UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Carbon and noble gases systematics in the Earth's interior

2526-1-124R-SCGA.17

Title

Carbon and noble gases systematics in the Earth's interior

Teacher(s)

Andrea Luca Rizzo

Language

English

Short description

The course provides advanced knowledge on the cycle of volatiles (in particular carbon and light noble gases) in the Earth's interior, in relation to geodynamics, volcanism and climate change. PhD students, through a multidisciplinary approach, learn the use of geochemical tracers (particularly isotopic ratios) in mantle and magmatic environments to constrain the origin of fluids. Attention will also be posed to the potential impact of magmatic/hydrothermal degassing on submarine ecosystems. There will be discussed some study cases representative of how volatiles isotopic signatures change in relation to i) terrestrial geodynamics, ii) the recycling of crustal material into the mantle, iii) the effect of magmatic degassing at mantle and crustal depths.

Final evaluation: at the end of the course a test will be administered to evaluate the knowledge acquired.

CFU / Hours

1 CFU - eight-hour lectures, in person, Delivered Didactics

Teaching period

II semester (September)

Sustainable Development Goals