

Stellenangebote

Stellenausschreibung / Job advertisement



The Institute for Chemistry and Biology of the Marine Environment (ICBM) at the University of Oldenburg invites applications for the position of

1 doctoral candidate (m/w/d) in geochemistry, volcanism and paleoclimate
(salary according to E13 TV-L, 75%, incl. comprehensive social security plans)

The position is limited to 36 months. **Earliest starting date: 01.12.2022**

The ICBM is an interdisciplinary research institute for fundamental and applied marine research. The internationally renowned institute aims at understanding the function of marine environmental systems through close cooperation of the various scientific disciplines (chemistry, biology, physics, mathematical modelling) of its more than 20 research groups. The **working group Marine Isotope Geochemistry** uses stable and radiogenic isotope systems (Si, Fe, Nd, Sr, Pb) and elemental analyses to investigate biogeochemical processes, element cycles and inputs to the ocean, and to reconstruct changes in the marine environment during past intervals of climate change.

The PhD project "**Investigating the role of volcanism in the onset and termination of the Paleocene-Eocene Thermal Maximum (PETM)**" is funded by the DFG and part of a larger collaborative effort in investigating the impact of the emplacement of the North Atlantic Igneous Province (NAIP) on paleoclimate, and especially the hyperthermal PETM using IODP Expedition 396 material.

The work will focus on a number of themes relating to the holistic role large-scale volcanic eruptions play in controlling climate change. To investigate the role of the NAIP in the onset of the PETM, the successful applicant will carry out geochemical characterization of ash layers preserved in sediments recovered during Expedition 396, and detailed logging of cores to estimate style and amount of explosive volcanism. In collaboration with Joost Frieling (University of Oxford) and Morgan Jones (University of Oslo), the applicant will incorporate these results with high resolution Hg/TOC measurements to assess total scale of volcanism. These data will be used to develop model based scenarios of carbon degassing, to determine if volcanic degassing could have driven the PETM onset. The applicant will also investigate evidence for volcanic ash deposition enhancing carbon burial and causing the end of the PETM. Elemental and isotopic (Sr isotopes) analysis of sediments and ash layers will clarify whether ash deposition led to enhanced carbon drawdown during the end of the PETM. This work will focus on the relative importance of ash as a supplier of nutrients to the ocean, and determine if this may have impacted cooling at the end of the PETM.

The successful candidate will be based in Oldenburg and closely collaborate with Dr. Jack Longman at the University of Northumbria in Newcastle. This will include several visits to Newcastle. Responsibilities for the candidate will be processing and analysis of elemental concentrations, Sr isotopes and the incorporation of results into large scale biogeochemical models. The candidate will interpret and publish the results in collaboration with other project partners.

Recruitment requirements include a qualifying university degree (Master or diploma (not of a University of Applied Sciences)) in earth sciences, analytical chemistry or a related field. A strong background in inorganic-geochemical sample processing and analysis, preferably in the mass spectrometric analysis of trace elements and metal isotopes, are required. Knowledge and experience of core logging, and of volcanic ash analysis are advantageous. Experience with Matlab and biogeochemical modelling is also advantageous, but can be learned during the project. In addition, very good English language skills (written and spoken), and the willingness to carry out research stays in the United Kingdom are required.

International candidates and individuals who identify as underrepresented in science are especially encouraged to apply.

The University of Oldenburg is dedicated to increasing the percentage of female employees in the field of science. Therefore, female candidates are strongly encouraged to apply. In accordance with Lower Saxony regulations (§ 21 Section 3 NHG) female candidates with equal qualifications will be preferentially considered. Applicants with disabilities will be given preference in case of equal qualification.

For further information regarding this position, please contact Dr. Jack Longman (jack.longman@uol.de) or Prof. Katharina Pahnke (k.pahnke@icbm.de).

Please send your application including a cover letter, curriculum vitae, certificates and contact information of up to three references in a single document **preferably by email** with the subject "IODP 396 PETM" to mig-stellen@uol.de by November 4th, 2022.

Susanne Nietzwecki @ (Stand: 16.09.2022) _