POSITION DESCRIPTION

Position Title:	Postdoctoral Research Fellow: Synthetic Chemist
Organisation Unit:	School of Chemistry & Molecular Biosciences
Position Number:	TBA
Type of Employment:	Full time, fixed term for 3 years with a possibility of extension
Classification:	Academic Research Level A

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 (45), the US News Best Global Universities Rankings (52), QS World University Rankings (51), 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 secured a greater share of Australian Research Council grants in 2016 ($24.5 million) than any other university nationally.

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 230,000-plus alumni. The University has about 7,000 academic and professional staff and a $1.7 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 will have further success in this area as an important strategic aim going forward.

Organisational Environment

The Centre for Organic Photonics & Electronics (COPE) draws together expertise from Chemistry and Physics in a combined facility (www.physics.uq.edu.au/cope). COPE has >20 senior research staff, postdoctoral fellows and research students and is housed in laboratories on the 9th Floor of the Chemistry Building that include state-of-the-art synthesis and materials characterisation facilities; a Class 1000 clean room incorporating gloveboxes with integral evaporators for device fabrication; and prototype measurement capability. The laboratory is located on the St. Lucia campus, one of the most spacious and attractive university campuses in Australia.

The Centre has extensive experimental and theoretical research programs in optoelectronic organic materials for organic light emitting diodes, photovoltaics, photodiodes, and organic chemosensors. The Centre plans to expand the organic optoelectronic materials research program to underpin the device and applications work.

Information about the Centre may be accessed on the Centre's web site at http://www.physics.uq.edu.au/cope/.

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

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

DUTY STATEMENT

Primary Purpose of Position

The main area of research will be the design and synthesis of light-emitting materials for use in organic light-emitting diodes. In this context organic includes both all-organic and/or organometallic materials.

Duties

Duties and responsibilities include, but are not limited to:

Research

- Conduct research in the area assigned by the supervisor and publish scholarly papers.
- Work with colleagues and postgraduates in the development and carrying out of research projects.

- Laboratory supervision of undergraduate and postgraduate students as required.
- Preparation of reports of experimental findings for publications and presentations.
- Participation in activities associated with running the laboratory, such as but not limited to laboratory duty, maintenance of equipment, preparation of risk assessments and maintenance of databases and records.
- Accurately record experiments and experimental results to the standard required by your supervisor.
- Attend Centre meetings and others as directed by your supervisor.
- 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 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 Director, Centre for Organic Photonics & Electronics.

SELECTION CRITERIA

Essential

- Hold a PhD in synthetic organic chemistry or related areas.
- Have recent experience of carrying out synthesis.
- Have experience in characterisation of organic compounds and materials.
- Be expected to be able to demonstrate competence/success in any of these areas, eg as judged by publications (or papers in press) in peer reviewed journals.
- Be able to plan and execute synthetic schemes successfully and safely with minimal supervision.
- Have the ability to analyse and optimise reaction processes, the ability and experience independently to select, and the skills to execute successfully, appropriate purification techniques, particularly chromatographic methods for isolating analytically pure compounds on a range of reaction scales.
- Have the ability to take accurate and reliable records of work carried out.
- Have the ability to carry out, interpret and properly record the results of modern spectroscopic techniques, particularly NMR.
- Have a general broad working knowledge of modern organic synthesis, including understanding of reaction mechanisms, the ability to convey this understanding. Particular evidence will be sought of deeper understanding of the applicant's previous fields of research and evidence of independent intellectual and practical contributions to previous research projects - as evidence that such attributes can be brought to bear on the present project.
- Ability to work collaboratively with colleagues;
- High-level communication, inter-personal and communication skills.

Desirable

- Experience of organic optoelectronic materials synthesis and characterisation.
- Experience of dendrimer synthesis.
- Experience of polymer synthesis
- Demonstrate a sound knowledge of organic devices and the factors that are important in designing organic materials for these applications.
- Awareness of current important trends and developments reported in the recent "**organic light-emitting diode**" literature.
- Familiarity with online database searching and Chemical Abstracts for use in the selection and planning of synthetic routes.
- Experience of electrochemical, DSC, TGA and GPC analyses.
- The ability to work supportively in a laboratory environment with junior co-workers.
- The ability to present work to other scientists in the field in a clear and concise manner.
- Experience in the synthesis and processing of conjugated materials.

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.

Applications are particularly encouraged from Aboriginal and Torres Strait Islander peoples. Applications are also encouraged from women.