

MINERAL REACTION KINETICS: MICROSTRUCTURES, TEXTURES, CHEMICAL AND ISOTOPIC SIGNATURES

Conveners (alphabetical order)

R. Abart (University of Vienna), rainer.abart@univie.ac.at

W. Heinrich (GFZ Potsdam), whsati@gfz-potsdam.de

E. Ruiz-Agudo (Universidad de Granada), encaruiz@ugr.es

Advances in analytical techniques allow for retrieving chemical and isotopic composition, crystallographic orientation, and lattice strain at unprecedented accuracy and spatial resolution. Time series experiments and in-situ observation using atomic force microscopy, X-ray, synchrotron or spectroscopic methods allow for quantifying reaction rates in the laboratory. Through this new insights into the processes underlying mineral reactions are generated, and kinetic models are continuously refined. This is crucial for reading the petrogenetic information engraved in the mineralogical, microstructural and textural record of rocks. We invite researchers concerned with mineral reaction in all geological environments, including high temperature magmatic and metamorphic systems as well as the water-mineral interface at hydrothermal and ambient conditions. Contributions dealing with natural and synthetic materials as well as theoretical studies including both macroscopic and atomistic approaches are welcome.

