



Advances in Materials Science and Engineering

Special Issue on

Advanced Cementitious Materials: Mechanical Behavior, Durability, and Volume Stability

CALL FOR PAPERS

Several types of advanced cementitious materials, including fiber-reinforced concrete, eco-friendly concrete with mineral admixtures (i.e., fly ash, blast-furnace slag, silica fume, etc.), geopolymer concrete, (ultra)high-performance concrete, and self-consolidating concrete, were developed worldwide since the 1960s. Fiber-reinforced concrete is very suited for structures under flexure or tension due to its inhibition of crack propagation through fiber bridging. Eco-friendly/geopolymer concrete became very important in construction technology after the UN Climate Change Conference held in 2015. (Ultra)high-performance concrete may improve several shortcomings of ordinary concrete in terms of strength-to-weight ratio, ductility, durability, workability, and so forth. Self-consolidating concrete is an example of high-performance concrete improving workability.

This special issue aims to provide a comprehensive overview on cementitious materials, including aspects related to mechanical behavior, durability, and time dependent volume changes (e.g., shrinkage and creep). Authoritative review articles and original research papers describing recent findings in the field of advanced cementitious materials are expected to cover various topics.

Potential topics include, but are not limited to:

- ▶ Fiber-reinforced concrete
- ▶ Geopolymer concrete
- ▶ (Ultra)high-performance concrete
- ▶ Eco-friendly concrete with mineral admixtures
- ▶ Self-consolidating concrete
- ▶ Mechanical properties
- ▶ Durability
- ▶ Shrinkage
- ▶ Creep
- ▶ Strain-rate effects
- ▶ Rheology
- ▶ Fracture mechanics

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