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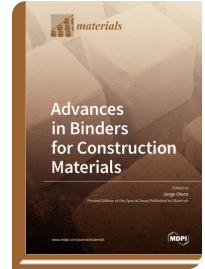
Advances in Binders for Construction Materials

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The global binder production for construction materials is approximately 7.5 billion tons per year, contributing ~6% to the global anthropogenic atmospheric CO₂ emissions. Reducing this carbon footprint is a key aim of the construction industry, and current research focuses on developing new innovative ways to attain more sustainable binders and concrete/mortars as a real alternative to the current global demand for Portland cement.

With this aim, several potential alternative binders are currently being investigated by scientists worldwide, based on calcium aluminate cement, calcium sulfoaluminate cement, alkali-activated binders, calcined clay limestone cements, nanomaterials, or supersulfated cements. This Special Issue presents contributions that address research and practical advances in i) alternative binder manufacturing processes; ii) chemical, microstructural, and structural characterization of unhydrated binders and of hydrated systems; iii) the properties and modelling of concrete and mortars; iv) applications and durability of concrete and mortars; and v) the conservation and repair of historic concrete/mortar structures using alternative binders.

We believe this Special Issue will be of high interest in the binder industry and construction community, based upon the novelty and quality of the results and the real potential application of the findings to the practice and industry.



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