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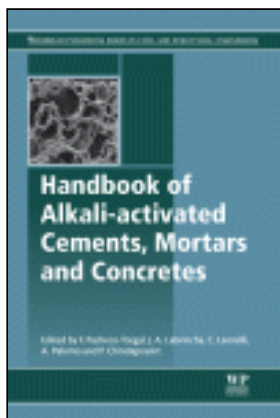
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Handbook of Alkali-Activated Cements, Mortars and Concretes

Edited by: F. Pacheco-Torgal, J. Labrincha, C. Leonelli, A. Palomo and P. Chindaprasit

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This book provides an updated state-of-the-art review on new developments in alkali-activation. The main binder of concrete, Portland cement, represents almost 80% of the total CO₂ emissions of concrete which are about 6 to 7% of the Planet's total CO₂ emissions. This is particularly serious in the current context of climate change and it could get even worse because the demand for Portland cement is expected to increase by almost 200% by 2050 from 2010 levels, reaching 6000 million tons/year. Alkali-activated binders represent an alternative to Portland cement having higher durability and a lower CO₂ footprint.

- Reviews the chemistry, mix design, manufacture and properties of alkali-activated cement-based concrete binders
- Considers performance in adverse environmental conditions.
- Offers equal emphasis on the science behind the technology and its use in civil engineering.

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