**ACTPHAST 4R / Photonics PPP Press Release**

# Innovation hub to accelerate scientific breakthroughs

**A new innovation hub is enabling researchers to turn their breakthrough scientific concepts that use photonics into industrially-relevant demonstrators.**

A new EU innovation hub – ACTPHAST 4R – specialising in the deployment of cutting-edge photonics technologies will give researchers in academic institutes all over Europe the chance to turn their breakthrough scientific concepts into industrially-relevant demonstrators.

Launched this year, ACTPHAST 4R (short for 'ACTPHAST for Researchers') has financial support from the European Commission under the H2020 Framework, to solve the bottleneck in developing a concept into a prototype.

Centrally coordinated by the Brussels Photonics Team (**B-PHOT**) at the Vrije Universiteit Brussel, ACTPHAST 4R will support 800 researchers from across Europe over the next four years.

Providing them with open access to expert coaching in the accelerated development and deployment of photonics from its panel of 200 top photonics experts, ACTPHAST 4R expects to select at least 100 of the researchers to receive further deep innovation project support to build their demonstrators.

An extension of ACTPHAST 4.0, the existing EU photonics innovation incubator for SMEs, ACTPHAST 4R is set to be a game-changer in the European innovation ecosystem. For the first time, researchers will have access to support to progress seamlessly from early-stage breakthroughs right through to advanced prototypes and into industrial use.

With 24 of Europe's top photonics competence centres, ACTPHAST 4R will make advanced photonics resources available to all researchers on an open-access one-stop-shop basis.

## Photonics Technologies

Photonics – the science behind the power of light – is a critical digital technology for the creation of new applications and solutions that address many of our major societal challenges from Optical Communications and High-Performance Computing, to Environmental Sustainability, Industry 4.0, Smart Living and Personalised Healthcare.

While researchers working in different scientific domains behind these applications often have breakthrough concepts, many lack the expertise in photonics and easy access to the

advanced photonics technology platforms in order to develop fully-functioning industrially-relevant demonstrators.

Significantly, ACTPHAST 4R's deep innovation support will involve internships and hands-on training for the researchers in the state-of-art technology platforms and equipment of the host competence centres.

Researchers will get access to intensive entrepreneurial coaching, ensuring a durable knowledge transfer and cross-fertilisation of photonics with other key scientific domains with a focus on commercial deployment.

## Ambitious Impact Targets

Over the next 4 years, ACTPHATS4R expects to create 50 high-tech jobs in new spin-out companies (creating new positions like CEOs, CTOs and Heads of Innovation, Engineering and Product Development)

As a result of its support activities with European researchers, the innovation hub will foster 30 new IP depots, patent applications or strengthened patents, 20 new IP transfer or technology licensing agreements with industry, and help to generate €15M in new venture capital.

Project coordinator and managing director of the Brussels Photonics Team at VUB, Professor Hugo Thienpont said: "The ambitious ACTPHAST 4R programme will greatly strengthen the European innovation ecosystem."

"We will open up access to advanced prototyping platforms for researchers and tackle critical roadblocks at the early stage TRL levels in the bridge between fundamental and applied research.

"Through this facility, we will create new opportunities to deliver advanced photonics technologies and sustainable growth across all European regions," Professor Thienpont said.

Catering to photonics and non-photonics researchers alike, the new facility will provide a full supply chain of services such as design, measurement and packaging, with transnational internships and expertise from Europe's leading photonics research institutes.

In parallel, ACTPHAST 4R participants will also get exclusive access to expert coaching in technology deployment and entrepreneurship.

"We offer services that are unique for turning research into real products. All of the ACTPHAST 4R services are made available in a subsidized format for collaborating on photonics innovation projects.

"With an average 'incubation' time of 6 months per project, we expect that ACTPHAST 4R will accelerate the development of new applications, enterprises and jobs, and the diffusion of innovation for the betterment of society in Europe and beyond," said Thienpont.

## Unique Innovation Support

The ACTPHAST4R model is unique in a European context in that it is designed to provide a single entry point into a fully integrated "one-stop-shop" supply chain for innovation support across the broad spectrum of photonics technology platforms.

ACTPHAST4R, together with ACTPHAST 4.0 and the European pilot lines in photonics, will complete the essential bridges across the 'Valley of Death' between research and development where the flow of innovation is often de-railed, namely:

- **Demonstration of Conceptual Breakthroughs** moving from fundamental research (TRL1-2) to applied research (TRL3-4);
- **Prototyping** moving from applied research (TRL3-4) to advanced prototypes for industrial applications (TRL5-6), and;
- **Scaling Manufacturability** moving from small-scale prototypes (TRL6-7) to mass-market products (TRL8-9).

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## About ACTPHAST4R

ACTPHAST4R is financially supported by the **European Commission** and the **Photonics Public-Private-Partnership (PPP)** under the Horizon2020 programme for Innovation Actions (Grant Agreement No. 825051)
https://cordis.europa.eu/project/rcn/219086/factsheet/en.

ACTPHAST 4R combines the expertise and technologies of the following 24 top European photonics competence centres:

**List of participants**

| Participant No * | Participant organisation name | Short name | Country |
|---|---|---|---|
| 1 (Coord.) | Vrije Universiteit Brussel | VUB | Belgium |
| 2 | Center National de la Recherche Scientifique | CNRS | France |
| 3 | Karlsruhe Institute of Technology | KIT | Germany |
| 4 | Politechnika Warszawska | WUT | Poland |
| 5 | Institute of Communication and Computer Systems | ICCS | Greece |
| 6 | Tyndall Institute, University College Cork | UCC | Ireland |
| 7 | Technische Universiteit Eindhoven | TUE | Netherlands |
| 8 | Interuniversitair Micro-Electronica Centrum VZW | IMEC | Belgium |
| 9 | Teknologian Tutkimuskeskus VTT oy | VTT | Finland |
| 10 | LioniX International | LIO | Netherlands |
| 11 | Universitat Politècnica de València | UPV | Spain |
| 12 | Fraunhofer-Gesellschaft Zur Foerderung der Angewandten Forschung E.V. | HHI-FEP | Germany |
| 13 | Fundacio Institut de Ciencies Fotoniques | ICFO | Spain |
| 14 | University of Southampton | ORC | United Kingdom |
| 15 | Itä-Suomen Yliopisto | UEF | Finland |
| 16 | Conzorzio Nazionale Interuniversitario per le Telecomunicazioni | CNIT | Italy |
| 17 | Uniwersytet Marii Curie-Sklodowskiej | UMCS | Poland |
| 18 | Instytut Technologii Materialow Elektronicznych | ITME | Poland |
| 19 | Foundation for Research and Technology Hellas | FORTH | Greece |
| 20 | Leibniz-Institut fuer Photonische Technologie E.V. | IPHT | Germany |

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| 21 | Joanneum Research Forschungsgesellschaft mbH | JR | Austria |
| 22 | Polytechnic University of Catalonia | UPC | Spain |
| 23 | Consiglio Nazionale Delle Ricerche - Istituto di Fotonica e Nanotecnologie | CNR | Italy |
| 24 | SMART Photonics BV | SPH | Netherlands |

For more information, please visit www.actphast.eu.