

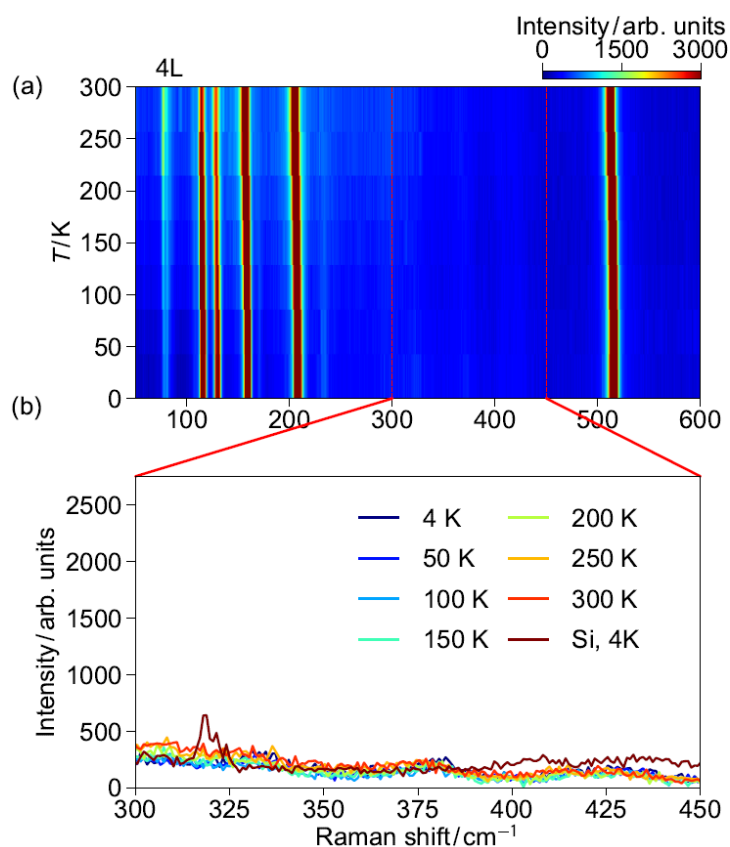
补充材料：二维  $\text{WTe}_2$  晶格对称性的光学研究\*何宽鱼<sup>1)</sup> 邱天宇<sup>1)</sup> 奚啸翔<sup>1)2)†</sup>

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图S1. (a)四层 $\text{WTe}_2$ 在平行偏振条件下的温度依赖拉曼散射强度图; (b)为(a)中  $300 - 450 \text{ cm}^{-1}$ 范围内在若干温度点的拉曼谱. 激发波长为532 nm. 衬底为 $\text{SiO}_2/\text{Si}$   
 Fig. S1. (a) Temperature dependent Raman scattering intensity map for tetralayer  $\text{WTe}_2$  on  $\text{SiO}_2/\text{Si}$ , measured in the parallel polarization configuration. (b) The corresponding spectra between  $300$  and  $450 \text{ cm}^{-1}$  at selected temperatures. Excitation wavelength of 532 nm was used.

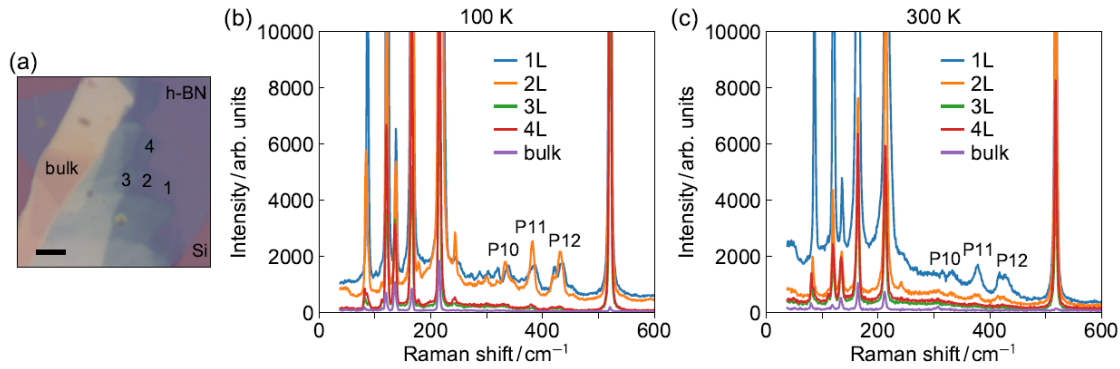
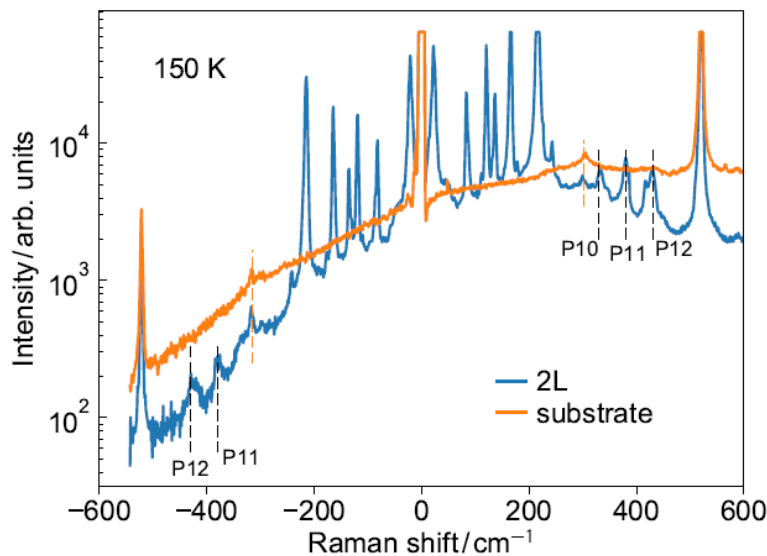


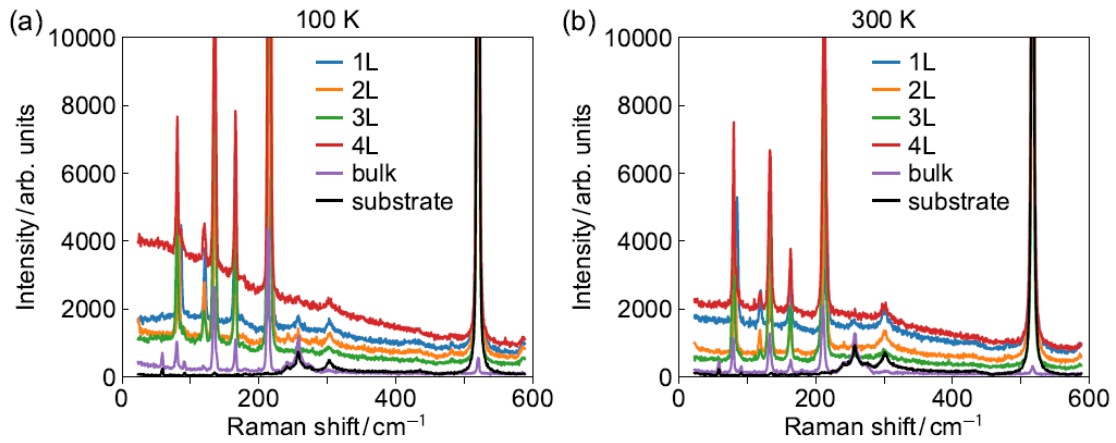
图 S2. (a)机械剥离制备的  $WTe_2$  样品的光学照片. 薄层样品的厚度用数字标出. 衬底为  $SiO_2/Si$ , 其中氧化层厚度为 300 nm. 比例尺: 5  $\mu m$ . (b), (c) 1—4 层和块体  $WTe_2$  在平行偏振条件下 100 K 和 300 K 的拉曼谱. 激发波长为 532 nm. 入射功率为 0.2 mW

Fig. S2. (a) Optical image of mechanically exfoliated  $WTe_2$ , with layer numbers marked for the thin regions. The substrate is  $SiO_2/Si$  with a 300 nm oxide layer. Scale bar: 5  $\mu m$ . (b), (c) Raman spectra of monolayer, bilayer, trilayer, tetralayer, and bulk  $WTe_2$  at 100 K and 300 K, measured in the parallel polarization configuration with 532 nm excitation and an incident power of 0.2 mW.



图S3. 双层  $WTe_2$  在平行偏振条件下的拉曼谱. 激发波长为 532 nm. 该测量采用了较大的入射功率(0.6 mW), 以确保获得 300—450  $cm^{-1}$  范围的反斯托克斯信号

Fig.S3. Raman spectra of bilayer  $WTe_2$ , measured in the parallel polarization configuration with 532 nm excitation. A large incident power of 0.6 mW was used to ensure the observation of anti-Stokes lines in the range of 300—450  $cm^{-1}$ .



图S4. 与补充图2中相同的1—4层和块体WTe<sub>2</sub>样品在633 nm激发波长、平行偏振条件下100 K和300 K的拉曼谱. 入射功率为0.2 mW

Fig. S4. Raman spectra of monolayer, bilayer, trilayer, tetralayer, and bulk WTe<sub>2</sub> used in Supplementary Fig. 2, measured at 100 K and 300 K in the parallel polarization configuration with 633 nm excitation and an incident power of 0.2 mW.