

Department of Inorganic and Coordination Chemistry
(Faculty of Chemistry, Nicolaus Copernicus University in Torun)

Position: Scholarship grantee/PhD student

Project title: Mechanistic clarification of the interaction of nanoparticles and nanoscale coordination compounds at the interface of multiphase chemical and medicinal related processes

Requirements:

1. Master degree in Chemistry;
2. Good background in inorganic/bioinorganic chemistry;
3. Experience with kinetic and mechanistic studies;
4. High motivation to perform independent research work;
5. Ability to work in a scientific team;
6. Fluent in spoken and written English.

Tasks:

1. Mechanistic studies on the application of nanoparticles and nanoscale coordination compounds in biological redox controlled processes.
2. Application of X-ray, SEM, TEM, EDX, ESI-MS and DLS techniques to follow changes in the structural pattern of nanoscale Ru(II) polypyridyl complexes.
3. Mechanistic studies on ligand substitution processes of nanoscale Ru(II) polypyridyl complexes.
4. Studies on nanoscale coordination compounds for the reversible formation of NAD⁺/NADH to control ROS generation in cells.
5. Systematic studies on the influence of different stabilizers, ultrasound and temperature on the size of the synthesized coordination compounds, their crystal structure, shape and dispersity.

NCN call for proposals type: OPUS 19 – ST4

Deadline for the submission: February 7, 2021

Date of the contest settlement: February 15, 2021

Form of submission: e-mail

Contact person: Prof. Dr. h. c. mult. Rudi van Eldik, e-mail: rudi.vaneldik@fau.de

Scholarship: PLN 4,000 (gross) per month for 3 years

Commencement: March 1, 2021

Required documents:

- Letter of motivation (optional)
- CV
- Copy of the master's diploma with supplement
- Opinion of the academic supervisor
- Documentation of scientific achievements
- Declaration of consent to the processing of personal data contained in the application for the needs of the recruitment process, in accordance with Regulation (EU)2016/ 679 of the European Parliament and of the Council (Journal of Laws UE L 119/1)