

GEOCHRONOLOGY AND GEOCHEMISTRY OF SOLID EARTH

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Research in the Geochronology and Isotope Geochemistry group is focussed on the study of the origin and evolution of the solid Earth. In particular, geochemical tracers and cutting edge geochronological methods are used to get a better understanding of rock-forming processes as well as to characterize mineral resources and get insights into ore-forming processes. The newly equipped, state-of-the-art geochemical laboratory of the department of Earth Sciences at UNIMI allows investigating a large variety of geological processes by integrating in-situ dating of accessory mineral phases with elemental and isotope characterization of rocks and minerals. The following main research lines are developed by our workgroup:

- Geochronology of U- and Th-rich accessory minerals. In-situ U-Th-Pb dating is used to determine the tempo and duration of processes at different scales from the emplacement/eruption of individual igneous bodies to the tectonic evolution of orogens.
- Geochemistry of crustal rocks. Elemental and isotope fingerprinting is used to get insights into the genesis and evolution of the continental crust. This approach is used to study rocks going from ultramafic cumulates formed in subduction-related settings to high-silica granites and rhyolites formed during continental collision.
- Elemental and isotope characterization of economic reservoirs, with particular focus on Li and REE mineralization.
- Implementation of new analytical methods and methodological improvement.

We seek candidates interested in geochemistry and isotope geochemistry and keen to apply multi and interdisciplinary approaches to geological studies from field work to geochemical characterization and modelling.