

# STÉPHANE ESCRIG

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## PROFESSIONAL APPOINTMENTS

Sept 2006-present: **Research Associate**. *Harvard University*.

Sept 2003-Sept 2006: **Post-doctorate in Geochemistry**. *Harvard University*. Advisor: Pr C.H. Langmuir.

## EDUCATION

**Ph.D. in Isotope Geochemistry**. “*Re-Os systematic in oceanic basalts: implications on the nature of the upper mantle chemical heterogeneity*”. Advisor: Pr C.J. Allègre. Laboratory of Geochemistry and Cosmochemistry. *Institut de Physique du Globe de Paris (IPGP)*, Paris, France.

**Magistère of Earth Sciences** of the *École Normale Supérieure*, Lyon, France. Including:

- **DEA (M.S.) in Geochemistry**, *IPGP*, Paris, France.
- **Licence and Maîtrise with honors (B.S.) in Earth Sciences** at the *École Normale Supérieure*, Lyon, France.

## RESEARCH EXPERIENCE

**Post-doctoral research**: Trace elements and Pb-Sr-Nd isotopic studies of the Eastern Lau Spreading center. Trace element variation along the Carlsberg and Central Indian ridges.

**Doctoral research**: Re-Os systematic in oceanic basalts: implications on the nature of the upper mantle chemical heterogeneity. Advisor: Pr. C.J. Allègre.

**Master research**: Preliminary study of Os isotopic variation in South Atlantic Mid-ocean ridge basalts. Advisor: Pr. P. Schiano. *IPGP*, Paris.

### **Undergraduate research:**

- Determination of the P-T conditions of melt at equilibrium in the system CaO-CO<sub>2</sub>-H<sub>2</sub>O. Advisor: S. Elphick. *Grant Institute*, Edinburgh.
- Mapping of the continental molassic basin of Savoie. Unpacking models for different lithologies. Advisor: Pr. C. Beck. *LGCA*, Chambéry, France

## TEACHING EXPERIENCE:

2004-2005: Teaching assistant “How to build an habitable planet, B35”. *Harvard University*.

1999-2003: Teaching assistant in Isotope Geochemistry and Nucleosynthesis. *Univ. Paris 7*.

2001-2002: Teaching assistant in Introduction to Geophysics. *Univ. Paris 7*.

1999-2001: Teaching assistant in General Geology. *Univ. Paris 7*.

## TECHNICAL SKILLS:

- Thermal ionization mass spectrometry (Finnigan Mat 262 and Triton) and MC-ICP-MS (VG axiom and GV Isoprobe P).
- Chemical separation by liquid-liquid extraction (Re-Os) and by ion chromatography (Pb ,Sr ,Nd).
- Trace element analyses of basalts (by ICP-MS using a Thermo X-series and LA-ICP-MS using a Newwave 213nm coupled with a Thermo X-series).

## PUBLICATIONS

- Doucelance R., **Escrig S.**, Moreira M., Gariépy C. and Kurz M.D., Pb-Sr-He Isotope and Trace Element Geochemistry of the Cape Verde Archipelago. *GCA* 67 (2003) 3717-3733.
- **Escrig S.**, Capmas F., Dupré B. and Allègre, C.J., Os Isotopic Constraints on the Nature of the DUPAL Anomaly from Indian Mid-Ocean-Ridge Basalts. *Nature* 431 (2004) 59-63.
- **Escrig S.**, Doucelance R., Moreira M. and Allègre C.J., Os isotope systematics in Fogo Island: Evidence for lower continental crust fragments under the Cape Verde Southern Islands. *CG* 219 (2005) 95-113.
- **Escrig S.**, Schiano P., Schilling J.-G. and Allègre, C.J., Rhenium-Osmium isotope Systematics in MORB from the Southern Mid-Atlantic Ridge (40°-50°S) *EPSL* 235 (2005) 528-548.
- Langmuir C.H., Bezos A., **Escrig S.** and Parman S.W., Chemical systematics and hydrous melting of the mantle in back-arc basins. In *Back-Arc Spreading Systems: Geological, Biological, Chemical and Physical Interactions*, American Geophysical Union, Washington DC, 2006.

## CONFERENCE ORAL PRESENTATIONS

- **Escrig S.**, B. Bourdon B., Schilling J.G. and Allègre C.J. Plume-Ridge interaction inferred by osmium isotopes in MORB from the southern Mid-Atlantic ridge, *EUG XI. 2001*, Strasbourg, France.
- **Escrig S.** and Allègre C.J. Osmium Inference of Recycled Continental Material in the OIB and MORB Sources *AGU fall meeting, December 2002*, San Francisco, USA.
- Allègre C.J. and **Escrig S.** Chemical composition of the Earth and its envelopes. *AGU fall meeting, December 2002*, San Francisco, USA.
- **Escrig S.**, Bezos A., Langmuir C., Humler E., Allègre C. and SU Y.J., Variations in mantle composition along the Central Indian Ridge. *V.M. Goldschmidt Conference. June 2004*, Copenhagen, Denmark.
- Michael P., Langmuir C., Bezos A., **Escrig S.**, Matzen A.K. , Asimow P., Woods S., Gier E., Goddard C., Arculus R., Geochemistry of Seamounts Between the East Lau Spreading Center and Tonga Arc. *AGU fall meeting, December 2005*, San Francisco, USA.
- **Escrig S.**, Bezos A., Langmuir C., Humler E., and Su Y.J., Trace element variations along the Central Indian Ridge: deciphering Indian mantle heterogeneities. *AGU fall meeting, December 2005*, San Francisco, USA.

## CONFERENCE POSTER PRESENTATIONS

- **Escrig S.**, Doucelance R. and Moreira M., Os, Sr, Nd, Pb isotopic systematics in basalts and carbonatites from Fogo Island, Cape Verde. *V.M. Goldschmidt Conference XII. August 2002*, Davos, Suisse.
- **Escrig S.**, Doucelance R., Moreira M. and C.J. Allègre, Os, Sr, Nd, Pb isotopic variations in the basaltic source of Fogo island, Cape Verde, *EGS-AGU-EUG Joint Assembly, April 2003*, Nice, France.
- Kingsley R.H., Bezos,A., **Escrig S.**, Gannoun, A., Humayun, M., Meisel, T., Peucker-Ehrenbrinck, B., Puchter, I., Sharma, M., Schilling, J., Interlaboratory Comparison of PGE and Re in a Mid-Ocean Ridge Basalt, *Eos Trans. AGU , 85(17), Jt. Assem. Suppl., Abstract V51B-02.*
- Bezos A., Langmuir C., **Escrig S.**, Michael P., Asimow P., Woods S., Mantle petrogenesis of the Eastern Lau Spreading Center basalts and andesites and the role of subduction-related fluids. *AGU fall meeting, December 2005*, San Francisco, USA.