

JOB DESCRIPTION

Vacancy Ref: A3220

Job Title: Research Fellow/Senior Research Associate (Research Officer) of 'High performance Wide spectral range Nanoprobe (HiWiN)' EPSRC project."	Present Grade: 7 or 8
Department/College: Physics/Materials Science Institute	
Directly responsible to: Prof. Oleg Kolosov, principle investigator (PI).	
Supervisory responsibility for: Some supervision of postgraduate and research students and junior PDRA's.	
Other contacts: Internal: Lancaster co-investigators (CIs) team: Drs. Rostislav Mikhaylovskiy, Samuel Jarvis (Physics), Nigel Fullwood (BLS). External: The HiWiN consortium, FELIX staff, equipment manufacturers.	
Major Duties: The Research Fellow/Senior Research Associate (Research Officer, RO) under supervision of principal investigator and in interaction with CIs will lead the overall design, specification, selection and procurement of the dedicated scanning probe microscope (SPM) and associated optomechanical and electronic equipment. The RO will work with the manufacturing suppliers of the design and production of micromachined optical nano-probe. The RO will then lead testing individual HiWiN components; building the HiWiN optical system using modern computer-controlled optomechanical components, interfacing the components of the system with the data acquisition software, and validate the operation and performance of the whole system. After assembling and testing the HiWiN system in Lancaster, UK during the first year, RO will lead transfer and initial testing at the FEL light source at FELIX in Nijmegen, Netherlands. The HiWiN will be installed there as a user facility. The RO will be also responsible for training a dedicated researcher and technicians at FELIX, and provide guidance to academic HiWiN users collaborating with them on research projects.	
Key Responsibilities: Under the supervision of Prof Oleg Kolosov and in close interaction with Lancaster HiWiN team and FELIX staff the Senior Research Officer will be responsible for: <ul style="list-style-type: none"> • Overall specification of the components of HiWiN and the measurement hardware and software workflow. • Specifying, selecting and procuring the components, namely, a dedicated SPM, optomechanical components, electronic equipment, micromachined optical nano-probe and experiment interfacing. • Work with manufacturing suppliers on the design modification and manufacturing of micromachined optical nano-probe and testing it performance in Lancaster facility using table top mid-IR and THz sources. • Assembling of the SPM system in Lancaster, testing the operation and performance of the individual HiWiN components and the whole system. • Transfer and initial testing of the HiWiN at the FEL light source at FELIX in Nijmegen, Netherlands. • Training the dedicated researcher and technicians at FELIX and preparing necessary guidance manual so they can continue the supporting the HiWiN operation on-site. • Providing guidance and training to academic HiWiN users and to FELIX staff regarding operation of the system. Collaborating with HiWiN users on their research projects. • Preparing the project reports and academic publications. • Contributing to the running of the research group, by providing technical training and contributing to resource management (ordering, generating health and safety documentation, etc.). • Performing administrative tasks related to the research group activities, including Budgets/Expenditure and project administration. Contribute to the organisation, supervision, mentoring and training of undergraduate and/or postgraduate students and junior PDRA's to ensure their effective development. • Engage in personal, professional and career development to enhance both specialist and transferable skills. • Undertake any other duties of equivalent standing as assigned by the PI. 	