



Job ID: #JOB 3/2022

Job Description

Job Title: Post-doc, growth of metallic layered heterostructures

Job Summary:

Postdoc will be involved in the experimental work in the project on asymmetric metallic magnetic multilayers. Such systems are characterized by perpendicular magnetic anisotropy (PMA), Dzyaloshinskii-Moriya interaction (DMI) and magnetic inter-layer coupling (IC). They feature complex magnetic structures such as spin spirals or skyrmions. A very important factor influencing the mentioned properties of such systems is their crystal structure and interface quality. The tasks of the post-doc will include the production of such stacks in a high-vacuum system, structure analysis using scanning probe microscopy and, additionally, testing their properties using available magneto-optical techniques such as MOKE and VNA-FMR.

Job Description:

The work will have an experimental character. It involves the production of layered magnetic structures of the ferromagnet / heavy metal type in a molecular beam epitaxy (MBE) system equipped with electron guns and effusion cells. The main task of the post-doc will be in-situ structural studies of the fabricated layers using scanning tunnelling microscopy (STM, VT SPM Omicron microscope) and magnetic force microscopy (MFM). RHEED and LEED are other supportive techniques available in the UHV system. On this basis, the structure of interfaces will be resolved and correlated with the magnetic properties (such as: PMA, DMI and IC) of the investigated systems. The post-doc will also be expected to support the studies of static magnetic properties using the magneto-optical Kerr effect (PMOKE) setup and resonant dynamic properties (spin waves) with help of VNA-FMR system.

A good candidate should have experience and skills in working with:

- * high vacuum technological systems (sputtering, MBE)
- * scanning tunnelling microscope operating in ultra-high vacuum

Experience with techniques investigating magnetic properties: MOKE, VNA-FMR, MFM will be a significant advantage.

The applicant should demonstrate a good command of spoken and written English and the ability to write reports and scientific publications.

Main research field: Physics

Sub Research Field: Solid state physics

Career Stage: Post-doc

Research Profile ([details](#)): Recognized researcher (R2)

Type of Contract: Temporary (12 months)

Status: Full time

Salary: Approximately 8300 PLN per month (before ~ 30% taxes, exact amount depends slightly on applicable social security contributions).

Contact

More information can be obtained from prof. Andrzej Wawro (e-mail: wawro@ifpan.edu.pl).

Application details

Application deadline: 23rd February 2022. Applications sent after deadline will not be considered

Required materials:

- Curriculum Vitae
- List of publications
- Motivation letter
- Contact data (e-mail) to, at least two potential referees.
- If applicable - documents confirming scientific stays in foreign institutions (foreign relative to the country of your doctoral degree).
- Consent to process your personal data (expressed on the form attached to this announcement)
- Certificate of obtaining a doctorate issued by an institution recognized in Poland. In the case of institutions not recognized in Poland, the doctorate will have to be validated before employment. This position is intended for people who obtained the doctoral degree no earlier than 7 years before the year of employment in the project.

All materials should be submitted in electronic form to the address: rekrutacja@ifpan.edu.pl with Job ID in the subject.

DATA PROCESSING UNDER CONSENT FOR THE PURPOSES OF RECRUITMENT

Under Art. 13 sections 1 and 2 of the Regulation of the European Parliament and of the Council (EU) 2016/679 of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Resolution), EU OJ L 119 of 04.05.2016, page 1, as amended, hereinafter referred to as "GDPR", we hereby inform as follows:

1. The Data Controller of the provided personal data is the Institute of Physics of the Polish Academy of Sciences, Al. Lotników 32/46, 02-668 Warsaw, phone (22) 116-2111, e-mail director@ifpan.edu.pl.
2. Contact details to the Data Protection Officer are as follows: e-mail iodo@ifpan.edu.pl
3. Your personal data shall be processed for the purpose of carrying out the recruitment process for the position of
4. Processing of your personal data in scope of: full name, date of birth, correspondence address, information about education and course of past employment shall take place under Art. 22¹ § 1 of the Act of 26 June 1974 - Labour Code. In the scope in which you sent to us more personal data than indicated above, we process your data under the consent granted by you.
5. Your personal data shall be stored for 1 month from completion of the recruitment process. If you grant consent for processing of personal data for future recruitments, we shall process your data until withdrawal of the consent by you, however, no longer than for the period of 6 months from the day of submittal of the application by you.
6. Provision of the abovementioned data in the scope indicated above is a statutory requirement resulting from Art. 22¹ § 1 of the Act of 26 June 1974 - Labour Code, in the remaining scope it is voluntary. Failure to provide the data referred to in Art. 22¹ § 1 of the Act of 26 June 1974 - Labour Code precludes consideration of your candidacy for the offered position.
7. You have the right to access your personal data, to rectify them, erase them, restrict their processing.
8. You may submit a complaint to the Inspector General for the Protection of Personal Data.
9. You have the right to withdraw the consent to process your personal data in the scope in which they were provided at any time. Withdrawing the consent does not affect the lawfulness of processing carried out on the basis of consent before its withdrawal.

Consent content:

I grant my consent to the Institute of Physics of the Polish Academy of Sciences to process my personal data contained in the sent recruitment documents for the purpose of carrying out the recruitment process for the position of

If you want us to consider your candidacy also in the future recruitment processes, please grant the additional consent:

I grant my consent to the Institute of Physics of the Polish Academy of Sciences to process my personal data contained in the sent recruitment documents in future recruitment processes taking place during 6 months from the day of appearance of this job advertisement.