



ADAM MICKIEWICZ UNIVERSITY, POZNAN
ANNOUNCES A COMPETITION
for the position of Student (civil law contract)
at the Faculty of Physics

GENERAL INFORMATION

1. Research discipline (research field): **Experimental/Theoretical Physics.**
2. Number of work hours per week: **16h/week.**
3. Type of employment: **civil law contract.**
4. Anticipated job starting date: **01.06.2024.**
5. Salary: **1500 PLN (brutto)/month.**
6. Electronic submission to: bartlomiej.graczykowski@amu.edu.pl.
7. Application deadline: **20.05.2024.**
8. Supervisor: **Prof. UAM Dr. Hab. Bartlomiej Graczykowski.**
9. Required documents:
 - *Curriculum Vitae* (max. 2 pages A4);
 - Diplomas or certificates issued by colleges and universities.
 - Student status certificate.

DESCRIPTION

Title: Mechanical properties of twisted van der Waals 2D materials

Keywords: van der Waals materials, 2D materials, mechanical properties, acoustic waves/phonons, Brillouin light scattering, nanotechnology

Description: The project's ambition is to engineer mechanical properties and phonon transport in 2D materials using the relative layer orientation (twist). With precise layer arrangement, we will study the anisotropy between the in-plane and cross-plane directions, but emphasis will be put on the in-plane anisotropy enabled by moiré fringes.

The project will be carried out in the framework of the EU-Japan (EIG CONCERT-JAPAN/9/91/PETITE/2023) grant PETITE in collaboration with ICN2 Barcelona (Spain) and the University of Tokyo (Japan).

Expected skills and competences: Solid state physics, optics, laser physics, mechanics, solid state mechanics, fundamental knowledge of MATLAB (or Mathematica).

Tasks: Laboratory work utilizing laser spectroscopy, sample preparation, data fitting and analysis under supervision of the PI. Periodic (monthly) reporting. Possible secondments in Barcelona and Tokyo.

References:

1. V. Babacic, D. Saleta Reig, S. Varghese, T. Vasileiadis, E. Coy, K.-J. Tielrooij, B. Graczykowski, *Advanced Materials* 2021, 33, 2008614.
2. B. Graczykowski, M. Sledzinska, M. Placidi, D. Saleta Reig, M. Kasprzak, F. Alzina, C. M. Sotomayor Torres, *Nano Lett.* 2017, 17, 7647.