

PHD FELLOWSHIP in MINERAL PATTERN FORMATION IN ARCHEAN ROCKS

A 3-year PhD position is offered at Instituto Andaluz de Ciencias de la Tierra (CSIC/Universidad de Granada) in Granada (Spain) to applicants interested in the following project:

Mineral pattern formation in Archean rocks **PhD Thesis Supervised by Juan Manuel García-Ruiz**

The offer

We are offering a 3-year PhD position funded by the ERC Senior Advanced Grant “Pattern formation and mineral self-organization in highly alkaline natural environments”, within the laboratory of Professor Juan Manuel García-Ruiz (Laboratorio de Estudios Cristalográficos) at the Andalusian Institute of Earth Sciences (IACT) located in Granada, Spain. The laboratory of Prof. García-Ruiz belongs to CSIC (Spanish National Research Council) and University of Granada and has an international and multidisciplinary atmosphere with its research focus in crystallization, pattern formation and self-assembly. The laboratory is fully equipped to perform the project, with petrographic, confocal, atomic force and electron microscopies, X-ray diffractometers, several crystallization techniques, and also has fast access to the Center for Scientific Instrumentation of the University of Granada. The laboratory maintains cooperative relationships with several groups around the world.

The project

It is widely thought that Archean rocks contain biological remnants of the earliest living organisms that inhabited this planet. Therefore a lot of work has been and is devoted to searching for these precious remnants and to deciphering unambiguously their biogenicity and the biological information they might contain. However, Archean rocks also have mineral microstructures and patterns that contain unique information on the physics and chemistry of the earliest geological landscapes of this planet. To decipher the formation of these mineral patterns and to decode the geochemical information they contain is the objective of this PhD thesis. The task is by no means simple but it is undoubtedly highly rewarding. Further information on the project is available at webpage <http://garciaruiiz.net/prometheus/>.

Qualifications

We are therefore looking for a PhD candidate who is highly motivated to perform basic research, likes fieldwork but mostly enjoys and has some background in laboratory experiments and computer simulation. A Master's degree in Geology, Geochemistry, Crystallography, Chemistry, Earth Sciences or equivalent is mandatory for this position. Excellent communication skills in English will be required. Fieldwork will mostly take place in Australia in collaboration with the Australian Centre of Astrobiology (University of New South Wales), in Sydney. The candidate should have a willingness to travel to different laboratories in the world and interact in a strongly interdisciplinary team.

When to apply: Review of applications will begin immediately and continue until the position is filled before June 30, 2015.

How to apply: Applications, including a two-page motivation letter and a CV with contact information of two potential referees, should be sent to Professor Juan Manuel García-Ruiz (juanmanuel.garcia.ruiz@csic.es).