

Strain-enhanced thermoelectric performance in GeS₂ monolayer

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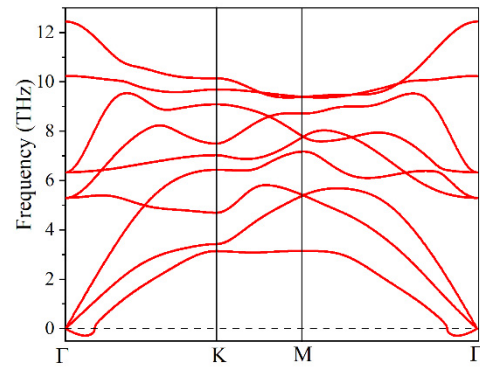


Figure S1. The phonon spectrum of GeS₂ under 2% compressive strain.

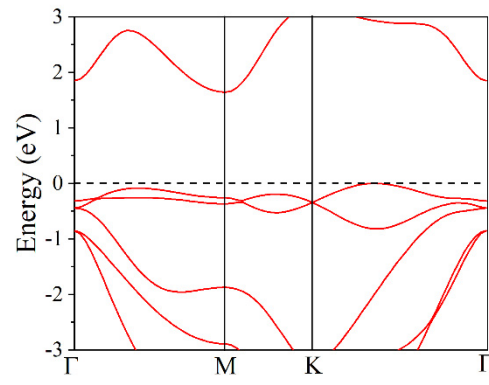


Figure S2. The band structure of GeS₂ monolayer under 8% tensile strain.

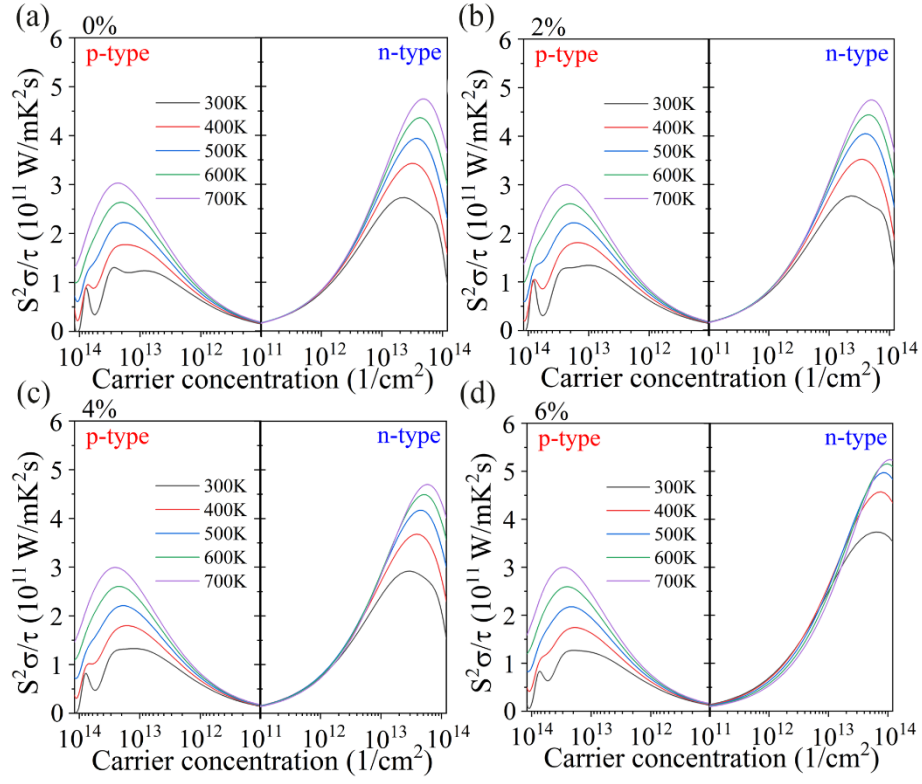


Figure S3. The power factor of GeS₂ monolayer as a function of carrier concentrations under different tensile strains.

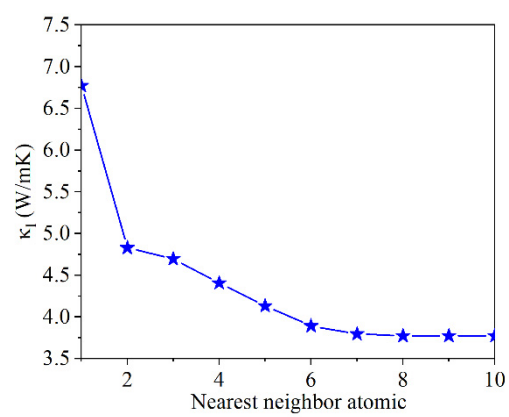


Figure S4. The lattice thermal conductivity of GeS₂ monolayer as a function of the nearest neighbor atomic.

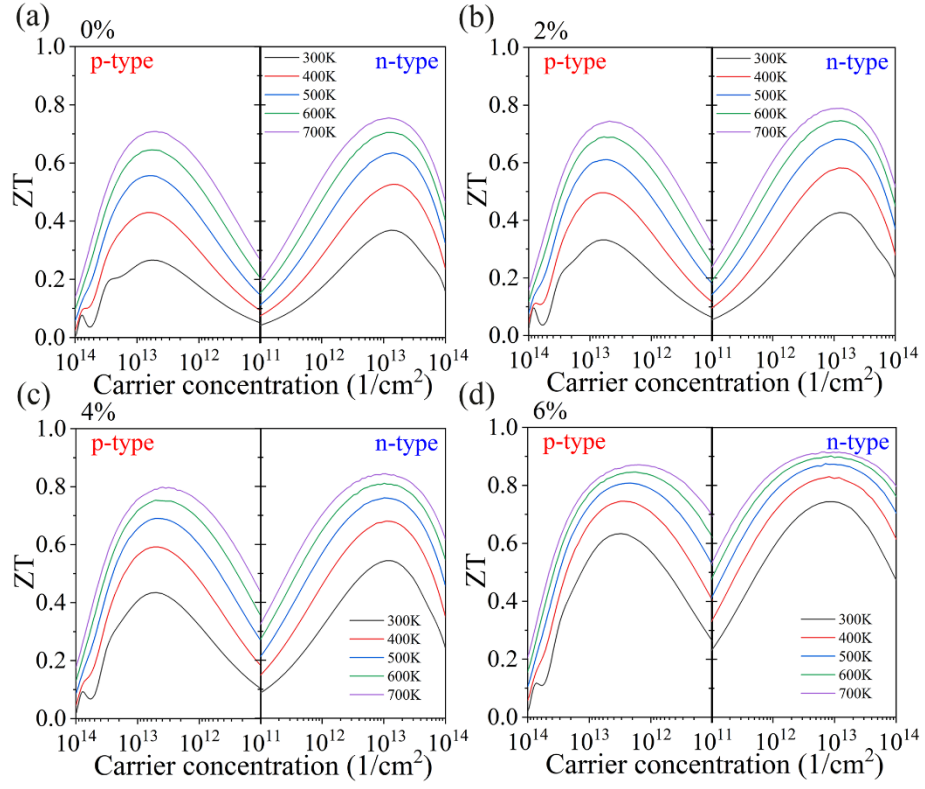


Figure S5. The figure of merit ZT of GeS_2 monolayer as a function of carrier concentrations under different tensile strains.

Table S1. The calculated parameters for effective mass of the GeS₂ monolayer, the number of band for quadratic function fitting (N_b), k -cutoff, band extrema points (B_p), fitting points (F_p)

Effective mass type	N_b	k -cutoff ($1/\text{\AA}$)	B_p	F_p
e	27	0.015	1	6
h	26	0.015	11	6