

Nanomagnetism - Higher Research Scientist

Job Ref:	65172
Job Title:	Nanomagnetism - Higher Research Scientist
Location:	Teddington
Type:	Fixed Term
Salary:	Competitive Salary + Comprehensive Benefits Package
Closing date:	9th December 2016

Job Description

The UK's National Physical Laboratory (NPL) sits at the intersection between scientific discovery and real world application. One of the top three National Measurement Institutes (NMIs) in the world, we now have a regional presence and strategic relationships with Surrey and Strathclyde Universities. Our expertise and original research have benefited UK citizens and the UK economy for over a century.

The field of nanomagnetism and spintronics has led to the highest level scientific discoveries and to highly important industrial applications. Magnetic force microscopy (MFM) is a crucial characterisation tool for acquiring information about magnetization distributions with both high spatial resolution and magnetic sensitivity. To answer many challenges in fundamental nanomagnetism and technology applications (e.g. data storage, life science, etc.), some critical capabilities of MFM and novel methodologies have to be developed (e.g. in the area of quantitative data acquisition and analyses) To support this, NPL anticipates the need for appropriate quantitative magnetic measurements on nanoscale and development of relevant metrological standards in the field of nanomagnetism and spintronics.

A vacancy exists for a physicist to work in the area of nanomagnetism / spintronics, including the relevant standardisation aspects.

The role includes:

- Designing and performing experimental studies;
- Development and test of advanced magnetic microscopy techniques;
- Design, development and tests of novel magnetic probes;
- Performing standardisation aspects of the work and participation in the work of the relevant standardization committees;
- Working in close collaboration with 2 large European networks and taking responsibility for delivery of research and standardisation tasks;
- Exploring existing and building up new collaborative networks in the international research community;
- Presentation of research results in peer-reviewed journals and at international conferences.

A PhD or a similar level of experience in physics.

- Excellent knowledge of scanning probe techniques. Good knowledge of magnetism, spintronics and nanotechnology.
- Understanding and enthusiasm in fundamental and applied research.
- Excellent problem-solving, with a record and achievements in innovative research and skills in problem solving.
- Strong communication and presentation skills (oral and written).
- Ability to manage own time and to work as part of an interdisciplinary project team.

The successful candidate should have a relevant experience in the following areas:

Scanning probe techniques, electrical and magnetisation measurements, knowledge of electronics and basic programming (LabView, MatLab), experience in nanotechnology and nanofabrication, general understanding of standardisation processes.

This role initially is for a 3 year fixed term contract.

Based in a unique, purpose-built research environment, we are located in beautiful surroundings on the edge of Bushy Park, south-west London with a host of onsite facilities. These include a subsidised crèche, restaurant, free parking and our own sports and social club.

NPL Management Limited is committed to supporting its people to develop both personally and professionally and is committed to equal opportunities. NPL Management Limited is a Stonewall Diversity Champion and an Institute of Physics Project Juno Supporter.

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