Special Issue

From Clay Minerals to Ceramics: Progress and Challenges

Message from the Guest Editors

The use of different types of clay for the manufacture of ceramics has been well-known since ancient times. The processes investigated include the pre-treatment of natural clay and extracting its finer parts, the selection of the type of clay according to the desired shape, the introduction of degreasing agents to control tensions and plasticity, the use of fluxing minerals, and so on.

The world of ceramics is evolving towards the sustainable use of raw materials, which leads to experimentation with the introduction of waste in their formulation, and research into the manufacture of glass ceramics and geopolymers.

Finally, clays are the most promising raw material as a complement to increase the reactivity of industrial, mining, construction, and demolition wastes so that they can be used for the production of new materials, such as geopolymers or supplementary cementitious materials. This application is important to reduce CO2 emissions produced during the manufacture of Portland cement. Given the above, there is still a lot of research to be carried out in the field of clays and their ceramic applications.

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Minerals welcomes submissions that report basic and applied research in mineralogy. Research areas of traditional interest are mineral deposits, mining, mineral processing and environmental mineralogy. The journal footprint also includes novel uses of elemental and isotopic analyses of minerals for petrology, geochronology and thermochronology, thermobarometry, ore genesis and sedimentary provenance. Contributions are encouraged in emerging research areas such as applications of quantitative mineralogy to the oil and gas, manufacturing, forensic science, climate change, geohazard and health sectors.

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