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# Photosynthesis at the interface of Arts, Sciences and Society

Artists and scientists explore collaborations inspired by photosynthesis at the Hivernacle in Barcelona's Parc de la Ciutadella

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**Photosynthesis at the interface of Arts, Sciences and Society**, an interdisciplinary discussion examining the dynamic intersection between science and the arts, with a focus on photosynthesis for societal impact, aptly took place at the beautiful, modernist Hivernacle (Greenhouse) in Barcelona's Parc de la Ciutadella. It was organized by **HacTe**, the Barcelona Hub for Art, Science and Technology and **ICFO**, in the framework of the **EU's S+T+ARTS in the CITY** initiative which brings artists into research centers through a residency program with the goal of enhancing art-driven innovation.

Photosynthesis is a long-standing subject of scientific investigation and artistic inspiration. **In the scientific field**, this theme unveils the processes governing nanoscale energy transfer, raising questions about the improvement of its functions and the potential advances in sustainable agriculture, green energy, and carbon capture. **In bio-art**, this topic draws inspiration from the philosophical, societal, and environmental implications of recombinant genetics, molecular biology, and biotechnology.

By bringing together researchers and artists, the dialogue examined both scientific and creative approaches to understanding and harnessing this vital biological process, from the microscopic mechanisms of photosynthesis to large-scale applications such as regenerative life support systems for human space missions.

The event featured the participation of **Prof. Nicoletta Liguori**, Group Leader of the **Photon Harvesting in Plants and Biomolecules (PHPB)** research group at **ICFO** and **Nicolas Maignret** from the artistic collective **DISNOVATION.ORG** with whom **ICFO** collaborated on the project **½The Solar Share½** through the **S+T+ARTS in the CITY** initiative. **Prof. Francesc Godi Casablanca**, director of the **Melissa Pilot Plant** project and **UAB** professor as well as **Raoul Frese**, physicist at the **Vrije Universiteit Amsterdam** and Head of the **Hybrid Forms Lab** offered an array of examples of inspired artistic collaborations where they were able to communicate aspects of their scientific programs. Artist and environmentalist **Paula Bruna** described projects in which she was able to palpably humanize science through her art. **Irma Vila i Odena**, Professor at the **Universitat Oberta de Catalunya** whose work is rooted in

science and engineering and who is also actively involved in creative practice and cultural research, and in hybrid research projects spanning science, culture and curating, moderated this event.

**Organising committee:** Prof. Dr. Nicoletta Liguori (ICFO), Prof. Raoul N. Frese (Vrij Universiteit Amsterdam), and Tere Badia (Director of Hac Te

**\*\*\* The event was funded by the European Commission that aims to stimulate innovation between the arts, sciences and technologies, with the support of the Department of Culture of the Generalitat de Catalunya. The event received support from the Ajuntament de Barcelona.**

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Presentation by Prof Nicoletta Liguori

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Presentation by Nicolas Maigret,  
DISNOVATION.ORG