THE UNIVERSITY OF QUEENSLAND

The University of Queensland (UQ) contributes positively to society by engaging in the creation, preservation, transfer and application of knowledge. UQ helps shape the future by bringing together and developing leaders in their fields to inspire the next generation and to advance ideas that benefit the world. UQ strives for the personal and professional success of its students, staff and alumni. For more than a century, we have educated and worked with outstanding people to deliver knowledge leadership for a better world.

UQ ranks in the world's top universities, as measured by several key independent ranking, including the Performance Ranking of Scientific Papers for World Universities (43), the US News Best Global Universities Rankings (52), QS World University Rankings (47), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (60). UQ again topped the nation in the prestigious Nature Index and our Life Sciences subject field ranking in the Academic Ranking of World Universities was the highest in Australia at 20.

UQ has an outstanding reputation for the quality of its teachers, its educational programs and employment outcomes for its students. Our students remain at the heart of what we do. The UQ experience – the UQ Advantage – is distinguished by a research enriched curriculum, international collaborations, industry engagement and opportunities that nurture and develop future leaders. UQ has a strong focus on teaching excellence, winning more national teaching excellence awards than any other in the country and attracting the majority of Queensland's highest academic achievers, as well as top interstate and overseas students.

UQ is one of Australia’s Group of Eight, a charter member of edX and a founding member of Universitas 21, an international consortium of leading research-intensive universities.

Our 50,000-plus strong student community includes more than 13,000 postgraduate scholars and more than 12,000 international students from 144 countries, adding to its proud 240,000-plus alumni. The University has about 7,000 academic and professional staff and a $1.8 billion annual operating budget. Its major campuses are at St Lucia, Gatton and Herston, in addition to teaching and research sites around Queensland and Brisbane city. The University has six Faculties and four University-level Institutes. The Institutes, funded by government and industry grants, philanthropy and commercialisation activities, have built scale and focus in research areas in neuroscience, biomolecular and biomedical sciences,
sustainable minerals, bioengineering and nanotechnology, as well as social science research.

UQ has an outstanding track-record in commercialisation of our innovation with major technologies employed across the globe and integral to gross product sales of $11billion+ (see http://uniquest.com.au/our-track-record).

UQ has a rapidly growing record of attracting philanthropic support for its activities and this will be a strategic focus going forward.

**Organisational Environment**

The School of Chemical Engineering is an international leader in the chemical engineering field and has an excellent reputation, built over many decades at The University of Queensland.

We deliver quality programs and leadership in chemical engineering education, research and development, and expert consulting to support the process industries. Undergraduate teaching within the School focuses on the disciplines of chemical, biological, environmental and metallurgical engineering and postgraduate programs are available in growing fields including water, sustainable energy and petroleum engineering.

The School’s project-centered curriculum was recently recognised as an international exemplar of engineering education. Worldwide, UQ Chemical Engineering was ranked 33rd in the QS World University Rankings 2017 for chemical engineering. We also received the highest score for chemical engineering in Australia in the Excellence in Research for Australia study (2015). Central to the School’s success are our staff, specifically the academic, research and professional staff. They are engaged in pioneering teaching and research crossing traditional disciplinary boundaries, mindful of their role in addressing the big challenges that lie ahead.

As the School enters an exciting phase of building on recent successes in individual industry-linkages and international-research partnerships we are interested in new staff to join us on this journey to further increase our local and international impact in learning and discovery in chemical engineering.

The School recognises and values equity and diversity, and encourages applications from any individual who meets the requirements of this position regardless of gender, sexuality, race, ethnicity, religion, disability, age or other protected attributes. The School strives to provide an inclusive working environment, and along with the University, is committed to supporting staff with family and caring responsibilities by providing policies, programs and initiatives to help balance work and family responsibilities.

For more information about the School, please visit: [www.uq.edu.au/chemeng](http://www.uq.edu.au/chemeng)

**Information for Prospective Staff**

Information about life at UQ including staff benefits, relocation and UQ campuses is available at - [http://www.uq.edu.au/current-staff/working-at-uq](http://www.uq.edu.au/current-staff/working-at-uq)

The University of Queensland Enterprise Agreement outlines the position classification standards for Levels A to E.
DUTY STATEMENT

Primary Purpose of Position

To undertake 1) research into the characterizations of functional nanomaterials, thin-film deposition and electrical/electrochemical properties of energy generation and storage devices, and 2) applications of thin-film deposition and advanced printing techniques for ultra-thin flexible batteries.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Conduct research on the preparation and characterisation of functional nanomaterials for energy generation and storage devices with CRC Projects’ support;
- Provide insights, knowledge and experience with devices using various electrical/electrochemical characterisation;
- Apply thin-film deposition and advanced printing techniques for low-cost production of flexible batteries;
- Provide laboratory leadership and supervision of team members in this project, including honours, masters and RHD students;
- Work with colleagues in the project and help to manage the progress in achieving each milestone;
- Identify IPR arising from research and facilitate its protection through established University procedures.

Teaching and Learning

- Involvement in supervision of research students at undergraduate and postgraduate levels.

Service and Engagement

- Perform a range of administrative functions in the School;
- Contribute to the processes that enable the academic team to manage the work of the School, including participate in School decision-making and serve on School committees;
- Foster the School's relations with industry, government departments, professional bodies and the wider community;
- Any other duties as reasonably directed by your supervisor.
**Other**

Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including but not exclusive to:

- the [University’s Code of Conduct](#)

- requirements of the Queensland occupational health and safety (OH&S) legislation and related [OH&S responsibilities and procedures](#) developed by the University or Institute/School

- the adoption of sustainable practices in all work activities and compliance with associated legislation and related University [sustainability responsibilities and procedures](#)

- requirements of the Education Services for Overseas Students Act 2000, the National Code 2007 and associated legislation, and related [responsibilities and procedures](#) developed by the University

**Organisational Relationships**

The position reports to Prof Lianzhou Wang ([l.wang@uq.edu.au](mailto:l.wang@uq.edu.au)), School of Chemical Engineering and Australian Institute for Bioengineering and Nanotechnology, the University of Queensland; and Prof. Chris Greig ([chris.greig@uq.edu.au](mailto:chris.greig@uq.edu.au)), Director of UQ Energy Initiative and Dow Centre for Sustainable Engineering Innovation.
SELECTION CRITERIA

**Essential**

- PhD qualification in Physical Chemistry, Materials Science, Materials Physics or Chemical Engineering
- Knowledge of the synthesis and characterizations of functional nanomaterials, especially in the low-cost electrode active materials based on metal oxide for high performance energy generation and storage devices, as evidenced by scholarly publication in high-ranking refereed journals
- Extensive research experience in the area required, particularly energy generation and storage devices
- Highly experienced in various characterisation techniques of novel nanostructured materials, experience of independent operation for relevant equipment is highly preferred
- Experience in flexible devices, thin-film deposition and be familiar with advanced printing techniques, such as screen-printing and roll-to-roll printing
- Experience in laboratory procedures and safe work practices
- Publication record in high quality journals;
- Experience in managing a research program and working with academic/industry collaborators;
- Ability to establish effective relationships and to represent and promote academic discipline at a University and wider community level, including industry, government and professional bodies;
- Excellent analytical and problem solving skills and attention to detail;
- Experience in writing reports and applications for funding bodies;
- Evidence of a contribution to research, including external grant applications;
- Ability to work collaboratively with external and internal collaborators in a multidisciplinary environment;
- High-level interpersonal, written and verbal communications skills;
- Demonstrated ability to prioritise own workload, work independently and meet deadlines.

**Desirable**

- Knowledge of the processes relating to the identification, protection and exploitation of intellectual property;
- Skills in the quantitative analysis of research results;
- Experience in supervising or co-supervising postgraduate (honours, masters or PhD) students;
- Developed industry liaisons and professional contacts;

**Qualification Verification**

An appointment to this position is subject to the verification of the highest academic qualification from the conferring institution.
The University of Queensland values diversity and inclusion and actively encourages applications from those who bring diversity to the University. Please refer to the University’s Diversity and Inclusion webpage (http://www.uq.edu.au/equity) for further information and points of contact if you require additional support.

This role is a full-time position; however flexible working arrangements may be negotiated.

Accessibility requirements and/or adjustments can be directed to the contact person listed in the job advertisement.