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**Manifestation of intermediate phase in Cu doped Si-Te glasses**

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**Abstract**

Alternating differential scanning calorimetry (ADSC) analysis has been carried out on bulk Si15Te85-xCux (1 ≤ x ≤ 10) glasses to examine the thermal properties of the glassy samples in detail. The investigations on the compositional dependence of ΔHNR (non- reversing enthalpy) manifests a trough between the composition 2 ≤ x ≤ 6 which stands as the basis of the presence of Boolchand's Intermediate phase in that range. Additionally, anomalous behavior has been observed at the compositional dependence of various thermal parameters at x = 9, which stipulates the appearance of chemical threshold at the stated composition. Annealed bulk samples have been exposed to XRD studies to discern the type of formed crystalline phases. The study has reported the manifestation of Te, Si1Te2, Si2Te3, Cu3Te2 phases.

**Keywords:**

Chalcogenide glass, Boolchand intermediate phase, Chemical threshold

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