

**JOB DESCRIPTION****Ref: A2067**

Job Title: Research Associate in Quantum Ring VCSELs	Present Grade: 6
Department/College: Department of Physics	
Directly responsible to: Prof M Hayne	
Supervisory responsibility for: N/A	
<u>Other contacts</u> Internal: Departmental academic, research, administrative and technical staff, PhD students. External: Industrial partners.	
Major Duties: The work will involve the further development and characterisation of telecoms-wavelength, self-assembled GaSb/GaAs quantum-ring (QR) vertical-cavity surface-emitting lasers (VCSELs), including their benchmarking against commercial specifications, with a view to exploitation in telecoms and datacoms applications. It will include collaboration with existing group members and three UK-based industrial partners, in the framework of an Innovate UK Feasibility Study, supported by the UK government's Industrial Strategy Challenge Fund. Specific duties could include any or all of the following: design, modelling and simulation, epitaxial growth by molecular-beam epitaxy, structural and optical characterisation, electrical and optoelectronic characterisation (2 to 400 K), development and/or enhancement of experimental facilities. It is likely that the role will be tailored to optimise the use of the skills and expertise of the successful candidate and existing group members. Publication of non-confidential results in international peer reviewed journals is expected and participation at appropriate national and international conferences may also be required. The work will involve close cooperation with existing group members and industry partners. Contact with other members of staff, students or external partners other than those listed above may be required as and when necessary.	