Research Group: Atomic Structure-Composition of Materials The Atomic Structure-Composition of Materials Research Group is dedicated to investigating the atomic structure, atomic composition, and defect behavior of nanomaterials, through transmission electron microscopy.

Job Title:	**Research Fellow (Postdoc) – Behaviour of platinum-based catalysts for PEM electrolysers by advanced electron microscopy**
PRR Agenda (s):	***Moving2Neutrality***
Project Title (s):	***Development of PEM electrolysers***
Job Reference:	*RRP.11.28.01.4/1*
Contract duration:	*27 months*
Expected hiring date:	*October 2023*
Main Job Duties:	• Conduct and produce high quality original research, following the objectives of the aforementioned project, in particular determining the morphology, structure and composition of atomically supported Pt/Ir catalysts by aberration corrected TEM/STEM, as well as monitor in real time the behavior of the nanocatalysts as a function of cycling by In situ TEM. • Compound research activities and results and disseminate such results in research papers and reports. • Engage in collaborative research with researchers from other clusters and Institutions. • Engage in RTDI activities together with industrial and other entities ensuring timely and accurate deployment of compounded knowledge to such entities. • Participate in national and international conferences.
Required Qualification:	PhD in Science or Engineering.
Mandatory requirements:	• Experience with aberration corrected TEM and STEM imaging techniques. • Experience with In-Situ Gas and/or Liquid TEM/STEM microscopy. • Experience with nanobeam electron diffraction. • Experience with Energy Dispersive Spectroscopy (EDS). • Experience with Electron Energy Loss Spectroscopy (EELS). • Experience with image processing and standard software for electron microscopy. • Experience with sample preparation of materials for TEM/STEM observations.
Other preferred qualifications:	• Experience with nanoparticles. • Experience with electrochemistry.
Supervisor:	Dr. Paulo Ferreira