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**Code:** CUSTOM-ART-01  
**Project:** CUSTOM-ART  
**Area:** Advanced Materials for Energy  
**Head of the Area:** Prof. Joan Ramon Morante  
**Group:** Solar Energy Materials and Systems Group, SEMS  
**Group leader:** Prof. Alejandro Pérez-Rodríguez

The Solar Energy Materials and Systems Group (SEMS) announces a predoctoral position in the frame of the European H2020 project CUSTOM-ART, in the research line:

### **INNOVATIVE STRATEGIES FOR THE DEVELOPMENT OF HIGH EFFICIENCY KESTERITE ABSORBERS ONTO FLEXIBLE SUBSTRATES**

The candidate will carry out a multidisciplinary scientific activity in the frame of the work packages 1 (WP1) and 3 (WP3) corresponding to the project: Disruptive Kesterite-based thin film technologies customised for challenging architectural and active urban furniture applications (CUSTOM-ART). The work will be mainly focused on the improvement of the interfaces of kesterite  $\text{Cu}_2\text{ZnSn}(\text{S},\text{Se})_4$  (CZTSSe) absorbers, with the aim of developing passivation strategies and selective surface doping to improve the performance of the corresponding solar cells onto flexible steel substrates.

Among the different possible approaches, the candidate will work in the implementation of oxide nanolayers and chemical etchings for surface passivation, together with the use of selective doping. In addition, part of the work will be dedicated to identify and implement highly selective contacts better adapted to kesterite solar cells. The contract includes the registration fees of the doctorate program in Electronic Engineering at the Polytechnic University of Catalonia (UPC).

**Requisites:** the candidates need to be in position of the Bachelor and Master degrees in Physics, Chemistry, Electronic Engineering, Materials Engineering or equivalent, before the starting date of his/her contract, being able to accede to the corresponding Doctorate Program. Previous experience in thin film photovoltaic technologies, and/or advanced characterization of materials and devices will be very well evaluated.

**Candidacy:** send the CV, and Degree and Master records to Dr. Sergio Giraldo ([sgiraldo@irec.cat](mailto:sgiraldo@irec.cat)) and Prof. Alejandro Pérez-Rodríguez ([aperezr@irec.cat](mailto:aperezr@irec.cat)) indicating CUSTOM-ART-01 in the subject of the e-mail.

**Deadline:** 1st of September 2020

**Starting date:** October-December 2020

Duration of contract: up to 48 months maximum, renewable yearly (6 months of trial period)

For additional information, please contact Dr. Sergio Giraldo ([sgiraldo@irec.cat](mailto:sgiraldo@irec.cat)) and Prof. Alejandro Pérez-Rodríguez ([aperezr@irec.cat](mailto:aperezr@irec.cat)).