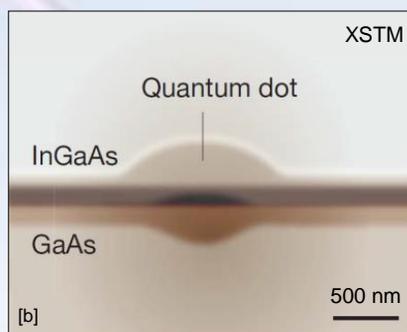
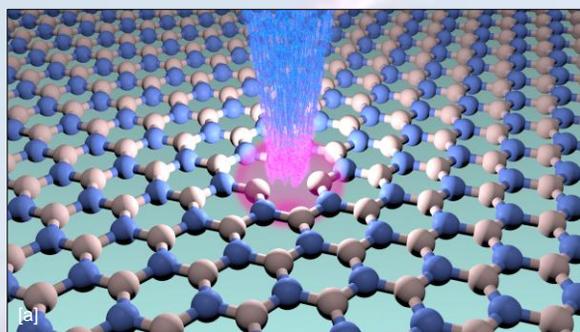


# PhD Studentship in Quantum Photonics

We invite applications from outstanding and highly motivated students for a PhD Studentship in Quantum Photonics in the School of Mathematics, Statistics and Physics at Newcastle University. The successful applicant will join the **Quantum Photonic Materials & Devices Group** (led by Dr. Jonathan Mar), which performs experimental research at the intersection of solid-state quantum optics and nanophotonics for applications in quantum computing and quantum communication and cryptography.



This studentship will investigate single-photon emitters and carrier spins in **2D materials**, **III-V epitaxial quantum dots**, and **diamond**, and explore their optical coupling to **nanophotonic devices**. Laboratory work will include high-resolution optical spectroscopy, nanoscale device fabrication, state-of-the-art electron microscopy, and theoretical device modelling; therefore, previous experience using these techniques will be an asset. The successful applicant will also have the opportunity to work closely with collaborators at top research institutions in the UK and internationally, including those at Cambridge University.

The successful applicant will be joining a world-class school and university, have access to state-of-the-art research facilities including those at nanoLAB, NEXUS, and INEX Microtechnology, and have the opportunity to engage with world-leading academics, including those at the **Joint Quantum Centre**.

In the latest REF2014, our School is ranked in the **Top 10** for both research output and research impact and 11<sup>th</sup> overall. A founding member of the prestigious **Russell Group** of research-intensive universities in the UK, Newcastle University is consistently ranked as one of the **Top 150 universities in the world** (QS World University Rankings 2020). The University is centrally located in the beautiful and cosmopolitan city of Newcastle-upon-Tyne, which is ranked **No.1** for affordability (QS Best Student Cities 2019), **No.4** for social life (THE Student Experience Survey 2018), and in the **Top 3** for both safety and friendliness (Unbroken Britain Survey 2018) in the UK.

This studentship includes a generous travel grant, a new desktop computer, and opportunities for paid teaching.

Applicants are strongly encouraged to contact **Dr. Mar** ([jm585@cam.ac.uk](mailto:jm585@cam.ac.uk)) for further information and informal discussions.

**Value of Award:** Full tuition fees for UK/EU students or international students (if funding available) and annual stipend of £15,009.

**Start Date and Duration:** September 2020 for 42 months

**Application Closing Date:** February 7, 2020

**Eligibility Criteria:** This studentship is available to UK/EU/International candidates who have/expect a First Class or high 2:1 Honours degree or international equivalent in physics, engineering, materials science, or closely related disciplines. Enthusiasm for research, ability to think and work independently, excellent analytical skills and strong verbal and written communication skills are essential requirements. Applicants whose first language is not English require a minimum of IELTS 6.5. International applicants may require an ATAS clearance certificate prior to obtaining their visa and to study on this programme.

**How to Apply:** You must apply through the University's online postgraduate application form at:

<http://www.ncl.ac.uk/postgraduate/apply/>

- Insert the programme code **8839F** in the programme of study section; select '**PhD Physics (FT) (Experimental)**' as the programme of study; insert the studentship code **MSP027** in the 'Studentship/Partnership Reference' field.
- Attach a **cover letter** and **CV**, and list **two references**. The cover letter must state the title of the studentship, quote reference code **MSP027**, and state how your interests and experience relate to the studentship.
- Attach **degree transcripts and certificates** and, if English is not your first language, a copy of your English Language qualification.

