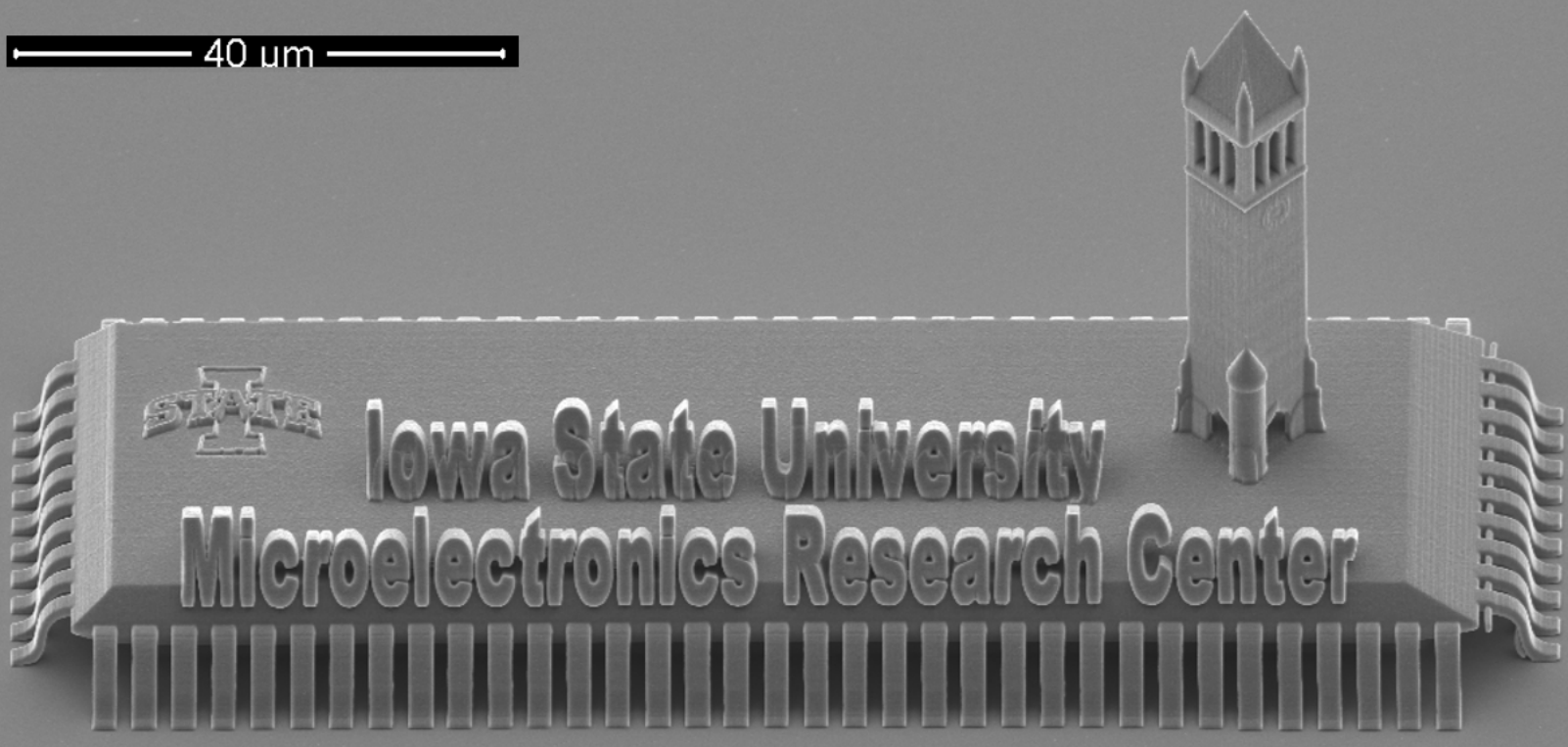


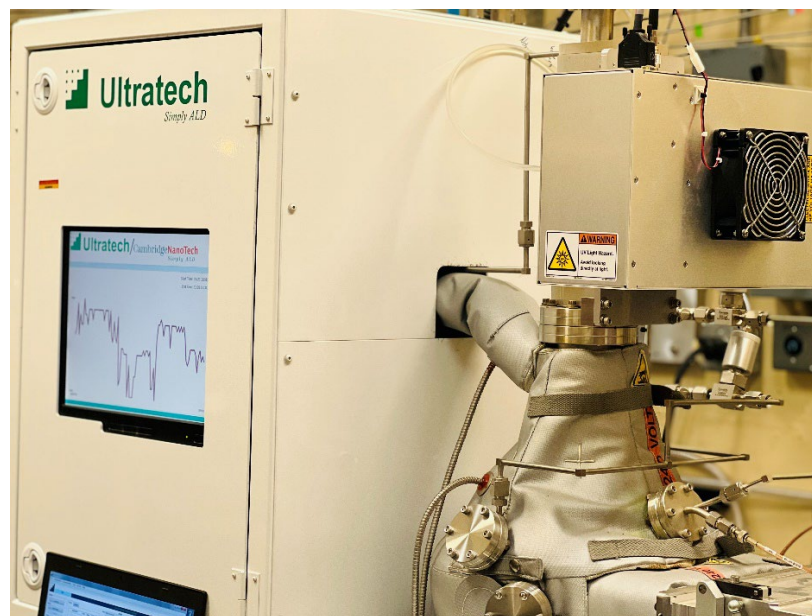
40 μm



Atomic layer deposition (ALD) system installed at Microelectronics Research Center

The Microelectronics Research Center (MRC) at Iowa State University is pleased to announce the installation of an atomic layer deposition (ALD) system --- Fiji G2 Plasma-Enhanced ALD. This high-vacuum atomic layer deposition system can be used for thermal and plasma-enhanced film growth (e.g., alumina, zinc oxide, etc.) and is compatible with wafer diameter up to 8". The system had full control over film growth processes that can include up to 5 precursors and 4 different gases for plasma generation. User-edited recipes can incorporate a variety of procedures, including substrate temperature (up to 500°C), precursor heating (up to 200°C), mass flow rate of ALD gases, pulse duration, and number of cycles. The high conformity and uniformity (<1.5% for alumina) of the system allows for high-precision growth down to monolayer thickness.

Key applications of the system include high-quality films for wide bandgap power devices, organic semiconductors, optoelectronics, sensors, and MEMS. Our highly skilled research specialists can assist with the use of the system.



Contact: Dr. Ranjith Kottokkaran (ranjith@iastate.edu) or Dr. Liang Dong (ldong@iastate.edu)

The mission of the Microelectronics Research Center (MRC) at Iowa State University is to become a national critical infrastructure for next-generation research and education in microelectronics, photonics, magnetics, sensing, and nanoscale engineering. The MRC researchers collaborate on research and technology transfer with a variety of stakeholders and partners from academia, industry, foundations, and national agencies. The MRC is equipped with a suite of new microfabrication and characterization tools to support micro-nanotechnology research at Iowa State University.