Ph.D. project within Sonata-Bis

"Kondo resonance measurements of single salophene molecules adsorbed on metal substrates."

Spintronic devices, based on the manipulation of spin states rather than charge flow of electrons, could offer energy-efficient solutions for future smart information and communication technologies. Spins can be employed either as classical bits of information or as qubits in quantum computing.

One of the possible experiments to obtain information about the spin of a single molecule adsorbed on a monocrystalline surface is to investigate the Kondo resonance. This requires a scanning tunneling microscope operating at UHV conditions and cryogenic temperatures (typically bellow 10K).

The objective of this project is to measure the Kondo resonance of single adsorbed salophene molecules on metal substrates. To achieve this goal, a successful candidate will develop a new home-build STM mounted on a newly developed cryogen-free cryostat.

We offer a four year Ph.D. scholarship according to NCN rules within a small working group in a friendly atmosphere. We have ample international cooperation and often send people for short-term scientific internships. Our group members have plenty of know-how that we gathered working at many European institutions.

Requirements:

- A M.Sc. or equivalent in physics or chemistry.
- Experience in cryogenics.
- Experience in scanning probe methods.
- Experience in UHV systems design and operation is a bonus.
- Fluent English
- Admission to Ph.D. program at Faculty of Technical Physics, Poznan University of Technology

Conditions of employment:

- Scholarship agreement,
- Monthly scholarship of 4500 PLN.

Please send your application (CV) by September 24th to:

Dr. Maciej Bazarnik, Email: maciej.bazarnik@put.poznan.pl

Date of the interview: 25/09/2018

In the case of two candidates with the same qualifications, preference will be given to women.