Postdoctoral fellowship in the field of magnetic two-dimensional materials

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Uppsala University (UU) is an international research university focused on the development of science and education. The most important assets of the University are all the individuals who, with their curiosity and their dedication, make Uppsala University one of Sweden's most exciting work places.

The Division of Solid State Physics is part of the Department of Materials Science and Engineering and is located at Ångström laboratory in Uppsala. At the division, we perform both basic and application-oriented research related to energy and environmental aspects in different research areas. We investigate physical and chemical properties of nanomaterials and compounds, whether it be for smart windows, gas sensors, photocatalytic coatings, spintronics and biomagnetic applications or to create new magnetic materials for environmental applications. Webpage: https://www.uu.se/en/department/materials-science-and-engineering/research/divisions/solid-state-physics

Information about the project: The project deals with the synthesis of novel magnetic two-dimensional materials and the study of their structural and magnetic properties. Materials of interest will be synthesized by CVT, exfoliated, and investigated using X-ray diffraction, Raman spectroscopy, SQUID magnetometry, and/or electrical property measurements (anomalous Hall effect), including dielectric measurements if relevant.

The research will be performed at the Solid State Physics Division, Department of Materials Science and Engineering, Uppsala University, in collaboration with local colleagues with e.g. access to specific measurement setups.

Major responsibilities: The postdoctoral fellow will be responsible for the synthesis, exfoliation and characterization of the (structural, magnetic, (di)electric) properties of the two-dimensional systems. This includes the collection of data, as well as its analysis, and dissemination in scientific articles.

Position summary: Experimental research in the field of magnetic two-dimensional materials. Full-time, tax-free scholarship. The position is for a period of 21 months.

Qualifications: This position requires highly motivated candidates with a doctoral degree in physics or a related field. Demonstrated and documented experience in chemical synthesis, including use of tube furnaces, magnetic and (di)electric measurements is a must. Experience in X-ray diffraction and Raman spectroscopy is also required. We require very good written and oral skills in English as well as very good skills in writing scientific publications. When assessing the applications, special emphasis will be placed on the applicant's documented experience in synthesis and magnetic and (di)electric measurements.

The application should be written in English and include:
1. A letter of motivation with a short description of your research interests, and why you feel you are a good match for the project (maximum two pages).
2. CV, including a description of the relevant skills and experiences, as well as a full publication list.
3. A copy of your Ph.D. degree or date of thesis submission.
4. Contact information of a minimum of two (ideally three) individuals, who can provide letters of reference to support your application, with a brief mention of how these individuals are professionally related to you.

Please send your application to roland.mathieu@angstrom.uu.se no later than August 15, 2025. Starting date: October 1, 2025 or as mutually agreed upon.

For further information about the position and scientific aspects of the application, please contact Dr. Roland Mathieu, Division of Solid State Physics, Department of Materials Science and Engineering, Uppsala University, Sweden (email: roland.mathieu@angstrom.uu.se).