

Abstract Submitted
for the SHOCK15 Meeting of
The American Physical Society

Thin films of energetic materials by physical vapor deposition: TATB and LLM-105 DAVID WILLIAMSON, SUE GYMER, University of Cambridge, COLUM O'CONNER, ADAM HAZELWOOD, AWE, ANDREW JARDINE, University of Cambridge — Thin films of energetic materials enable a diverse range of characterization measurements: structure, surface energy and adhesion, and even reactivity. Here we present a method to grow thin films by a physical vapor deposition method (sublimation) using a dedicated instrument which can operate at ultra-high vacuum. The approach enables fabrication of thin films of energetic materials that are otherwise difficult to process by traditional methods, for example because of their low solubility. The intention is to use this instrument as a platform for studying pure materials and co-deposited materials grown either as multi-layers or as co-crystals. Examples of TATB and LLM-105 film morphologies grown using this technique are presented.

David Williamson
University of Cambridge

Date submitted: 30 Jan 2015

Electronic form version 1.4