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Excelliance MOS Adopts Silvaco DTCO Flow for the Development of Next-Gen Silicon Carbide Devices

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SANTA CLARA, Calif., May 06, 2025 (GLOBE NEWSWIRE) -- **Silvaco Group, Inc.** ("Silvaco") (NASDAQ: SVCO), a leading provider of TCAD, EDA software, and SIP solutions that enable semiconductor design and digital twin modeling through AI software and innovation, today announced that Excelliance MOS has adopted Silvaco's DTCO (Design Technology Co-Optimization) flow, including Victory TCAD™ and UTMOST IV™, to accelerate the development of its next-generation Silicon Carbide (SiC) power devices.

As demand for high-efficiency power electronics continues to grow, Excelliance MOS is leveraging Silvaco's advanced DTCO platform to streamline research and development for cutting-edge SiC technology. Silvaco's Victory Process™ and Victory Device™ simulators provide realistic process and accurate device simulation, including support for SiC-specific phenomena such as anisotropic oxidation and mobility, enabling precise modeling of next-generation devices.

"Building efficient power devices requires an integrated TCAD simulation and SPICE modeling environment," said Eric Guichard, Senior Vice President and General Manager of the TCAD business unit at Silvaco. "Our DTCO flow—combining Victory TCAD with UTMOST IV SPICE modeling and Victory DoE™—provides Excelliance MOS with a powerful, user-friendly solution that enhances device and circuit performance optimization and reduces development time."

"Silvaco's DTCO solution provides our team the accuracy and efficiency we need to push the boundaries of SiC device and circuit design," said Fermi Liu, Director of R&D Department at Excelliance MOS. "With Silvaco's DTCO flow combining Victory TCAD and UTMOST IV, we can simulate, analyze, and refine device performance faster than ever, helping us bring innovative power solutions to market more rapidly."

The inclusion of Victory DoE, Silvaco's intuitive design-of-experiments interface, allows for rapid exploration of process variations, while UTMOST IV delivers automated electrical measurements and SPICE model extraction to speed up characterization and circuit-level modeling. Together, these tools enable Excelliance MOS to efficiently design, simulate, and refine next generation SiC devices.

Silvaco's simulation solutions are technology-agnostic and support a wide range of applications, including power, memory, photonics, CMOS, and display technologies. With user-centric features such as streamlined interfaces, automation capabilities, and comprehensive DoE support, Silvaco's tools empower engineers to innovate with greater speed and accuracy.

About Silvaco Group, Inc.
Silvaco is a provider of TCAD, EDA software, and SIP solutions that enable semiconductor design and digital twin modeling through AI software and innovation. Silvaco's solutions are used for semiconductor and photonics processes, devices, and systems development across display, power devices, automotive, memory, high performance compute, foundries, photonics, internet of things, and 5G/6G mobile markets for complex SoC design. Silvaco is headquartered in Santa Clara, California, and has a global presence with offices located in North America, Europe, Brazil, China, Japan, Korea, Singapore, and Taiwan. Learn more at silvaco.com.

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