

Supplementary information:

**Synergistic modulation of thermoelectric performance in SnTe via Ge alloying
and Sb doping**

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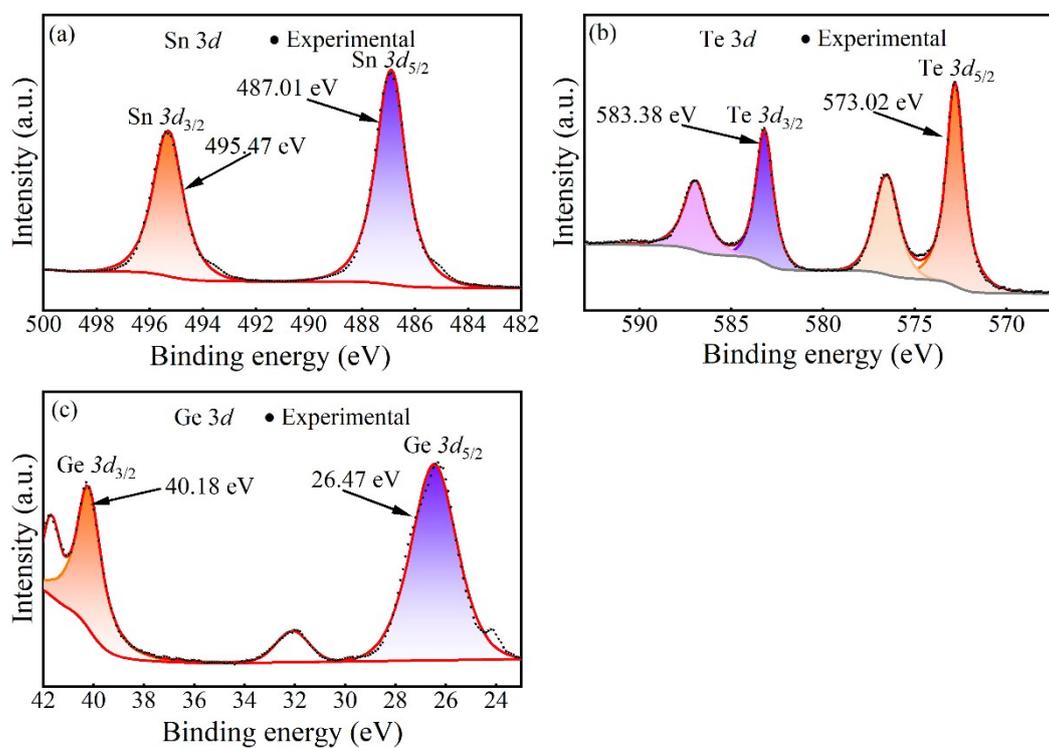


Fig. S1. XPS results of the binding states of (a) Sn 3d, (b) Te 3d and (c) Ge 3d spectra.

Table S1. Thermoelectric performance parameters for Ge alloyed and Sb-doped SnTe at 777 K.

	S ($\mu\text{V K}^{-1}$) ¹⁾	PF ($\times 10^{-3} \mu\text{W m}^{-1} \text{K}^{-2}$) ²⁾	κ ($\text{W m}^{-1} \text{K}^{-1}$)	κ_{lat} ($\text{W m}^{-1} \text{K}^{-1}$)	zT
SnTe	94.2	1.57	4.33	1.95	0.24
Sn _{1.03} Te	128.1	1.47	2.67	1.41	0.41
Sn _{0.93} Ge _{0.1} Te	113.0	1.70	2.77	0.85	0.47
Sn _{0.88} Ge _{0.15} Te	111.8	1.73	2.88	0.88	0.46
Sn _{0.83} Ge _{0.2} Te	117.3	1.94	2.54	0.52	0.59
Sn _{0.78} Ge _{0.25} Te	113.8	1.83	2.72	0.68	0.52
Sn _{0.73} Ge _{0.3} Te	114.1	1.92	2.58	0.44	0.57
Sn _{0.81} Ge _{0.2} Sb _{0.02} Te	128.8	1.86	2.47	0.88	0.58
e					
Sn _{0.79} Ge _{0.2} Sb _{0.04} Te	140.0	1.90	2.17	0.83	0.67
e					
Sn _{0.77} Ge _{0.2} Sb _{0.06} Te	148.8	1.89	1.95	0.78	0.75
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Sn _{0.75} Ge _{0.2} Sb _{0.08} Te	153.8	1.88	1.86	0.78	0.78
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