

SUPPLEMENTARY INFORMATION

**Enhancing the thermoelectric performance of Bi_2S_3 :
 A promising earth-abundant thermoelectric material**

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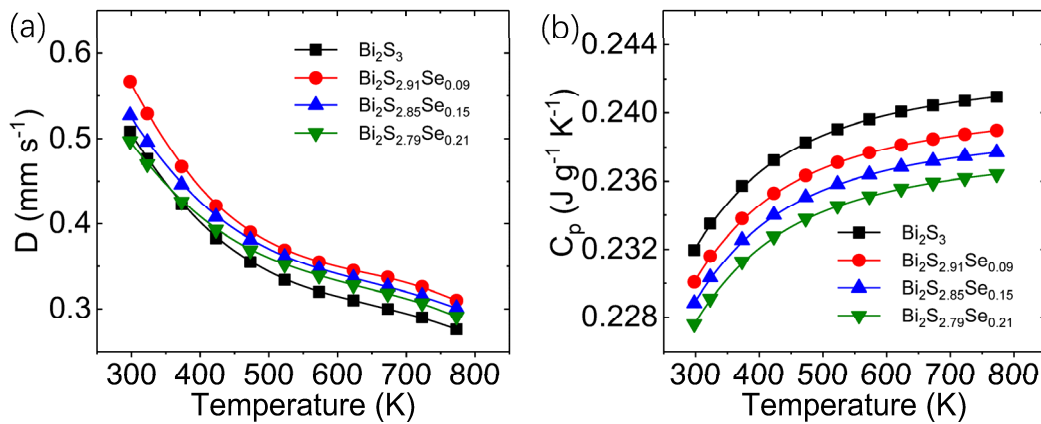


Fig. A1 Temperature-dependent (a) thermal diffusivity D and (b) heat capacity C_p for $\text{Bi}_2\text{S}_{3-x}\text{Se}_x$ samples ($x = 0, 0.09, 0.15, 0.21$).

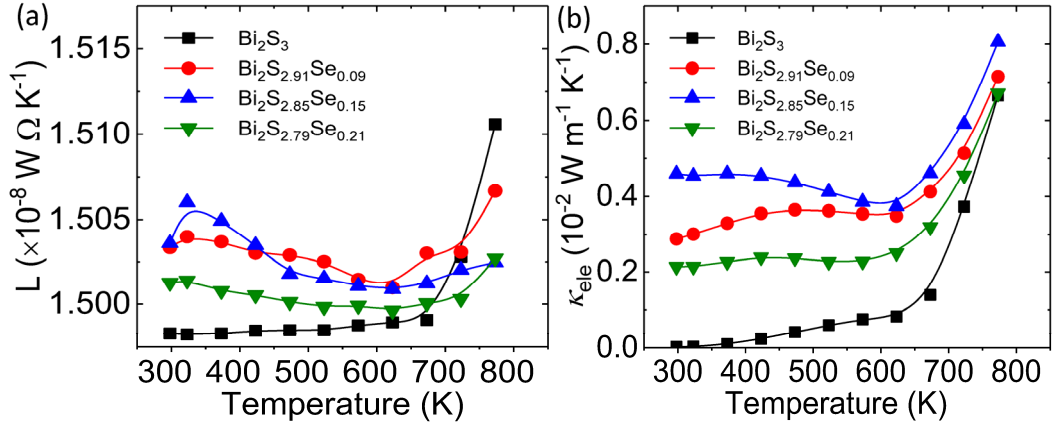


Fig. A2 Temperature-dependent (a) Lorentz number L and (b) electronic thermal conductivity κ_{ele} for $\text{Bi}_2\text{S}_{3-x}\text{Se}_x$ samples ($x = 0, 0.09, 0.15, 0.21$).

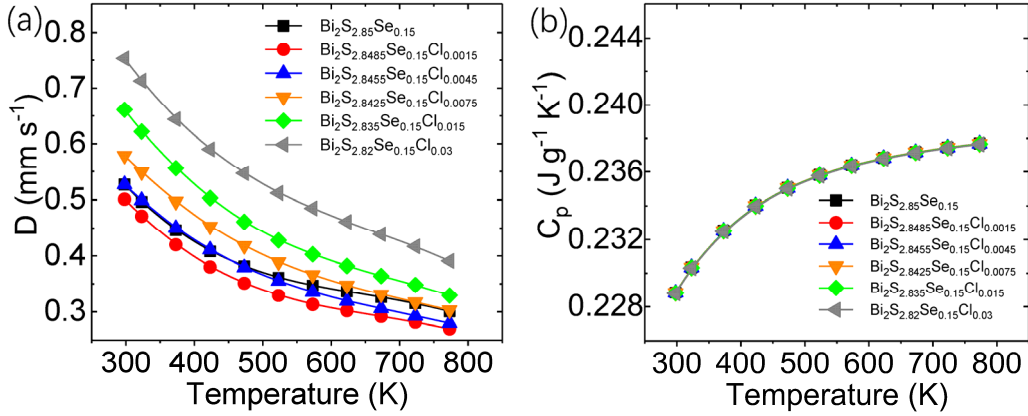


Fig. A3 Temperature-dependent (a) thermal diffusivity D and (b) heat capacity C_p for $\text{Bi}_2\text{S}_{2.85-y}\text{Se}_{0.15}\text{Cl}_y$ samples ($y = 0\%, 0.15\%, 0.45\%, 0.75\%, 1.5\%$, and 3%).

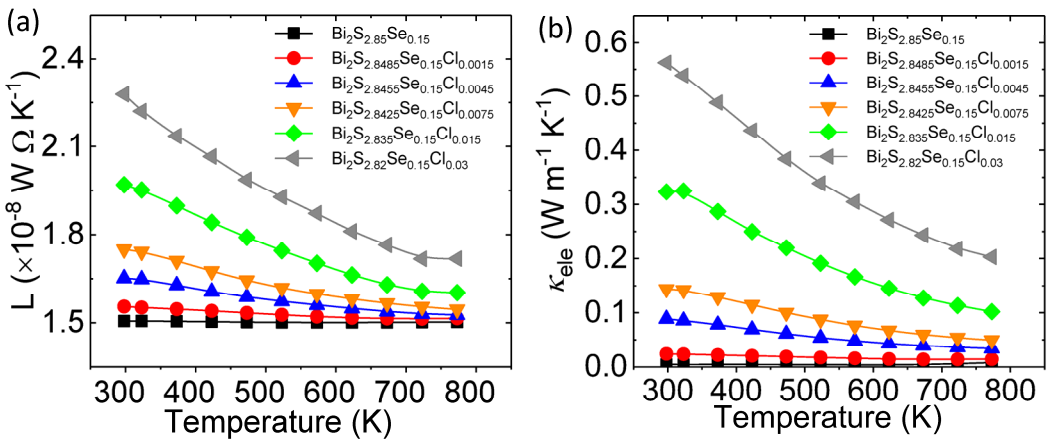


Fig. A4 Temperature-dependent (a) Lorentz number L and (b) electronic thermal conductivity κ_{ele} for $\text{Bi}_2\text{S}_{2.85-y}\text{Se}_{0.15}\text{Cl}_y$ samples ($y = 0\%, 0.15\%, 0.45\%, 0.75\%$, 1.5% , and 3%).