

## **Job Title: 2 Pos-doc Positions for the Project CapTherPV-ERC-Consolidator Grant**

### **Job Summary: (Máx. 1000 Caracteres)**

One Pos-doc position is open to coordinate research activities in the field of plasmonic nanoparticles with up-conversion for thin film solar cells applications in the Framework of the CapTherPV Project, an ERC\_Consolidator Grant. The project's PI is looking for a Pos-doc fellow with background in materials and devices for energy conversion with creativity, ability to work in group and passion for research.

Second Pos-doc position is open for candidates with background in Capacitors or Batteries, its fabrication and characterization. The aim is to use Graphene supercapacitor to connect to solar and perform a stand along device.

.....

### **Job Description: (with detailed information Máx. 3000 Caracteres)**

#### **Objectives and Methods (Enumerar os objetivos e os métodos)**

- 1) The goal of this research work is the incorporation of NPs in thin films solar cells and study the device performances such as spectral response and energy conversion efficiency for the different NPs. The NPs films will be produced either by chemical (deep coating, spray, drop-casting) and physical process (thermal evaporation and sputtering).
- 2) The goal is to apply graphene based supercapacitors to store energy from thin film solar cells and reach a full stand along optoelectronic device with possibility to be scaled up and industrialized.

#### **Expected Results:**

During this project, it is expected the development of new concept of stand-alone solar cells, based on design of nanoparticles and its integration in thin films. The two Pos-doc will play a major role on these developments and will contribute in the supervision of PhD students. Besides that, it is expected to supervise MSc students, to give scientific contribution for new projects' application and oral presentation of the work in conferences and workshops.



European  
Research  
Council

ERC-2014-CoG-647596



**Number of positions available: 2**

**Research Fields:**

Preference for candidates with experience in the solar cells and energy conversion materials and devices or generic physics technology, nanotechnology or related fields and/or in batteries/supercapacitors production and characterization.

**Career Stage:** (Early Stage Researcher ou Experienced Researcher)

Preference for early stage researcher, but this is not an exclusion factor for the established or experienced researchers

**Research Profiles:**

A multidisciplinary background profile is a prime factor for the selection.

**Benefits:** The base salary is 1600€ for an experimental period of six months that will be adjusted up to 2000€ according the skills demonstrated during this period.

Besides that, the Pos-doc will be integrated in multidisciplinary team composed of qualified personnel with different backgrounds in chemistry, biotechnology, biomedical engineering, materials engineering, and electronics engineering. Therefore, the Pos-doc also benefits from this multidisciplinary to enlarge its knowledge and research horizons.

**Type of Contact:**

**Status:** (Full-Time)

**Working Hours (hours per week):** 40 hours/week

**Company/Institute:**

The work is to be performed at Faculdade de Ciências e Tecnológica da Universidade NOVA de Lisboa and will be integrated at I3N/CENIMAT a materials research centre classified as exceptional by international evaluation panel.

The grant contract is made by:

NOVA.id.FCT – Associação para a Inovação e Desenvolvimento da FCT  
Campus de Caparica  
2829-516 Caparica  
Portugal

**Closing Date: July 15, 2018**

NOVA.id.FCT  
Campus de caparica  
2829-516 Caparica, Portugal

[www.novaid.fct.unl.pt](http://www.novaid.fct.unl.pt)  
Tel.: +351 21 294 85 53  
Email: [secretariado@novaidfct.pt](mailto:secretariado@novaidfct.pt)



## Comment/web site for additional job details

For further information, please contact:

Isabel Ferreira, Professor, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Portugal

- Email: [imf@fct.unl.pt](mailto:imf@fct.unl.pt)
- Telf: (+351)

## Requirements

### 1. Required Education Level

Degree: PhD

Degree Field: Material Science, Physics Tehcnology, Nanotechnology, Electronics

### 2. Required Languages

Language: English

Language Level: Proficient

### 3. Required Research Experiences

Experience in electronic, structural and morphologic characterization of solar cells, nanoparticles, semiconductor devices and also in its production processes: Chemical and/or physical deposition.

Experience in the characterization of capacitors and/or batteries, and materials development.

### 4. Additional Requeriments

Good inter-personnel relationship and creativity, passion for research, and motivation for working in group.

.....

### 5. Eligibility requirements

.....

On the selection process will be given preference for Pos-Docs showing multidisciplinary work, with experience in the field of solar cells or semiconductor devices or synthesis and characterization of nanoparticles. Or with experience in batteries/ supercapacitors

The pre-selected candidates will be interviewed before the final selection.