



concept

Crystalline Oxides for Next Generation Computing and Emerging Photonic Technologies

Enabled by atomic layer deposition (ALD) for neuromorphic and silicon optoelectronic technologies that will outperform the current technologies in terms of performance and energy efficiency.



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Key features & Innovation



Scalable Epitaxial Platform: developing a manufacturing-ready platform for ferroelectric materials BTO, HZO, BSO and WO₃.



New ALD reactor: an atomic layer deposition reactor enabling complex oxide epitaxy on wafer-scale (8") bridging the gap from lab to fab with a dedicated wafer-scale ALD system.



Model neuromorphic device demonstrator: fully epitaxial FeFETs and FTJs ready for CMOS integration and MEMS applications.



Photonic Modulator: advanced Mach-Zehnder modulator based on Lumiphase's technology and using atomic layer deposition grown epitaxial BTO.

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