

Supporting Information for

The electronic structure of transition-metal based Cu_2GeTe_3 phase change material: Revealing the key role of Cu *d* electrons

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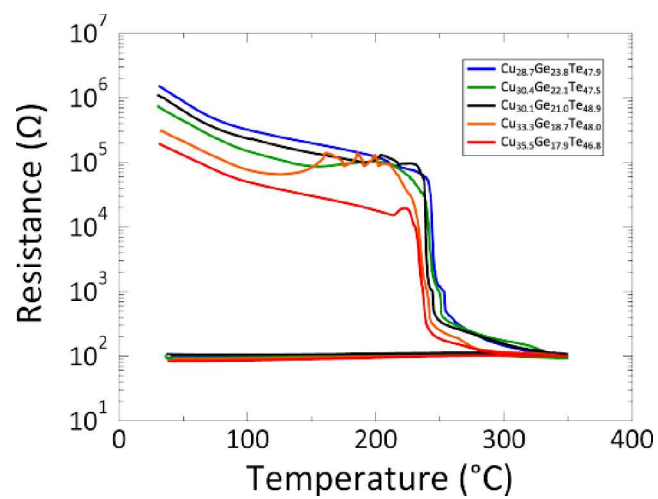


Figure S1. Temperature dependence of the electrical resistance of Cu-Ge-Te films measured by the two-point probe method.

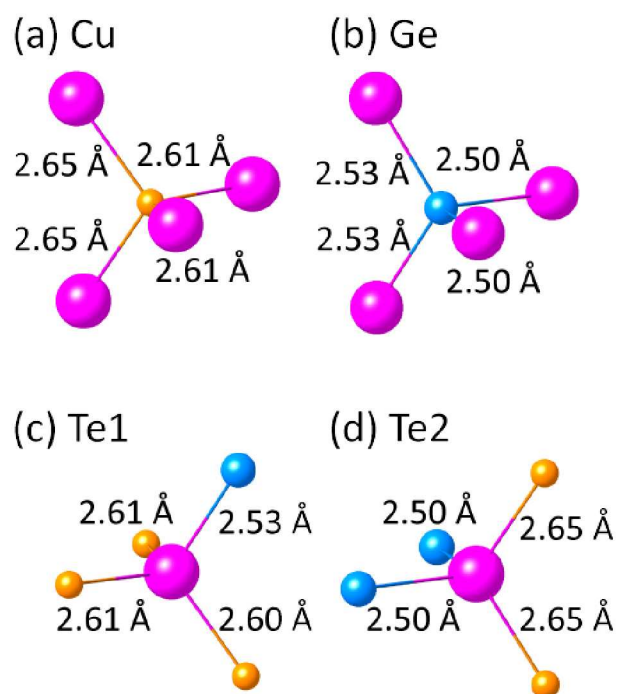


Figure S2. The four types of tetrahedral bonding in crystalline Cu_2GeTe_3 , with bond lengths as marked (Cu - yellow, Ge - blue, Te - pink).

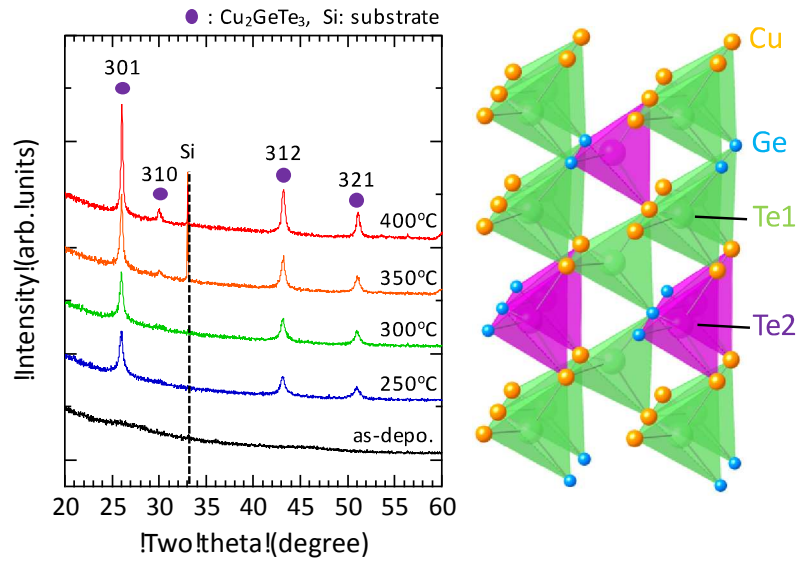


Figure S3. XRD patterns of the Cu_2GeTe_3 after annealing at different temperatures (left panel). All peaks were assigned to Cu_2GeTe_3 phase without any unknown peaks except for the Si substrate peak. The crystal structure of Cu_2GeTe_3 in the (polyhedron) tetrahedron representation (right panel).

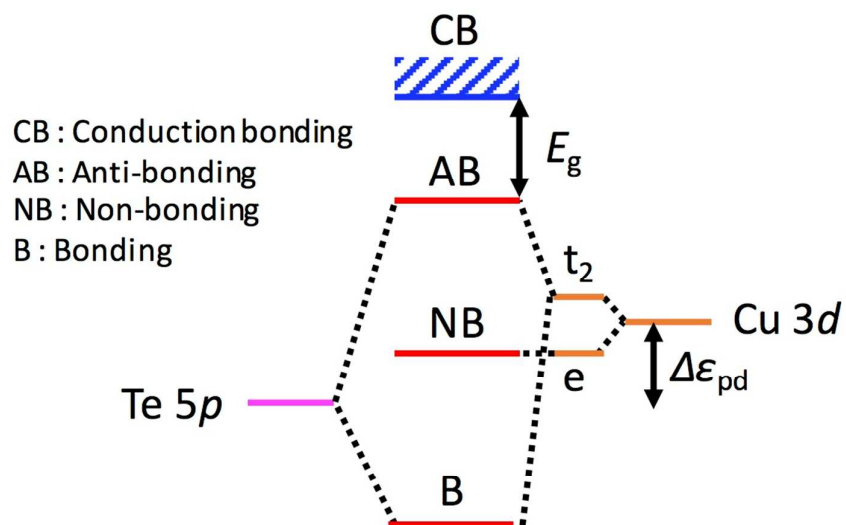


Figure S4. Schematic plot of p - d interaction [52]. In Figure 4, (A), (B), and (C) are assigned to AB, NB, B states in this Figure.