

Thematic Session 27

Clay mineral reaction progress during burial diagenesis and very low-temperature metamorphism

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Basic research on the clay mineral reaction progress is indispensable to characterise better burial diagenesis and very low-grade metamorphic conditions. Phyllosilicates, may be useful indicators of a broad range of geological processes, from weathering, through diagenesis and very low-grade metamorphism to the hydrothermal alterations and retrograde retrogression. The session will focus on the phase alterations, clay mineral transformations (e.g. illitisation, chloritisation, kaolinitisation, smectitisation) to understand changes in physico-chemical conditions in various geological environments. All contributions using common techniques as well as introducing modified or new methods to identify, characterise, and quantify clay mineral reactions during burial diagenesis and very low-grade metamorphism are welcome.

Keywords: Illitisation, Chloritisation, Clay crystal growth and dissolution, Kinetics and thermodynamics of clay reactions, Methods of clay research.

Potential Journal: Clays and Clay Minerals.

