Job Profile
Photonics Engineer

CHROMOSOL

Job Details	
Job Title:	Photonics Engineer
Reports to:	Prof William Gillin
Salary:	£40K-£45k p.a. dependent on experience
Appointment period:	Permanent	**Full Time**
Current Location:	Mile End Campus, Queen Mary University of London
Closing date	

Job Context

Chromosol Ltd is a spin out from Queen Mary, University of London (QMUL) which will commercialise an organic sensitized rare earth optical amplifier technology to enter the £3 bn optical transceiver and optical amplifier markets, part of the broader electronics sector. Professor William Gillin, of the School of Physics and Astronomy, has demonstrated an organic optical gain material which will extend existing fibre optic technology to operate on a much shorter scale, of the order of a metre between racks and servers in datacentres, and on the cm scale between silicon chips in devices. IP Group Plc, the UK's largest early stage technology investor (www.ipgroupplc.com), have invested in Chromosol and, in addition, Chromosol has been awarded funding from Innovate UK. The early stage research will take place within QMUL's laboratories, and specifically in the School of Physics and Astronomy on the Mile End Campus.

Job Purpose

The Photonics Engineer will work with Prof William Gillin the CTO of Chromosol Ltd and Dr Huanqing Ye, Senior Research Scientist at Chromosol Ltd. This role will be to develop and test a new class of photonic integrated circuits (PICs), primarily on a Silicon Nitride platform but moving on to a Silicon Photonics platform. The successful applicant will be responsible for the specification, simulation, design and testing of PICs to be manufactured by commercial suppliers. The work will be performed within the Organic Photonics Clean-Room in the School of Physics and Astronomy at QMUL.

Main Duties & Responsibilities

Under the supervision of Prof William Gillin, the Photonic Engineer will:

- Design and simulate waveguide, laser and other optical devices using commercial optical simulation software.
- Work with commercial PIC fabricators to optimise device designs for production.
- Generate GDS files for the finished designs.
- Perform characterisation of fabricated devices.
- Develop new facilities as required.
- Be responsible, under the general guidance of Prof. Gillin for undertaking the programme of work.
- Maintain a detailed written experimental log-book.
- Ensure that all research is undertaken according to good research practice and guidance

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This table lists the essential and desirable requirements needed in order to perform the job effectively. Candidates will be shortlisted based on the extent to which they meet these requirements.
Candidates MUST currently have the right to work in the UK

Requirements	Essential / Desirable
Qualifications	
PhD and/or equivalent professional experience in SiN/silicon based waveguides	E
Degree or equivalent professional experience in a physical science or engineering area.	E
Knowledge, Skills & Experience	
Experience in appropriate techniques including:	
● Design and characterisation of waveguides	E
● Optical gain/loss measurements in waveguides	E
● Photonic characterisation	E
● Clean-room operation	D
● Organic deposition	D
Able to independently communicate and interact with collaborators	E
Able to work effectively alone as well as within a group	E
Good communication skills (English - written and oral)	E
Able to organise and prioritise own work and organise research within the project timetable	E
Experience of working in a team to tight deadlines	D
Practical problem solving under time constraints and the ability to work to deadlines	D
The ability to learn quickly and assimilate large amounts of information, and present this confidently in meetings	D

E – Essential: Requirements without which the job could not be done.

D – Desirable: Requirements that would enable the candidate to perform the job well.