

NEWSLETTER Spring 2025

Dear Reader,

We are happy to introduce the third newsletter of the SPHINX project. We are now halfway through the project (just completed Month 18). We are reaching the end of the proejct phase dedicated to innovations on material and component level. We are now advancing to the next stage, where the focus will lie on BIPV production technology and installation of its demonstrators. Interesting times to look forward to!

News

Recent technical achievements and updates

WP3

The project activities in WP3, focused on material and component innovations, including new coatings, interconnections, antifouling and antiglare solutions, are now (almost) complete. This intensive 18-month effort challenged the involved partners and laid the foundation for SPHINX's advanced BIPV solutions. This culminated this month resulting in SPHINX submitting three deliverables in WP3. D3.5 reports the fabrication and initial testing of semi-transparent modules, tiles, and lightweight modules, confirming product feasibility and outlining next steps for reliability testing and scale-up. D3.7 presents the development of anti-glare and anti-soiling coatings, with validated formulations and promising scale-up potential for industrial application. D3.8 reports innovative encapsulants, designed to boost efficient and module durability (UV downshifting and IR reflective layers). Together these innovations mark important steps towards high performance, application-ready BIPV solutions.

WP4

We are happy to announce that the <u>production of shingle matrices</u> at Fraunhofer is going on full speed'and the full format matrices for HLP's lightweight modules have been produced, and the first batch of rooftiles has been shipped (and delivered) to the Freesuns demonstration site (see picture below (left).

SPHINX has reached a major milestone with the successful development of full-scale lightweight modules, addressing the construction sector's growing demands for efficient, cost-effective and sustainable solutions. Thanks to collaborative efforts of partners HLP and Fraunhofer, innovative materials and advanced manufacturing methods have been combined to enable scalable production. This breakthrough strengthens SPHINX's impact in the BIPV sector and sets the stage for the next phase of challenges and progress (picture right).

WP4 developed and put in commission the first in its kind Laser Scribe and Break Machine for Matrix shingling. It can be seen in action <u>here</u>.





WP5

SalvaTerra, a vertical photovoltaic planter developed by ETW, has joined the SPHINX demonstrator portfolio. Combining bifacial PV modules with greenery in a relocatable design, it offers a sustainable and aesthetic energy solution. Recently approved by the EC, SalvaTerra complements the noise barrier demonstrator and strengthens SPHINX's contribution to greener cities. Read the full article <u>here</u>.

WP6

SPHINX has completed the first life cycle assessment (LCA) of its BIPV products, marking a key step towards evaluating their environmental impact. Based on the product input from Freesuns, Voltec, Heliup and Etway, the assessment analysed materials, energy use and yields across production steps, providing insights for future improvements. This initial LCA sets the foundation for the final LCA at the project's conclusion.

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Project white paper and other publications

Via this webpage you can access the project-related publications.

One of them is a public project report focusing on the advantages of matrix shingle technology for integrated PV (full article available <u>here</u>). This document is considered the SPHINX-white paper on shingle technology and it will be updated during the proejct duration.

Clustering activities with Sister Projects



During the past 6 months, our collaboration with sister projects intensified – particularly with the INCREASE team - culminating I SPHINX participation and co-chairing of the <u>INCREASE</u> workshop in March 2025 in Villars-sur-Ollon, Switzerland.

These interactions not only enhance cooperation but also align our efforts to drive impactful outcomes in solar innovation and integration.

Check the <u>news page</u> to read more about SPHINX clustering activities.

Coffee Breaks



For anyone interested in more details about our partners, the SPHINX website regularly adds 'Coffee-break' interviews.

At this moment, you can get to know the gentlemen of EPFL, <u>Antonin</u> <u>Faes and Paul Rémondeau</u>, in a double interview.

Meetings

SPHINX project meetings:

- In March the project fourth general assembly took place. Hosting the event, which took place in parallel with INCREASE meeting and clustering workshop, have been our partners CSEM and EPFL.
- Next physical meeting will be in November in Trento, hosted by partner ETW. All partners are looking forward to see and learn more about the project noise barriers and get to know the new 'salvaterra'.

Participation and contribution at relevant events for the sector:

- SPHINX results included in Fraunhofer presentation at SiliconPV Conference.
- Heliup, Fraunhofer, M10, CSEM participated at Intersolar (Munich, May 2025).

SPHINX as a Consortium

Project Partners

SPHINX joins a multi-disciplinary consortium with 12 partners, located in 7 European countries including Italy, Germany, Belgium, Switzerland, France, Spain and the Netherlands, to discover costeffective, aesthetically pleasing photovoltaic solutions and cutting-edge technology, driving us towards a sustainable and low-impact energy future.

French translation on the website

For our French speaking readers, partns of the SPHINX website are tranlated into <u>French.</u>

Pour nos lectueurs francais, nous avons aussi une version francaise du site web <u>ici</u>.





Facts & Figures Start date: 01 November 2023 Duration: 36 months Total Costs: € 8,936,233 Funding by the EC: € 5,247,990 Funding by the CH: € 2,185,513



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