Supplementary information for:

Proximity Co-evaporation Growth of SnSe Thin Films for High-Responsivity Photodetectors

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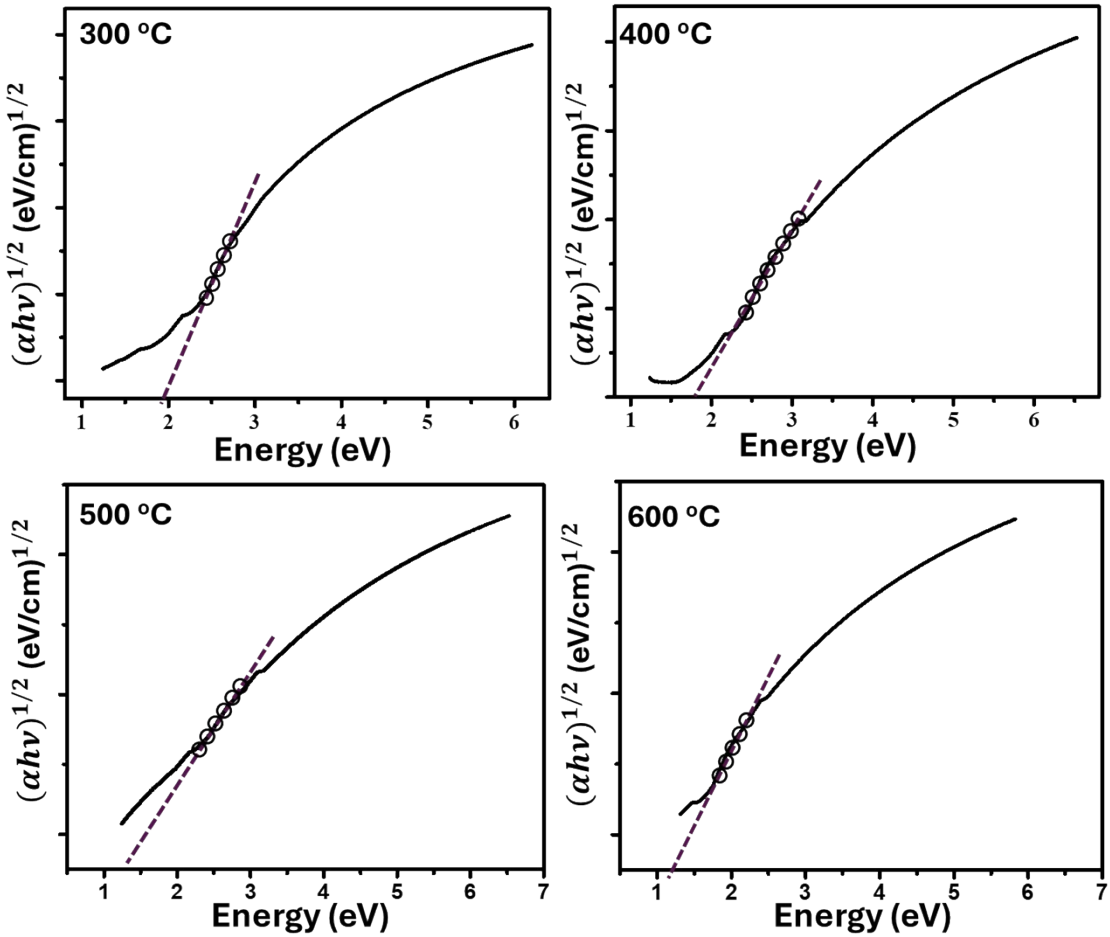

Figure S1. Tauc plots from UV-Vis absorption spectra for SnSe thin films synthesized at different growth temperatures: 300 °C, 400 °C, 500 °C, and 600 °C. The extracted optical band gaps decrease from 1.9 eV (300 °C) to 1.8 eV (400 °C), 1.4 eV (500 °C), and 1.2 eV (600 °C), indicating a temperature-dependent band-gap narrowing associated with improved phase purity

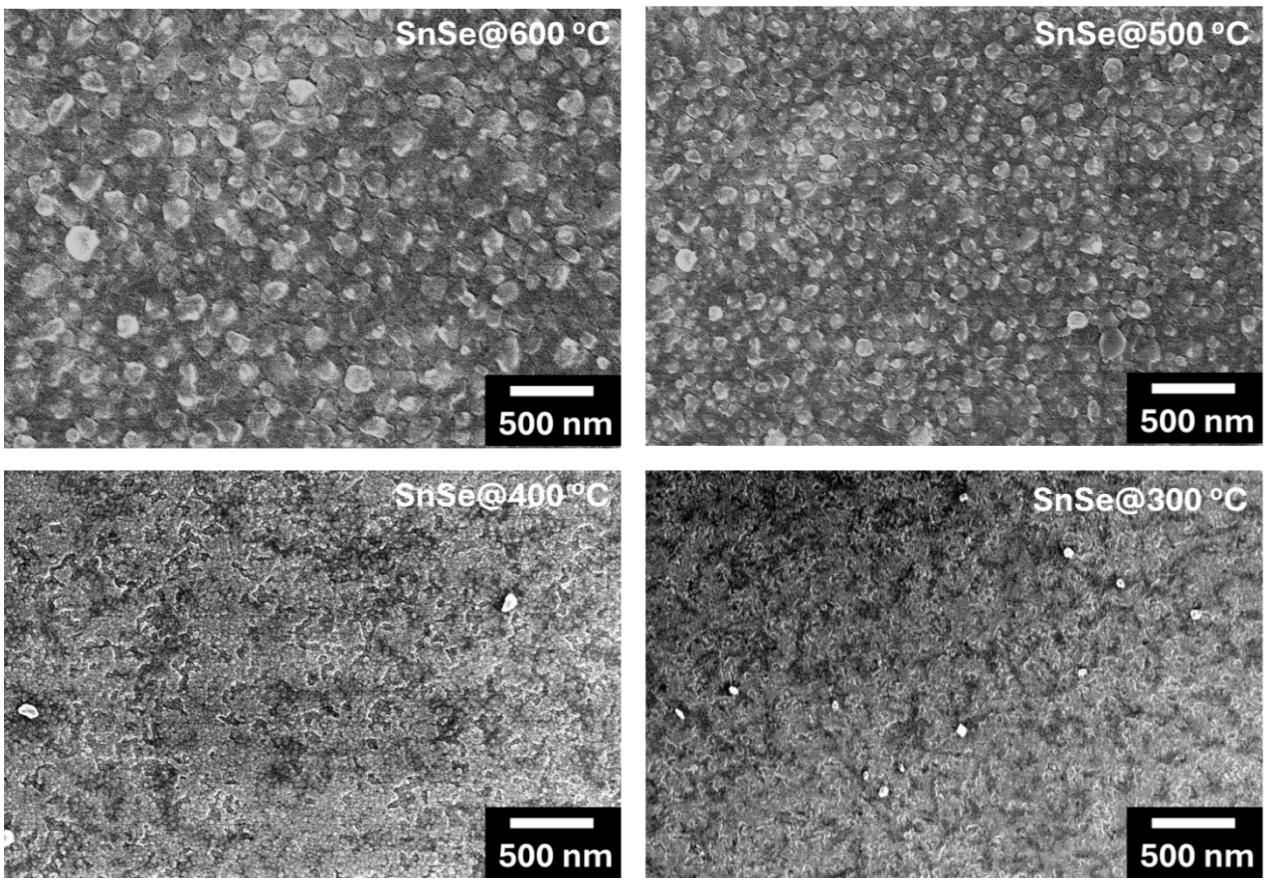

Figure S2. FESEM micrographs of SnSe thin films synthesized at different growth temperatures: (a) 300 °C, (b) 400 °C, (c) 500 °C, and (d) 600 °C. A clear temperature-dependent evolution in surface morphology is observed, with an increase in grain size at higher synthesis temperatures. The scale bar in all images corresponds to 500 nm.