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The "Green Earths" Glauconite and Celadonite: From Genesis to Application

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Message from the Guest Editors

Authigenic "green earths" show a broad compositional spectrum, including potassic green clay with mica-like structures such as celadonite and glauconite and ferric illite, ferrous green clays and other phases. Celadonite and glauconite are comparable in physical, chemical and mineralogical characteristics. The micro-environment where these minerals form requires slightly oxygendepleted conditions, facilitating the uptake of Fe into the structure so that glauconite is ubiquitous in marine deposits while celadonite forms in both marine and nonmarine environments, more commonly by altering intermediate to mafic rocks. Recent studies show that there are subtle differences in their structure so different techniques can be applied to distinguish them. This is also important due to their application as pigments in creating artworks since antiquity.

The aim of this Issue is to bring together researchers from different fields (sedimentology, mineralogy, petrology, and archaeometry) to acquire new knowledge on their geological history and successive transformation as well as a more precise classification of the green pigments in heterogeneous samples.

Specialsue



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Message from the Editor-in-Chief

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