Special Issue

Study of Hydraulic Binders: From Mixing to Setting

Message from the Guest Editor

Hydraulic binders are complex systems, where chemical equilibria and dissolution/precipitation reactions interplay with multiscale heterogeneity and surface interactions mediated by the interstitial pore solution. From mixing to the onset of setting the binder paste is very much a soft matter, the behavior of which is driven by the self-assembly of the precipitating hydrates and the hydrating particles. This complexity is ever more evident now with the flourishing of studies on new binder systems that attempt to reduce the environmental footprint of the building industry

This Special Issue illustrates the present status of comprehension of cement chemistry as well as of the different alkali-activated materials and binding systems that are being proposed. The goal is to highlight the differences and, above all, to find commonalities, in order to reconduct this highly specialized area into the mainframe of physical chemistry.

Guest Editor

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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