



Institute of Physics of the Polish Academy of Sciences Scholarship for a PhD Student



Job ID: #JOB 64/2021

Job Description

Job Title: PhD student – scholarship holder

Job Summary:

MBE growth and characterization of oxide heterostructures for photovoltaic applications.

Job Description:

The candidate selected through a competition will participate in the implementation of the OPUS project: Research on the {CdO/MgO} and {CdO/ZnO} superlattices quasi ternary alloys -towards new materials for photovoltaics., financed by the National Science Center. The task of the PhD student will be the production and characterization of II-VI oxide structures. The samples will be produced by the molecular beam epitaxy (MBE) method, from semiconductors materials classified as a wide band gap such as ZnO, MgO and CdO. The task of the PhD student will be to optimize the MBE growth of II-VI structures in terms of obtaining heterostructures with appropriate electrical, crystallographic and optical parameters. PhD student will also participate in the broad optical-electrical characterization of structures.

Requirements:

- knowledge about basic optical, structural and electrical characterization of the semiconductors,
- knowledge of material physics, solid state physics,
- ability to work with the Origin program,
- Master's degree in physics (or an equivalent that qualifies one for PhD studies in physics in the country of issue).
- To be employed, the candidate must be accepted into the PhD school in which the Institute of Physics participates. Applications for the position are through recruitment to the School, online at warsaw4phd.eu.

Main research field: Physics

Sub Research Field: Semiconductor physics

Career Stage: Early stage researcher or 0-4 yrs (Post-graduate)

Research Profile ([details](#)): First Stage Researcher (R1)

Type of Contract: Fixed term (48 months)

Status: Full-time

Salary: grant funding of **5000** PLN per month, before subtracting obligatory employer and employee social security contributions (~15%).

Contact

More information can be obtained from

Ewa Przeździecka (e-mail: eilczuk@ifpan.edu.pl)

Please make contact.

Application details

Application deadline: 4.1.2022 Later applications will not be considered.

Required materials:

- Scientific CV
- Cover letter
- Scan of MsC diploma or equivalent (or an explanation of when one is expected)
- Academic record (for finalized semesters)
- Recommended: A recommendation letter by an academic, or their contact email.

All materials should be submitted in electronic form by application to the PhD school warsaw4phd.eu, choosing the project: " MBE growth and characterization of oxide heterostructures for photovoltaic applications.". (The application system will be active from 21 December 2021).

Results regarding the position will be made available by 10 February 2022.