

Member of the Helmholtz Association



The department High Field Magnet is looking for

POSTDOCTORAL SCIENTIST (F/M/D) (PHYSICS OR CHEMISTRY) FOR SCATTERING EXPERIMENTS AT HIGH MAGNETIC FIELDS

Reference No.: NP 2019/1

HZB is pursuing a program of X-ray and neutron scattering experiments at high magnetic fields. The High Field Magnet Department operates a unique facility to perform neutron scattering experiments at magnetic fields up to 26T – the highest continuous fields available for neutrons worldwide. The magnetic fields are produced by our hybrid magnet (HFM) permanently located at our time-of-flight EXtreme Environment Diffractometer (EXED), which is capable of neutron diffraction, small-angle-neutron-scattering (SANS) and spectroscopy. In addition HZB is in the process of establishing pulsed high magnetic field (30-50T) at the BESSYII synchrotron source. Pulsed field measurements will be performed in combination with resonant X-ray diffraction to explore field-induced magnetic structures and phases.

Tasks We invite applications for a two year postdoctoral position in the area of experimental condensed matter physics. The position is to use primarily the experimental techniques of X-ray and neutron scattering to explore the phenomena of correlated electron systems such as quantum and frustrated magnets, superconductors and multiferroic materials at high magnetic fields. X-ray and neutron experiments will take place both in-house and at external sources, and bulk properties measurements can be performed in-house as complementary techniques.

The candidate will form part of the team operating the EXED instrument where neutron diffraction, SANS and spectroscopy can be performed up to continuous fields of 26T and down to temperatures of 0.5 K. He or she should support external users of this facility as well as perform own experiments. He or she will also join the team setting up pulsed high magnetic field measurements in combination with resonant X-ray scattering techniques at BESSYII. The goal here is to investigate magnetic phenomena in modern materials under conditions of high magnetic fields and to make this facility available to external users. A significant part of the postdoc time is available for own research and it is expected that the candidate will have strong scientific interests and will also develop collaborations with colleagues both inside and outside HZB.

Requirements Applicants should have or be close to finishing a PhD in physics or chemistry. Experience in X-ray and/or neutron scattering techniques is important, experience in high magnetic fields is useful.

Please enclose with your application the following documents:
Motivation letter, CV and the contact details of at least two academic references.

What we offer

Fixed term contract for 24 months in full-time. The employment contract is based on contracts for the German civil service (TVöD-Bund).

Helmholtz-Zentrum Berlin für Materialien und Energie (HZB) operates two large scale facilities for materials research: the neutron source BER II and the synchrotron source BESSY II, which provide deep insights into the structure of materials and the processes within complex systems. Each year around 3,000 scientists use the HZB infrastructure facilities. Important focuses of HZB are accelerator, materials and energy research.

SCIENCE + CAREER + DIVERSITY = HZB

... is the formula for our successful human resources policy. We offer wide-ranging internal and external training programs for our employees as well as a special support program for young scientists. Our family-friendly workplace policy includes flexible working hours, telework arrangements and holiday programs for employees' children.

CONTACT FOR FURTHER INFORMATION:

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INTERNATIONAL
APPLICANTS
WELCOME!

We particularly welcome applications from women. Preference will be given to handicapped applicants provided equal suitability.

How to apply

Have we sparked your interest? Then we look forward to receiving your application until February the 26th of 2019 by using the e-Recruitment Portal on the intranet (Administration => Personal und Soziales => E-Recruiting).

Helmholtz-Zentrum für Materialien und Energie GmbH, Hahn-Meitner-Platz 1, 14109 Berlin

For German version, please check our website: www.helmholtz-berlin.de