



Institute of Physics of the Polish Academy of Sciences

Scholarship for a PhD Student



Job ID: #JOB 23/2023

Job Description

Job Title: PhD student – scholarship holder

Job Summary:

Molecular beam epitaxial growth and characterization of light emitting diodes (nanoLEDs) based on nanowires of nitride semiconductors

Job Description:

The student will participate in the NCN Weave-UNISONO project "ZnO/(Al, Ga)N nanowire heterostructures for optoelectronics". The project is focused on deepening our understanding of mechanisms of catalyst-free nucleation and plasma-assisted MBE (PAMBE) growth of nanowires (NWs) made of nitride semiconductors. The main goal is to use the knowledge and experience gained for preparation of specific nitride NW structures for new designs of optoelectronic devices and correlation of their characteristics with the fabrication steps. Understanding of growth mechanisms as well as elaborated ways of their control will be used for studies of growth of spatially organized NW structures by selective area epitaxy, core-shell structures and for developing of novel nanowire-based light emitting diodes (nanoLEDs).

Requirements:

- experience in MBE growth of semiconductor nanostructures
- Master's degree in physics, material engineering, chemistry, electrical engineering or electronics or related field
- good spoken and written English
- high motivation for scientific work
- 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: solid state physics

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

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

Type of Contract: Fixed term (36 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

dr. hab. Marta Sobanska (e-mail: sobanska@ifpan.edu.pl)

<http://info.ifpan.edu.pl/Dodatki/WordPress/mbe2en/>

Application details

Application deadline: 04.06.2023 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)
- Description of scientific experience, including participation in research projects, conferences or international schools
- Recommended: A recommendation letter by an academic or contact e-mail

All materials should be submitted in electronic form by application to the PhD school warsaw4phd.eu, choosing the project: "Molecular beam epitaxial growth and characterization of light emitting diodes (nanoLEDs) based on nanowires of nitride semiconductors". The application system will be active from 22.05.2023.

Results regarding the position will be made available by 08.07.2023.