



INTERNSHIP PROGRAM FOR INTERNATIONAL STUDENTS

INTERNSHIP SUBJECT FORM

Name of the Host Laboratory	Institut Photovoltaïque d'Ile de France
Website of the Host Laboratory	https://ipvf.fr/
Research Group	Alternative chalcogenide technology
Internship Supervisor	Jackson Lontchi
Internship Subject	Coevaporated CIGS solar cells with Cd-free buffer layers for tandem Si/CIGS
Student's level	<input checked="" type="checkbox"/> Master's students (1 st or 2 nd year)
Proposed Duration	<input checked="" type="checkbox"/> 6 months
Prerequisites	Good knowledge on solid state physics and semiconductors. Know-how: experimental work; written and oral communication.
Internship description (max. 15 lines)	<p>The internship will be involved in a research project focusing on tandem Silicon / Cu(In,Ga)S₂ (CIGS) solar cells. The two solar cells are superimposed, each cell absorbing a specific part of the solar spectrum to maximize the overall efficiency.</p> <p>Presentation of the programme : https://ipvf.fr/jean-francois-guillemoles-and-nathanaelle-schneider-introducing-programme-6-proof-of-concept-for-pv-innovation-breakthrough/</p> <p>Main missions:</p> <ul style="list-style-type: none"><input type="checkbox"/> Fabrication of CIGS and alternative buffer layers for implementation into Si/CIGS tandem solar cells : deposition of thin films by vacuum evaporation and reactive annealing. The work will be focused on the study of Cd-free buffer layers such as indium sulfide, and on the fabrication of wide gap CIGS.<input type="checkbox"/> Characterization : XRD, IV, GD-OES, XRF.

The boxes marked with cross implies eligible