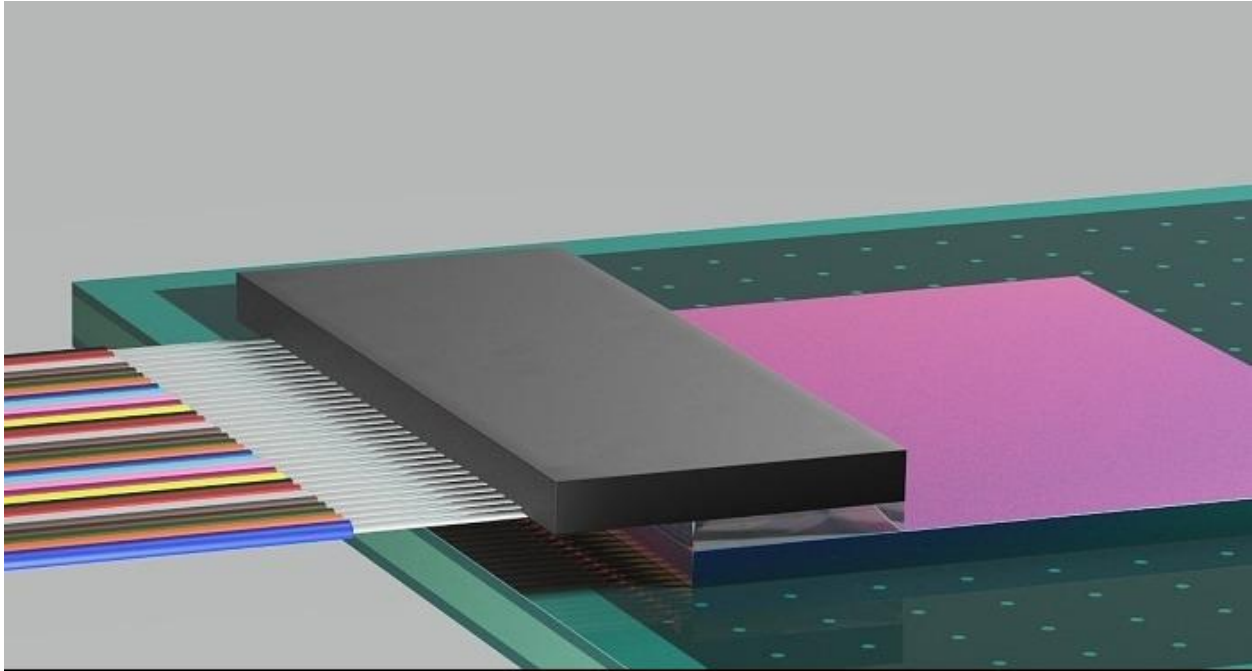




EVG and Teramont Collaborates to Develop New Packaging Technologies for Photonic ICs – March 14, 2022



EV Group (EVG), a leading supplier of [wafer bonding](#) and lithography equipment for the MEMS, [nanotechnology](#), and semiconductor markets, and [Teramont](#), the leader in scalable solutions for connecting [optical fibers](#) to silicon chips, announced a collaboration on implementing wafer-level optics to solve a major obstacle of silicon photonics, namely fiber chip packaging. The collaboration will leverage EVG's [nanoimprint lithography \(NIL\) technology](#), expertise, and services with Teramont's PhotonicPlug technology.

Under this collaboration, standard [CMOS](#) wafers that implement silicon photonics chips will be post-processed using EVG's NIL technology to implement optical elements such as mirrors and lenses for Teramont's unique "self-aligning optics". This enables flexible beam extraction from the chips and easy connection to a large number of optical fibers. Furthermore, it enables wafer-level optical inspection capabilities for enhancing silicon photonics wafer manufacturing.

The collaboration is being carried out within [EVG's NILPhotonics® Competence Center](#) at its headquarters in St. Florian, Austria. The NILPhotonics Competence Center provides an open-access innovation incubator for customers and partners across the NIL supply chain to collaborate to shorten development cycles and time to market for innovative photonic devices and applications. Through the collaboration with Teramont, EVG provides process development and production services, as well as expertise in both CMOS and photonics manufacturing, thus accelerating the commercialization of Teramont's PhotonicPlug technology.

The need for high-speed data transfers in data centers, telecom networks, sensors, and emerging applications in advanced computing for [artificial intelligence \(AI\)](#) is growing exponentially. This in turn is driving the importance of developing solutions that will cost-effectively scale up production of silicon

photonics, which enables ultra-high bandwidth performance. The collaboration between EVG and Teramount aims to solve this problem.

"Our joint work with EVG has been very successful in producing this innovative synergy between wafer-level optics and silicon photonics wafer manufacturing," said [Hesham Taha](#), CEO of Teramount. "By offering this capability to the industry, Teramount solves one of the major hurdles to further adoption of optical connectivity, which is critical for so many applications that require high-speed data transfers and low power consumption."

"Teramount's PhotonicPlug silicon photonics packaging technology is a truly novel approach to improving optical performance, and we are excited to be a partner in helping to bring it to the market," stated [Markus Wimplinger](#), Corporate Technology Development, and IP Director at EV Group. "This is just the latest example of innovative technology developed with the support of EVG's process and equipment know-how through our [NILPhotonics Competence Center](#), where we help our partners and customers turn new ideas into innovative products."

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