

**Publish date December 15th 2020**

**Ref. 58/2020**

**Area: Advanced Materials for Energy Applications**

**Head of the Area: Prof. Joan Ramon Morante**

**Group: Solar Energy Materials and Systems, SEMS**

**Head of Group: Prof. Alejandro Pérez-Rodríguez**

**Position: Coordinator of research line on development of buffer layers for advanced chalcogenide thin film photovoltaic technologies at the SEMS group**

The group of Solar Energy Materials and Systems (SEMS) from the area of Advanced Materials for Energy announces an Experienced Research position as Recognised Researcher (R2.2.5) available for a highly motivated candidate to work in the Coordination of the research line at the SEMS group centred on the development of buffer layers for advanced chalcogenide thin film photovoltaic technologies.

**Activities:** The candidate will carry out a multidisciplinary activity with the final aim of coordinating the research activities in the development of innovative chemical processes in thin film advanced chalcogenide technologies at the SEMS Laboratory in IREC, leading the development of new Chemical Bath Deposition (CBD) processes for innovative buffer layers in high efficiency devices, as well as the research on innovative etching and passivation chemical processes in advanced thin film chalcogenide technologies, contributing to the development of advanced solutions for the new technologies under implementation in the Laboratory.

Tasks involved in the position include: coordination of the Chemical Workshop at the SEMS Laboratory (including the CBD processes), use of DC and DC-pulsed sputtering as well as thermal evaporation systems, use of conventional and rapid thermal annealing furnaces, demonstrated experience in chemical processes for photovoltaic technologies including chemical bath deposition, fundamental characterization of materials (XRD, SEM, Raman, AFM, XRF, etc), transference of knowledge to scientific and industrial levels.

**Requirements:** Candidate must have a PhD degree in Chemistry, Physics, Material/Electronics Engineering or equivalent. Previous demonstrated experience in fabrication and characterization of Thin Film Chalcogenides Photovoltaic devices and in particular in chalcopyrite and kesterite technologies is strongly required, with special emphasis in chemical processes for photovoltaics, and specially in the development of CdS and Cd-free buffer layers for advanced chalcogenide technologies. Publications at international scientific journals, experience in the participation in international cooperative research projects in these topics involving both research centres and companies and in presentation of patent applications will be also very well evaluated.

**Proposed Jury:**

Presidency	Titular	Prof. Alejandro Pérez-Rodríguez
Vocal 1	Titular	Dr. Jordi Jacas
Vocal 2	Titular	Dr. Edgardo Saucedo (UPC)