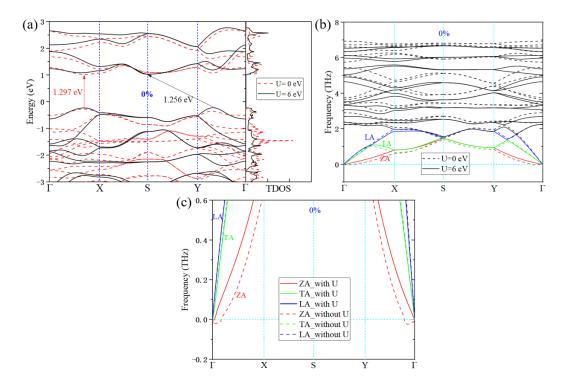
## **Supplementary Information**

## Enhanced thermoelectric performance and reversed anisotropy in Janus penta-PdSeTe monolayer via biaxial strain

Qiong Xia, Yushen Liub and Guoying Gao\*a

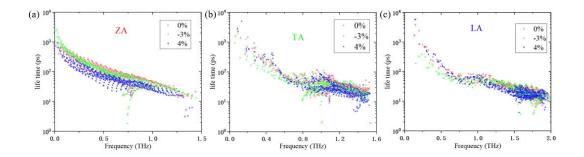


**Fig. S1** Band structure (a) and phonon spectrum (b) within PBE and PBE+U for penta-PdSeTe monolayer. The enlarged phonon spectrum (c) is also presented in order to clearly show the imaginary frequency without U.

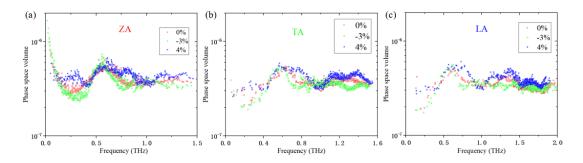
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**Fig. S2** The phonon life time of ZA (a), TA (b), LA (c) branches at 300 K for PdSeTe monolayer under different strains.



**Fig. S3** The phase space volume of ZA (a), TA (b), LA (c) branches at 300 K for PdSeTe monolayer under different strains.