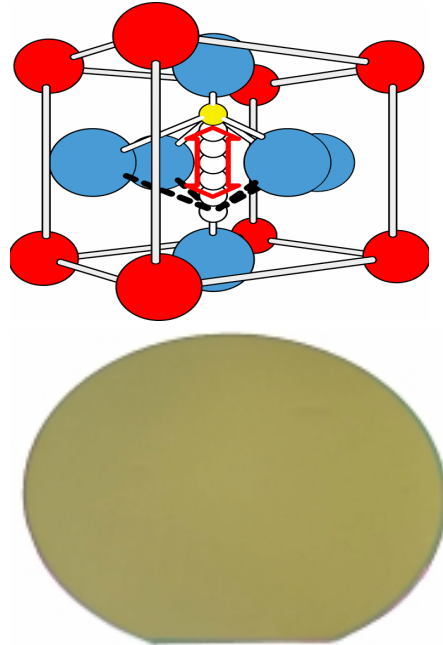


Perovskite Complex Oxide Films by *SpinCVD*TM

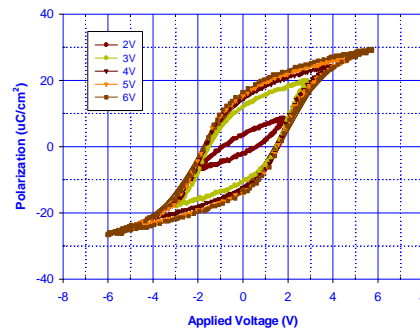
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The SMI *SpinCVD*TM deposition system is ideally suited for depositing perovskite layers of uniform thickness and composition. The perovskite structure shown at right consists of an ABO₃ crystal lattice. Perovskites have a variety of properties important to ferroelectric, pyroelectric, piezoelectric, optical, conductive, superconductor and dielectric applications. Repeatable deposition of ABO₃ films is routinely accomplished using the SMI *SpinCVD*TM deposition system. Shown at the right is a perovskite film on a 6" silicon wafer with better than 1% uniformity. *SpinCVD*TM films allow device development with confident and predictable performance. An example is the ferroelectric hysteresis shown below, which is critical to production of non-volatile memory devices. A cross-sectional SEM of an integrated memory cell using ferroelectric switching PZT is also shown.

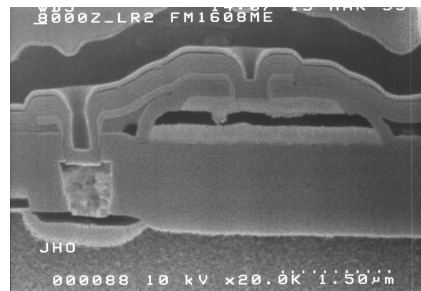


High quality perovskite films are enabling many new product technologies, including nonvolatile memories, logic devices, thin film batteries, waveguides, electro-optic devices, IR imaging, bypass capacitors, superconductors, MIMIC devices, thermistors, MEMS/MOEMS devices, and many others.

The versatility of SMI's *SpinCVD*TM system allows production of multi-layer thin film stacks for applications such as optical interference filters. SMI *SpinCVD*TM systems are available to produce perovskites for either research or production- making the transition of new material systems into manufacturing very straightforward.



High quality perovskite films are easily deposited by SMI *SpinCVD*TM deposition systems. Oxide films deposited by *SpinCVD*TM include: PZT, SBT, BST, CMO, YBCO, ZnO, Al₂O₃, HfO₂, LiNbO₃, SiO₂, ZrO₂, Ta₂O₅, among many others.



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