

## Thematic Session 15

### **Interaction between clay minerals and organic carbon: from natural clay-carbon compound to hybrid materials**

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This proposal for a thematic session in the 17<sup>th</sup> ICC is with regard to the interaction between clay minerals (CM) and organic carbon (OC). The interface reactions between CM and OC, as well as their products, organoclay, are widely present in natural environments such as soil, rock, water, and aerosol. The reactions, such as sorption and catalysis of OC occur on/by CM play an important role in the terrestrial and marine carbon cycle. The effects of CM for OC protection (*e.g.*, avoiding its decomposition by microorganisms) and for OC consumption (such as by catalysis) have been attracting increasing attention from many research domains focusing on mineralogy, soil science, environmental science, geochemistry, and ecology. Moreover, synthetic organoclay has found promising applications in the field of hybrid materials. Therefore, the abovementioned session aiming at provoking more research and discussion in interactions between CM and OC will be of general interest in the clay community.

**Keywords:** Clay minerals, Organic carbon, Interaction, Carbon cycle, Organoclay, Hybrid materials.

**Potential Journals:** Applied Clay Science, Minerals.

# Coupled Clay-Carbon Cycling

