



WELCOME ADDRESS COORDINATOR' MESSAGE

Greetings VIPERLAB Community,

As we gear up for a transformative 2024, **VIPERLAB** continues to lead in advancing perovskite PV research. Our upcoming calls, from January 1st to February 29th 2024, invite proposals for characterisation and virtual facilities, ensuring sustained support as we elevate our vibrant community. Visit www.viperlab-kep.eu for details.

The VIPERLAB consortium has organised two workshops showcasing cutting-edge infrastructures, like **TNO-Solliance's S2S Process PSK Line** and **Swansea University's PV manufacturing facilities**.

VIPERLAB's global presence shines, from the E-MRS conference to pivotal workshops in LCA methodology harmonisation. Our engagement at PSCO 2023 and ISOPHOS 2023 underscores our dedication to advancing science.

Looking ahead, don't miss our upcoming events, including a VIPERLAB public webinar on standardisation (January 17th, 2024) and the ISOS-15 Summit in Berlin (September 30th - October 2nd, 2024).

Thank you for contributing to VIPERLAB's success. Together, we shape the future of perovskite PV.

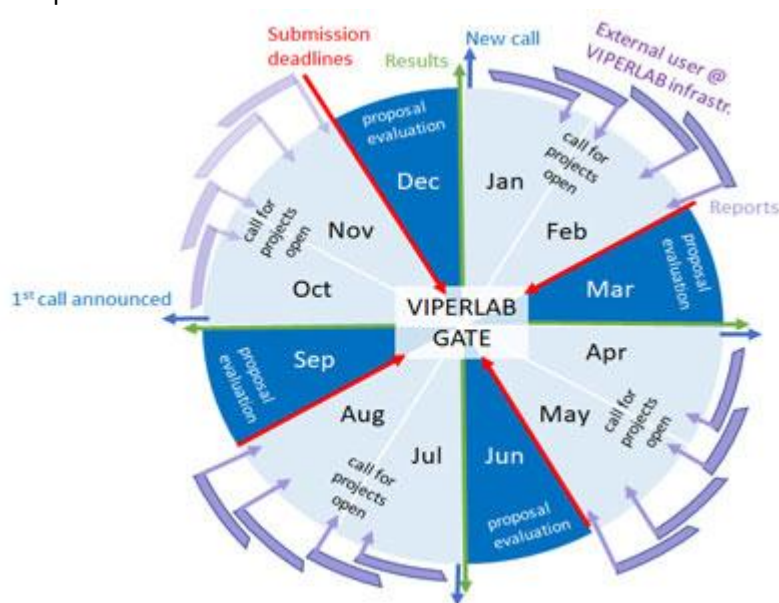
Stay connected for exciting updates!



VIPERLAB calls in 2024

Save the dates!

Are you interested in submitting a proposal for free access to our excellent and complimentary EU perovskite PV infrastructures?



In 2024 you will still have the possibility to submit your proposal, take note! The upcoming calls to foster perovskite PV development and testing in Europe to build a unified access service towards EU academic and industry researchers will open between **1st January and 29st February.**

After 2.5 successful years, processing facilities have reached their budget limit. In response, this call exclusively welcomes proposals for characterisation and virtual facilities, ensuring sustained support for our vibrant community. Details on the call, including application procedures, are at www.viperlab-kep.eu.

Thank you for being an integral part of VIPERLAB's success!

Apply here!



VIPERLAB INFRASTRUCTURES: SERIES OF WEBINARS

TNO-SOLLIANCE S2S Process PSK Line

The **TNO-Solliance S2S Process PSK Line** is an advanced infrastructure that offers great solutions. On the one hand, sheet-to-sheet process line for perovskite solar cells and modules based on industrial compatible processes. On the other hand, manufacturing of rigid, flexible, and opaque or semitransparent modules. The materials can be tested with scalable process on cell and module level. Furthermore, the loss of upscaling can be analysed as the area of device increases by about four orders magnitude.

Read more about the infrastructure [here](#).

Watch the video



TNO-Solliance - S2S Process PSK Line @TNO

SU-PV Manufacturing and Testing Facilities

The **PV manufacturing and testing facilities of Swansea University** offer state-of-the-art fabrication and characterisation equipment for the printing and testing of solar cells devices with focus on solution processed OPV and perovskites devices. The infrastructure offers full characterisation of solar cells by AAA solar simulators, quantum efficiency apparatus, electrochemical impedance spectroscopy, cyclic voltammetry, and optoelectronic transient and charge extraction measurements.

Read more about the infrastructure [here](#).

Watch the video



Ink-Jet processing ©Swansea University



VIPERLAB'S EVENTS

VIPERLAB DATA MANAGEMENT WORKSHOP

Experts from different German research institutes together with representatives of both NOMAD-LAB and NEO4J databases shared insights on projects and databases dedicated to storing research data based on FAIR rules. During the workshop, there were ample opportunities for networking and knowledge exchange. The participants visited the AMANDA Lab, providing valuable insights into cutting-edge research and fostering discussions in an informal setting.



Interested in the discussion?

[Read the proceedings](#)

VIPERLAB SHINING AT RELEVANT EVENTS!

VIPERLAB at E-MRS 2023!

Delighted to share that our Project Manager, Dr. N. Maticiu, participated in the E-MRS conference in Warsaw (18-21 September).

Presenting a talk on the project and our TA/VA offerings, Dr. Maticiu engaged in fruitful discussions with past and future users.

VIPERLAB's presence is crucial for advancing perovskite research also in Eastern Europe, fostering collaboration and innovation in this dynamic scientific community.

[Read more](#)





Were you attending the SAIPho workshop?

On the 14th and 15th of November, 2023, the **SAIPho23 - Sustainability Assessment of Innovative PHotovoltaics 2023 Workshop** was hosted by the University of Siena. This was a follow-up event to the LCA harmonisation workshop held in Brussels in March 2023. The SAIPho23 workshop focused on “Prospective LCA modeling” for emerging PV and innovative PV (space applications) as well as the challenges associated with PV recycling.



The discussions covered PV End-of-Life, PV recycling, and LCA for Pero-Si tandem cells. Additionally, the key takeaways include plans for a white paper on LCA harmonisation with two core recommendations.

- Clear differentiation between mature and low TRL technologies in LCAs.
- Emphasis on prospective LCAs for nascent technologies as they enable better visualisation of the impact of potential technical developments.

This workshop marked a pivotal moment in refining LCA methodologies for sustainable advancements in the PV industry.

[Read more](#)

PSCO 2023 in Oxford!

The VIPERLAB project was present at the **PSCO 2023** that took place in Oxford from 18 to 20 September 2023.

On September 19th, 2023, Dr. Eva Unger (HZB) had a talk about “Rational process optimisation for high performance scaled perovskite PV prototypes”. Furthermore, our colleagues Dr. Christian Wolff (EPFL) and Dr. Francesca Brunetti (UNITOV) were also invited as speakers.



[Read more](#)



VIPERLAB dissemination at EU PVSEC 2023 !

Dr. Franco Roca (ENEA), on behalf of the VIPERLAB project, presented a poster at the **40th European Photovoltaic Solar Energy Conference and Exhibition (EU PVSEC)** that took place in Lisbon (Portugal) from 18 to 22 September 2023.

[See the poster](#)

Additionally you can also access the following VIPERLAB publications:

- Stability follows efficiency based on the analysis of a large perovskite solar cells ageing dataset ([here](#))
- The challenge of studying perovskite solar cells' stability with machine learning ([here](#))



Where you at the ISOPHOS School?

The 15th edition of the **International School on Hybrid and Organic Photovoltaics (ISOPHOS®)** was held from the 4th till 8th of September 2023 in the wonderful atmosphere of Talamone (Tuscany, Italy), an ancient seaside town grown around a medieval fortress and a large fishery, from which it got its designation.



[Read more](#)



ISOPHOS 2023 was organised by the Center for Hybrid and Organic Solar Energy (CHOSE) of Lazio Region-University of Rome Tor Vergata, partner of Viperlab Project, and the startup company Cicci Research. The school focused on recent advances in science and technology of organic and hybrid photovoltaic devices, including perovskites, dye solar cells, polymers, and the use of graphene and other 2D materials for energy applications.

Viperlab collaborates with RetelFV!

The Italian RetelFV-[Italian Photovoltaic Network for research, development and innovation](#) intends to promote collaboration between research centers and the photovoltaic industry on the main scientific, technological and innovation objectives preparatory to the competitiveness of the photovoltaic sector, accelerating the development of solutions.



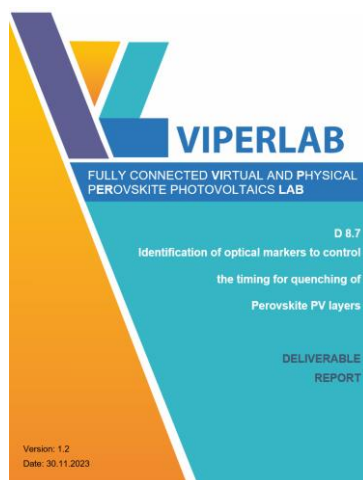
In this framework, the VIPERLAB project is tightly collaborating with RetelFV since its first steps being the Italian partner of Viperlab ENEA, UniTov, UniTo, EERA-PV members and with UniMib, founder members of RetelFV coordinated by Massimo Mazzer (CNR). Prof. Aldo Di Carlo (UniTov) co-organized with prof. Simona Binetti (UniMib) the kick off meeting of RetelFV was held on 22 and 23 June, 2023, at Milano Bicocca University where the VIPERLAB project was widely presented to Italian PV community.

Dr. Francesco Roca (ENEA) chaired Session IV of the RetelFV event at ZeroEmission on 10th October 2023, in Rome. The event was organised by Salvatore Guastella, Project Manager, RSE in collaboration with Massimo Mazzer, coordinator of the RetelFV. Prof. Aldo Di Carlo participated as session chairperson and speaker. The event discussed about:

- The RetelFV and the state of Italian photovoltaic research
- Tools and strategies for the energy transition: the role of photovoltaics
- Strengthening the photovoltaic supply chain in Italy
- The need for training in the photovoltaic sector

[Read more](#)

VIPERLAB PUBLIC REPORTS




UPCOMING EVENTS ON PV

VIPERLAB public webinar on standardisation

On January 17th, 2024, the VIPERLAB project will hold the **“VIPERLAB Webinar on Standardisation for Perovskite PV”**. This will be a half-day online event on standardisation activities in the field of PV, focusing on Perovskite materials and devices.


Experts from international research institutes will report on the current activities of the EC Technical Committees 113 and 82, ISOS and PSK-ISOS, as well as on standardisation activities regarding data ontologies and RDM.

[Read more](#)



VIPERLAB Webinar on Standardization for Perovskite PV
 January 17th, 2024, 13:00 – 15:30 (CEST) - Online

Final agenda and dial-in link will follow by email some days before the event!



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 101006715



Join us during HZB Photon School!

The **HZB Photon School 2024**, taking place from 18 to 22 March 2024, will be a great opportunity for master students and early-stage researchers in physics, chemistry, materials science, engineering, life or environmental science, to explore synchrotron and laboratory-based methods.

Join online the HZB School for lectures. You can also join the training onsite from 25 to 28 March 2024 at the Wilhelm-Conrad-Röntgen-Campus, Berlin-Adlershof.

[Read more](#)



HZB PHOTON SCHOOL

ON LINE LECTURES, 18th - 22th March, 2024

ON SITE TRAINING, 18th - 22th March, 2024

HZB - Wilhelm-Conrad-Röntgen-Campus, Berlin-Adlershof.

International Summit on Organic and Hybrid Photovoltaics Stability (ISOS-14) in Berlin!

The **ISOS-15** (International Summit on Organic and Hybrid Photovoltaics Stability) will be held at Helmholtz Zentrum Berlin (HZB) from 30th September to 2nd October 2024. The event is co-organised together with the VIPERLAB project.

Save the date!

Additional details will be available shortly [here](#).
Stay tuned for updates!





MEET THE CONSORTIUM



JOIN THE VIPERLAB COMMUNITY:



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