscope (SEM), mercury intrusion measurement (MIP), energy-dispersive X-ray spectroscopy (EDS), acoustic emission (AE) and digital photography. These methods offer a great pathway to better investigate and assist in manufacturing high-performance cementitious composites. This Special Issue covers the topics of the microstructural and failure behaviors characterization of cementitious composites, as well as their mechanical properties, permeability, and durability investigation. We expect the publication of this topic to provide useful information for future studies on cementitious composite design.



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