Postdoctoral Scientist - Physical and Materials Science

PostDoc Position
Helmholtz-Zentrum Berlin
Germany, Berlin
Mar 2014

The Helmholtz-Zentrum Berlin für Materialien und Energie GmbH (HZB) operates one of the world's most advanced Synchrotron Light Sources (BESSY II) in the VUV to soft x-ray range, as well as the low energy storage ring Metrology Light Source (MLS) of the Physikalisch-Technische Bundesanstalt. (www.helmholtz-berlin.de)

The Scientific Division Large Scale Facilities is seeking for the Institute Accelerator Physics a **Postdoctoral Scientist (f/m)** (in the fields of Physical Science, Chemistry, Material Science or a related discipline) for the development of suitable photocathodes.

BERLinPro, a 50 MeV electron energy ERL, is currently being constructed as a test facility, to investigate technologies crucial to the realization of future large scale projects. An important part of BERLinPro is the superconducting radio frequency photoelectron source, which is to generate an electron beam with high average current and low emittance. In close collaboration with the Institute for Superconducting Radio Frequency Systems and Technology (as well as other national and international collaboration partners), the Institute of Accelerator Physics works on the development and optimization of this electron source for BERLinPro. For future applications photocathodes will be required, with high quantum efficiency, short response time and long service life. These photocathodes are to be integrated into a superconducting radio frequency cavity resonator.

Your responsibilities will be:

- Operation and development of an apparatus for the preparation and characterization of semiconductor and multi-alkali photocathodes with high quantum efficiency for BERLinPro
- Optimization of the preparation process towards achieving the objectives high quantum efficiency, long lifetime and short response time of the photocathode
- Research in the subject area photocathodes

Your profile:

- Good skills in surface physics, material science
- Experience with methods of surface analysis and characterization, e. g. with synchrotron radiation (e. g. XPS, ARPES)
- Interest in issues of accelerator physics

For further information or informal inquiries please contact:
Prof. Dr. Andreas Jankowiak, Phone: 030/8062-13508
Dr. Thorsten Kamps, Phone: 030/8062-15157
Application deadline: March 14th, 2014

As HZB endeavors to increase the number of women working in the scientific field, women are especially encouraged to apply. Applicants with disabilities will be given preference to others of equal qualification.

Applicants should send their application quoting **Reference No. G 2014/3** by using the **Apply** button below, or to the Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Abteilung Personal und Soziales, Hahn-Meitner-Platz 1, 14109 Berlin.

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