

MISSION TITLE

Opto-electrical modeling of photovoltaic devices

POSITION DESCRIPTION

Function	Post-doctoral researcher	Reference :	
Contract type	Fixed-term	Duration	18 months
Starting date	09/2015	Formation	Ph.D.
Location	Ile de France	Remuneration	Profile dependent

IPVF IN BRIEF

The Île-de-France Photovoltaic Institute (IPVF) aims to become one of the main world's centers for research, innovation and training in the field of photovoltaic solar energy by bringing together academic internationally recognized research teams (CNRS, Ecole polytechnique) and leaders of the of the photovoltaic industry (EDF, Total, Air Liquide, Horiba Jobin Yvon et Riber). IPVF aims to improve performance and competitiveness of photovoltaic cells and to develop new disruptive technologies by activating the following levers:

- A research program targeting high conversion efficiencies and low manufacturing costs;
- An experimental research platform, open to the photovoltaic players;
- A training program.

JOB CONTEXT

- Photovoltaic device modeling

MAIN MISSIONS

In this framework, a postdoc position is open on optical and electro-optical modeling of solar cells. The aim of the project is to couple full 3D electromagnetic simulations tools (RCWA, FDTD, FEM) with electrical simulation tools. The final goal will be to develop a versatile tool for opto-electrical modeling of solar cells with complex 3D (texturation with sub-wavelength size, nanowires solar cells,...). The postdoc will work in collaboration between several labs involved in this project (LPN, IRDEP, GeePS, IM2NP,...).

We are looking for a candidate with a strong experience in optical modeling of nanophotonic structures, and/or electrical modeling of semiconductor devices. The candidate should have an excellent background in physics of semiconductors and nanophotonics. A previous experience in photovoltaics is also welcome.

SOUGHT PROFILE

Knowledge	Knowhow	Self-management skills
<ul style="list-style-type: none"> ▪ <i>excellent background in physics of semiconductors and nanophotonics</i> 	<ul style="list-style-type: none"> ▪ <i>optical modeling of nanophotonic structures</i> ▪ <i>electrical modeling of semiconductor devices</i> 	<ul style="list-style-type: none"> ▪ <i>Team working</i> ▪ <i>Rigorous</i> ▪ <i>Autonomous</i>

CONTACT

Cover letter and résumé to be sent to : rh@ipvf.fr, Stéphane Collin (<mailto:stephane.collin@lpn.cnrs.fr>)