



CeNT-35-2022

Director of Centre of New Technologies of the University of Warsaw, with the Project Leader, announce opening of the competition for the position of PhD Student in Laboratory of Technology of Novel Functional Materials the project of Dr Piotr J. Leszczynski – Centre of New Technologies of the University of Warsaw.

JOB OFFER

Position in the project:	PhD student
Laboratory:	LTNFM, Project of Piotr J. Leszczynski
Scientific discipline:	Chemical sciences
Keywords:	Silver(II), cycloaddition, organic electrochemistry, organic synthesis, catalysis, NMR
Job type (employment contract/stipend):	Scholarship
Part-time/full-time:	Full-time, 40 h/week
Number of job offers:	1
Remuneration/stipend amount/month:	4400 PLN gross gross
Position starts on:	1 October 2022
Maximum period of stipend agreement:	5 months with the possibility of extension up to 12 months
Institution:	Centre of New Technologies, University of Warsaw
Project leader:	Piotr J. Leszczynski, PhD, DSc
Project title:	CYCLO. Ag(II) promoted cycloaddition processes https://projekty.ncn.gov.pl/opisy/463083-en.pdf
Competition type:	Opus 18
Financing institution:	NCN
Project description:	CYCLO aims at design of a novel synthetic protocol allowing various organic compounds to undergo DA reactions even when both reactants exhibit very high ionisation potentials, which is unavailable with use of known DA protocols. CYCLO considers a synthetic use of divalent silver compounds as novel, highly reactive redox initiators of [2+2] cycloaddition and/or [4+2] DA reactions driven by radical cation initiation. https://projekty.ncn.gov.pl/opisy/463083-en.pdf
Key responsibilities include:	Planned role in the project: <ul style="list-style-type: none">– participation in electrochemical experiments including use of divalent silver species in [4+2] Diels-Alder and/or [2+2] cycloaddition reactions driven by radical cation catalytic cycles under shared supervision of Dr. Hab. Piotr Leszczyński and the collaborating specialists: Dr. Hab. Krzysztof Kazimierczuk, Dr. Dariusz Gołowicz and Dr. Hab. Rafał Jurczakowski;– determination of reaction parameters and electrocatalytic yield using chemical electroanalysis techniques including impedance spectroscopy and cyclic voltammetry;– data processing and preliminary analysis of the results obtained;– writing up scientific reports and learning to write manuscripts of scientific publications.



Profile of candidates/requirements:	<p>The competition is open for persons who meet the conditions specified in the regulations on the allocation of resources for the implementation of tasks financed by the National Science Centre for OPUS 18 grant.</p> <p>PhD Student should have M.Sc. or M.Res. degree in chemistry, materials science, or in closely related subject. She/he should be experienced in NMR, organic chemistry and chemistry of Ag(II) species. She/he should speak English fluently to ensure proper communication. PhD Student should be able to work in a group because she/he will closely collaborate with PI and NMR Specialist, and might also supervise a younger Student.</p> <p><u>Ranking list would be made judging:</u></p> <ul style="list-style-type: none">– academic achievements, i.e. scientific publications, patents, conference talks and posters, etc.– research experience, i.e. participation in scientific projects, internships, stipends, awards, etc.– competence related to the project, i.e. experience in electrochemistry including impedance spectroscopy, experience in modern NMR techniques, good knowledge of English (minimum B2), organic electrochemistry, organic synthesis, laboratory experience (e.g. work in glovebox, anaerobic conditions) <p><u>The following will be considered an asset:</u></p> <ul style="list-style-type: none">– fair knowledge of impedance spectroscopy and cyclic voltammetry– fair knowledge of modern NMR spectroscopy techniques– experience in processing electrochemical and NMR data– experience in electrochemical <i>in situ</i> monitoring of organic synthesis– experience in analysis of NMR data, e.g. Mestre Nova– experience in use of silver(II) species in organic synthesis– experience in conference presentations of research results– experience in work with younger students <p>Selected candidates may be invited for an interview (in person or zoom) expected in mid-August 2022.</p> <p>Competition may be closed with recommendation of no candidate if all the applicants would not fulfil the requirements or represent insufficient academic level.</p> <p>Important: Prior to start of the scholarship, the candidate will have to obtain the status of PhD student at the University of Warsaw (Doctoral School of Exact and Natural Sciences) according to standing procedures including filing an extra application.</p>
Required documents:	<ol style="list-style-type: none">1. Cover letter2. Current curriculum vitae3. List of publications and conference presentations4. List of scientific achievements, awards, internships, etc.5. Copy of M.Sc. or M.Res. diploma (or, if the degree has not been obtained yet, a certificate/document about the date of the defense)6. PDF copy of a master thesis (if obtained so far)7. Recommendation letter from the supervisor of master thesis (optional)8. Signed information on the personal data processing, available at: https://cent.uw.edu.pl/en/wp-content/uploads/sites/5/2020/11/Information-clause_personal-data-processing.pdf
We offer:	Participation in the project regarding ionic conductivity in solid state, possibility to learn unique methods of chemical analysis, work in friendly environment, possibility for scientific self-development
Please submit the following documents to:	piotr.leszczynski@cent.uw.edu.pl
Application deadline:	31 August 2022
Date of announcing the results:	15 September 2022
Method of notification about the results:	email, website: https://cent.uw.edu.pl/en/career/