VIPERLAB

FULLY CONNECTED **VI**RTUAL AND PHYSICAL
PEROVSKITE PHOTOVOLTAICS **LAB**

Introduction of the VIPERLAB project - perovskite community and Infrastructures

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Project Motivation

In 2020: from the 9 labs, which have achieved >25 % efficiency for perovskite silicon tandem solar cells, more 5 of them were in Europe.

But…

A **European strategy** including relevant and dedicated infrastructure **to develop these perovskite devices is missing so far.**

High potential

Missing strategy

Fully connected **vi**rtual and physical **per**ovskite photovoltaics **lab**

(VIPERLAB)

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

VIPERLAB approach

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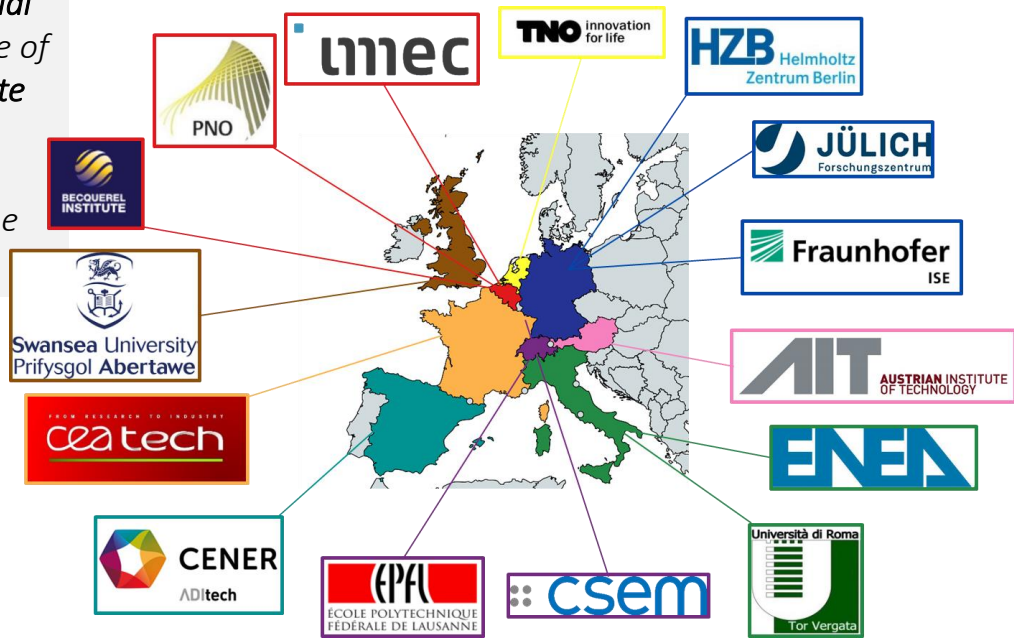
Consortium and Goal

Main goal:

Through ***facilitated and coordinated transnational and virtual access*** *to the best EU perovskite infrastructures and the use of advanced data mining approaches,* ***the project will stimulate European academic and industrial researchers to work together on the research and development of the next generation of solar cell technology****, which will accelerate the perovskite PV technology development in Europe.*



EU's RIA Research and Innovation action (H2020-INFRAIA-2018-2020)

Total Budget: 5,520,124.75 €
Duration: June 2021 – November 2024
Coordination: HZB

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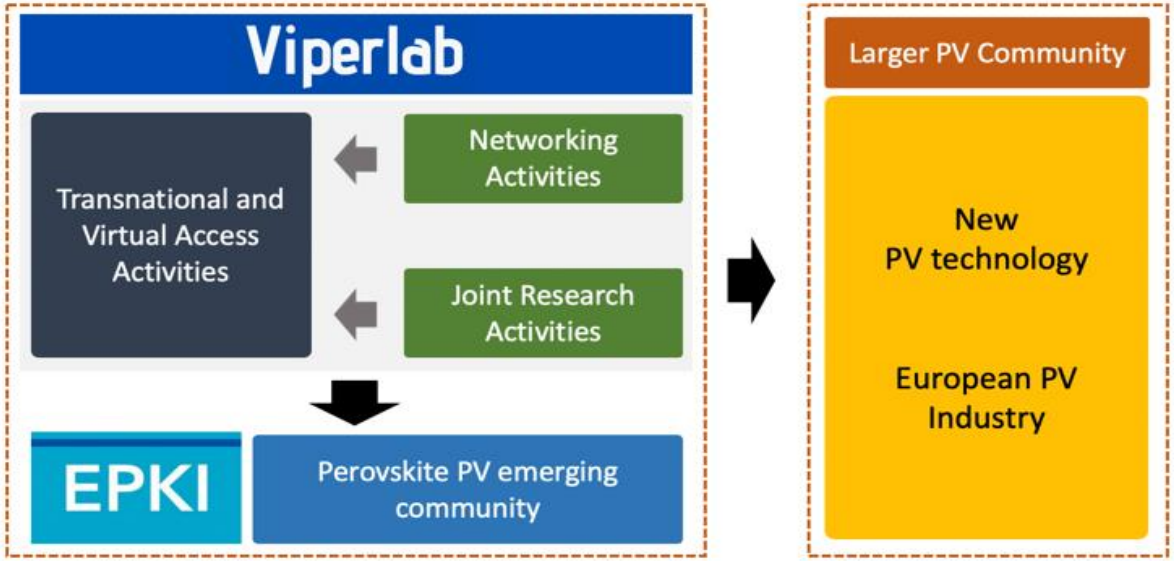
Concept and Objectives



- Combine and share top EU infrastructures
- Connect and support starting EU perovskite community
- Further develop the project

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Transnational and Virtual Access Activities

User days by April 2023

Virtual

- **CENER** – Modelling Capacity
- **JÜLICH** – AMANDA
- **HZB** – Perovskite Database
- **ENEA** – CRESCO Computing lab

37 days
>500 accounts

Characteriz.

- **ENEA** – Tandem PSK/Si Lab
- **CEA** – PSK Platform for SJ and PSK/Si tandem stability assessment
- **HZB** - EMIL (Energy Materials In Situ Lab Berlin), at BESSY II
- **HZB** - HySPRINT-Stability Lab
- **CENER** – Accredited PV Module testing Lab
- **AIT** – PVS Lab - Tools for PV characterization/reliability

84 days

Processing

- **UNITOV** – CHOSE - S2S SJ PSK and mechanically stacked tandem line
- **FRAUNHOFER** - Solar Cell Manufacturing & Characterization
- **EPFL/CSEM** – PV Lab/PV Center PSK/Si tandem processing
- **JÜLICH** – R2R-Coating-Line
- **SU** – PV Manufacturing and Testing Facility
- **TNO/Solliance** – S2S process PSK line
- **IMEC** – ThinFilm PV Lab

276 days

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Joint research and networking activities

- Materials and device innovation Infrastructure
- Advanced device processing infrastructure
- Characterization and standardization
- Environmental, social and economic impact

- Harmonization and path towards standardization
- Communication, Dissemination, Exchange, Training
- Community building and Exploitation

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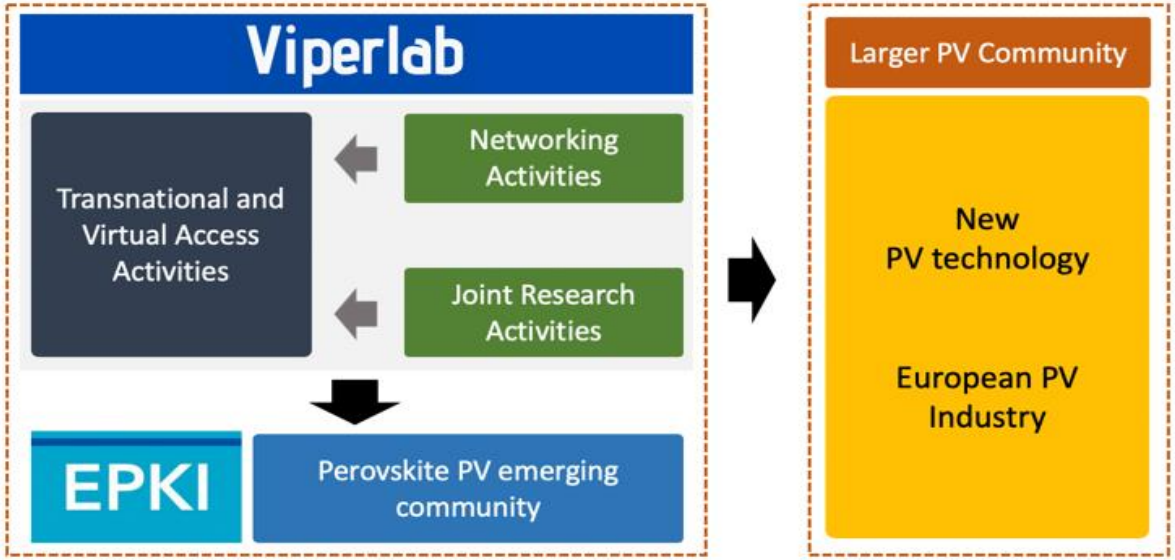
From the initial concept to the event today



- 2 SRIA workshops with key stakeholders (9.22 & 03.23)
- 2 strategic workshops on harmonized procedures (09.22 & 03.23)
- **1st public event with industry (today)**

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Thank you!

GA meeting, July 2022

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More details about VIPERLAB

www.viperlab-kep.eu
www.viperlab.eu

linkedin.com/in/viperlab-project/

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