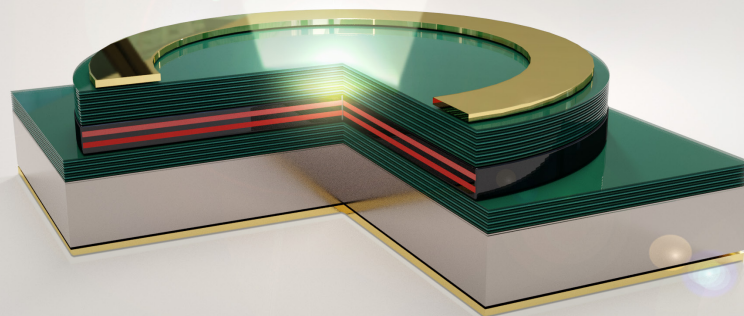


Game changer in the photonics industry



PhotoGeNIC will develop an innovative technology for germanium-based VCSELs that will significantly increase their performance while reducing the carbon footprint.

November 2022



VILLACH, AUSTRIA— Photonics offers new and unique solutions where today's conventional technologies are approaching their limits in terms of speed, capacity, and accuracy. The range of applications spans several sectors, from optical data communications, imaging, lighting and displays to manufacturing, life sciences, healthcare, safety, and security. As the VCSEL sector is developing dynamically and production of lasers is expected to triple in the next five years, the PhotoGeNIC project with its innovative GeVCSEL solution has the potential to be a game changer in the photonics industry. Germanium-based VCSELs enable new application opportunities such as LiDAR, at a potentially higher output and with a greatly reduced carbon footprint, and recycling capabilities at each every step.

PhotoGeNIC therefore aims at the laboratory-based development of a new generation of integrated photonic devices which will to lower the barrier to the deployment of innovative photonic integration technologies for high-tech SMEs in the EU .and to strengthen the industrial capabilities to manufacture photonic devices and integrate them into general-purpose systems.

Seven partners from five different countries will provide their extensive know-how and extensivelong-lasting experience to enable advanced photonic integrated circuits. This well-balanced group consists of two industrial partners, three SMEs, one research organizations and one university. The 3 years project, funded with 4.8 million euros from the EU, will start in October 2022 under the coordination of Technikon with a duration of 3 years. Within the

project framework, the consortium will primarily focus on enabling new applications in the field of sensing, extending the functionalities of optical components through new materials, design, and manufacturing, and mastering epitaxial material growth. The goal of PhotoGeNIC is to realise two different VCSEL components and integrate them into two different 3D sensor applications. One component will be used for consumer devices and the other will be a complete long-range, high-resolution LiDAR module for autonomous driving.

About the coordinator: Technikon is a private research service company in Austria. Technikon's range of expertise makes it Europe's leading private company for the coordination and dissemination of technology-based collaborative European collaborative technology-based research projects.

For more information about the PhotoGeNIC project, contact the coordinator directly:

Office: **TECHNIKON Forschungs- und Planungsgesellschaft mbH**
Burgplatz 3a, A-9500 Villach, AUSTRIA

E-MAIL: coordination@horizon-photogenic.eu
PHONE: +43 4242 233-55



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