



Call for candidates for a doctoral position at GEP

REF. G2147

Published: 4/26/2021

Deadline: 30 august 2021

Reference: G2147

Research Activities: Material science and Renewable Energies

Candidate: Phd fellowship in silicon group – “Modelling of the cells and modules and design of cell and module architecture”

Location : Benguerir

Duration : 36 months

Eligibility : Be enrolled in a doctoral thesis at a National University

DESCRIPTION

The research group "Silicon" at Green energy Park in Benguerir, Morocco, focuses on the synthesis and characterization of silicon-based materials for applications in Photovoltaic solar cells, biofuel generation and water treatment. We have well equipped labs for synthesis and material characterizations. The Heterojunction project of our group aims at developing low-cost and scalable high-efficiency amorphous-silicon / crystalline-silicon solar cell and module technologies. The objective of this thesis is to design silicon heterojunction-based cells and modules adapted to Moroccan climate for the cells and for the modules and simulate their performances in order to optimize all the device parameters.

Role of Phd Student

- Development of a calibrated silicon heterojunction solar cell and module simulator
- Development of an energy yield simulator to assess specifically the effect of high temperature and dust on the performance of the devices.
- Design of the optimal cell and module structure
- Guide the experimental work by simulating the optimal material parameters for the cells and modules.
- Publications of the scientific results in journals and at conferences.;

REQUIREMENTS

- Be enrolled in a doctoral thesis at a National University;
- First experience with simulation software is required (Scaps, Amps or equivalent...)
- Skills in material science and silicon based solar cells;
- Good knowledge of semiconductors deposition techniques
- Good analytical, synthesis, innovation and communication skills ;
- Strong interest in interdisciplinary research.



The candidate should send the following documents to contact@greenenergypark.ma

- A curriculum vitae;
- Copies of university degrees (doctorate registration certificate);
- A research proposal linked to the project description and to one of the issue areas of the call (2000 words, containing an explanation of topic, Scientific background of candidate, Methodology for completion of research proposal);
- Letter of recommendation by a professor.