An early stage researcher (ESR) position is available at Ulster University and Aqualia as part of the Marie Curie Industrial Doctorate project "REWATERGY"

PhD student (3 years). ***ESR 4 – Development of novel mechanisms based on photo and electrodisinfection and decontamination of wastewater and drinking water***

REWATERGY is a Marie Curie European Industrial Doctorate (EID) training network funded by the European Commission within the Horizon 2020 research and innovation action. The REWATERGY programme aims to develop an academic-industrial partnership within the water-energy nexus.
Three research objectives set the foundation of this ambitious programme:

- Enhance the energy recovery from wastewater streams inspired by the *circular economy* concept.
- Improve the *energy efficiency* of water disinfection and removal of contaminants of emerging concern.
- Increase the *resilience* of distributed household safe drinking water systems addressing potential health and safety challenges.

The REWATERGY network comprises 3 universities (Universidad Rey Juan Carlos, Spain; University of Cambridge, UK; and Ulster University, UK) and 3 companies (Deft IMP, Netherlands, ProPhotonix, Ireland; and FCC Aqualia, Spain). The consortium is recruiting 8 highly motivated PhD candidates, providing inter-sectoral training, which will qualify them for a career in academia and/or industry. Each ESR will crucially gain inter-sectoral experience in an individual ESR research project, with the main working period (36 months) of the ESR equally split into an academic and an industrial part of 18 months at 2 different countries.

This PhD student position will be hired by:

- Ulster University (Belfast, United Kingdom). 18 months (1st October 2019 – 31st March 2021).
- Aqualia (Madrid, Spain). 18 months (1st April 2021 – 30th September 2022).

Description of the work:

This PhD student position offers an exciting and innovative research project for understanding novel mechanisms for the photo- and electro-generation of reactive oxidising species in water; understanding mechanisms of photo and electro oxidation processes for the generation of oxidising species for water treatment. The PhD will be focused on the optimisation of scaling up of novel photo and electrodisinfection processes for wastewater and drinking water treatment. In addition, the student will be involved in the modelling performance of photo and electrodisinfection processes at real scale and the testing final prototype for organic compounds and microorganisms removal. In Aqualia, the student will test the selected photo and electrodisinfection processes integrated into the tertiary treatment of an urban wastewater treatment plant and a drinking water plant.

Requirements:

- Candidate should be in the first four years of his/her research career. He/she should not have a doctoral degree and fulfil the eligibility criteria and mobility rule (see below).
- A Master degree in chemical engineering, environmental engineering, biotechnology, bioengineering, or other fields relevant to project activities.
- Problem solving skills and ability to work both as part of the team, and independently, coupled with excellent communication and organisational skills.
- High level of oral and written communication skills (applicants must provide evidence of competence in English language, i.e. proficiency level of English-level6).
- Evidence of initiative and innovation.
- Evidence of potential to conduct high quality research.
- International students who require a Tier 4 visa will need to take a UK Home Office approved Secure English Language Test (SELT). The two approved providers are Trinity College London and IELTS (Academic). If you have studied at a UK institution or are from a majority English speaking country, as per the Home Office's list, you are exempt from having to provide this evidence.
- Availability to travel for training events and research secondments.
- The candidate has to the PhD candidate admission requirements of Ulster University Doctoral College, as the successful candidate will be expected to formally apply for admission: https://www.ulster.ac.uk/__data/assets/pdf_file/0010/152200/Regulations-for-the-Degree-of-Doctor-of-Philosophy.pdf
- Other relevant competences:

AREA	COMPETENCE
INTRAPERSONAL	Emotional stability
	Self-assurance
	Resistance to adversity
INTERPERSONAL	Communication
	Negotiation
	Teamwork
PERFORMANCE	Initiative
	Goal orientation
	Analysis capacity
ENVIROMENTAL	Openness
	Identifying with the company
MANAGEMENT	Organization and planning

ELIGIBILITY CRITERIA: Recruiting is in accordance with the European rules for Marie Curie Initial Training Networks. Early-stage researchers (ESR) can be of any nationality. They must be, at the time of recruitment by the host organisation, in the first four years (full-time equivalent) of their research careers and have not yet been awarded a doctoral degree. The research career starts after the degree that enables a student to proceed with a PhD (usually, the Master degree).

MOBILITY RULE: At the time of the recruitment by the first host institution, the ESRs must not have resided or carried out their main activity (work, studies, etc.) in the country of their first host institution for more than 12 months in the 3 years immediately before the recruitment date. Short stays such as holidays and/or compulsory national service are not taken into account.

Benefits

- 3 years full time employment contract (starting 1st October 2019) corresponding to two 18 months contracts, one with each host.
- Attractive salary according to the living standards of the hosting country. UK gross salary 3440 €/month including mobility allowance from which the employee has to pay National Insurance, taxes and pension contributions. Taxes bands depend on personal circumstances (more info: https://www.gov.uk/income-tax-rates). Spain gross salary 2760 EUR/month including mobility allowance, taxation of 15-18% depending on individual and familiar circumstances). Candidates should get information about the tax requirements associated to each country and their personal circumstances.
- Work in a dynamic and international Nanotechnology and Integrated Bioengineering Centre (NIBEC) in the School of Engineering of Ulster – https://www.ulster.ac.uk/nibec
- Work in an innovative company: https://www.aqualia.com/en/web/aqualia-en
- Participation in an innovative PhD training program.
- Possibility to collaborate with international research groups engaged in the project.
- Involvement in a leading multinational water company.

How to apply

Send your complete application before 26th April (first phase) or 31th May (second phase) filling this form:

http://rewatergy.eu/esr-application-form/

A single pdf file needs to be submitted including:

- a cover letter, stating your research motivation and interests; including relevant background (max 1 A4 page)
- at least 2 referees (including name, position and email address) (max 1 A4 page)
- CV, including academic background, previous industrial and/or research experience (max 2 A4 pages).
- Degree transcripts.
- English language qualification certificates

Contact:

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www.rewatergy.eu