



(a)  $P_4$

$y$

$x$



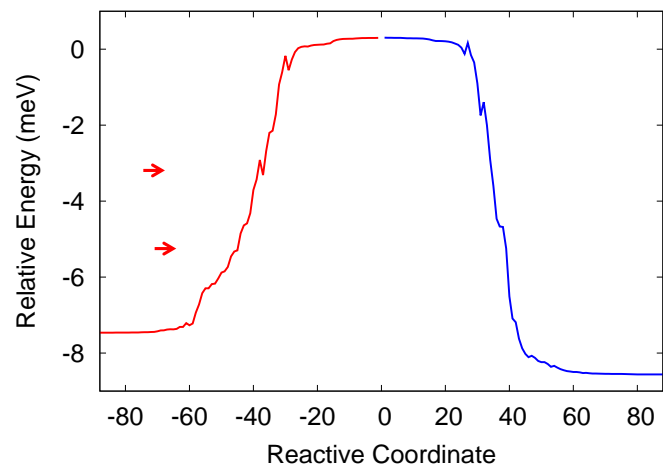


FIG. 4. (a) The difference of bond length within Bi-S1 plane of distorted  $T_3$  structures as a function of hydrostatic pressure. The black arrow corresponds to 2.5 GPa where the Bi-S1 bond length becomes isotropic, indicating a phase transition from a distorted structure to a high-symmetry  $T_0$  structure. Since the difference between a distorted  $T_3$  and  $T_0$  structure is just a stretched Bi-S1 plane (but no bond breaking), different pressure will lead to a structure with either larger or smaller in-plane distortion. If the distortion vanishes under pressure then a phase transition will ensue from  $T_3$  to  $T_0$ .

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