

Pulsed Laser MBE System

Engines for Thin Film Innovation

Description

Laser Molecular Beam Epitaxy (MBE) leverages unique features of both Pulsed Laser Deposition (PLD) and conventional MBE for depositing complex thin films with atomic layer precision and control. By adding laser ablation capability to MBE, high purity materials can now include high melting point ceramics and multi-component solids. Using its 15 year history in MBE equipment technology, SVT Associates has further advanced the technology by adding in-situ monitoring capabilities related to temperature, thickness, RHEED, and Atomic Flux monitoring while providing a full complement of source technology for unprecedented material capabilities. Please contact SVT Associates for more details.

Applications

Oxide semiconductors, high-T_c superconductors, optical crystals, electro-optical films, ferroelectric and ferromagnetic materials.



UHV Target and Sample Shown within
MBE Growth Chamber

Standard Features

- True UHV ($< 1 \times 10^{-10}$ Torr Base Pressure)
- Multiple Deposition Source Technologies
 - RF Plasma
 - Effusion Cells
 - E-Beam Evaporation
 - Ozone Delivery System
- Advanced In-Situ Monitoring Options
 - Atomic Absorption Flux Monitor
 - RHEED
 - Temperature & Thickness Monitor
- Six Rotatable PLD Targets
- High Power Excimer Laser
- Tailored Pumping Combinations
- Versatile Chamber Configurations
- Training and Service Support

