Bi$_2$Te$_3$ single crystals with high room-temperature thermoelectric performance enhanced by manipulating point defects based on first-principles calculation

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![Fig. S1](image1.png)

(a) lamella structure, (b) first Brillouin zone, and (c) primitive unit cell of Bi$_2$Te$_3$.

![Fig. S2](image2.png)

Fig. S2 Schematic illustration of the synthesis procedure for Bi$_2$Te$_{3-x}$ ($x = 0, 0.02, 0.04, 0.06, 0.08$) single crystals by the TGGM.
Fig. S3 FESEM images and EDS mapping of Bi and Te elements for $x = 0$ bulk.

Fig. S4 Temperature dependence of TE properties along the in-plane (||) and out-plane (⊥) for $x = 0$ bulk. (a) power factor ($\alpha^2\sigma$), (b) thermal diffusivity ($D$), and (c) electronic thermal conductivity ($\kappa_{ele}$).