

## **Nanoscale contributions to terrestrial and extraterrestrial mineralogy**

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Minerals record isotopic and structural evidence that tells us about the nature, intensity or duration of geological processes (including metamorphism, weathering, and deformation). For many systems, the size of minerals and features which preserve evidence of these processes require a challenging sub-micrometer approach. This is made possible by the improvement of new high spatial resolution analytical techniques including Transmission Electron Microscopy, Atom Probe Tomography, STXM, TKD, NanoSIMS, TOF-SIMS, and many others which make it possible to extract chemical, isotopic and structural information at close to atomic scale. This session aims to bring together researchers focusing on the development and integration of “nanoscale” analytical techniques in terrestrial and extraterrestrial minerals to solve major geological and planetary issues.