补充材料：二维 WTe_2 晶格对称性的光学研究*

何宽鱼 [1)] 邱天宇 [1)] 奚啸翔 [1)2)†]

1)(南京大学物理学院, 固体微结构物理国家重点实验室, 南京 210093)

2)(南京大学人工微结构科学与技术协同创新中心, 南京 210093)

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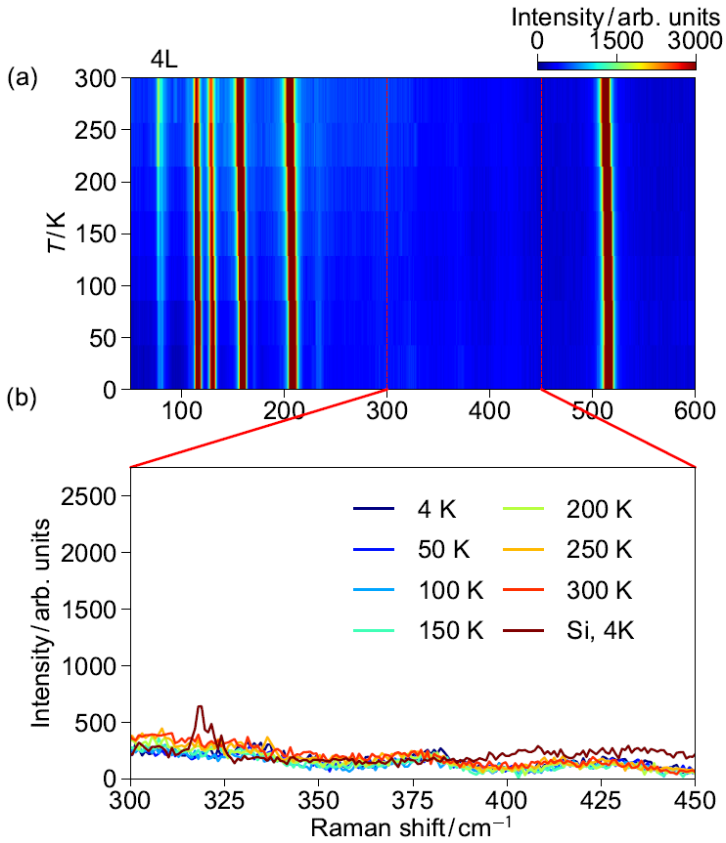
† 通讯作者.E-mail: xxi@nju.edu.cn



图S1. (a)四层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 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SiO_2/Si

Fig. S1. (a) Temperature dependent Raman scattering intensity map for tetralayer WTe_2 on SiO_2/Si, measured in the parallel polarization configuration. (b) The corresponding spectra between 300 and 450 cm^{-1} at selected temperatures. Excitation wavelength of 532 nm was used.

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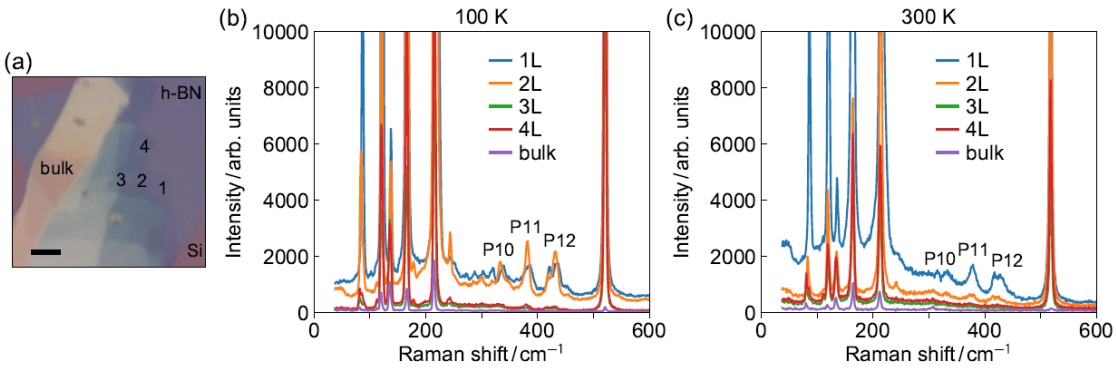
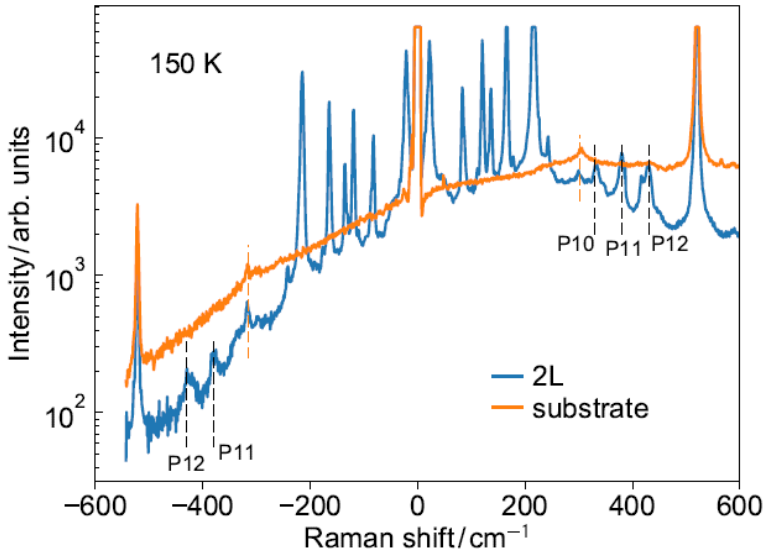


图 S2. (a)机械剥离制备的 WTe_2 样品的光学照片. 薄层样品的厚度用数字标出. 衬底为 SiO_2/Si，其中氧化层厚度为 300 nm. 比例尺：5 μm. (b), (c) 1—4 层和块体 WTe_2 在平行偏振条件下 100 K 和 300 K 的拉曼谱. 激发波长为 532 nm. 入射功率为 0.2 mW

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 μm. (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}.

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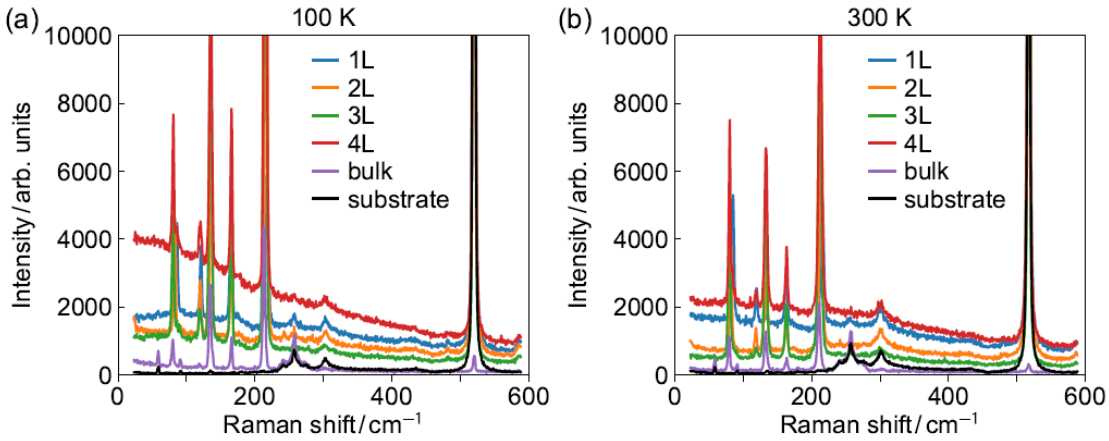

图S4. 与补充图2中相同的1—4层和块体WTe_2样品在633 nm激发波长、平行偏振条件下100 K和300 K的拉曼谱. 入射功率为0.2 mW

Fig. S4. Raman spectra of monolayer, bilayer, trilayer, tetralayer, and bulk WTe_2 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.

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