



**Institute of Molecular Physics**  
**Polish Academy of Sciences**  
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**Director of Institute of Molecular Physics, Polish Academy of Sciences**  
announces a competition for a Post-doc position in the research project at the  
Department of Thin Film

**Institution:** Institute of Molecular Physics Polish Academy of Sciences (IMP PAS)

PL: Instytut Fizyki Molekularnej Polskiej Akademii Nauk (IFM PAN)

**City:** Poznań, Poland

**Position:** Post-doc

**Scientific discipline:** physical sciences or similar

**Opening date:** 30 January 2020

**Application deadline:** 19 February 2020, 15:00 CET

**Website:** <http://www.ifmpan.poznan.pl>

**Keywords:** solid state physics, surface physics, condensed matter properties

## **I. Offer description:**

Title of the scientific project: Ferromagnetic layers with lateral distribution of Dzyaloshinskii-Moriya interaction for application in spintronic and magnonic devices.

Principal investigator: dr hab. inż. Piotr Kuświk

Project description: In this project theoretical and experimental research will be performed to investigate the influence of the ion bombardment on the Dzyaloshinskii-Moriya interaction (DMI) in magnetic thin films with perpendicular magnetic anisotropy.

Research objectives: The scientific goal of this project is to describe and explain the influence of ion bombardment on the DMI. The final goal is to develop a technology for local modification of DMI by focused ion beam (FIB) or ion bombardment through masks. This technology is studied to achieve new magnetic materials required in spintronic and magnonics devices.

## **II. Requirements for candidates:**

### **1. Research career stage:**

R2: Recognised Researcher (PhD holders or equivalent who are not yet fully independent).

More information on career stages: <https://www.more3.eu/indicator-tool/career-stages-r1-to-r4>.

### **2. Required education:**

- in the discipline physical sciences or similar;
- professional title, academic degree or academic title: doctor\*.

### **3. Required qualifications and skills:**

- experience in micromagnetic simulation for scientific purpose;
- experience in theoretical research on magnetic thin film;
- documented scientific achievements (publications, talks, awards, etc.);

- good knowledge of programs available for research analysis (Microsoft Office, Origin, Mathematica, etc.).

**4. Special requirements:**

The candidate must meet the conditions described in § 4 ust.3 of the Regulation No. 21/2019 of the Director of the National Science Center regarding the introduction of the "Regulations for the implementation of research projects, internships and scholarships introduced by Director of the National Science Center No. 21/2019 of March 15, 2019".

**5. Knowledge of English:** very good, enabling communication with other team members.

**6. Scientific experience required:**

- in the discipline physical sciences or similar;  
- on the topic of: solid state physics, surface physics, condensed matter properties, magnetic thin films dynamics.

**7. Professional experience required:** Early career scientist who has received their doctoral degree within the past seven years\*\*.

**III. Duration of the employment:** 34 months

**IV. Type of contract:** full-time job

**V. Expected date of employment start:** 1<sup>st</sup> March 2020

**VI. Employment type:** employment contract - scientific project NCN OPUS 17

**VII. Salary:** about 10 000 zł (including employment costs)

**VIII. Number of positions offered:** 1

**IX. Job benefits:** excellent working conditions, state-of-the-art technical facilities, international cooperation

**X. Required documents:**

1. Application;
2. CV including information on education and the course of scientific careers, internships and scientific training, conference presentations and seminars, prizes and awards, participation in research projects, acquired funds, organizational achievements, etc.;
3. list of scientific publications;
4. a scan or photocopy of English certificate for non-native English speakers;
5. a scan or photocopy of the PhD degree;
6. consent to the processing of personal data for recruitment purposes (Appendix No. 1);
7. statement that if the contest is won, Institute of Molecular Physics Polish Academy of Sciences will be the primary place of work within the meaning of the Act of 20 July 2018 Law on Higher Education and Science (Journal of Laws of 2018, item 1668, as amended) - Appendix No. 2;
8. supervisor's opinion is optional.

**Documents in other languages than Polish or English should be translated into Polish or English.**

**XI. Method of submitting offers:**

Applications with the annotation Post-doc - Z3 no. 03" should be delivered to the Institute's address or sent to the e-mail address [director@ifmpan.poznan.pl](mailto:director@ifmpan.poznan.pl).

**Contact person:** dr hab. inż. Piotr Kuświk, [kuswik@ifmpan.poznan.pl](mailto:kuswik@ifmpan.poznan.pl)

**XII. Qualification criteria:**

- 1) Ability to use available/own computational packages to conduct theoretical research related to the magnetic properties of layered systems;
- 2) Scientific achievements in the field of theoretical research on a magnetic thin film;
- 3) Knowledge of micromagnetic simulation software.

**XIII. Qualification process:** job application competition followed by a short interview via phone or Skype with the best candidates.

The evaluation and selection will be conducted by a three-person recruitment committee appointed by the Director of the Institute of Molecular Physics of the Polish Academy of Sciences in accordance with "Regulations for the implementation of research projects, internships, and scholarships introduced by Director of the National Science Center No. 21/2019 of March 15, 2019".

**XIV. Expected date of the results announcement:** 25th February 2020

**XV. Additional information:** IMP PAS does not provide accommodation.

\* A person who does not have a doctorate degree may apply, however he/she has to receive this degree at the start of working in the project.

\*\* This period may be extended by the duration of staying in this period on long-term (over 90 days) documented sickness benefits or rehabilitation benefits in connection with incapacity for work. In addition, this period may be extended by the number of months spent on holidays related to the care and upbringing of children granted on the terms set out in Kodeks Pracy ((t.j. Dz.U. z 2018 r. poz. 917 z późn.zm.), and for women by 18 months for each born or an adopted child, if this way of indicating breaks in scientific career is more favorable.

**DISCLAIMER:**

According to art. 13 1 and 2 of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of individuals with regard to the processing of personal data and on the free movement of such data and repealing Directive 95/46/EC (Journal of Laws UE L 119/1 of 4.5.2016), hereinafter referred to as RODO, we inform that:

1. The administrator of your personal data is the Institute of Molecular Physics Polish Academy of Sciences in Poznań, ul. Mariana Smoluchowskiego 17.
2. Your personal data will be processed for the duration of the recruitment process.
3. You have the right to request from the administrator access to personal data, the right to correct them, delete or limit processing, the right to object to the processing of personal data, as well as the right to transfer data.
4. You have the right to withdraw your consent at any time. The above does not affect the compliance with the law, which was made on the basis of your consent before it was withdrawn.
5. It is possible to lodge a complaint with the supervisory body - the President of the Office for Personal Data Protection.
6. Providing personal data is voluntary.
7. Your data will not be shared with entities other than entities authorized on the basis of applicable law.
8. The administrator will not transfer your personal data to recipients in third countries and international organizations.

**Appendix 1**

**Consent for the processing of personal data for recruitment purposes**

I agree to the processing of personal data provided in this document for realising the recruitment process pursuant to the Personal Data Protection Act of 10 May 2018 (Journal of Laws 2018, item 1000) and in agreement with Regulation (EU) 2016/679 of the European Parliament and of the Council 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 Regulation).

.....  
Name

.....  
Date and signature

**DECLARATION**

I declare that if I win the Contest the Institute of Molecular Physics of the Polish Academy of Sciences will become my primary place of work within the meaning of the Act of 20 July 2018, Law on Higher Education and Science (Journal of Laws of 2018, item 1668, as amended).

.....  
Name

.....  
Date and signature