



Ref. 23/066

Research line: Advanced characterization processes in thin film PV technologies (Processos avançats de caracterització en tecnologies fotovoltaïques de capa fina)

Area: Advanced Materials for Energy

Area leader: Prof. Joan Ramon Morante

Group: Solar Energy Materials and Systems, SEMS

Group leader: Prof. Alejandro Pérez Rodríguez

First Stage Researcher (R1.1) in the frame of the Advanced characterization processes in thin film PV technologies research line

The Solar Energy Materials and Systems (SEMS) group of IREC announces a position for a First Stage Researcher (R1.1) for carrying out a PhD in the frame of the “Advanced characterization processes in thin film PV technologies” research line.

Position description: The candidate will carry out a multidisciplinary technical and scientific activity centred in the advanced characterization of chalcogenide-based thin film photovoltaic devices, with special focus on advanced high efficiency and bifacial CIGS devices. This will include the application of advanced spectroscopic techniques and their correlation with structural, physicochemical and optoelectronic techniques for process and device optimisation.

Tasks to develop: The candidate will carry out a PhD working on the application of different techniques that allow controlling the structural (XRD, Raman), compositional (XRF, EDX, XPS), morphologic (SEM, AFM, confocal), optical (transmittance/reflectance) and electrical (4-point probe, Hall effect, I-V) properties of the layers, devices and processes for device and process optimisation. This also includes the extension of these techniques to methodologies for quality control and process monitoring.

Requisites: The candidate must be in possession of a master’s degree in physics, chemistry, materials engineering or equivalent before the incorporation date. Previous experience in thin film chalcogenide technologies and advanced characterisation techniques will be well evaluated.

Candidacy: Send the CV, a motivation letter and academic certificates (of both degree and master studies, with topics and qualifications) to Prof. Alejandro Pérez-Rodríguez (aperezr@irec.cat) indicating Ref.23/066 in the subject of the e-mail.

Deadline: *****

Starting date: December 14th 2022

Expected duration of contract: Three years contract with potential extension to a 4th year