



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



**Job ID:** #JOB37/2018

## Job Description

**Job Title:** PhD Student in Laser Spectroscopy

### Job Summary:

Candidate profile:

- MSc university degree in one of the following disciplines: Atomic Physics, Molecular Physics, Optics, Laser Physics.
- Good spoken and written English skills
- Experience in laboratory work
- Strong motivation for scientific work

### Job Description:

Group of laser spectroscopy (ON2.5) offers a Ph.D. project on laser spectroscopy of diatomic alkali molecules. The project is focused on investigation of electronic structure of selected electronic states of Rb<sub>2</sub>, Cs<sub>2</sub> and RbCs molecules, including determination of corresponding molecular constants and potential energy curves.

The research methodology is based on a laser polarization labelling spectroscopy technique which allows to record high resolution spectra of the investigated molecules. The experimental resources available in our laboratories include state-of-the-art laser systems, specialized detection systems and spectroscopic cells designed for production of specific alkali metal dimers. The numerical Pointwise Inverted Perturbation Approach method developed in our group enables construction of molecular potentials for investigated electronic states basing on experimental spectra, even for states with exotic shapes of potential curves.

**Main research field:** Physics

**Sub Research Field:** Optics

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

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

**Type of Contract:** Temporary (18 months with possibility of prolongation)

**Status:** Full-time

**Salary:** 3000 PLN per month (untaxed scholarship).

## Contact

More information can be found at <https://dimer.ifpan.edu.pl> or obtained from prof. Włodzimierz Jastrzębski (e-mail: [jastr@ifpan.edu.pl](mailto:jastr@ifpan.edu.pl)).

## Application details

**Application deadline:** 31 August 2018 Later applications may also be considered.

**Required materials:**

- Curriculum Vitae
- Letter of motivation
- Detailed description of experimental abilities
- Reference letter and contact data of the Author of the letter (phone number(s) and e-mail address(es))
- List of publications, conference presentations and other achievements
- Transcript of record from undergraduate studies

All materials should be submitted in electronic form to the address: [jobs@ifpan.edu.pl](mailto:jobs@ifpan.edu.pl) with Job ID in the subject.