



NEWS ANNOUNCEMENT

FOR IMMEDIATE RELEASE

SkyWater Chooses Evatec's Latest Thin Film Cluster Technology to Enhance Manufacturing of the World's Highest Performance Semiconductor Devices

Evatec's next generation CLUSTERLINE® tool supports SkyWater's 3DSoC and carbon nanotube programs, opening new custom foundry possibilities

TRUBBACH, Switzerland and BLOOMINGTON, Minnesota, August 29, 2019 — [Evatec AG](#), a leading provider of thin film production solutions and [SkyWater Technology Foundry](#), the innovators' trusted partner for a competitive edge, today announced Evatec has delivered the latest generation of its CLUSTERLINE® thin film deposition tool, including evaporation capability to SkyWater. This tool brings new levels of thin film performance, key to the production of carbon nanotubes and other emerging technologies. CLUSTERLINE® is an industry-proven, high volume single wafer processing production solution enabling integration of PVD (physical vapor deposition), highly ionized PVD, Soft Etch and PECVD (plasma-enhanced chemical vapor deposition) process technologies. Along with state of the art process capabilities, it provides extensive pre- and post-treatment steps. The open system architecture allows easy tool configuration.

The latest tool from Evatec enables SkyWater with new capabilities in processing of metals and dielectrics and is important in its 3DSoC work, providing unconventional processing capabilities for a CMOS-based foundry. This new tooling supports SkyWater's business model as a Technology Foundry by giving innovators additional processing options to establish manufacturable process flows for emerging technologies. This capability supports on-going process development at SkyWater not only for carbon nanotubes, but photonics and MEMS device types as well where conventional PVD processes do not provide flexibility or the precision these applications require.

The latest generation of CLUSTERLINE® extends the range of thin film deposition technologies available on traditional cluster tools. In addition to techniques like sputter, PECVD or ALD (atomic layer deposition), it is now possible to integrate evaporation capability. Evatec's long know-how in building both cluster systems and box coaters for evaporation has addressed the challenge of integrating evaporation technology into a compact module suitable for up to 300mm cluster tools with long life evaporation sources and simple access for maintenance.

Evatec's Head of its Semiconductor Business Unit, Silvan Wuethrich commented, "Evaporation continues to be the process of choice for many custom applications and offers the chance to process material compositions which wouldn't be possible otherwise. We are very pleased to be working with SkyWater which is focused on making possible the most advanced emerging technologies."

"Evatec's tooling allows customers to try new materials or processes quickly in a quality fab environment and opens up a whole new range of custom foundry possibilities for us," said Gregg Damminga, Vice President of Technology Development, SkyWater. "We appreciate Evatec's professional support and industry-proven expertise and look forward to the value they add to our development and manufacturing operations."

For more information on Evatec's CLUSTERLINE® family of cluster tools, please visit: <https://www.evatecnet.com/products/clusterline-platforms/clusterline300-ii>.

About Evatec

Evatec delivers complete thin film production solutions in its core markets of Advanced Packaging, Power Devices, MEMS, Optoelectronics, Wireless Communication and Photonics. From 5G mobile network solutions and the new generation of micro LEDs to Gesture Recognition technology and EMI shielding for our smart phones, Evatec thin film deposition systems enable manufacture of the world's highest performance optical, optoelectronic and semiconductor devices. Advanced Process Control (APC) technologies enables new level of thin film performance and production yield. For more information please visit www.evatecnet.com.

About SkyWater Technology Foundry

SkyWater is a solely U.S.-based and owned, DMEA-accredited Technology Foundry, providing custom design and development services, exclusive design IP, and volume manufacturing for integrated circuits and micro devices. The Company's world-class operations and unique processing capabilities enable mixed-signal CMOS, rad-hard and ROIC solutions. SkyWater's Innovation Engineering Services empower development of superconducting and 3D ICs, along with carbon nanotube, photonic and MEMS devices. SkyWater serves customers in growing markets such as aerospace & defense, automotive, cloud & computing, consumer, industrial, IoT and medical. For more information, please visit: www.skywatertechnology.com/.

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