Job Vacancy Available

Marie Skłodowska-Curie actions
Innovative Training Network (ITN-ETN)
"BASE-LiNE Earth"

We invite applications to undertake competitive high-level research on the complex Phanerozoic seawater history through the determination of original proxy information preserved in reliable ancient geological archives like fossil brachiopods using cutting edge technologies and experimental approaches within the Marie Skłodowska-Curie Innovative Training Networks (ITN-ETN) »Brachiopods As SEnsitive tracers of gLobal mariNe Environment: Insights from alkaline, alkaline Earth metal, and metalloid trace element ratios and isotope systems«. BASE-LiNE Earth is funded through the HORIZON2020 program of the European Union and consists of 14 full partners and seven associated partners out of 11 countries (Austria, Australia, Canada, Czech Republic, Denmark, France, Germany, Israel, Italy, Poland, Slovak Republic) among them internationally leading researchers in the field of geology, chemistry and isotope geochemistry, marine biology and ecology as well as numerical modelling and engineering.

The project is coordinated at the GEOMAR Helmholtz Centre for Ocean Research Kiel, Germany. BASE-LiNE Earth will run until December 2018.

All positions offered are full-time and fixed term for 3 years. Successful applicants will benefit from training and networking program delivered jointly by academic and non-academic partners. As a result, BASE-LiNE Earth fellows will gain both, research experience and complementary skills such as career planning, communicating science, and management techniques. Researchers will mainly work in their host institution, but they will also have the possibility to visit another BASE-LiNE Earth partner for secondment activities, which could be either in academia or in industry. On completion of their fellowship, successful applicants are expected to be among the future leaders in their respective fields. The Researchers recruited for these positions are expected to be an active part within the BASE-LiNE Earth consortium by participating in network wide activities such as workshops and conferences. The candidate will be part of an international, interdisciplinary team at universities and research institutions, and is expected to attend the actions as announced in the proposal.

In order to strengthen the role of women in science the application of females for an ESR position is strongly encouraged. Handicapped persons with comparable qualifications receive preferential status.

Please submit your complete application (including a CV [max. 3 pages], a letter of motivation for the position and a statement of your research interests [max. 1 page], relevant certificates, plus contact details of at least two referees) to the contact below quoting BASE-LiNE Earth_ESR05. Applications are accepted until the positions are filled, but we intend to conduct a first evaluation by May 31st 2015.
ESR05—PhD position

Lithium isotopes in Phanerozoic brachiopod shells: Implications for the continental weathering flux

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SHORT DESCRIPTION: This PhD project generates a Phanerozoic marine lithium (Li) isotope record, based on the analysis of lithium isotope (δ⁷Li) values in calcitic shells of modern and fossil brachiopods. This will extend and complete the existing information on the evolution of seawater δ²⁷Li and Li/Ca ratios. The latter knowledge will provide important quantitative information on continental weathering fluxes throughout the Phanerozoic with implications for the Earth’s global atmospheric CO₂ budget and paleo-climate history.

FULL JOB DESCRIPTION

This PhD project focuses on the development of Li separation from carbonate-based low-Li matrices in limited amounts of precious samples and use of lithium isotope composition measured in fossil and modern brachiopods as paleo-weathering proxy on continents. In order to reconstruct the history of Phanerozoic seawater evolution with respect to lithium, several tasks will be endeavored: (i) the development of high-efficiency methods for the chemical isolation of Li and purification from minute amounts of carbonate samples with low lithium concentrations, (ii) application to brachiopods which were cultured under controlled laboratory conditions (temperature, nutrients, pH, CO₂, etc.) prior to the lithium measurements, (iii) application of the established methods to fossil and modern Phanerozoic brachiopods in order to generate the first continuous record of Li isotope evolution of global ocean, and (iv) interpretation and numerical modelling to the geological record and quantitative modelling of the continental weathering based on the lithium isotope record with implications for the Earth’s atmospheric CO₂ budget and paleoclimate history. In addition, we will also use the δ⁷Li proxy to investigate the effects of a mid-Paleozoic (Silurian/Devonian) appearance and colonization of complex land plants, and their impact on the formation of soils and deep-weathering profiles, which are expected to be manifested in the coeval marine δ²⁷Li record due to an anticipated acceleration of the continental weathering rates.

The PhD candidate will become an integral member of a vibrant research group that is focused to isotope and low-temperature geochemistry, paleoclimatology, isotope geochemistry and cosmochemistry. Study and secondment activities at other institutions linked to the BASE-LiNE Earth project (e.g., GEOMAR Kiel, Germany; Memorial University Newfoundland, St. John’s, Canada; IPGP Paris, France; Brock University, Canada) will result in fostering tight collaborations amongst the BASE-LiNE Earth nodes beside the annual workshops to be held at different institutions. The Czech Geological Survey hosts a wide range of analytical facilities, necessary to complete the outlined research tasks, including ultra-clean laboratories, electron microprobe, XRF, LA-ICP-MS and MC-ICP-MS. Besides, TIMS facilities at other participating institutions may become available.

Qualifications:
As a successful candidate you should have

- A MSc degree in a relevant field such as geochemistry, paleontology, sedimentology, oceanography
- The ability to work in an internationally-oriented environment
- A broad interest in geosciences, and the willingness and capacity to work independently
- The willingness to travel
- You should be fluent in oral and written English, since the host group is highly international in composition and publication aims

Employment conditions:
The position is offered for three years full-time position, starting summer/ autumn 2015. In accordance with the Marie Skłodowska-Curie rules, the salary will be calculated as follows:

Annual salary: ~38,000 €* plus in case of family obligations** additionally 6000,-€.

* This amount is based on the relevant budget concerning the employment of the EU-Researcher. After deduction of the employer’s social insurance share, it amounts to the gross salary for the activity. Employees gross salary includes taxes, social security, insurance, pension summing up the following:

1. The Living Allowance is a gross EU contribution to the salary costs of the researcher, calculated individually for each European country. “The net salary results from deducting all compulsory (employer/employee) social security contributions as well as direct taxes (e.g. income tax) from the gross amounts. The final amount will not change during the secondment activities. The primary host will ensure that the researcher is covered under the social security scheme. During the secondment the social security provision will also cover the researchers during this period.” (Ref: Guide for Applicants, Marie Skłodowska-Curie Actions).

2. The Mobility Allowance: All eligible researchers recruited within an ETN/ITN are entitled to receive this allowance. It contributes to the expenses of the researcher caused by the mobility. The amount of the mobility allowance is specified in Table 3 of the MSCA Work Programme and for the calls 2014-2015 it amounts to €600 per month.” (Ref: Guide for Applicants, Marie Skłodowska-Curie Actions). According to the country-specific requirements this amount may be subject to taxation.

3. Family Allowance of €500 per month will be paid should the researcher be eligible for this allowance. See ** below.

** In this context, family is defined as persons linked to the researcher (i) by marriage, or (ii) a relationship with equivalent status to a marriage recognised by the legislation of the country where this relationship was formalised; or (iii) as dependent children who are actually being maintained by the researcher. The family status of a researcher will be determined at the time of their (first) recruitment in the project and will not evolve during the project lifetime.” (Ref: Guide for Applicants, Marie Skłodowska-Curie Actions).

In order to be eligible, each applicant must simultaneously fulfil the following criteria at the time of recruitment:

- **Mobility:** At the time of recruitment, the applicant must not have resided or carried out his/her main activity (work, studies, etc...) in the country of the host organization for more than 12 months in the 3 years immediately prior to his/her recruitment. Compulsory national service and/or short stays such as holidays are not taken into account.

- **Qualifications and research experience:** The applicant must fulfil the requirements defined for Early Stage Researchers (ESRs): ESRs are researcher who, at the time of recruitment, has **NOT yet been awarded the doctorate degree** and is in the first 4 years (full-time equivalent) of his/her research career.

Additional information on BASE-LiNE Earth and further job descriptions can be found on our website, [https://www.baseline-earth.eu/](https://www.baseline-earth.eu/).