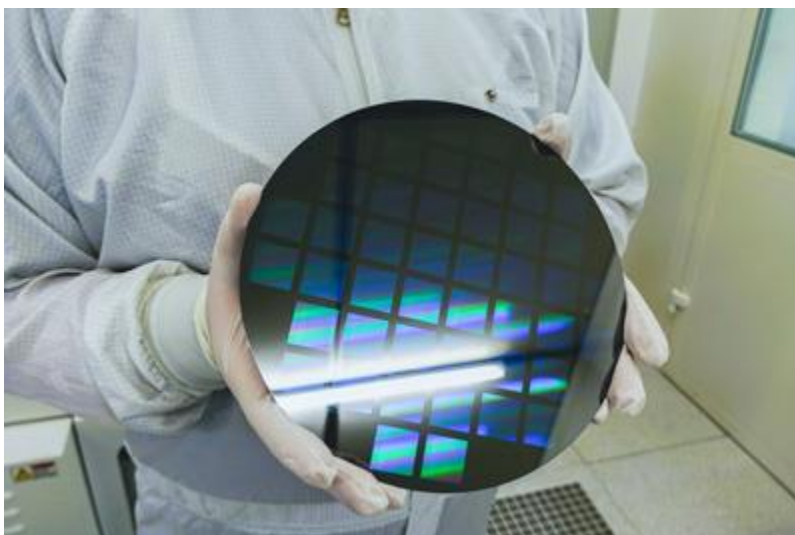


## **EV Group and Silicon Austria Labs extend photonics collaboration – November 15, 2023**

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***To boost development of wafer-level optics for micro cameras and mirrors, diffractive and automotive optics.***



### **Nanoimprint master: high precision for mass-production of meta-optics devices.**

**Silicon Austria Labs** (SAL), which researches electronics-based systems, has announced the installation of multiple lithography and resist processing systems from **EV Group** (EVG) at its microfab R&D cleanroom facility in Villach, Austria.

EVG is a developer of wafer bonding and lithography equipment for the MEMS, nanotechnology and semiconductor markets. The value of the installation was not disclosed.

The installations are part of a strengthened collaboration between the two companies to accelerate the development and deployment of advanced optical technologies for heterogeneous integration applications, including wafer-level optics for micro-cameras and micro-mirrors, diffractive optics, and automotive optics used to enable autonomous driving and automotive lighting.

The new EVG systems include the Lithoscale maskless exposure system, the EVG 7300 automated SmartNIL nanoimprint and wafer-level optics system, and multiple complementary resist processing

systems. These systems join SAL's existing installed base of EVG bonding, mask alignment and lithography systems, including the first installation of the 200-mm version of the EVG 150 automated resist processing system.

### **Close collaboration**

In addition, SAL has been working closely with the technology development and application engineering team at EVG's headquarters, including the NILPhotonics Competence Center, to leverage EVG's equipment and process knowhow and develop processes that are transferrable and scalable to high-volume manufacturing.

Dr. Mohssen Moridi, Head of Research Division Microsystems at Silicon Austria Labs, "We have recently been immersed in a range of cutting-edge R&D projects spanning meta-optics, integrated photonics, and MEMS, necessitating the use of advanced lithography and bonding tools. Through our valued partnership with EVG, we have gained access to tools of exceptional reliability and precision, paramount for successful R&D endeavors.

"Notably, the EVG7300 SmartNIL system has emerged as a pivotal tool, enabling the mass production of nanostructures for emerging photonics and MEMS devices. Its applications extend to diverse fields such as smart lighting systems, AR/VR, automotive optics, telecommunication, and quantum technology," said Dr. Moridi.

The new EVG7300 system is EVG's most advanced solution to combine multiple UV-based process capabilities, such as nanoimprint lithography (NIL), lens molding and lens stacking (UV bonding), in a single platform. The EVG7300 was specifically developed to serve advanced R&D and production needs for a wide range of emerging applications involving micro- and nano-patterning as well as functional layer stacking.

EVG's Lithoscale maskless exposure system addresses lithography needs for markets and applications that require a high degree of flexibility or product variation. It tackles legacy bottlenecks by combining powerful digital processing that enables real-time data transfer and immediate exposure, high structuring resolution and throughput scalability. It is suited for rapid prototyping, providing fast turnaround and R&D cycle times.

Thomas Glinsner, corporate technology director at EV Group, commented, "Silicon Austria Labs is a leading research center for optical miniaturization and heterogeneous integration, and is a strategic partner for EV Group. This latest shipment and installation of our advanced lithography and resist processing systems further strengthens our relationship and supports SAL's ability to develop future key technologies and apply our leading-edge solutions into real-world industrial applications."

Attendees to this week's [SEMICON Europa](#) expo in Munich, Germany, who are interested in learning more about EVG and its suite of wafer bonding, lithography and metrology solutions for heterogeneous integration can visit the company at booth B1213 (Hall B1), through November 17th.

<https://optics.org/news/14/11/22>