POSITION DESCRIPTION

Position Title: Postdoctoral Research Fellow  
Organisation Unit: School of Mathematics and Physics  
Position Number: TBA  
Type of Employment: Full time – Fixed term for up to 36 months  
Classification: Academic 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 (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 (65). 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+

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

Organisational Environment

UQ Physics is located in the School of Mathematics and Physics in the Faculty of Science.
The Discipline is internationally recognised for its research excellence, and hosts a number
of world-class research centres. Details of the research interests of academic staff may be

Physics is one of the University of Queensland's top 30 research strengths. In the recent
Excellence in Research for Australia 2015 assessment, the University of Queensland was
rated “well-above international standard” in 02 Physical Sciences.

The School of Mathematics and Physics has a total of 110 full-time academic staff members,
and 21 professional staff who provide professional, technical and administrative support. The
School teaches a comprehensive undergraduate program in physics, as well as performing
service teaching for students of engineering and the life sciences. There is also an extensive
postgraduate research program, which currently has more than one hundred Research
Higher Degree students enrolled.

Information for Prospective Staff

Information about life at UQ including staff benefits, relocation and UQ campuses is

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

DUTY STATEMENT

Primary Purpose of Position

Conduct research on the project “Nanoscale heat transfer phenomena: new paradigm for
intra- and intercellular signalling and shaping”. The project is supported by Human Frontier
Science Program and is conducted in collaboration with an international team of researchers.

Duties

Duties and responsibilities include, but are not limited to:

- Conduct experiments and publish scholarly papers.
- Proactively collaborate with colleagues involved in the project.
- Participate in the supervision of postgraduate students.
- Communicate research outcomes, in the form of oral and written presentations, at
  meetings, in reports, conferences, and in peer-reviewed publications.
• Apply for external and internal funding when the opportunity becomes available.

Research
• Conduct research on the topic of “Nanoscale heat transfer phenomena: new paradigm for intra- and intercellular signalling and shaping”.
• Assist with the development of future research programs, including applying for external funding.
• Work with colleagues and postgraduates in the development of joint research projects.

Service and Engagement
• Perform a range of administrative functions in the School of Maths and Physics
• 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 Dr Taras Plakhotnik.
SELECTION CRITERIA

Essential
- PhD in physics, chemistry, or equivalent.
- Demonstrated expert knowledge in one or more of the following areas: cellular biophysics, surface chemical functionalization, optical microscopy and spectroscopy.
- Demonstrated creativity and productivity in research and scientific writing.
- High-level interpersonal skills including the ability to work collaboratively with colleagues.

Desirable
- Direct experience in the fields of experimental optics, optical micro thermometry, nanodiamonds and NV-centres.
- Experience with surface functionalization relevant to application of nanoparticles in fluorescent bioimaging.
- Demonstrated ability to collaborate with experimentalists/theorists.

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.