

Present academic position

Professor of Mineralogy

ERC and CUN subfields

PE10_10 Mineralogy, petrology, igneous petrology, metamorphic petrology

PE10_11 Geochemistry, crystal chemistry, isotope geochemistry, thermodynamics

SC 04/A1 - SSD GEO/06

Education

Ph.D. in Mineralogy (Crystallography)

Graduate in Geological Sciences

Major research and expertise fields

- Crystallography and crystal-chemistry of minerals and their synthetic analogues, gemstones, structure-property relationships of minerals (or their synthetic counterparts) and their solid solutions. The diverse areas of research encompassed by this work include:

1) mineral physics: structure-property relationships of minerals and their solid solutions, in particular order-disorder processes, equations of state and phase transitions;

2) mineralogical crystallography: structure and chemistry of natural and synthetic open framework silicates and phosphates, and oxides;

3) detecting protons and/or structurally incorporated water in nominally anhydrous minerals;

4) industrial minerals; environmental and medical mineralogy;

- experimental expertise mostly focused on single crystal and powder diffraction, both with conventional X-rays and large-scale facility radiations (synchrotron X-rays and neutrons); Rietveld refinement;