Electronic Supplementary Material (ESI) for RSC Advances.

Toward Understanding the Phase-Selective Growth Mechanism of Films and Geometrically-Shaped Flakes of 2D $MoTe_2$

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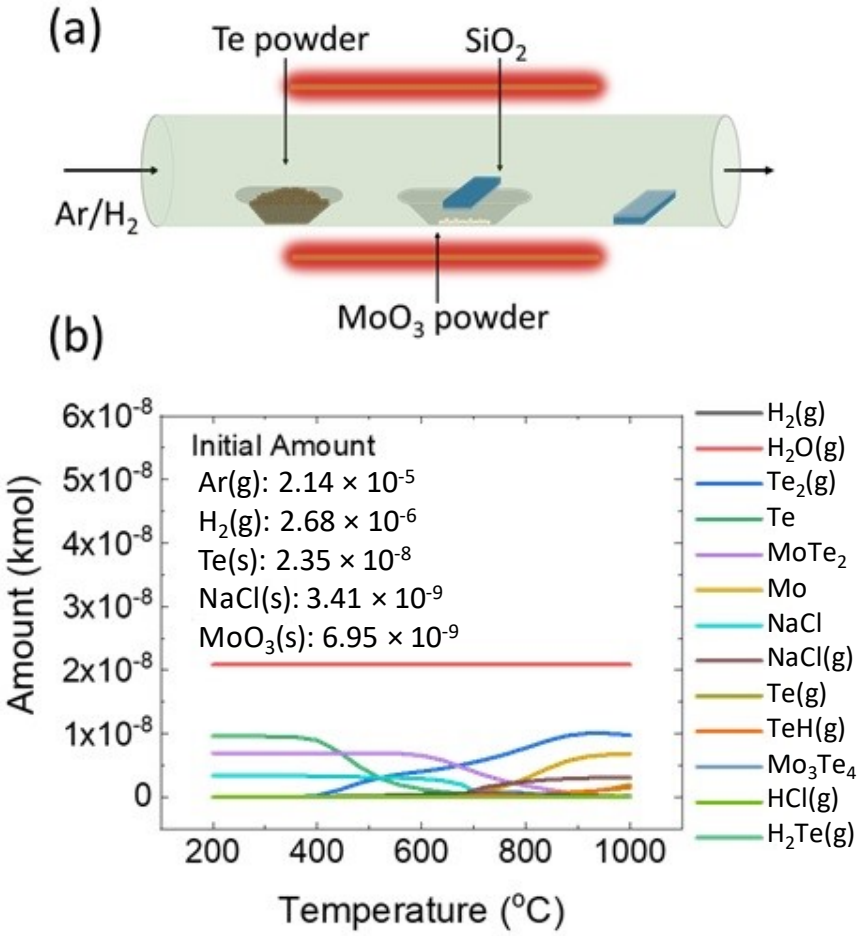

Figure S1 (a) Schematic of the CVD setup for the growth of 2D $MoTe_2$ and byproduct 2D material, MoO_2, and (b) thermodynamic equilibrium product compositions for the reaction of MoO_3 (6.95×10^{-9} kmol) with Te (2.35×10^{-8} kmol) for flakes and rings growth, predicted by HSC Chemistry.

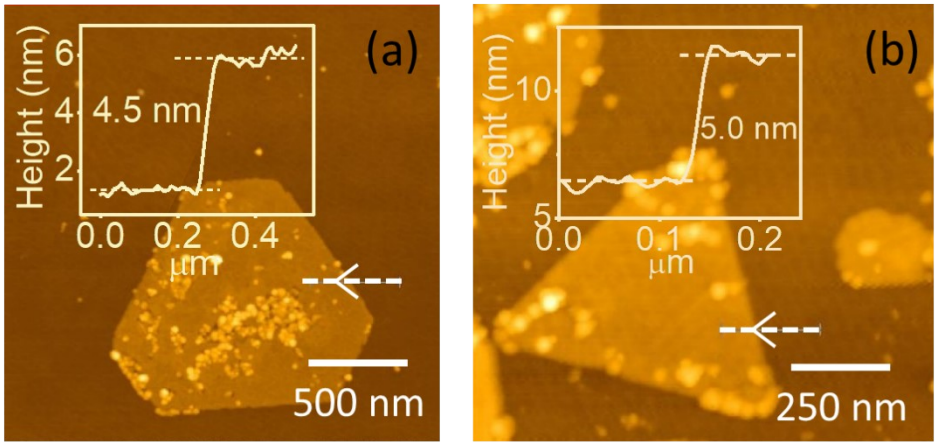

Figure S2 Tapping-mode AFM images and corresponding height profiles of the (a) truncated triangular, and (b) triangular flakes of 1T-$MoTe_2$.

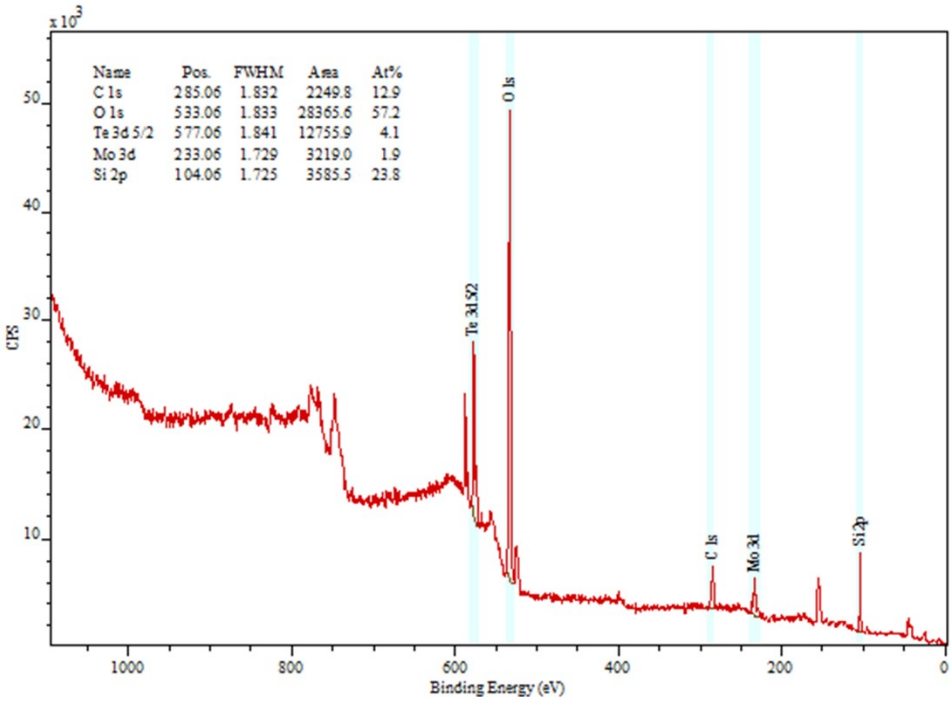

Figure S3 XPS survey spectrum of 1T-$MoTe_2$ film collected before Ar^+ ion sputtering, showing Te to Mo ratio of ~2.

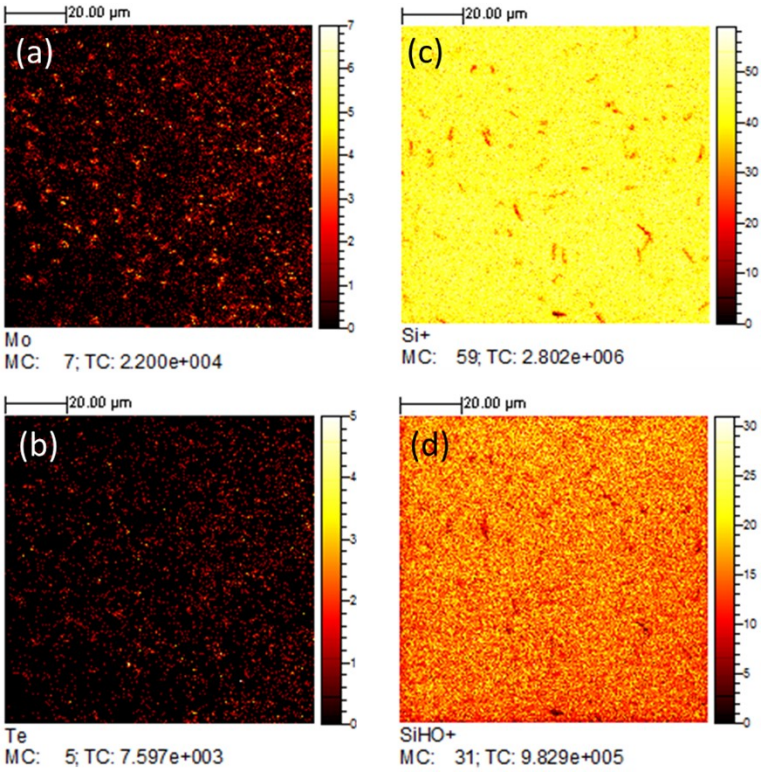

Figure S4 Secondary ion ToF-SIMS color maps for (a) Mo and (b) Te in 1T-$MoTe_2$ flakes deposited on SiO_2/Si, and (c) Si and (d) SiHO in Te nanobelts deposited on SiO_2/Si.