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Code:

Project: Mater-One

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 (SEMS) group announces a postdoc position (2.1.3) in the frame of the Mater-One project, in the research line of:

Development of wide-bandgap chalcogenide-based materials and devices for tandem and agrivoltaic applications.

Position description: The candidate will carry out a multidisciplinary technical and scientific activity centered in the development and optimization of inorganic wide-bandgap chalcogenide thin film solar cells. This activity will include the systematic synthesis and advanced characterization of materials, layers and PV devices in the frame of the Mater-One research project. The candidate will be at the forefront of the photovoltaic device research/characterization for the development of research activities that enable achieving 10% high efficiency devices in cell scale and the upscaling of the deposition and thermal treatment processes to a 10x10 cm² area.

Tasks to develop: The candidate will coordinate tasks for the development and optimization of wide band-gap Sb-based chalcogenide PV device technology with a 10% efficiency at cell scale and perform structural and optoelectronic characterization for the development of the technology. Additionally, the candidate will be in charge of the interactions with the Mater-One consortium and perform activities related to the dissemination of the project.

Requisites: The candidate must be in possession of a PhD degree in Physics, Materials Engineering or equivalent before the incorporation date, and demonstrable previous research experience in:

- 1) Synthesis of thin film Sb-based technologies by physical routes including sputtering and evaporation.
- 2) Materials and device characterization techniques including the following: XRF, XRD, SEM, solar simulator, EQE and Raman.
- 3) Independent coordination of research activities including the coordination of other workers.
- 4) Scientific publications on synthesis and characterization of PV-related materials and PV devices.
- 5) Participation in international conferences
- 6) Participation in national and international research projects
- 7) Availability for incorporation in the position during March 2022 is also required.

Candidacy: Send the CV, a motivation letter and PhD diploma (or certificate) to Dr. Victor Izquierdo-



Shaping Energy for a Sustainable Future

Roca (vizquierdo@irec.cat) (with copy to Prof. Alejandro Pérez-Rodríguez, e-mail aperezr@irec.cat) indicating Ref.14/2022 in the subject of the e-mail.

Deadline: March 20th 2022

Starting date: April 1st 2022

Expected duration of contract: 24 months