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GEOMAR Helmholtz Centre for Ocean Research Kiel is a foundation of public law jointly financed by the Federal Republic of Germany (90%) and the state of Schleswig-Holstein (10%) and is one of the internationally leading institutions in the field of marine sciences. Currently GEOMAR disposes over an annual budget of approx. 80 million Euro and has approx. 1000 employees.

The research unit “Chemical Oceanography“ of the research division “Marine Biogeochemistry” is offering a position as

## **Postdoc (m/f/d) in assessment of trace metal behaviour in hydrothermal plume using thorium and helium isotopes**

funded by the DFG and starting on November 1st 2021.

### **Project Description**

A research cruise with FS Meteor is scheduled in the North Atlantic Ocean to conduct detailed geochemical work in the Rainbow vent field on the Mid-Atlantic Ridge. The cruise will involve the study of the behavior of trace elements and their isotopes (TEIs) in the hydrothermal plume over a distance of up to 100 km from the Rainbow vent field. The overall project aims to obtain a mechanistic and quantitative understanding of processes that set hydrothermal fluxes of TEIs to the deep ocean interior at the Mid-Atlantic Ridge. The work will quantify TEIs fluxes from the ocean crust and determine their biogeochemical cycling and the plume spread in relationship to large scale ocean circulation in the North Atlantic in the vicinity of the Mid-Atlantic Ridge.

The advertised postdoc position will utilize isotopes of thorium and helium to assess to what extent TEIs are controlled by vent supply, particle removal processes and advection. Sampling of helium isotopes will aid to quantify hydrothermal fluxes of TEI and fingerprint sources to elucidate TEI distributions. The thorium work will provide insights into scavenging processes of trace elements. The Meteor cruise is to become officially part of the internationally coordinated program GEOTRACES.

### **Job Description / Duties**

The candidate will be part of an international GEOTRACES team that investigates trace metal biogeochemistry in the world’s ocean. The candidate will be working closely with chemical and physical oceanographers in the project, and collaborators at Kiel and Jacobs Universities, Alfred Wegener Institute (Germany), University of Minnesota and Woods Hole Oceanographic Institution (US). The candidate will undertake analysis of thorium isotopes (helium isotope analysis to be conducted in external lab), and conduct data interpretation of thorium and helium isotopes to establish the distribution/behavior of trace elements in the plume at Rainbow in relation to sources and removal processes. The candidate is expected to publish the findings in international journals.

### **Qualification**

- A PhD in chemical oceanography, geochemistry or similar field is required or is to be achieved by the end of autumn 2021
- Experience is required in analysis of U-Th Series radionuclides
- Experience is required in interpretation of oceanic geochemical tracers
- We expect excellent English language skills and experience with working on research vessels

- The candidate will need to indicate experience of science communications in large research teams
- The candidate will need to indicate experience in research project management
- The candidate should be willing and able to participate in sea-going expeditions

The position is funded by the DFG (Deutsche Forschung Gemeinschaft) and available for a funding period of 24 months. The salary depends on qualification and could be up to the class 13 TVöD-Bund of the German tariff for public employees. This is a full-time position according to 100% of a full-time equivalent. The position is basically divisible. Flexible working time models are possible in principle.

GEOMAR Helmholtz Centre for Ocean Research Kiel seeks to increase the proportion of female scientists and explicitly encourages qualified female academics to apply.

GEOMAR is an equal opportunity employer and encourages scientists with disabilities to apply. Qualified disabled applicants will receive preference in the application process.

Please send your application (including a letter of motivation, CV (no photo) and contact details of 3 referees) for this post via email **in a single pdf-file** mentioning the keyword "**Achterberg - RainbowPlume**" in the subject line and not later than **August, 25<sup>th</sup> 2021** to the following email address:

[bewerbung@geomar.de](mailto:bewerbung@geomar.de)

As soon as the selection procedure has finished, all your application data will be removed according to data protection regulation.

For further information regarding the position and research unit please contact Prof. Dr. Eric Achterberg ([eachterberg@geomar.de](mailto:eachterberg@geomar.de)) or Dr Aaron Beck ([ajbeck@geomar.de](mailto:ajbeck@geomar.de)). Please also email the application to Prof. Dr. Eric Achterberg.

Please do not contact us by phone about the present state of procedures. However, we will answer all your questions if you send us an e-mail to [bewerbung@geomar.de](mailto:bewerbung@geomar.de). In doing so, please refer to the keyword.

GEOMAR is a member of the Helmholtz Association and the German Marine Research Consortium (KDM). For further information please visit [www.geomar.de](http://www.geomar.de) or [www.helmholtz.de](http://www.helmholtz.de).

GEOMAR is committed to a non-discriminatory personnel selection. Our job advertisements address all people. We expressly renounce the submission of application photos.



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