



Job title	Research Associate in Plasma Modelling	Job family and level	Research and Teaching Level 4
School/ Department	Faculty of Engineering/RERS Group/Department of Chemical and Environmental Engineering	Location	The Energy Technologies Building Jubilee

Purpose of role

The purpose of this role will be to undertake specific responsibility of an EPSRC-funded research project entitled 'Plasma-driven Green Ammonia Production'. The person appointed will be expected to conduct plasma modelling to describe and predict the ammonia synthesis, to assist in experimental investigation, and will be responsible for writing up their work for publication in peer-reviewed journals and dissemination at conferences. The appointment is planned for 24 months initially, and extendable up to another 12 months subject to performance.

	Main responsibilities (Primary accountabilities and responsibilities expected to fulfil the role)	% time per year
1	To develop research objectives and proposals for own and/or collaborative research area.	5
2	To plan and conduct research using recognised approaches, methodologies and techniques within the research area	25
3.	To analyse and illuminate data, interpret results, evaluate and criticise texts and bring new insights to research area.	20
4.	To write up research work for sponsor reviewing and journal publication, and/or contribute to the dissemination at national/international conferences, resulting in successful research outputs.	20
5.	To identify opportunities and assist in writing bids for research grant applications. Prepare proposals and applications to both external and/or internal bodies for funding, contractual or accreditation purposes.	5
6.	To assist the academic staff in the project team with the supervision of undergraduate MSc, MEng, or PhD projects and day-to-day support for other researchers.	7

7	To co-ordinate the operational aspect of research networks, for example, arranging meetings and updating web sites etc and contribute to collaborative decision making with colleagues in area of research.	3
8	To build relationships with both internal and external contacts in order to exchange information, to form relationships for future collaborations and identify potential sources of funds and/or opportunities for collaboration.	2
9	To utilise and contribute to organising research resources and facilities, laboratories and workshops/training as appropriate	5
10	To make appropriate contribution to teaching, for example through laboratory demonstrations, marking student works, lectures to postgraduate workshops.	3
11	To plan and manage own research activity and resolve problems, if required, in meeting own/team research objectives and deadlines in collaboration with others	5
	Total	100

Person specification

	Essential	Desirable
Skills	<ul style="list-style-type: none"> • In-depth understanding of plasma modelling or modelling gas-solid interactions ▪ Excellent written and oral communication skills ▪ Able to manage time and tasks effectively to meet project deadlines and prioritise workload ▪ Ability to work across multiple fields and readily understand new and challenging concepts ▪ Ability to creatively apply relevant research approaches, models, and techniques to help improve scientific understanding 	<ul style="list-style-type: none"> ▪ Able to build and maintain effective working relationships with academic colleagues, students, and external partnerships to support collaborative research and communication of findings ▪ Laboratory operation of plasma reactors
Knowledge and experience	<ul style="list-style-type: none"> ▪ Experience in plasma modelling ▪ Authoring original work for academic journal papers ▪ Experience in conference dissemination (e.g. oral presentation) of research outputs ▪ Chemical Engineering, chemistry, material science, and/or mechanical engineering 	<ul style="list-style-type: none"> ▪ Experience in non-equilibrium plasma systems ▪ Experience in experimental plasma work ▪ Experience in DFT simulation ▪ Experience in chemical looping technologies
Qualifications, certification and training (relevant to role)	<ul style="list-style-type: none"> ▪ PhD (or near completion) in Chemical Engineering, Mechanical Engineering, Chemistry, or related subject 	<ul style="list-style-type: none"> ▪ A willingness to undertake further training as appropriate and to adopt new procedures as and when required
Statutory, legal or special requirements	UK Work Permit for applicants who are non-UK citizens	



Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

- Valuing people** Is friendly, engaging and receptive, putting others at ease. Actively listens to others and goes out of way to ensure people feel valued, developed and supported.
- Taking ownership** Is clear on what needs to be done encouraging others to take ownership. Takes action when required, being mindful of important aspects such as Health & Safety, Equality, Diversity & Inclusion, and other considerations.
- Forward thinking** Drives the development, sharing and implementation of new ideas and improvements to support strategic objectives. Engages others in the improvement process.
- Professional pride** Is professional in approach and style, setting an example to others; strives to demonstrate excellence through development of self, others and effective working practices.
- Always inclusive** Builds effective working relationships, recognising and including the contribution of others; promotes inclusion and inclusive practices within own work area.

Key relationships with others



