After the great success of the previous editions of the PV School on the Physics of Solar Cells in 2018, 2020, 2022 and 2024 in the famous Les Houches School of Physics, **we are proud to announce the fifth edition of the PV School!**

Physics of Solar Cells: from basic principles to interface science

Les Houches School of Physics, 25-29 May 2026, France

https://sunlit-team.eu/pv-school-2026/

This school will cover the physics of solar cells, from basic principles to advanced concepts, with a focus on interface science. It will open on a series of lectures devoted to the basic physics for solar cells (thermodynamics, opto-electronic properties of semiconductors…) setting a frame shared by all materials and technologies. It will then turn to the increasing role of interfaces in emerging technologies (tandem, perovskites, ultrathin solar cells…), and we will investigate the functions, materials, processes, and characterization of interfaces in photovoltaics.

List of lecturers: Daniel Abou-Ras (Helmholtz-Zentrum Berlin), **Amaury Delamarre** (C2N, CNRS, Université Paris-Saclay), **Jean-Francois Guillemoles** (IPVF, CNRS), **Jenny Nelson** (Imperial College), **Thomas Riedl** (University of Wuppertal), **Stefaan de Wolf** (KAUST).

The target audience is young researchers (PhDs, post-docs) as well as senior scientists and research engineers new to the field, or wishing to enlarge their knowledge in material science and devices for PV.

Organized by the CNRS and IPVF:

- Stéphane Collin (C2N, CNRS, Univ. Paris-Saclay)
- Nathanaelle Schneider (IPVF, CNRS)
- Andrea Cattoni (Politecnico di Milano, Italy)
- Daniel Suchet (IPVF, Ecole Polytechnique)

with the valuable contribution of Jean-François Guillemoles (IPVF, CNRS).

Contact: mailto:pvschool2026@services.cnrs.fr

School website: ***https://sunlit-team.eu/pv-school-2026/***

Applications must be received by **6 Feb. 2026**: https://sunlit-team.eu/pv-school-2026/application-2026/

Financial support: The PV School 2026 is supported by the CNRS, the Center for Nanoscience and Nanotechnology (C2N), the Institut Photovoltaïque d'Ile-de-France (IPVF), the E4C Interdisciplinary Center and the FedPV. It is hosted by Les Houches School of Physics.

ÉCOLE DE PHYSIQUE DES HOUCHES

Program (subject to changes):

Lectures will start on Monday morning (9:00) and conclude on Friday noon (12:00). Two poster sessions will be organized, and daily tutorials will be proposed.

The goal of this program and school is to build on basic science to better understand the physics of solar cells, and to explore the challenges related to interfaces.

Lectures – day#1-day#4

Basic PV Science – day#1

PV is at the crossroad of many scientific fields, where similar questions can be addressed in different terms. The first lectures of the week aim at building a shared ground on which further presentations will be carried. Starting from a most simple solar cell (Shockley-Queisser limit), non-idealities are progressively introduced to highlight some of the main issues faced by every PV technology. Transverse notions, such as absorptivity, transport, lifetime, selectivity and reciprocity, will be introduced and linked to solar cell performances. An overview of PV technologies (Si, III-V, CIGS, CdTe, perovskite, organic) will highlight the common points and main differences of major sectors.

- **Daniel Suchet** (IPVF, Ecole Polytechnique), **Jean-François Guillemoles** (IPVF, CNRS), **Andrea Cattoni** (Politecnico di Milano, Italy), **Stéphane Collin** (C2N, CNRS): Basic PV Science

Interface science in PV – day#2-day#4

The School will then turn to the multi-faceted notion of interface, with renowned experts from the field.

- **Daniel Abou-Ras** (Helmholtz-Zentrum Berlin): grain boundaries in polycrystalline absorbers (CIGS, CdTe)
- **Amaury Delamarre** (C2N, CNRS, Université Paris-Saclay): interfaces in III-V devices – Band alignment, lattice matching, alloys
- **Stefaan de Wolf** (KAUST): interfaces in silicon and silicon/perovskite tandem cells
- **Jenny Nelson** (Imperial College, UK): non planar interfaces, organic semiconductors
- **Thomas Riedl** (University of Wuppertal): characterization of interfaces
- **Nathanaelle Schneider** (IPVF, CNRS): encapsulation & passivation

Active learning – day#1-day#5

Tutorials – day#1-day#5

A daily session will be dedicated to tutorials. Working in small groups under the guidance of lecturers, participants will have the opportunity to apply lecture concepts through hands-on problems inspired by research situations.

Poster session – day#1, day#2

Two poster sessions will give participants the opportunity to present their activities (research topics, experimental platforms, projects…). Authors are invited to include an "open problem" section in their poster, to share unsolved issues and possibly benefit from discussions with other participants and lecturers. Furthermore, a poster-related game will be organized to encourage participants to discover new topics.

A debate on *Sufficiency* will be organized with **Mathias Guérineau** (Nantes Université) on day#3 (evening).

Physics of Solar Cells: from basics to nanoscience 25-30 March 2018	***Physics of Solar Cells: from basic principles to advanced characterization*** 1-6 March 2020	***Physics of Solar Cells: from basic principles to material science*** 3-8 April 2022	***Physics of Solar Cells: from basic principles to high performance*** 12-17 May 2024