

Electronic Supplementary Material (ESI) for RSC Advances.
This journal is © The Royal Society of Chemistry 2016

Electronic Supplementary Information

Enhanced SWIR Absorption in Chemical Bath Deposited PbS Thin Films Alloyed with Thorium and Oxygen

Tzvi Templeman,^{a,d} Michael Shandalov,^b Eyal Yahel,^b Vladimir Ezersky,^d Gabby Sarusi^{c,d} and Yuval Golant^{†,a,d}

^a Department of Materials Engineering, Ben-Gurion University, Beer Sheva 84105, Israel

^b Department of Physics, Nuclear Research Center Negev, P.O. Box 9001 Beer Sheva, Israel

^c Department of Electro-Optics Engineering, Ben-Gurion University, Beer Sheva 84105, Israel

^d Ilse Katz Institute for Nanoscale Science and Technology, Ben-Gurion University, Beer Sheva 84105, Israel

† Corresponding Author. E-mail: ygolan@bgu.ac.il

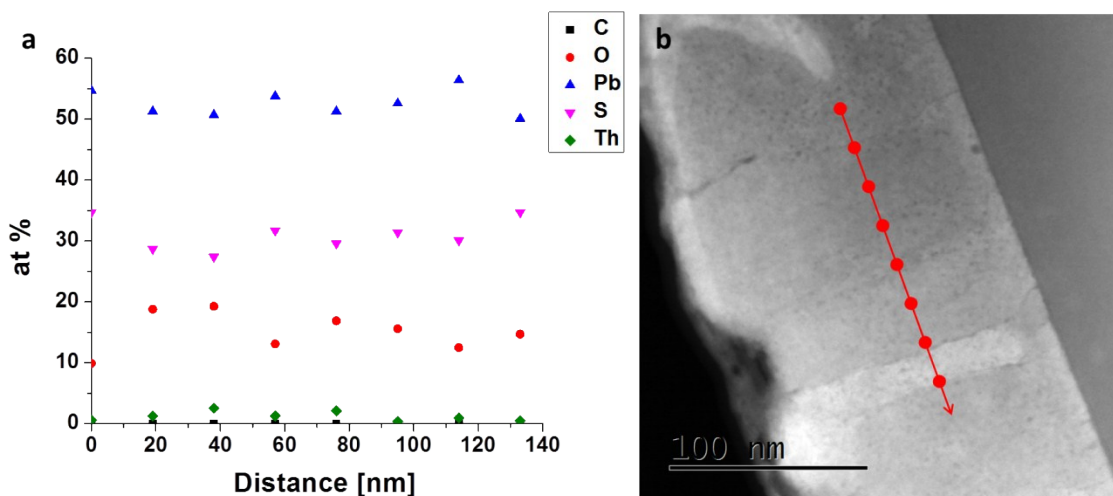


Figure SI 1. (a) Atomic composition plotted as a function of film position (b) HAADF STEM X-TEM micrograph of PbS film containing 1at% Th. Red dots depict the EDS line scan performed.

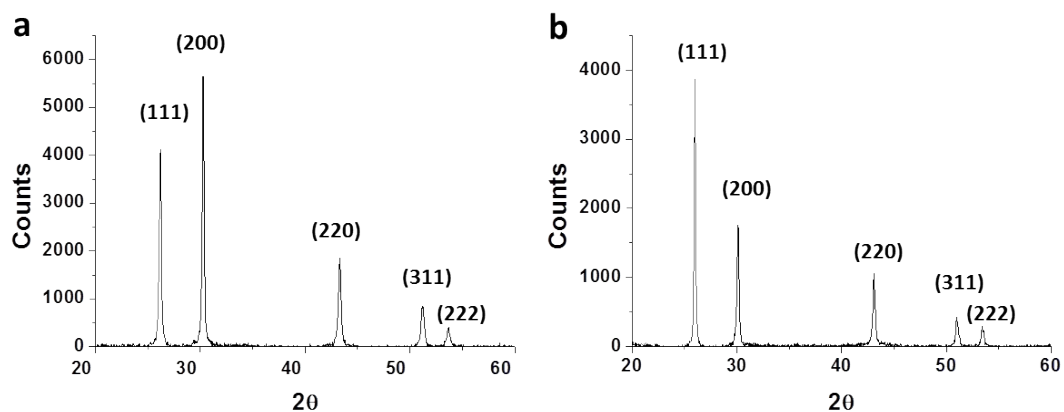


Figure SI 2. Normalized diffractograms taken from films grown on glass substrates, (a) PbS and (b) PbS(Th,O).

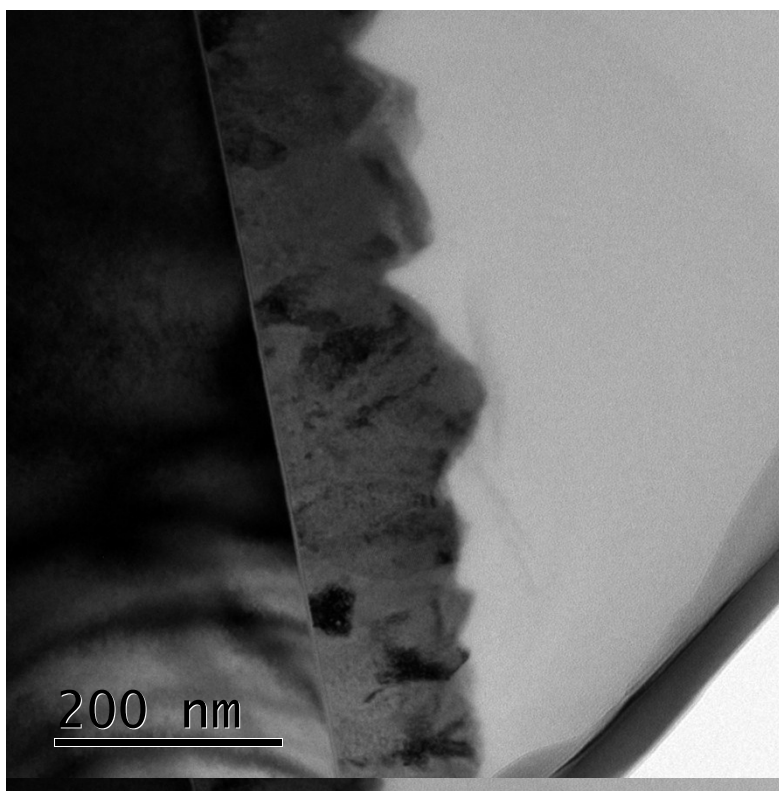


Figure SI 3. Bright field X-TEM micrograph of a PbS(Th,O) film with a composition of 8.1at% Th.