

JOB OFFER

Position in the project:	Assistant
Scientific discipline:	Mechanical Engineering/Energy Engineering and/or similar
Job type (employment contract/stipend):	Employment contract
Number of job offers:	1
Remuneration/stipend amount/month (<i>"X0 000 PLN of full remuneration cost, i.e. expected net salary at X 000 PLN"</i>):	6 000 PLN of full remuneration cost, i.e. expected net salary at 3 500 PLN
Position starts on:	01.01.2019
Maximum period of contract/stipend agreement:	01.01.2019-31.03.2021
Institution:	Division of Boilers and Steam Generators / Institute of Power Engineering and Turbomachinery / Faculty of Energy and Environmental Engineering / Silesian University of Technology
Project leader:	dr hab. inż. Sylwester Kalisz
Project title:	<i>Process optimisation and valorisation of combustion by-products in transition to circular economy (UPS-Plus)</i> <i>Project is carried out within the TEAM-TECH Core Facility programme of the Foundation for Polish Science</i>
Project description:	The main object of the project is the realisation of circular economy ideas by optimising the combustion process in order to obtain combustion by-products likely to valorisation and usable in industry. Optimization of low-quality solid fuels combustion (e.g. biomass or refuse-derived fuel) will be based mostly on upgrading fuel properties with additives, especially connected with slagging, fouling and high-temperature corrosion and on a reduction of harmful compounds (e.g. NO _x , Hg, HCl, HF, NH ₃). The purpose of the optimisation is to produce specific by-products subsequently subjected to thermal and chemical functionalization resulting in obtaining useful materials, e.g. geomats, insulations or sorption medium. Project objectives will be carried through the usage of innovative, multifunctional Core Combustion Facility (CCF) – semi-technical boiler stand allowing to develop research service concerning modification of combustion process in order to receive most useful by-products.
Key responsibilities include:	<ol style="list-style-type: none"> 1. Research within Task 1.3 - Corrosion control during combustion of low-quality solid fuels (corrosion control measurements in relation to variable combustion parameters, determination of fuel additives impact on high-temperature corrosion). 2. Research within Task 2.2 - Ammonia removal from fly ash with use of an oxidizing agent (determination of the possibility of ammonia removal from fly ash via oxidising agent usage).
Profile of candidates/requirements:	<ol style="list-style-type: none"> 1. PhD degree in in technical sciences, in the discipline: Mechanical Engineering/Energy Engineering and/or similar. PhD thesis should deal with subject of biomass and waste thermal conversion processes. 2. Good knowledge of spoken and written English, confirmed by English publications. 3. Experience in laboratory and measurement work (including fuel analysis, determination of process gas composition,

	<p>ammonia and chlorine concentration with use of analytical methods) confirmed by participation in at least three projects or scientific research.</p> <ol style="list-style-type: none"> Two-month abroad internship or six-month domestic internship (Poland) in research, industrial or local government units. Knowledge in the field of biomass and waste thermal conversion processes, high temperature corrosion in biomass-fired boilers and reduction of NO_x in flue gas confirmed by participation in at least three projects or research work. Scientific achievements in the field of thermal conversion of biomass and waste fuels and the problem of chlorine corrosion, confirmed by publications in journals included in the list of Ministry of Science and Higher Education bulleted magazines (including at least one publication with minimum 40 points) and active participation in at least two international conferences. Abilities of laboratory units designing and research planning in field of biomass thermal conversion. Excellent knowledge in the field of boilers and combustion, especially high temperature corrosion with methods of its decreasing as well as optimization of combustion process.
Required documents:	<ol style="list-style-type: none"> Covering letter including the reason of willing to realise the employment contract within the UPS-Plus Project (max. 1 page). CV including relevant professional experience and knowledge (max. 2 pages). Copy of the PhD degree certificate(s) with grades list. Translations into English or Polish if the original documents are not issued in one of these languages. Confirmation of required skills, according to Requirements.
We offer:	The possibility of realising employment contract in a dynamic research environment in close cooperation with industries and advanced research centres in the world.
Please submit the following documents to:	ccf@polsl.pl (e-mail subject: CCF – PhD application)
Application deadline:	https://euraxess.ec.europa.eu/jobs/337792
For more details about the position please visit (website/webpage address):	www.ccf.polsl.pl
Euraxess job/stipend offer (in case of PhD and postdoc positions):	2018.12.12

Please include in your offer:

“I hereby give consent for my personal data included in my application to be processed for the purposes of the recruitment process within the project conducted by Silesian University of Technology which is the administrator of my personal data.

I am aware of the fact that providing personal data is voluntary and necessary in the recruitment process. I have the right to withdraw or limit the scope of consent to data processing.

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place, date and signature”