Supplementary Material

1 SUPPLEMENTARY DATA

Figure S1: (A) Transmittance and reflectance of 15 nm evaporated MoO₅ and NiO films on glass and (B) Tauc plots of the absorption spectra of the same films, showing the wide band gap.

Figure S2: (A) Transmission and reflectance spectra for 500 nm thermally evaporated Sb₂Se₃ films on glass and (B) Tauc plot of the absorption spectrum of 500 nm thermally evaporated Sb₂Se₃ films on glass, showing the band gap.
Figure S3: SEM image of Sb$_2$Se$_3$ film grown by (A) thermal evaporation and (B) closed space sublimation on SLG/ITO/CdS superstrate showing presence of pinholes across the thin film.

Figure S4: XRD patterns of the molybdenum oxide films deposited at room temperature and heated to 300°C, with the reference diffraction patterns MoO$_2$ (PDF 00-032-0671) and MoO$_3$ (00-005-0337). Additional peaks relate to other reduced molybdenum oxides.