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Special Issue Reprint

## Research on the Crack Control of Concrete

**Edited by: Lepeng Huang, Zuowei Liu and Lin Chen**

This Reprint presents a collection of recent research advances on the cracking mechanisms, durability evolution, structural performance, and prevention strategies of concrete materials. The contributions cover a broad range of topics, including early-age shrinkage modeling of internally confined concrete, moisture diffusion under varying environmental conditions, mixed-mode fracture propagation, strain-energy-based cracking load estimation, and probabilistic numerical modeling of large structural elements. The Reprint also includes studies on seasonal water–heat coupling effects in permafrost roadbeds and the early-stage mechanical properties of fiber-reinforced coral concrete. Together, these articles offer an updated perspective on experimental characterization, theoretical development, and computational modeling, reflecting ongoing efforts to better understand and predict the complex multi-physics behavior that governs concrete performance in engineering applications. This Reprint aims to support continued scientific inquiry and provide researchers with an integrated view of current progress in concrete mechanics and structural materials.

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