





Castel San Pietro Terme , May 11st 2020

H2020 Grant for perovskite-based lighting, wearables and fabric devices with LiFi and photovoltaic capability has been approved and started April 1st 2020

The EU H2020-funded project PeroCUBE aims at developing flexible, lightweight perovskite-based electronics, creating new commercial opportunities for the lighting, energy and telecom industries. The consortium brings together 14 industrial and academic partners from 10 European countries.









This innovative collaboration, which engages the industry, academia and research organizations, represents the whole value chain and breeding ground needed to develop a new generation of sustainable perovskite-based devices. Already seen as a promising game-changer for the energy sector, this European consortium will allow the demonstration of the technology's viability as a commercial product. The project will last 42 months for a total requested EU contribution of EUR 5.6M.

The organic-inorganic metal halide 3D and lower dimensional semiconductors (usually referred to these days as perovskite), already used in PV technologies, have a strong potential to dominate the OLAE (Organic and Large Area Electronics) market by providing advanced lighting solutions (PE-LED).

PeroCUBE has two main objectives: producing efficient, simple and low cost light sources closer to natural light sources and supporting the development of more stable and sustainable, efficient and low-cost solar panels. By combining these promising technologies, the consortium seeks to develop a new generation of Visual Light Communication (VLC) and LiFi (light fidelity) standard, widening the scope for human centric lighting (HCL), data transmission, wearables and IOT applications that do not cause harm to humans nor the environment.

The future in lighting

The Perocube project financed by the European Commission will merge 3 different technologies. Lighting, energy harvesting and light communication.

The role of Aura Light Italia in the project will be that of innovation management. The design and integration of these new developments into finished products and bring them to market.

"This is in perfect harmony with our company mission improving the wellbeing of the individual by improving lighting though the application of advanced technology. We believe this project will change the world of lighting design as well as that of communication and we look forward to be able to play an active role in this transition " Ulrik Bertelsen CEO of Aura Light Italia.

About PeroCUBE

The **PeroCUBE** – High-Performance Large Area Organic Perovskite devices for lighting, energy and Pervasive Communication – consortium consists of 14 partners. Namely:

- 1. CSEM SA (CH) as coordinator and leader for the development of perovskite-based PV devices;
- 2. VTT (FIN) manufacturing approaches for Large Area flexible PeroCUBE devices and their integration into wearables;
- 3. University of Oxford (UK) for developing LED and PV device technologies;







- 4. **University of Patras** for tuning the perovskite upscaled industrial synthesis as well as providing improved perovskite structures;
- 5. **Fraunhofer Gesellschaft zur Forderung der angewandten Forschung (DE)** for electro-optical characterization of PeLED devices and their encapsulation;
- 6. Aura Light Italia (IT) as integrator of lighting applications, innovation, dissemination and IPR management;
- 7. **TNO (NL)** for Life Cycle Assessment and hazard and nanotoxicity assessment which will take into account the benefits as well as the potential risks of PeroCUBE devices across various life cycle stages of the product;
- 8. CNRS (F) for the optimization of the perovskite material;
- 9. Vodafone Innovus (EL) for light fidelity connectivity applications;
- 10. **Technische Universität Wien (AT)** developing micron- and nanoscale characterization of packaged PE-LED devices and PE-LED materials;
- 11. Alpes Laser SA (CH) for the laser source for perovskite characterization;
- 12. Eulambia Advanced Technologies Ltd. (EL) for the Perocube transceiver integration;
- 13. Optiva Media (ES) for the implementation and validation of the PeLiFi demonstration prototype;
- 14. Noesis Technologies (EL) for project, data and IPR management and exploitation support.

The PeroCUBE project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement No. 861985 with an overall budget of EUR 5.6M.

https://cordis.europa.eu/project/id/861985

The project website is under preparation and will be launched in Q4 2020.



About Aura Light Italia

Aura light Italia is a provider of sustainable lighting solution. With Swedish origin but based in Italy we design and supply functional, safe and innovative turnkey lighting projects with a strong focus on the wellbeing of the individual. Our LaaS approach, contains a complete range of services accommodating the client in every aspect of their project. Our proposals are characterized by the utilization of advanced technologies like LiFi, HCL and IOT. We invest in the future and in research to improve lighting in order to enhance quality of life.







Additional information

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