



Newsletter

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Welcome to the PHOTOSINT newsletter!

In this second edition, we compile a brief update of relevant actions carried out in PHOTOSINT within the past months, including news articles, events and an interview with our coordinator, María Tripiana (IDENER). Also, we introduce the launch of our Multi-Stakeholder Platform, a new tool designed as a collaborative ecosystem for different stakeholders. In addition, we bring a short list of interesting events and conferences related to photonics, hydrogen and methanol production and artificial photosynthesis, that will be carried out during the summer of 2026. For this second edition, we have a dedicated section to introduce an invited project: TRINEFLEX. Enjoy!



Coordinator's overview

María Tripiana is the coordinator of PHOTOSINT. She currently exercises as the manager of the Chemical Applications Division in IDENER. In this interview, she provided her point of view on the project advances and future outcomes. María provided a hint of her experience not only



as a coordinator but as a technical expert. She emphasises the importance of supporting and guiding the participant partners in order to keep the team focused on the big picture, as well as fluid and constant communication with the European Commission delegates.

In the interview, the coordinator evaluates the main challenges the project has faced – and will face- regarding the integration of renewable energy sources into heavy industry. This appraisal is not only focused on PHOTOSINT duration but also after the project has been completed. Also, she was able to provide her global vision on the role and impact of sustainability assessments in R&D projects across environmental, economic and social dimensions.

In addition, María highlights the importance of basic science in PHOTOSINT, referring to the researchers' and academics' roles as crucial for the project.

To read the full interview, visit the PHOTOSINT [website](#)

PHOTOSINT at the NEFERTITI winter school 2025

The NEFERTITI Winter School was held last December 2025. The event brought together researchers, early-career scientists and industry professionals to reinforce collaborations around sustainable CO2 technologies. By interdisciplinary dialogue, the participants explored how fundamental research is moving closer to real-world industrial applications.

The presentations covered a wide range of promising approaches, and the programme included talks from both experimental and computational perspectives, showcasing solutions for the sustainable production of alcohols (methanol or eth-



anol), hydrogen and ethylene. Dr. Sergi Danés, researcher at the Institute of Chemical Research of Catalonia (ICIQ) and member of the PHOTOSINT project, presented the project's aims and scope. Read the full news at the [Photosint website](#).

PHOTOSINT Multi-stakeholder platform

We are delighted to announce that the PHOTOSINT MULTI-STAKEHOLDER PLATFORM has been officially launched!

The platform provides a structured, interactive environment to support stakeholder engagement, knowledge exchange, and informed decision-making in artificial photosynthesis and photodriven hydrogen and methanol production.

Further than acting as a repository, the platform is a dynamic knowledge hub, consolidating scientific, technical, policy, and sector-specific resources relevant to PHOTOSINT.

The main goal of the platform is to facilitate access to curated content and connect with aligned projects and initiatives. This approach attempts to overcome the fragmentation of information across research, industry, and policy domains while supporting collaboration, innovation, and technology uptake.

The platform is structured in three main sections, in which the user will find discussion groups and forums related to relevant PHOTOSINT topics, a list of aligned entities and initiatives, research projects and groups, and a compendium of resources such as reports covering technical as-

pects, regulatory and policy documentation, specialised sector publications and open-access research journals.

By fostering dialogue among researchers, industry, policymakers and other stakeholders, the platform aims to help align research priorities with industrial needs, support technology implementation, and advance the energy transition and industrial decarbonisation.

To explore the Platform, click [here](#).





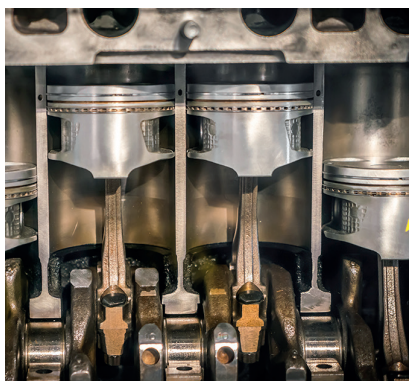
Blog news

Here you can find a shortlist of the latest News and communications shared by PHOTOSINT on different topics. For diving deeper into more publications, visit the PHOTOSINT [website](#)

Integrating PHOTOSINT Technologies into Real-World Manufacturing

One of the biggest challenges in creating a more sustainable industrial future isn't just creating new technologies, it's making them work in the real world. The PHOTOSINT project is designed to address this challenge by developing solar-driven technologies for producing alternative fuels and evaluating how they can be applied in real industrial settings.

Read the full article by clicking [here](#)



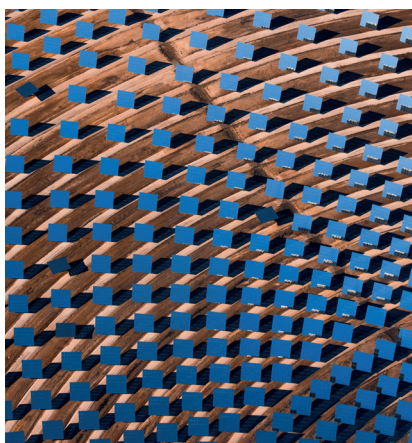
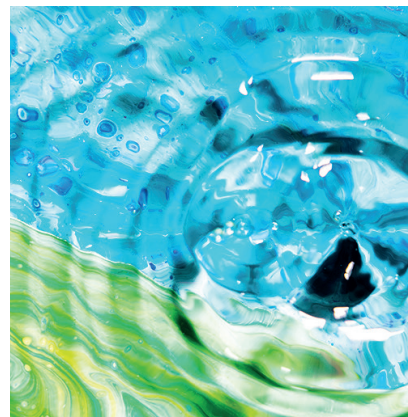
Green Methanol: From Sunlight in the Lab to the Test Bench

Rolls-Royce presents a new high-speed marine engine powered on 100% methanol. It is a practical signal that methanol can be more than a laboratory curiosity — it can be one of the real fuels of the future.

Read the full article by clicking [here](#)

Green and Blue Hydrogen, a Brief Comparison

Among low-carbon alternatives for energy intensive industrial sectors, green and blue hydrogen are consistently gaining attention. Despite being critical energy carriers, they differ significantly in their production methods, environmental performance and long-term sustainability. Understanding these differences is essential for guiding technology choices and investment strategies in the transition towards a fully renewable hydrogen economy. Read the full article by clicking [here](#).



PHOTOSINT Advances Catalyst Design for Renewable Fuel Production

The PHOTOSINT project has reached an important milestone in its mission to develop sustainable alternatives to fossil-based fuels. A recent project report presents the latest advances in the design, development, and evaluation of catalysts and electrodes that are essential for converting solar energy into renewable fuels such as hydrogen and methanol. Read the full article by clicking [here](#).

PHOTOSINT Work Package 3: Advancing Solar Fuel Technologies Towards Industrial Demonstration

Earlier stages of the PHOTOSINT project focused on developing and validating key materials and components at laboratory scale. Work Package 3, Pilot design and testing activities under industrial environment, represents a crucial step towards real-world implementation through pilot design and testing activities to validate the technology at TRL 4, with the aim of integrating and preparing PHOTOSINT technologies for operating in industrially relevant environments. Read the full article by clicking [here](#).


PHOTOSINT Advances Multidisciplinary Design Optimisation for Sustainable Fuel Production

The transition towards a climate-neutral economy requires more than breakthrough technologies. It also demands intelligent design approaches capable of ensuring that new energy solutions are efficient, economically viable, and environmentally sustainable. Read the full article by clicking [here](#).



Upcoming events

Here is a list of interesting international events related to photochemistry, advanced materials, solar fuels production, and more, that will be carried out during the summer 2026.

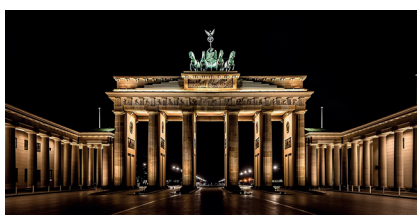
To check the full list, visit the PHOTOSINT [website](#) 



7th HRSMC/EPA Summer School on Photochemistry!

29th June 2026 / Deurne (The Netherlands)

Visit the website [here](#) 



International Conference in Artificial Photosynthesis (ICAP 2026)

22nd July 2026 / Berlin (Germany)

Visit the website [here](#) 



International Conference on
Photosynthesis Research 2026

2nd International Conference in Artificial Photosynthesis Research (ICPR26)

26th July 2026 / Liverpool (UK)

Visit the website [here](#) 



European Advanced Materials Congress

25th August 2026 / Stockholm (Sweden)

Visit the website [here](#) 



International Conference on Photocatalysis and Solar Fuel Production

28th August 2026 / Ruse (Bulgaria)

Visit the website [here](#) 

Invited project

TRINEFLEX: Transformation of energy intensive process industries through integration of energy, process and feedstock flexibility.



TRINEFLEX is a 4-year funded project designed as a comprehensive toolkit for energy intensive industries. It serves as a platform for managing the digital transformation, as well as facilitating the transition towards more flexible and sustainable industrial processes. The project aims to implement the toolkit in five demonstration sites with unique challenges, from 4 sectors: glass, copper, aluminium and water industries. It will function as an end-to-end service, managing the plant's digital life cycle and facilitating the transition to flexible and sustainable oper-

ation. This process will rely on advanced and green data acquisition, Big Data infrastructures, process analysis, model development, and digital twins with integrated multi-agent decision support systems. In addition, the project integrates transformative technologies in synergy with advanced digital solutions to demonstrate flexibility measures towards energy neutrality. TRINEFLEX is also designed for rapid replicability across these sectors and high transferability to other sectors focused on energy flexibility in the short term and industrial symbiosis

in the long term.

As part of the replication activities, TRINEFLEX is currently conducting a survey addressed to researchers, industrial partners and stakeholders working on energy flexibility in industry. Participants are invited to contribute their insights via the survey. Supported by the EU through the Horizon Europe Funding Programme, TRINEFLEX is coordinated by AIMEN and counts on the participation of 26 participants and 1 associated partners. To learn more about TRINEFLEX, visit their website and follow the project on social media channels.



Photo from the TRINEFLEX General Assembly, 28–29 April 2026. Source: TRINEFLEX website.

Continue to follow us on our journey toward a sustainable future for the heavy industry!

Visit our website and share our advances with your network!

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