

February, 2018

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

DEVELOPMENT OF POWER-BY-LIGHT SYSTEMS

INTRODUCTION

Power-by-light (PBL) is an emerging technology aimed at replacing conventional copper wire-based powering of sensor systems in applications or regions that have strict safety requirements. Such applications or regions usually called “exclusion regions”, typically present a critical risk of explosion or high electromagnetic noise, such as refineries, mines, fuel tanks, high-voltage lines, satellites, aircrafts, nuclear plants, etc. The **III-V Semiconductors Group at the Solar Energy Institute** of the Technical University of Madrid (http://www.ies.upm.es/Investigacion/IES_GI/S_III_V) is a leading research group in the field with an experience of almost 20 years. The activity of the group covers both the manufacturing of the PV device and the design, integration and assembly of the whole PBL system.

SCOPE

The work proposed will be framed within a contract with a multinational company. The tasks to accomplish in the PhD work will be mainly focused on the development and manufacturing of the PV device specifically customized for the system requirements. Additionally, the analysis of whole system including laser, optical fibre, connectors, etc. will be part of the PhD work.

REQUIREMENTS

- A degree in Physics, Electronic Engineering or Materials Science
- Basic knowledge on semiconductor physics and device physics. Computational skills are highly desirable
- Good academic record (above 2.0/4.0 or 7.0/10)
- 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 in late spring of 2018.

GENERAL CONDITIONS

- The selected candidate would start the PhD in our group within the frame of an international project
- 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), Prof. Ignacio Rey-Stolle and Dr. Iván García

