Supplemental Materials for

Staggering thermal transport in 2H-TiS_2 dominated by acoustic-like optical phonons

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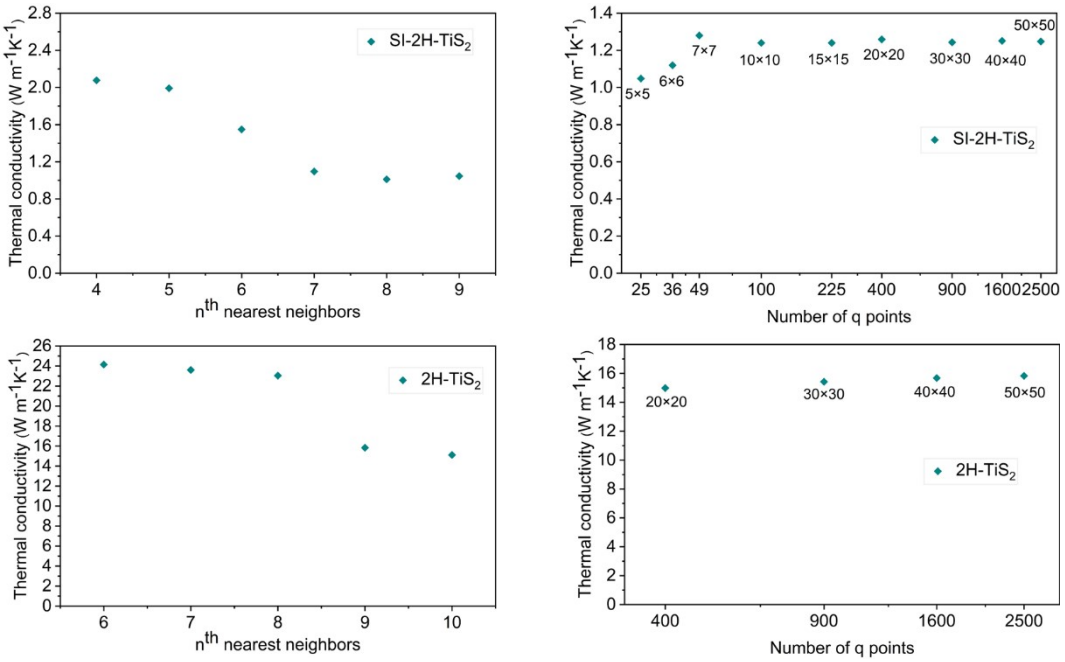

Figure S1. Neighbor number and grid tests for 2H-TiS_2 and SI-2H-TiS_2.

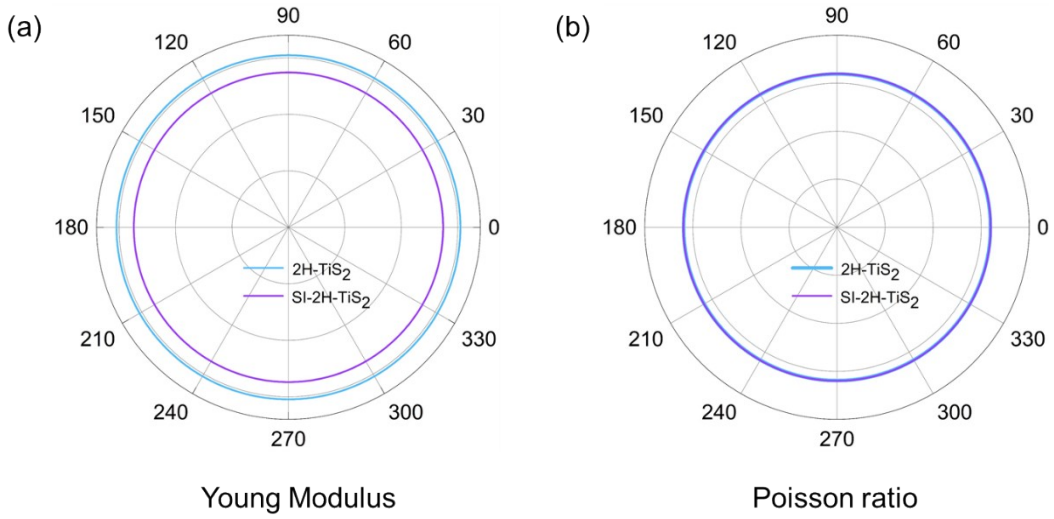

Figure S2. Young's modulus and Poisson's ratio of 2H-TiS_2 and SI-2H-TiS_2.

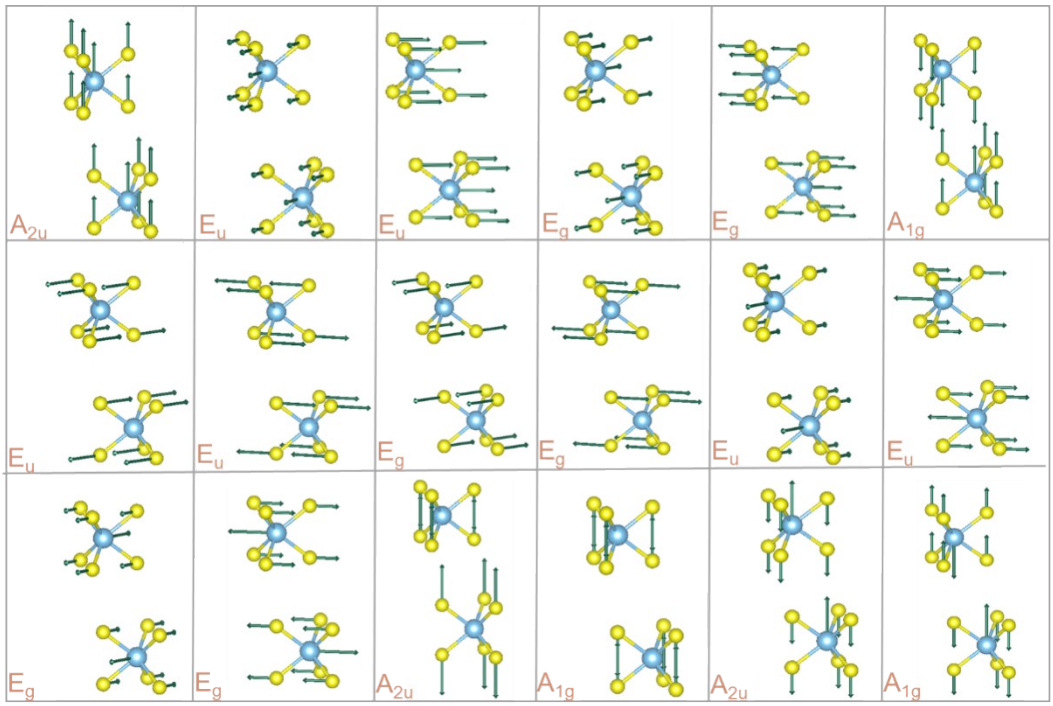

Figure S3. The vibrational patterns at the Γ point for the 2H-TiS_2 based on phonon eigenvectors.

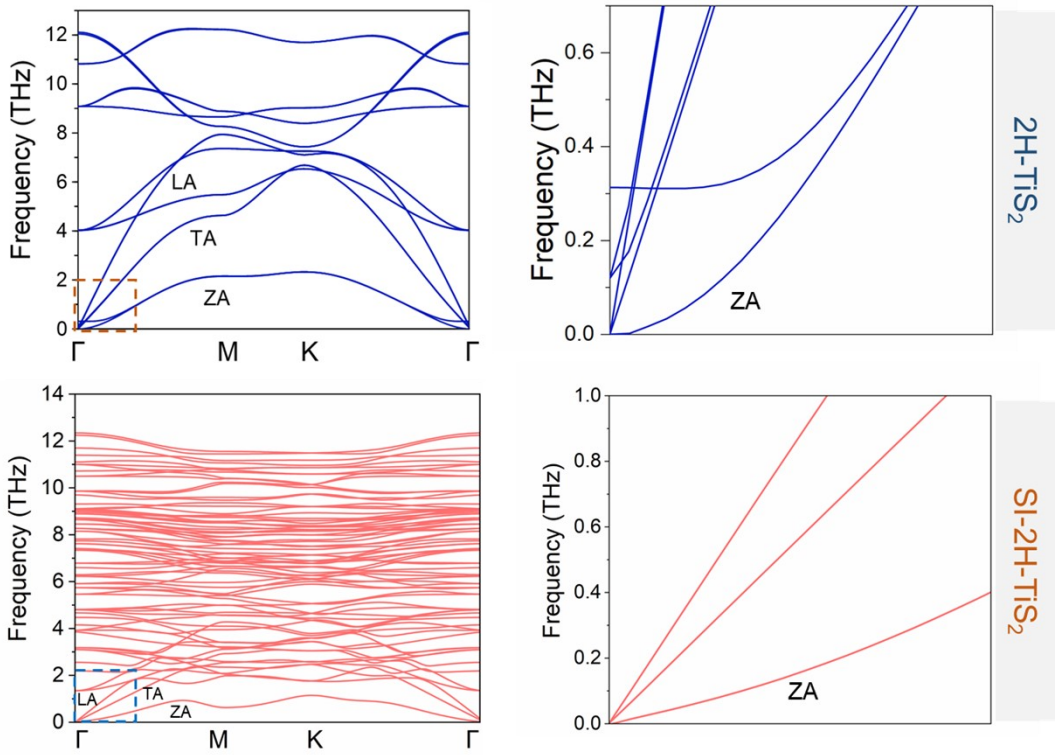

Figure S4. The phonon dispersion along the high-symmetry path of 2H-TiS_2 and SI-2H-TiS_2, as well as a zoomed-in view of the Γ point, reveals that the ZA mode exhibits quadratic dispersion.