Supporting Information

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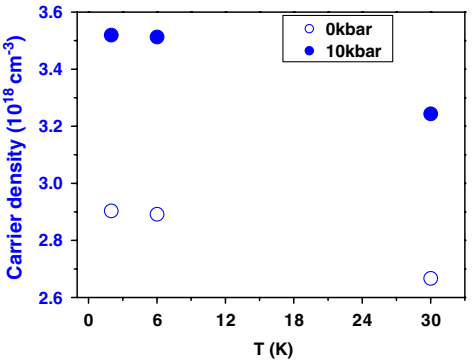

Fig. S1. The carrier density of Bi_2Te_3 single crystal at ambient and 1.0 GPa, respectively, showing a slight increase with pressure.

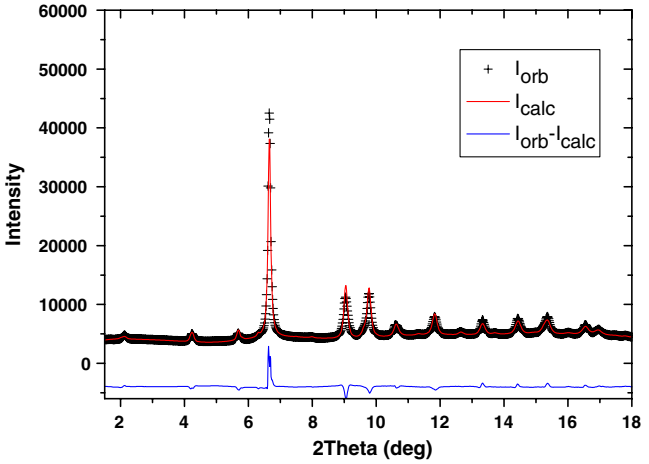

Fig. S2. The Rietveld refinements of the crystal structure for Bi_2Te_3 at 4.0 GPa at room temperature. The cross and red line correspond to that for experiment and refinement, respectively, while the blue is the difference.

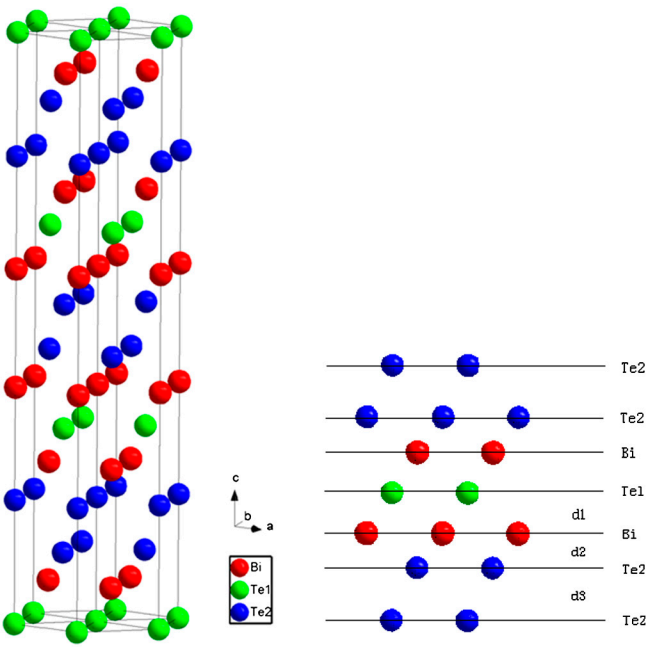

Fig. S3 The crystal structure of Bi_2Te_3.

Table S1. The crystal structure data of Bi_2Te_3 at ambient and 4.0 GPa at room temperature

OGPa	atom	site	x	y	Z
	Bi	6c	0	0	0.400 (0.44)
	Te1	3a	0	0	0.0 (0.0)
	Te2	6c	0	0	0.2095 (0.2094)
Bi-Te1 (Å)	Bi-Te2 (Å)	Te1-Bi-Te1 (°)	Te1-Bi-Te2 (°)	d1 (Å)	d2 (Å)	d3 (Å)
3.2551	3.0808	84.805	90.874	2.0434	1.7515	2.6243
$a = b = 4.390$ (4.400) Å, $c = 30.497$ (30.335) Å, $\alpha = 90°$, $\beta = 90°$, $\gamma = 120°$						
4GPa	atom	site	x	y	Z
	Bi	6c	0	0	0.4030 (0.401)
	Te1	3a	0	0	0.0 (0.0)
	Te2	6c	0	0	0.2059 (0.2055)
Bi-Te1 (Å)	Bi-Te2 (Å)	Te1-Bi-Te1 (°)	Te1-Bi-Te2 (°)	d1 (Å)	d2 (Å)	d3 (Å)
3.1845	2.9731	83.331	90.802	2.0411	1.6924	2.2989
$a = b = 4.234$ (4.237) Å, $c = 29.296$ (29.262) Å, $\alpha = 90°$, $\beta = 90°$, $\gamma = 120°$						

The theoretically relaxed lattice constants and internal atomic sites are listed in parenthesis. The interlayer distance d1, d2, and d3 are defined in the structure