

Supporting Information

High-Performance Ultra-Violet Phototransistors Based on CVT-Grown High Quality SnS₂ Flakes

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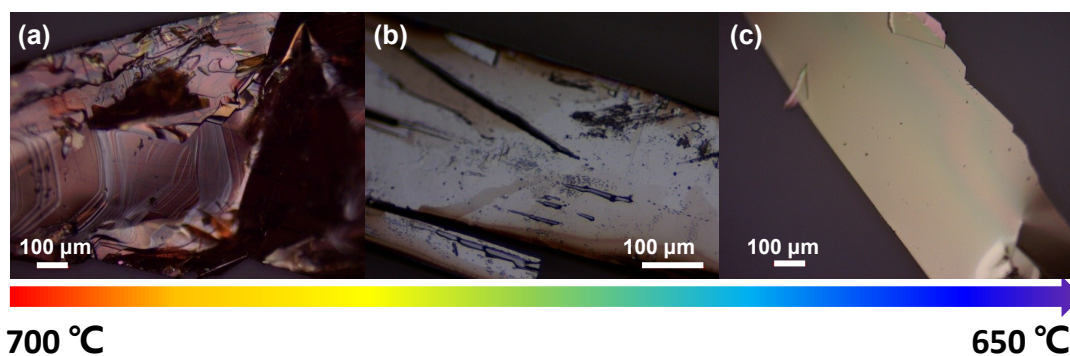


Figure S1. The temperature gradient effect on the final products

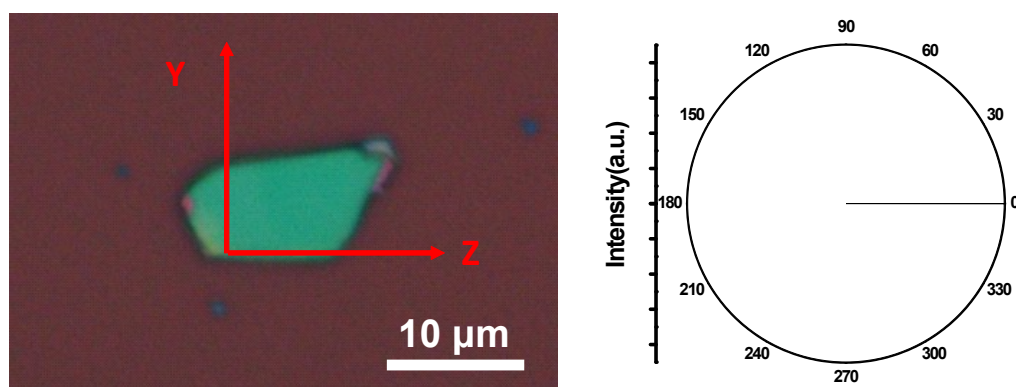


Figure S2. Polarized Raman characterization of A_{1g} vibration mode.

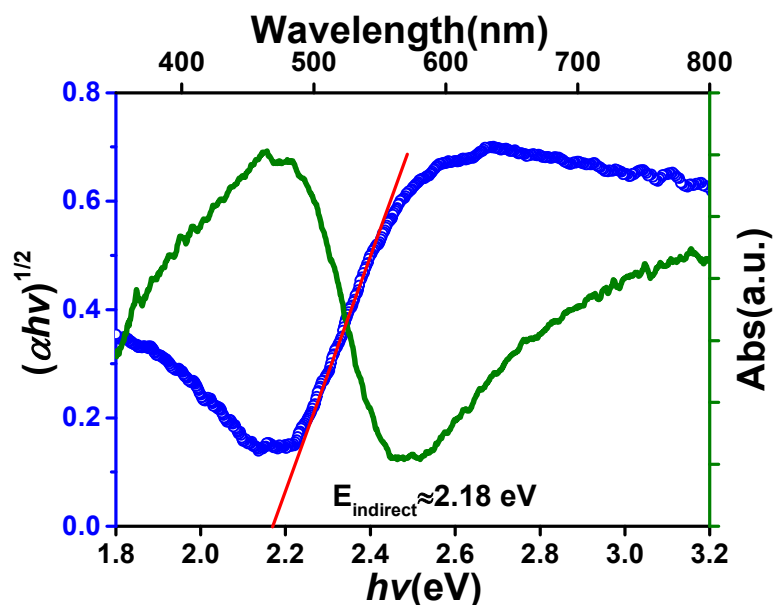


Figure S3. UV–vis absorption spectrum of SnS₂ flakes located on SiO₂/Si substrates with a Kubelka–Munk (K–M) transformation to the bandgap.

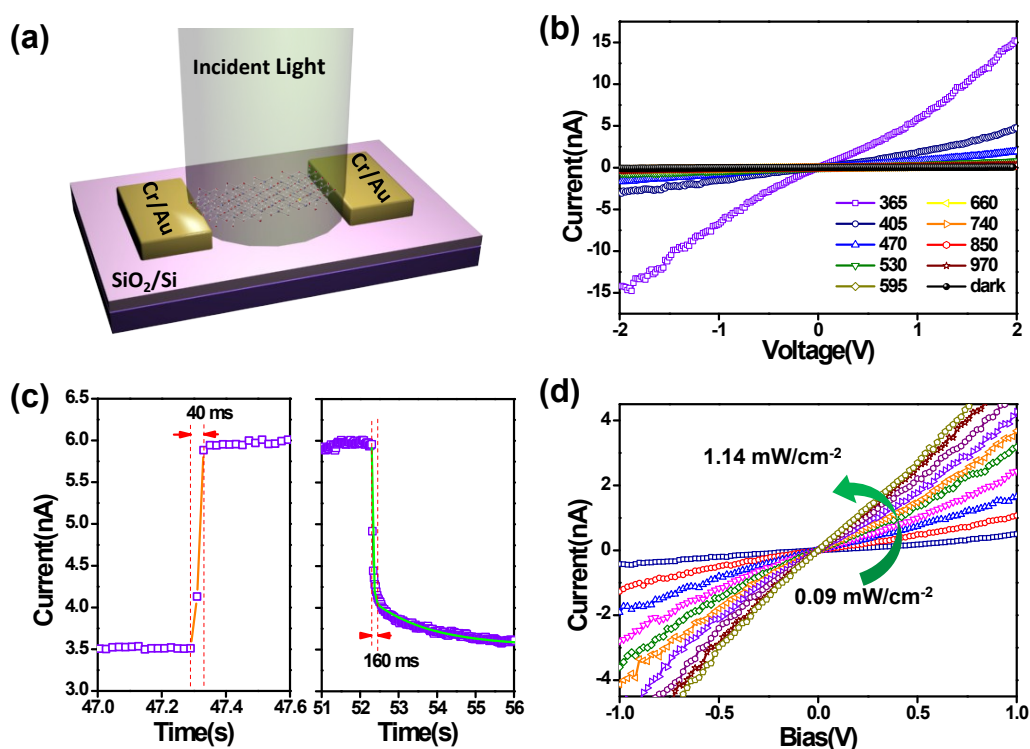


Figure S4. a) The layout of the two-terminal photodetectors based on individual SnS₂ flakes. b) The current versus voltage (I–V) plots of the photodetector in darkness and under incident light of different wavelengths. c) Enlarged views of the rise and decay sides from Figure 4c. d) Light intensity dependent I–V characteristics.

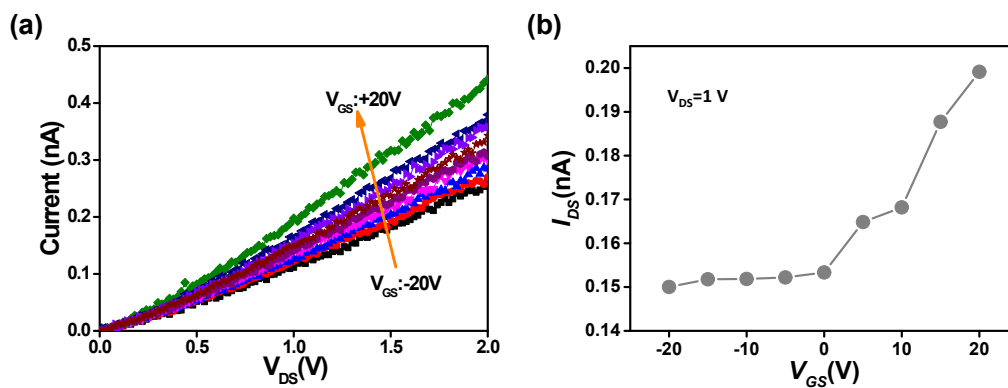


Figure S5. The (a) output and (b) transfer characteristics of SnS₂ flake based transistor measured in darkness.