

Supporting Information for

***Anomalous Raman scattering and lattice dynamics in
mono- and few-layer WTe₂***

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Optical microscopy and AFM images of 5- to 13-layer WTe₂

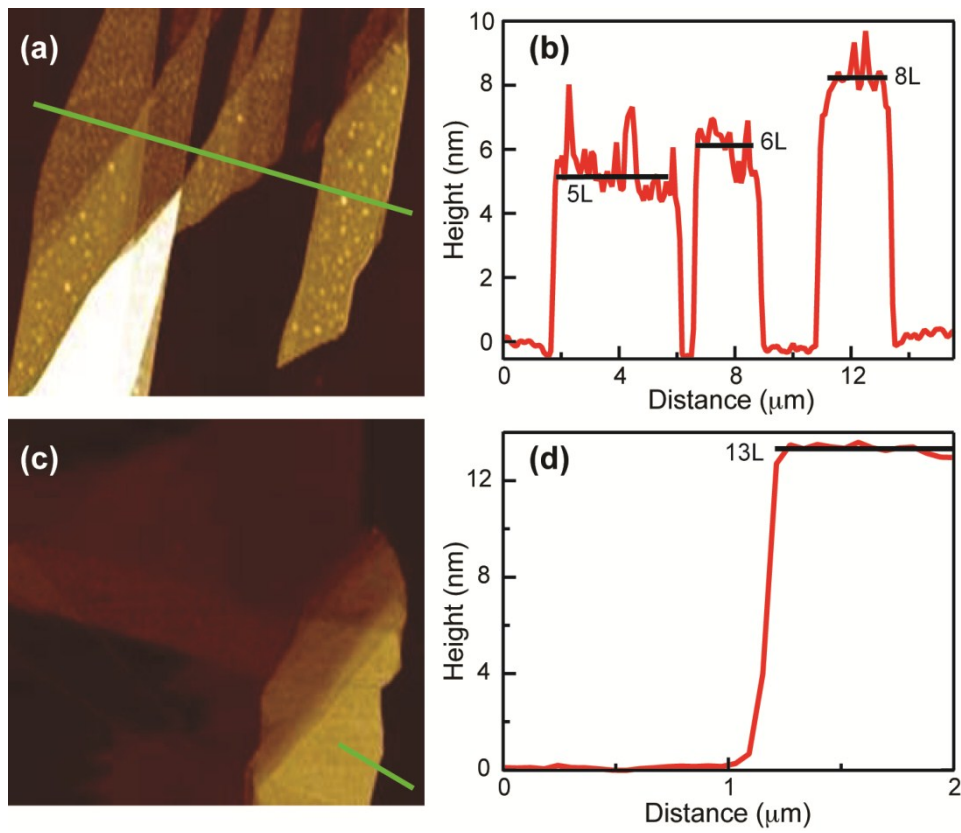


Fig. S1. (a, c) The optical microscopy images of WTe₂ flakes containing “5, 6, and 8 layers” and “13 layers”, respectively; (b, d) the AFM images of the WTe₂ flakes measured along the green solid lines in (a, c).

Phonon spectra of bulk and mono- to tri-layer WTe₂

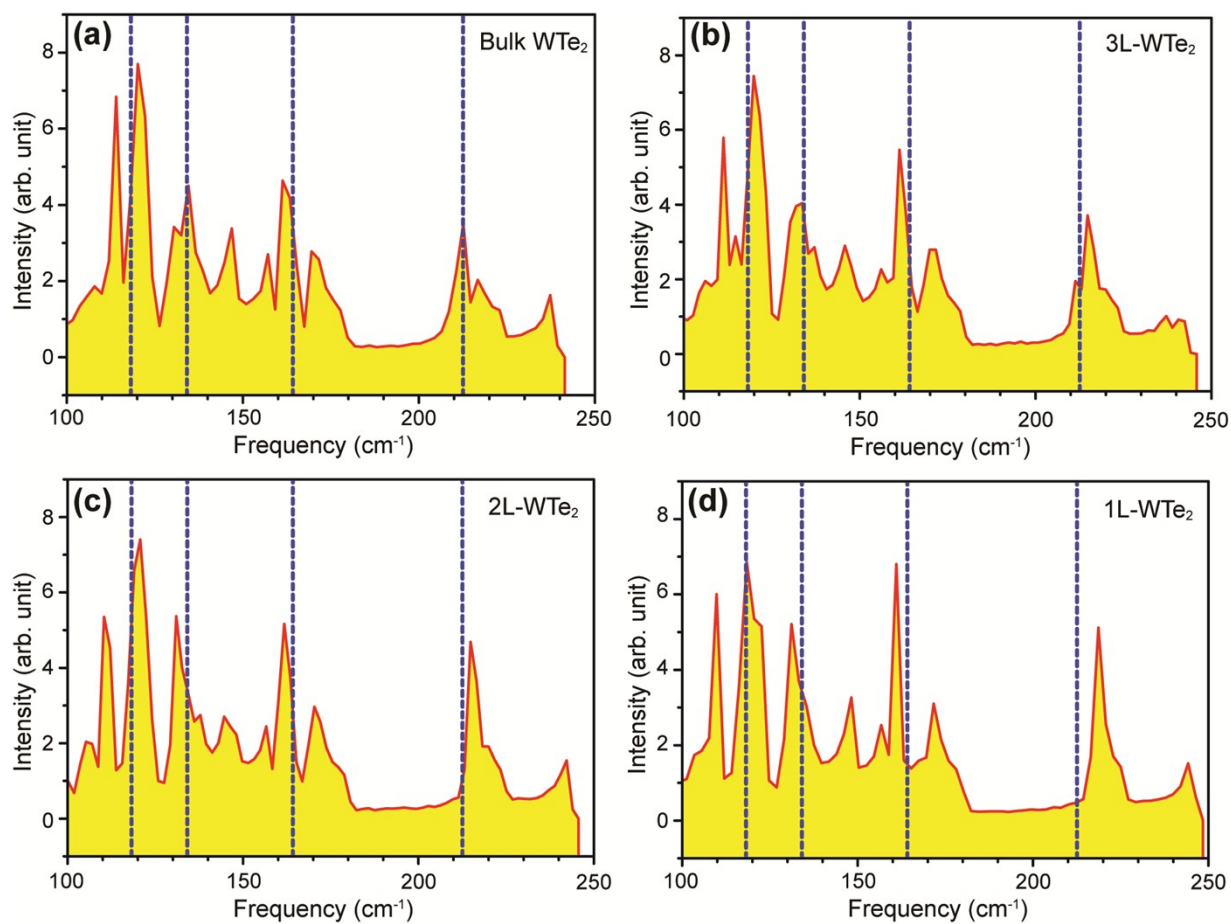


Fig. S2. Simulated Phonon spectra of (a) bulk, (b) tri-layer, (c), bi-layer, and (d) mono-layer WTe₂. Blue dashed lines indicate lattice vibrational frequencies corresponding to Raman modes of bulk WTe₂ in experiments.

Temporal degradation of trilayer WTe₂

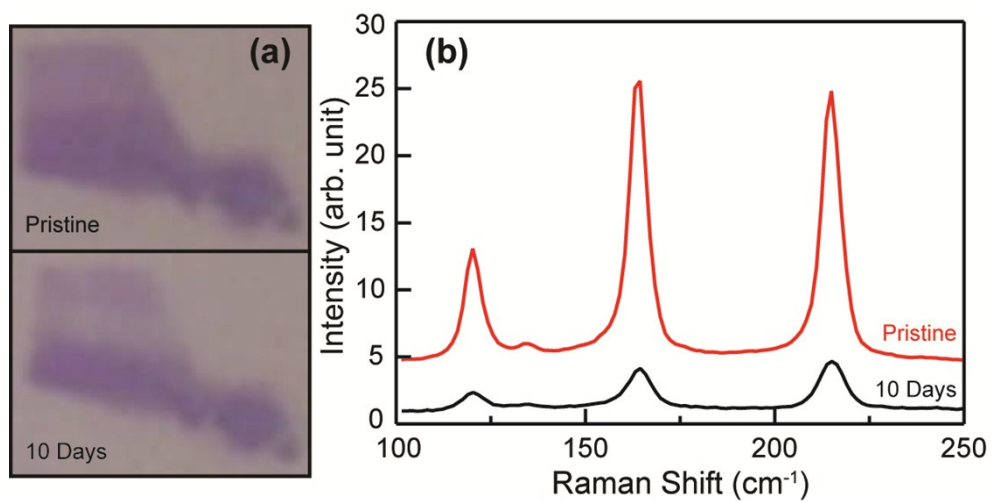


Fig. S3. (a) The optical microscopy images of trilayer WTe₂ obtained at sequential stages after its fresh deposition on Si/SiO₂ substrate. (b) The Raman spectra of trilayer WTe₂ measured on the center of degraded regions at the same sequential stages as in (a).