



' CRYSTAL2PLATE '
Marie Curie Initial Training Network
in Earth Sciences



*In the frame of a new research and educational program of the European Community,
Geosciences Montpellier invites applications of highly motivated individuals
for a **PhD** position starting from October 1st, 2009*

Feedback between melt transport, melt segregation, and deformation in the mantle

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This Ph.D. project will couple a petro-structural and geochemical analyses of mantle rocks (in the field and in the lab) to numerical modeling to study the relations between melt transport/segregation and deformation in the mantle. Fine analysis of the microstructures in natural systems with variable melt-rock interactions will be used to constrain feedbacks between deformation and melt segregation. The candidate will test, for instance, different models for melt segregation during porous transport in the mantle by coupling a systematic analysis of compositions and microstructures of fertile lherzolites, layered pyroxenites, and websterites in peridotite massifs to theoretical models of melt transport in a viscoplastic medium. She/he will also characterize the changes in deformation mechanisms and resulting strength variations in presence of variable melt fractions by the analysis of the microstructures and crystal-preferred orientations in fertile and refractory peridotites. She/he will work in close collaboration with other PhD students of the CRYSTAL2PLATE network, as her/his results are to be implemented in geodynamic models that investigate the role of magmas and fluids on the erosion of the subcontinental mantle lithosphere (CRYSTAL2PLATE project 9) and on the dynamics of subduction (CRYSTAL2PLATE project 6) and ridge systems.

Requirements:

- Applicants cannot be French or have lived in France for more than 12 months in the last 3 years (EU mobility condition)
- Applicants must have strong quantitative skills, hold a degree in geosciences, physics or related subject, and be highly motivated to work in an international team.
- Applicants must be in the first four years of their research career. Time is measured from the date of award of the Master degree.
- Applicants must have excellent written and spoken English skills.

Employment conditions:

- Participation in the EU-funded international research and training network CRYSTAL2PLATE that composed by 7 major research groups in geodynamics (Montpellier, Bristol, Utrecht, ETH Zurich, FAST-Orsay, Roma 3, IACT-Granada)
- Full employment contract with social security, a net monthly salary of 1800€ + a yearly travel allowance of €250-1000 (fixed amount that depends on the distance between the country of origin and Montpellier)
- A career exploratory allowance of €2000 (single payment)
- Guaranteed funding for the research project and training activities.
- A personalized training program mutually agreed on recruitment, which will directly reflect the candidate training needs and career objectives.

Application Procedure

- Candidates should apply via our [online application procedure](http://www.gm.univ-montp2.fr/CRYSTAL2PLATE/jobs.html) (<http://www.gm.univ-montp2.fr/CRYSTAL2PLATE/jobs.html>). Once the application is received, they will receive an email asking for their CV and academic credentials (mark sheets and degree statements).

A complete description of all CRYSTAL2PLATE positions and training program, deadlines, and online application forms can be found at: <http://www.gm.univ-montp2.fr/CRYSTAL2PLATE/home.html>
For additional information please mail us @ crystal2plate@gm.univ-montp2.fr