

October 13th, 2016

PhD Position Available
at the Group of III-V Semiconductors on

RELIABILITY ANALYSIS OF NEXT GENERATION CONCENTRATOR MULTIJUNCTION SOLAR CELLS

INTRODUCTION

The **III-V Semiconductor Group at the Solar Energy Institute** of the Technical University of Madrid is a leading research group in the field of high-efficiency multijunction solar cells. The activity of the group covers the whole life cycle of the solar cell development: modelling, manufacturing, characterization and reliability analysis. The group has achieved triple junction solar cells with efficiencies of 40% and now is developing next generation solar cells with an efficiency target approaching to 50% in collaboration with several European companies and research centres.

SCOPE

The work proposed will be engaged within Spanish government and H2020 European projects. The tasks to accomplish in the PhD work will cover the development of accelerating aging tests (with stress in temperature, humidity, current injection, etc.), characterization of the cells before and after the aging tests, failure analysis, interpretation of results and determination of the main reliability parameters.

REQUIREMENTS

- A degree in Physics, Electronic Engineering, Telecommunication Engineering or Materials Science
- Basic knowledge on semiconductor physics, device physics and characterization techniques, computational skills are highly desirable
- **Good academic record (above 2.4/4.0 or 7.5/10)**
- Great motivation for scientific work and ability for team work
- Full proficiency in English and basic knowledge of Spanish (or commitment to get it!) for foreign students. The full proficiency in English also applies for Spanish native speakers.
- Starting date during Autumn of 2016 or beginning 2017.

GENERAL CONDITIONS

- The selected candidate would start the PhD in our group with a contract according to University regulations and will also apply for public funding (FPU/University/Marie Curie grants)
- Excellent experimental infrastructure and international atmosphere.
- Attendance to scientific conferences worldwide
- Research stays in partner labs in Europe and/or the USA

APPLICATIONS

Interested candidates should send his/her CV and transcripts of all undergraduate and graduate (if any) coursework to Prof. Carlos Algora (algora@ies-def.upm.es)

