



# Institute of Molecular Physics Polish Academy of Sciences

Mariana Smoluchowskiego 17, 60-179 Poznań  
tel. 61 8695 112, 234, fax 61 8684-524  
[www.ifmpan.poznan.pl](http://www.ifmpan.poznan.pl)

## Director of Institute of Molecular Physics, Polish Academy of Sciences

announces recruitment for the assistant professor  
at the Department of Molecular Crystals (ZN7)

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

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

**City:** Poznań, Poland

**Position:** assistant professor

**Scientific discipline:** Physical sciences or related fields

**Opening date:** June 26, 2023

**Application deadline:** July 17, 2023, 15:00 CEST

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

### **Keywords:**

Solid state physics, infrared and Raman vibrational spectroscopy as a function of pressure and temperature, diamond anvil cell, quantum mechanical calculations of normal vibrations, quantum theory of atoms in molecules, dynamics of hydrogen bond networks, analysis of interactions in a crystal, Hirshfeld surface analysis

### **I. Offer description:**

- Conducting studies of the spectroscopic properties of organic compounds as a function of pressure and temperature. Recording infrared and Raman spectra using a diamond anvil cell and temperature measurement systems over a wide temperature range from 5 to 900 K.
- Performing normal modes calculations using the Gaussian computational package, topological analysis of the electron density scalar field.
- Analysis of intermolecular interactions in crystalline systems using Hirshfeld surfaces.
- Interpretation of the obtained research results and participation in the preparation of publications.

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

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

R2: Recognised Researcher

More information on career stages:

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

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

- in the discipline of physical science or similar;
- academic degree: doctor.

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

- knowledge of computational methods used to interpret vibrational and phonon spectra;
- knowledge of computational and experimental methods used to analyze hydrogen bonding networks in crystals;
- experience in infrared and Raman spectroscopic studies as a function of temperature and pressure;
- experience in preparing a diamond anvil cell for spectroscopic studies;
- documented scientific achievements (grants, publications, speeches, awards, etc.);

- good knowledge of computer programs necessary for scientific research (Microsoft Office, Origin, Fityk, OPUS, Gaussian, GaussView, GaussSum, etc.).

4. **Special requirements:** experience in spectroscopic studies of organic systems (IR and Raman) using diamond anvil cells and cryostats for temperature studies.
5. **Knowledge of English:** good, enabling communication with other team members.
6. **Scientific experience required:**
  - in the discipline of physical sciences or similar;
  - on the topic of: solid state physics, hydrogen bonding analysis, spectroscopic properties as a function of high pressure and low temperature, analysis of anomalous phenomena (NTE, NLC).
7. **Professional experience required:** 1-4 years or more

**III. Duration of the employment:** to be determined individually based on the current regulations

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

**V. Expected date of employment start:** August-September 2023

**VI. Employment type:** employment contract

**VII. Salary:** in accordance with the current Law

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

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

**X. Required document:**

1. application;
2. CV including information on education and the course of scientific careers, internships and scientific training, conference presentation 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 an English certificate for non-native English speakers;
5. a scan or photocopy of the Ph.D. degree;
6. consent to the processing of personal data for recruitment purposes (Appendix No. 1);
7. a statement that if the contest is won, the 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. opinion of at least two independent researchers (conducting independent research or leading an independent research team).

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

**XI. Method of submitting offers:** applications with the annotation „Competition for an assistant professor – ZN7 – No. 02” 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:**

Head of Department of Molecular Crystals

Assoc. Prof. Andrzej Łapiński, PhD, DSc  
e-mail: [andrzej.lapinski@ifmpan.poznan.pl](mailto:andrzej.lapinski@ifmpan.poznan.pl)

**XII. Qualification criteria:**

1. scientific achievements in the field of temperature studies of organic compounds using infrared and Raman spectroscopy;
2. knowledge of computational methods to analyze hydrogen bonds and spectroscopic properties;
3. experience in spectroscopic (IR and Ramana) studies of organic compounds in the function of pressure and temperature.

**XIII. Qualification process:**

1. Job application competition;
2. Possibility online interview with the best candidates.

The IMP PAS Scientific Council Committee will make the selection for the Training of Young Scientific Staff in accordance with the regulations of competitions for hiring an assistant and assistant professor at IMP PAS.

**XIV. Expected date of the results announcement:** August 31, 2023

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

**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

## **Appendix 2**

### **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