

Abstract Submitted
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Pulsed Laser Deposition and Reflection High-Energy Electron Diffraction studies of epitaxial long range order, nano- and microstructured Ag thin films grown on MgO, Al₂O₃, STO and Si DANIEL VELAZQUEZ, RACHEL SEIBERT, HAMDI MAN, LINDA SPENTZOURIS, JEFF TERRY, Illinois Institute of Technology — Pulsed Laser Deposition is a state-of-the-art technique that allows for the fine tunability of the deposition rate, highly uniform and epitaxial sample growth, the ability to introduce partial pressures of gases into the experimental chamber for growth of complex materials without interfering with the energy source (laser). An auxiliary in situ technique for growth monitoring, Reflection High-Energy Electron Diffraction, is a powerful characterization tool for predictability of the surface physical structure both, qualitatively and quantitatively. RHEED patterns during and post deposition of Ag thin films on MgO, Al₂O₃, Si and STO substrates are presented and their interpretations are compared with surface imaging techniques (SEM, STM) to evidence the usefulness of the technique.

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