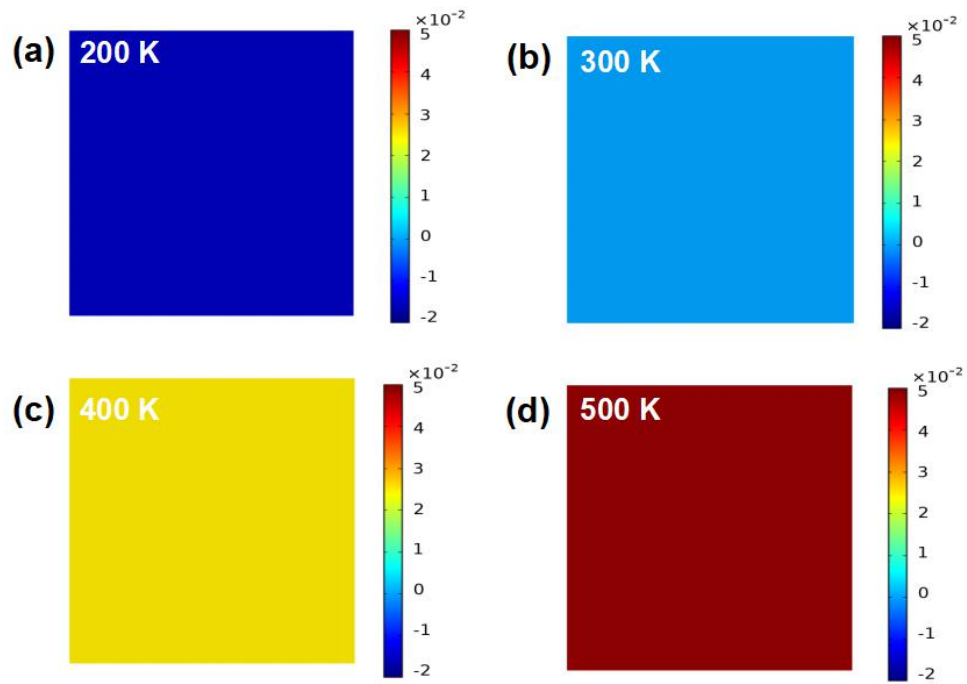1
2   **Supplementary Figure 3.** Flowchart for the numerical inversion procedure to obtain the α_{MoS_2} that
3   satisfies the experimental results.

4
5   **Supplementary Figure 4.** Adopting the TEC of monolayer MoS$_2$ obtained in this work, numerical
6   simulation results of the strain distribution in bare MoS$_2$ at 200 K, 300K, 400 K and 500K, respectively.
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