



MISSION TITLE

IPVF Post-doc: Advanced Optoelectronic and Luminescence Characterization

POSITION DESCRIPTION

Function	Postdoctoral Researcher	Reference	IPVF-2020-R006
Contract type	COD	Duration	36 months
Starting date	As soon as possible	Education	PhD in Physics, Materials Science, Electrical Engineering (or other relevant field)
Working Place	Palaiseau, Paris area	Salary	Profile dependent

IPVF IN BRIEF

Become an actor of the Energy Transition by joining a team driven by innovation and impact to address today's most decisive challenges.

IPVF - Institut Photovoltaïque d'Île-de-France, is a global Research, Innovation and Education center, which mission is to **accelerate energy transition through science & technology**.

Gathering industrial PV leaders (EDF, Total, Air Liquide, Horiba and Riber) and world-renowned academic research teams (CNRS, Ecole Polytechnique), multi-disciplinary and international IPVF teams conduct research for clean energy technologies.

IPVF at a glance:

- *An ambitious Scientific and Technological Program: from tandem solar cell technologies to economy & market assessment, state-of-the art characterization, photocatalysis and concepts breakthrough.*
- *A state-of-the-art technological platform: more than 100 tools, located in cleanrooms (advanced characterization, materials deposition, prototypes for fabrication, modelling...).*
- *A high-standard Education program (M.S. and PhD students).*

JOB CONTEXT

Our team has developed a strong and unique expertise in multi-dimensional photoluminescence (PL), which allows contact-less measurements of key photovoltaic functionalities (light absorption, carriers lifetime and transport...). This characterization technique is a favored platform for PV science: it provides experimental studies to fundamental models and offers an efficient quality control to improve the design and growth of devices. This job position takes place in the context of the new scientific and technological program of IPVF, which expands and strengthens the scope of our PL applications.

The Postdoctoral Researcher will benefit from a multidisciplinary environment, IPVF expertise and have access to IPVF unique capabilities.

MAIN MISSIONS

The candidate will directly report to the Deputy Programs Director of IPVF.

She/he will integrate a dynamic and talented team driven by innovation and results.

The candidate will be in charge of developing two optical setups for advanced PL characterization, requiring complementary knowledge and skills.

The first mission aims at developing our exceptional hyperspectral characterization capabilities.

The second mission aims at adapting and integrating a spectrally resolved PL setup to a climate chamber to investigate *in-situ* the aging of solar cells.

The candidate will have to participate to the design and/or construction of the setups, to validate and calibrate them, and conduct the characterization studies of materials from IPVF and external parties.

She/he will work in close relationship with highly qualified Researchers.

SOUGHT PROFILE

The candidate does not need any previous knowledge about solar cells, but experience in optical setups is required.

Knowledge	Know-how	Self-management skills
<ul style="list-style-type: none"> ▪ Optics ▪ Opto-mechanics ▪ Labview, Matlab, Python, Origin ▪ Optional: Semi-conductors Physics ▪ Optional: Solar cell characterization, optical and electrical ▪ Optional: Solar cell materials: perovskite, silicon, III-V 	<ul style="list-style-type: none"> ▪ Optical setups design, fabrication and validation ▪ Oral and written reports in English ▪ Advanced data analysis and modeling 	<ul style="list-style-type: none"> ▪ Autonomous and rigorous ▪ Self-organized ▪ Proactive and dynamic ▪ Imaginative

CONTACT

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