 

# **ADAM MICKIEWICZ UNIVERSITY, POZNAN**

**ANNOUNCES**

**A COMPETITION**

**for the position of Scholarship grantee/Student**

**at the Faculty of Physics**

**in project SONATA-17: *‘Time and momentum-resolved studies of gigahertz acoustic phonons in acoustoplasmonic metamaterials.’.***

**with project number: UMO-2021/43/D/ST3/02526**

**Basic information**

1. **Research discipline (research field):**

Physics

1. **Number of work hours per week including a task-based work schedule (if applicable):**

Part-time, 16 hours (2 days) per week in a task-based work time system.

1. **Type of an contract and expected duration :**

**scholarship agreement**

for **1 year** with possible extension for **1 year** (max. total 2 years).

1. **Anticipated job starting date:**

01.03.2024.

1. **Salary:**

Gros with the employer’s cost: 1500 PLN/month (approx. 1180 PLN/month).

1. **Workplace location:**

Faculty of Physics, Uniwersytetu Poznanskiego 2, 61-614 Poznan.

1. **Application deadline and process:**

Electronic submission to [thovas@amu.edu.pl](mailto:thovas@amu.edu.pl). Application deadline: **15.02.2024**. Please note that the job reference number should be quoted in the application.

1. **Required documents**

* Application form/letter of the candidate (email);
* *Curriculum Vitae* (max. 5 pages A4);
* Diplomas or certificates issued by colleges and universities attesting to education and degrees or titles held (in case of academic degrees obtained abroad - the documents must meet the equivalence criteria set out in Article 328 of the Act of 20 July 2018 Law on Higher Education and Science (Journal of Laws of 2021, item 478 i.e. as amended; Polish: Dziennik Ustaw 2021 poz.478);
* Information on the Applicant's research (publication record and list of conferences attended), teaching and organizational achievements,
* Two reference letters (not older than 3 months).
* Consent to the processing of personal data as follows: *In accordance with Article 6 (1) (a) of the General Data Protection Regulation of 27 April 2016. (OJ EU L 119/1 of 4 May 2016) I consent to the processing of personal data other than: first name, (first names) and surname; parents' first names; date of birth; place of residence (mailing address); education; previous employment history, included in my job offer for the purpose of the current recruitment.";*

**Conditions of the competition determined by the competition** **committee**

1. **Determination of qualifications: (researcher profile) according to the Euraxess guidelines**

**(R1) First Stage Researcher** (Individuals doing research under supervision in industry, research institutes or universities who have not yet obtained a PhD degree)

(definition of qualification level and professional experience according to Euraxess guidelines https://euraxess.ec.europa.eu/europe/career-development/training-researchers/research-profiles-descriptors)

1. **Job Offer description**

The job offer refers to the position in the NCN SONATA project (National Science Center) titled *Time and momentum-resolved studies of gigahertz acoustic phonons in acoustoplasmonic metamaterials* (Contract number: UMO-2021/43/D/ST3/02526).

The artificial, nano-engineered materials that synergistically merge plasmons and acoustic phonons are termed acoustoplasmonic metamaterials. A major obstacle for plasmonics and signal-processing devices is excessive heat generation. Ideally, the plasmonic resonances and the phononic band-structures in acoustoplasmonic metamaterials are engineered such that they maximize the energy transfer from plasmons into selected modes of acoustic phonons. In this way, most of the energy input will transform into useful acoustic signals, instead of waste heat. To achieve this selective energy transfer, our project aim is to perform time and momentum-resolved studies of photoexcited acoustic phonons in acoustoplasmonic metamaterials. The main experimental technique will be Brillouin Light Scattering (BLS) combined with femtosecond laser excitation of coherent acoustic phonons, termed pumped-BLS, and time-resolved electronics to capture nanosecond (ns) and sub-ns dynamics.

In this project the Student will work towards the preparation of a Master thesis with topic ‘Time- and momentum-resolved detection of acoustic phonons’, and will perform basic characterization of the samples with UV-Vis spectroscopy and optical microscopy, participate in the time- and momentum-resolved Brillouin light scattering experiments, and perform day-to-day laboratory work, maintaining lab book, keeping notes, participating in the scientific discussions and meetings, and preparing figures.

1. **Requirments and qualifications**

Bachelor of Science in Physics or related topics such as Materials Science, Physical Chemistry, or Electrical Engineering. Basic knowledge of condensed matter physics and optics.

1. **Required languages**

4. Language: English

5. Level: fluent or native

1. **Required research, teaching or mixed experience**

- Basic experience in optics, lasers, spectroscopic or time-domain techniques and building optical systems.

- Ability to perform supervised work in a team.

- Knowledge of English language.

- Basic knowledge of software such as: Matlab, Comsol or Python, LabView, OriginLab, CorelDraw, LaTex or similar tools.

- Basic knowledge of condensed matter physics or optics, electromagnetism, statistical physics and thermodynamics.

- Experience with working and studying in an international academic environment.

1. **Benefits**

* an atmosphere of respect and cooperation
* supporting employees with disabilities
* funding for language learning
* co-financing of training and courses
* leisure-time funding

1. **Eligibility criteria**

1. Matching of the candidate's scientific profile with the advertisement.

2. Grade on the diploma and other academic achievements.

3. Internships and participation in research projects.

1. **The selection process**
2. Competition committee begins working no later than 14 days after the deadline for submission of documents.
3. Formal evaluation of submitted proposals.
4. Call to provide additional or missing documents if necessary.
5. Selection of candidates for the interview stage.
6. Interviews for candidates who meet the formal requirements.
7. The chair of the competition committee announces the results and informs the candidates. This information will include justification with a reference to candidates' strengths and weaknesses. Submitted documents will be sent back to candidates.
8. **Prospects for professional development**

- supervision in building a scientific profile.

- establishing cooperation with renowned research centers in the world.

**RODO Information Clause :**

Pursuant to Article 13 of the General Data Protection Regulation of 27 April 2016. (Official Journal of the EU L 119 of 04.05.2016) we inform that:

1. The controller of your personal data is Adam Mickiewicz University, Poznań with the official seat: ul. Henryka Wieniawskiego 1, 61 - 712 Poznań.
2. The personal data controller has appointed a Data Protection Officer overseeing the correctness of the processing of personal data, who can be contacted via e-mail: iod@amu.edu.pl.
3. The purpose of processing your personal data is to carry out the recruitment process for the indicated job position.
4. The legal basis for the processing of your personal data is Article 6(1)(a) of the General Data Protection Regulation of 27 April 2016 and the Labour Code of 26 June 1974. (Journal of Laws of 1998 N21, item 94 as amended).
5. Your personal data will be stored for a period of 6 months from the end of the recruitment process.
6. Your personal data will not be made available to other entities, with the exception of entities authorized by law. Access to your data will be given to persons authorized by the Controller to process them in the performance of their duties.
7. You have the right to access your data and, subject to the law, the right to rectification, erasure, restriction of processing, the right to data portability, the right to object to processing, the right to withdraw consent at any time.
8. You have the right to lodge a complaint to the supervisory authority - the Chairman of the Office for Personal Data Protection, ul.Stawki 2, 00 - 193 Warsaw.
9. Providing personal data is mandatory under the law, otherwise it is voluntary.
10. Your personal data will not be processed by automated means and will not be subject to profiling.