POSITION DESCRIPTION

Position Title: Senior Professional Officer (Nano Printing, Photolithography, Soft Lithography, Laser Direct Writing, Clean Room Operation, Fabrication and Testing)

Organisation Unit: Australian Institute for Bioengineering and Nanotechnology

Position Number: 3049458

Type of Employment: Fixed Term, Full time

Classification: Hew Level 8

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 (45), QS World University Rankings (48), Academic Ranking of World Universities (55), and the Times Higher Education World University Rankings (69). UQ again topped the nation in the prestigious Nature Index, and our Academic Ranking of World Universities result in the field of Life and Agricultural Sciences is 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 $11 billion+ (see http://uniqest.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 University of Queensland's Australian Institute for Bioengineering and Nanotechnology (AIBN) is a dynamic multi-disciplinary research institute dedicated to developing technology to alleviate societal problems in the areas of health, energy, manufacturing and environmental sustainability. AIBN brings together the skills of more than 450 world-class researchers complimented by an extensive suite of integrated facilities, working at the intersection of biology, chemistry, engineering and computer modelling. With a reputation for delivering translational science, AIBN conducts research at the forefront of emerging technologies, and has developed strong collaborations with leading members of industry, academia and government. AIBN goes beyond basic research to develop the growth of innovative industries for the benefit of the Queensland and Australian economies.

Australian National Fabrication Facility (ANFF-Q)

ANFF-Q is a not-for-profit research infrastructure facility established under the National Collaborative Research Infrastructure Strategy. ANFF is a network of 8 nodes distributed throughout Australia, filled with over $200 million of investment in tooling, infrastructure and people.

ANFF’s Queensland Node (ANFF-Q) is a state-of-the-art fabrication facility specialising in microfluidics, organic electronics and opto-electronics, biomaterials, novel semiconductor materials and characterisation. ANFF-Q has facilities within the Australian Institute for Bioengineering and Nanotechnology (AIBN) and the Centre for Organic Photonics & Electronics (COPE) at The University of Queensland and within the Queensland Micro- and Nanotechnology Centre (QMNC) and the Queensland Microtechnology Facility (QMF) at Griffith University, as well as the ability to facilitate access to ANFF sites at 17 other universities around Australia.

Our people are our greatest asset. We offer collaborative, inclusive work and study places, which are enriched by the significant diversity of our staff, students and community. We genuinely believe that creativity and innovation flourishes in an environment where people feel supported, valued and empowered. Mutual respect, inclusivity and accountability are at the cornerstone of UQ’s culture.

AIBN is committed to supporting the career growth of women researchers and have a number of initiatives to support women in developing and achieving a fulfilling research career at the institute. For more information, please visit our AIBN Women in Science web site at http://www.aibn.uq.edu.au/women.

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-ug
DUTY STATEMENT

Primary Purpose of Position

Provide operational and scientific and technical service support in the fields of Nano and Photolithography, Soft Lithography, Clean Room Operation and Nano 3D Printing, Device Design, Fabrication and Testing to scientists accessing equipment within the NCRIS Australian National Fabrication Facility – Queensland Node.

Duties

Duties and responsibilities include, but are not limited to:

Technical and Scientific

- Provide a high level of operational, scientific and technical support, and training in the fields of 3D Nano Printing, Photolithography and Device Design.
- Fabrication and Testing to scientists accessing equipment within the National Collaborative Research Infrastructure Scheme (Australian National Fabrication Facility – Queensland Node)
- Draft designs and assist client’s ideas and concepts to become manufacturing designs.
- Managing and maintaining a class 10000 and class 1000 clean room
- Managing, maintaining and operating a range of advanced micro/nano-fabrication and testing equipment including: Direct write lithography equipment, Mask Aligner, Spin Coaters, Reactive Ion Etchers, Physical Vapour deposition tools, Advanced metrology equipment. This will include operating them to the full extent of the equipment capability and to allow research at the cutting edge of technology
- Provide high level advice and expertise to researchers and clients with respect to the capabilities and potential for further research utilising the equipment
- Provide training in designing and testing of devices by utilising such software programs as AutoCAD and L-Edit.

Administrative and Organisational

- Organise and administer access to NCRIS ANFFQ equipment located in the AIBN, including: providing training and certifying new users; tracking equipment usage and user access; organising user feedback; notifying the Facility Manager of usage of ANFFQ facilities
- Train users on a full range of techniques for all equipment to enable expanded research possibilities and to enable users to utilise the full potential of the equipment’s capabilities
- Keep up to date with new advances in techniques and research by literature searching, and other relevant sources of information
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 the ANFF Qld Node Facility Manager.

SELECTION CRITERIA

Essential

- Postgraduate qualifications in the area of material science, chemistry, physics, engineering or similar; or an equivalent combination of relevant experience and/or education/training
- Demonstrated experience and ability to draft CAD designs from client requirements and turn client concepts into manufacturing designs using fabrication knowledge and experience
- Sound knowledge and understanding of standard processing techniques including Photolithography, Dry and Wet Etching, Physical Vapour Deposition and Chemical Vapour deposition in the area of micro/nano device fabrication
- Demonstrated expert knowledge and experience in the area of micro/nano device fabrication and characterization including Ellipsometry, Stylus and Optical Profiling, White Light Reflectometry, Scanning Electron Microscopy
- High level communication and interpersonal skills, with the ability to train clients in scientific techniques in a service lead role.
- Excellent time management skills and demonstrated ability to work within deadlines
- High level communication and inter-personal skills, with a high degree of professionalism essential for dealing with external clients

Desirable

- Demonstrated expert practical knowledge in the area of 3D Nano-lithography
- Developed industry liaisons and professional contacts
- Knowledge and experience with Electron Microscopy

Vaccinations and Immunisation
It is a condition of employment for this role that if you are required now or in the future, to work or interact in Queensland Health clinical facility; or in an equivalent clinical health facility; or
health care role; or will be required to perform work tasks that put you at risk of exposure to vaccine-preventable disease you are required to be immunised against, and remain immunised against, certain vaccine preventable diseases (VPDs) in accordance with the University’s Vaccinations and Immunisation Guidelines (PPL 2.60.08). The employee is required to provide evidence of immunisation against VPDs.

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 (insert details of HR contact assisting with recruitment).