

Job offer: Postdoctoral researcher

X-ray magnetic nanotomography

Visualising the magnetisation vector field in 3D in materials is highly desirable in fields of research such as spintronics, frustrated magnetism, geomagnetism...

We propose to develop an innovative technique of magnetic tomography using X-ray, by combining circular dichroism with coherent diffraction imaging (CDI). We aim for sub-100 nm resolution in 3D in samples of a few μm^3 . The recent upgrade of the ESRF, the European synchrotron, has open a unique opportunity for such a new technique.

The postdoctoral researcher will participate in the development of this technique, which include the following tasks:

- installation and commissioning of the polariser
- development of a code for magnetic tomography, and implementation in an existing code for standard tomography.
- restart and benchmarking of the beamline with the new X-ray beam, including tests of CDI.
- magnetic nanotomography measurements
- data analysis
- valorisation of the results by publication of results in peer-reviewed journals and presentation in conferences.

The candidate should have a PhD in physics, materials sciences or equivalent. A taste for both instrumentation and programming is essential. Experience with synchrotron radiation and/or magnetism is desirable.

The project is lead by a consortium of labs: SIMaP (Grenoble, FR), Institut Jean Lamour (Nancy, FR), Institut Néel (Grenoble, FR), Spintec (Grenoble, FR) and ESRF (Grenoble, FR), and is funded by the Agence National de la Recherche (ANR) and the Centre National de la Recherche Scientifique (CNRS).

The employer is the CNRS.

The job is hosted by the ESRF, at beamline ID10. The working language is English.

Beginning of contract: 1st March 2020.

Duration of contract: 12 months.

Application here: <http://bit.ly/2sDd1rA>

Deadline for application: 10 February 2020.

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