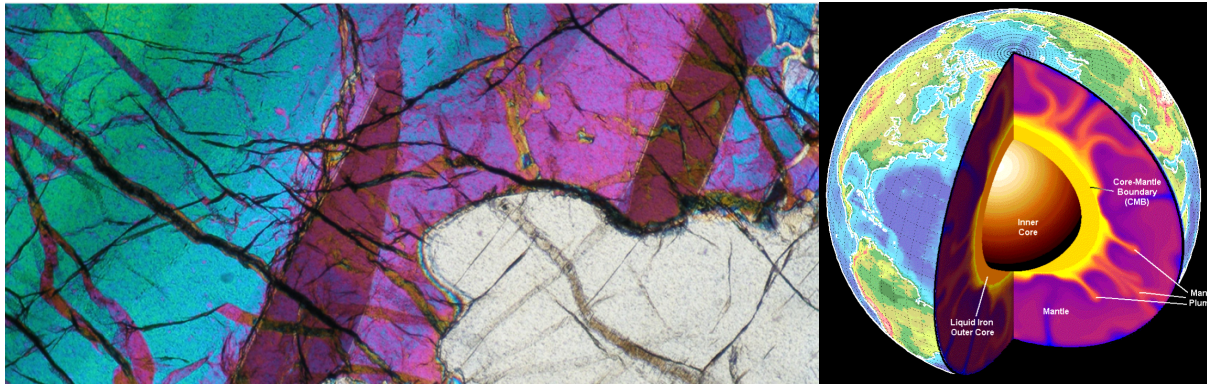


Chemical and geodynamic evolution of extensional and collisional plate margins



Genesis and evolution of the lithosphere in extensional environments and during deep recycling in subduction zones. Research developed in collaboration with national and international institutions and laboratories. Research lines:

- 1) Scale and origin of chemical and isotopic heterogeneities in the upper mantle (Principal Investigator: E. Rampone. Collaborations: Universities of Milano, LDEO-New York-USA, IGG-CNR-Pavia;).
- 2) Chemical exchange and mass transfer at oceanic peridotite/gabbro transition, through studies on Alpine/Apennine ophiolitic sequences (PI: E. Rampone. Collaborations: Universities of Milano, Pavia, Montpellier II, Toulouse III).
- 3) Melt migration and melt/rock interaction in extensional environments (PI: E. Rampone. Collaborations: Università di Milano, Pavia, Montpellier II).
- 4) Genesis and orogenic evolution of the continental lithosphere (PI: L. Gaggero. Collaborations: Universities of Sassari, Pavia, Modena, Milano Bicocca, BRGM-Francia, Zaragoza, Glasgow, SUPSI-CH).
- 5) Genesis and exhumation of high and ultrahigh pressure rocks, fluid and deformation channeling along the subduction plate interface (PI: M. Scambelluri. Collaborations: Universities of Milano, Montpellier II; Bern; Sorbonne Paris, Berlin, Boston College);
- 6) Volatile and fluid-mobile element transfer in subduction zones, deep carbon cycle (PI: M. Scambelluri. Collaborations: Universities of Melbourne; Bern; Milano, Lehigh- USA).
- 7) Elastic geobarometry of host-inclusion systems (PI: M. Scambelluri. Collaborations: Pavia University).
- 8) Seismicity in the subducting oceanic lithosphere (PI: M. Scambelluri. Collaborations: Universities of Padova and Utrecht).

Keywords: Mantle-crust chemical and isotopic exchange, melt-rock and fluid –rock interaction, extensional and subduction settings

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