

Code: 24/085

Project: ACTFAST

Area: Advanced Materials for Energy

Area leader: Prof. Joan Ramon Morante

Group: Solar Energy Materials and Systems, SEMS

Group leader: Prof. Alejandro Pérez Rodríguez

The Solar Energy Materials and Systems group, belonging to the Advanced Materials for Energy area, is announcing a postdoc (R-2.1.4) researcher position, in the research line of:

DEVELOPMENT OF WIDE BAND GAP SEMI-TRANSPARENT PHOTOVOLTAIC DEVICES

Position description: The candidate will carry out a multidisciplinary activity with the final aim of coordinating the tasks for the development of innovative inorganic wide band gap PV technologies suitable for (semi)transparent and tandem device applications, including the development and demonstration of devices with very high optical quality and transparency and the upscale of the processes up to 10x10 cm² for the demonstration of device prototypes under real operational conditions. The candidate will interact with the different lab leaders in the SEMS group, working in the design of the devices architectures and their technological implementation and coordinating the advanced characterisation. Tasks involved in the position include: use of DC and DC-pulsed sputtering as well as thermal evaporation, e-beam and ALD systems, use of conventional and rapid thermal annealing furnaces, fabrication and characterization of solar cell devices, fundamental characterization of materials (XRD, SEM, Raman, AFM, XRF, etc), transference of knowledge to scientific and industrial levels, coordination with project IPs and preparation of project applications at national (Spanish) and International cooperative programs.

Requirements

Essential: Candidate must have a PhD degree in Chemistry, Physics, Material/Electronics Engineering or equivalent. The candidate must have previous demonstrated experience in fabrication and characterization of (semi)transparent solar cells, including the design and demonstration of new device architectures, and previous involvement in international collaborative projects as those funded by the European Commission. Availability for incorporation in the position on September 2024 is also required.

Preferred: Experience in advanced characterization of photovoltaic materials and devices, including advanced fundamental characterization of materials (XRD, SEM, Raman, AFM, XRF) and optoelectronic characterization of devices (IV under illumination, EQE, IQE). Publications at international scientific journals and participation in international conferences

Candidacy: Send the CV, a motivation letter and PhD diploma (or certificate) to Prof. Alejandro Pérez-Rodríguez (e-mail aperezr@irec.cat) indicating Ref. 24/085 in the subject of the e-mail.

Deadline: ****

Starting date: September 2024

Expected duration of contract: 11 months, with potential further extension to a second year.