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Supplementary Materials

Thermoelectric Characteristics of A Single-Crystalline Topological Insulator Bi_2Se_3 Nanowire

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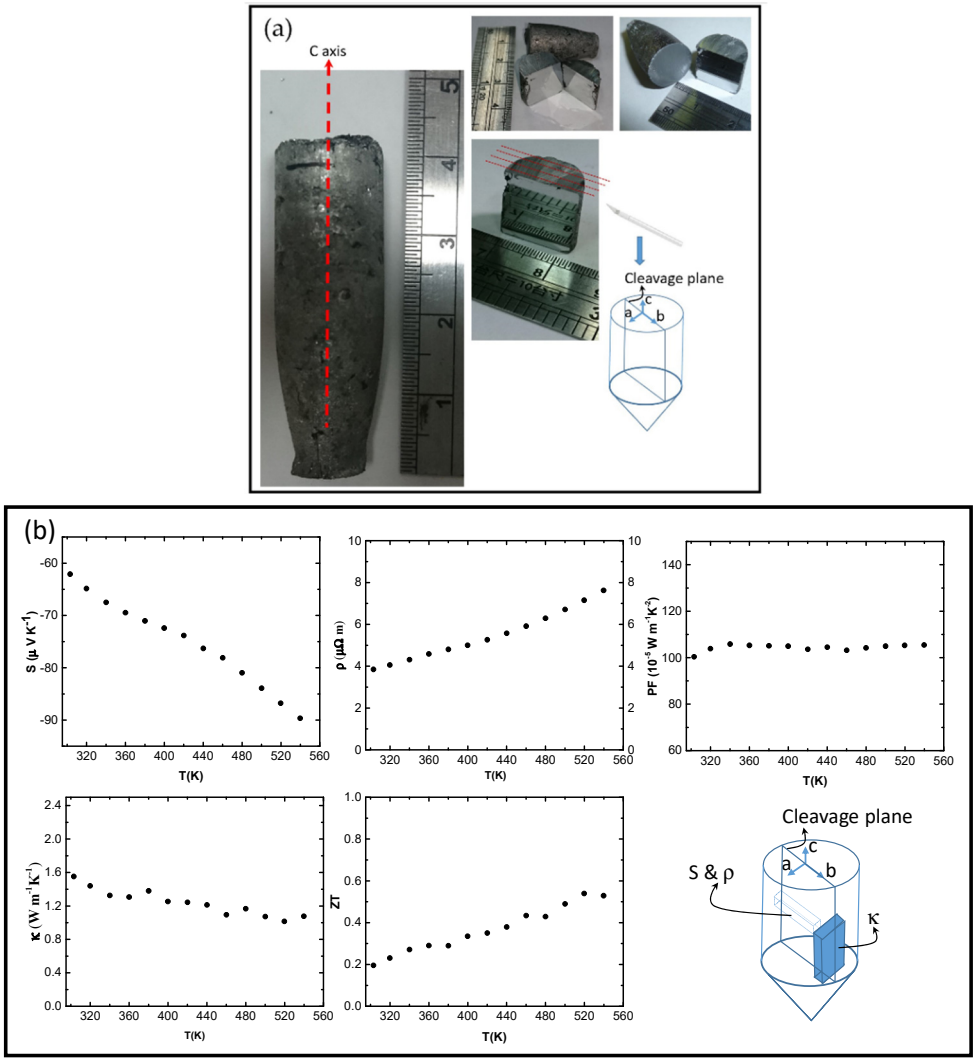

Figure S1. (**a**) Image of Bi_2Se_3 single crystalline was growth by Bridgman method and (**b**) Temperature dependent of thermoelectric properties of single crystalline Bi_2Se_3 bulk, which are −62.10 μ VK^{-1}, 259998 S m^{-1}, 1.55 W $m^{-1}K^{-1}$, and 0.19 for Seebeck coefficient (S), electrical conductivity (σ), thermal conductivity (κ) and figure of merit ZT, respectively at room temperature as shown in table 1.

Table S1. The fitting parameters of the third harmonic voltage signal V3ω as a function of the extraction current amplitude I_o for figure 5a.

Equation		$y = (K \cdot x^3)$	
Adj. R-Square	0.92439		
		Value	Standard Error
V3ω	K	5.35152×10^{-5}	3.21872×10^{-8}

Table S2. The fitting parameters of frequency dependence of V3ω for figure 5b.

Equation		$y = K \cdot (\frac{1}{\sqrt{1 + G \cdot x^2}} + 0.01)$	
Adj. R-Square	0.92439		
		Value	Standard Error
V3ω	K	2.74832×10^{-5}	1.14172×10^{-8}
V3ω	G	5.96359×10^{-6}	3.18552×10^{-7}