

Keywords:

optical spectroscopy, EMR/EPR/ESR, magnetism, computational modeling, molecular nanomagnets

Scholarship Offer for MSc or PhD Student at Faculty of Chemistry, A. Mickiewicz University, in Project Opus 11

Adam Mickiewicz University in Poznań announces an open competition for the position of MSc (*Magistrant - stypendysta*) or PhD student (*Doktorant - stypendysta*) in Faculty of Chemistry. The selected candidate will realize the research tasks in the project OPUS 11: "*Rational design of molecular nanomagnets: synthesis, characterization, theoretical description and computational modeling of their properties*" (financed by the National Science Centre under the terms of the Agreement for this project). Major task is to provide support for theoretical description and computational modeling leading to better understanding and prediction of spectroscopic and magnetic properties of molecular nanomagnets (MNM) using semiempirical methods.

Scholarship Offer for MSc or PhD Student at Faculty of Chemistry, A. Mickiewicz University, in Project Opus 11

Institution: Faculty of Chemistry, Adam Mickiewicz University in Poznań

Position Name: MSc (*Magistrant - stypendysta*) or PhD student (*Doktorant - stypendysta*) in the project OPUS 11: "*Rational design of molecular nanomagnets: synthesis, characterization, theoretical description and computational modeling of their properties*".

Duration: initially 6 months with possibility for extension.

Salary: MSc student 500 - 700 PLN/month (gross); PhD student 1000 - 1500 PLN/month (gross).

Principal Investigator (and Supervisor): Prof. Czesław Rudowicz.

Requirements:

1. Familiarity with of physical foundations of optical and EMR spectroscopy, and magnetism of transition (3d/4f) ions in crystals, especially the effective spin Hamiltonian theory.
2. Substantial knowledge of solid state physics, quantum mechanics, and group theory.
3. Other qualifications required:
 - good programming skills in computational and/or algebraic languages;
 - high level of analytical skills and inquiring mind;
 - publications in internationally refereed scientific journals would be an advantage;
 - proficiency in English is a must, whereas in Polish would be an advantage.

Scope of work within project tasks:

Carrying out calculations using suitable computer programs. Development of computational tools for standardization of triclinic crystal field parameter (CFP) sets to ensure comparability of data taken from various sources. Systematic standardization of CFP sets and comparative analysis of low symmetry aspects inherent in the triclinic or monoclinic CFP sets reported in literature for selected molecular nanomagnets (MNM). Development of better theoretical framework for description and prediction of properties of MNM complexes. Individual literature searches. Active participation in group activities and preparation of publications.

Additional information:

- Application containing: motivation letter, CV (including photo), publication list (if any), copy of diploma (if available, or information on current status of MSc thesis), contact details of 2 - 4 potential referees, should be sent as a single pdf-file or zip-file. Please include in your application one page with the following phrase: "*In accordance with Article 6(1)(a) of the General Data Protection Regulation of 27 April 2016 (Journal of Laws of the EU L 119/1 of 4*

May 2016) I agree to the processing of personal data other than those indicated in Article 221 of the Labour Code (name(s) and surname; parents' names; date of birth; place of residence; address for correspondence; education; previous employment), included in my job offer for the purpose of current recruitment."

- Selected candidates will be invited for the interview – the date will be communicated to the candidates individually.

Send applications by email to: <czerud@amu.edu.pl> *with a copy to*
<kinga.roszak@amu.edu.pl>

The e-mail heading should be: "MSc or PhD student #4B– OPUS grant".

Application deadline: 30.09.2020

For more information, contact: Prof. Czesław Rudowicz by email: <czerud@amu.edu.pl>.