

Open PhD and Post-Doc Positions on permanent magnet research

We are looking for some more excellent and highly motivated candidates who aspire to work in a challenging and international research environment. You should possess a degree in Physics, Materials Science, Inorganic Chemistry or Mechanical Engineering. It is necessary that the applicant has experience in at least one of the following fields: magnetic and structural characterization, metallurgical-, chemical- or thin film synthesis or plastic deformation. For the computational positions it is essential, that the candidate has experience in micro-magnetic or atomistic calculations. Willingness to integrate into an interdisciplinary team with diverse backgrounds is essential. Very good command of the English language is needed. Knowledge of German is beneficial but not necessary. Candidates can apply for one or more positions and indicate their preferences.

If you are interested, please contact the coordinator:

Prof. Oliver Gutfleisch
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http://www.response.tu-darmstadt.de/response/aktuelles_4/index.de.jsp

Materials for permanent magnets usually contain rare earth elements, which are difficult to obtain and handle. In an effort to reduce the amount of rare earths needed, we study new materials in terms of their magnetic properties, especially their magnetic anisotropy. The magnetostriction of a material is intimately connected to the magnetic anisotropy; therefore, if one knows the magnetostriction tensor, the magnetic anisotropy can be studied on a fundamental level. We are looking for a graduate student to build up, calibrate and use a setup to measure the magnetostriction tensor on an atomic level, i.e. determining the unit cell constants through x-ray diffraction under a strong (6 Tesla) magnetic field.

The work should be carried out at the Department of Materials Science of the Technical University of Darmstadt (Germany). The ideal start date would be

1.1.2014, with the prospect of obtaining a PhD degree within three years.

Contact:

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