POSITION DESCRIPTION

Research Engineer

Position Level | 7
Faculty/Division | Engineering
Position Number | 00120612
Original document creation | July 2022

Position Summary

A Research Engineer plays a key role within the Particles and Catalysis Research Group in the School of Chemical Engineering. The position will collaborate closely with an industry partner and a team of UNSW researchers to build and scale-up electrolyzer system for industrial application. The Research Engineer will undertake industrial research and development in the field of green hydrogen production with a dedicated focus on electrolyzer device fabrication and electrode material scale up.

The role reports to Scientia Professor Rose Amal and has no direct reports.

Accountabilities

Specific accountabilities for this role include:

- Build electrolyzer systems > 1 kW which includes the engineering design, fabrication, optimization and testing of electrolyzer stacks.
- Develop and scale-up metal-based electrocatalysts and membrane electrode assemblies which will be tested in a large scale electrolyzer.
- Work closely with a range of industry partners to deploy an electrolysis system producing green hydrogen for industrial applications.
- Assist with the coordination of research activities and actively contribute to research outputs to meet project milestones.
- Contribute to the preparation of proposal submissions to funding bodies and actively seek collaboration with industry partners as appropriate.
- Actively contribute to technical reports and research publications within the team
• Implement good laboratory practice and high standards of experimental design including documentation and archiving in line with project requirements.

• Ensure that confidential information for industry-funded research is not disclosed to the public. Confidential information may include designs, methods, data and company business information.

• Adhere to the University of New South Wales Intellectual Property policy

• Align with and actively demonstrate the UNSW Values in Action: Our Behaviours and the UNSW Code of Conduct

• Cooperate with all health and safety policies and procedures of the university and take all reasonable care to ensure that your actions or omissions do not impact on the health & safety of yourself or others.

Skills and Experience

• A PhD in Chemistry, Chemical Engineering, Materials Science and Engineering, or related discipline, OR an undergraduate/postgraduate degree in an engineering or related discipline with at least 3 years of related engineering industry experience.

• Demonstrated knowledge and experience in electrolyzer systems, engineering design, fabrication of devices, material (catalyst) synthesis, and electrochemistry (CAD experience highly desirable).

• Proven commitment to proactively keeping up to date with discipline knowledge and developments.

• Demonstrated ability to undertake high quality engineering design with a focus on industrial application of hydrogen (research and development experience desirable).

• Demonstrated ability to work in a team, collaborate across disciplines and build effective relationships.

• Demonstrated ability to communicate and interact with a diverse range of stakeholders and students.

• Demonstrated ability to work collaboratively and productively within a team, but also to take initiative and work independently while managing competing demands.

• An understanding of and commitment to UNSW's aims, objectives and values in action, together with relevant policies and guidelines.

• Knowledge of health and safety responsibilities and commitment to attending relevant health and safety training.

About this document

This Position Description outlines the objectives, desired outcomes, key responsibilities, accountabilities, required skills, experience and desired behaviours required to successfully perform the role.

This template is not intended to limit the scope or accountabilities of the position. Characteristics of the position may be altered in accordance with the changing requirements of the role.