

## Supplementary Content

### Structure-property relations in a critically connected $(As_2Se_3)_x(GeTe_4)_{1-x}$ glasses

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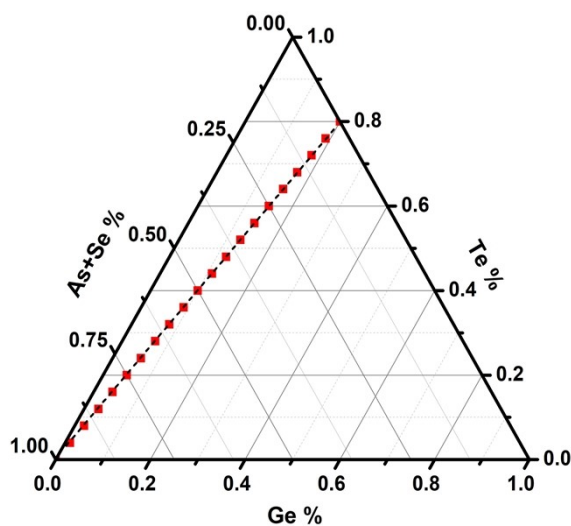


Fig. S1. Ternary diagram of  $GeTe_4$  substituted by  $As_2Se_3$

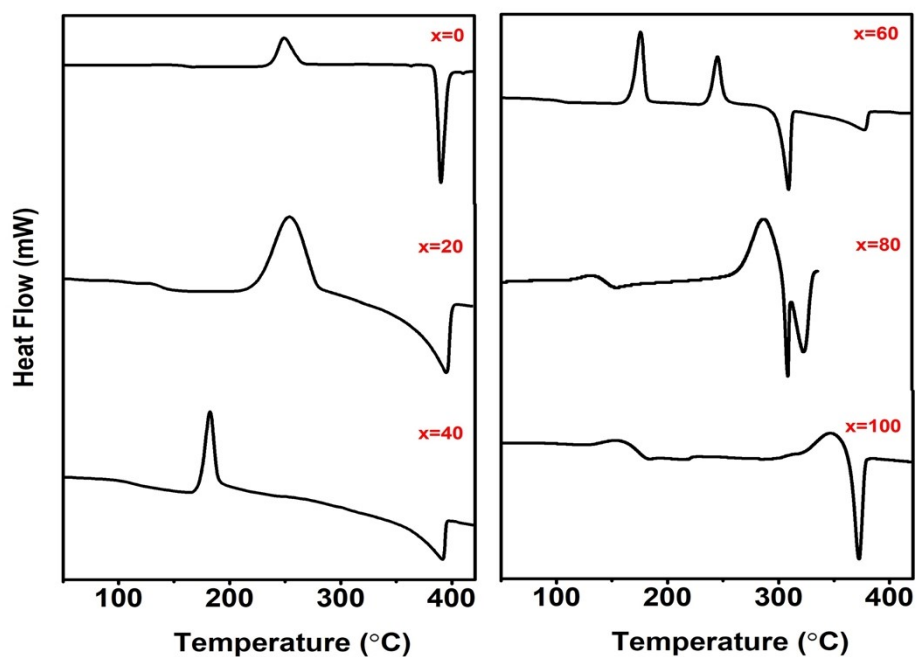


Fig.S2. DSC thermogram of  $(As_2Se_3)_x(GeTe_4)_{100-x}$  glasses

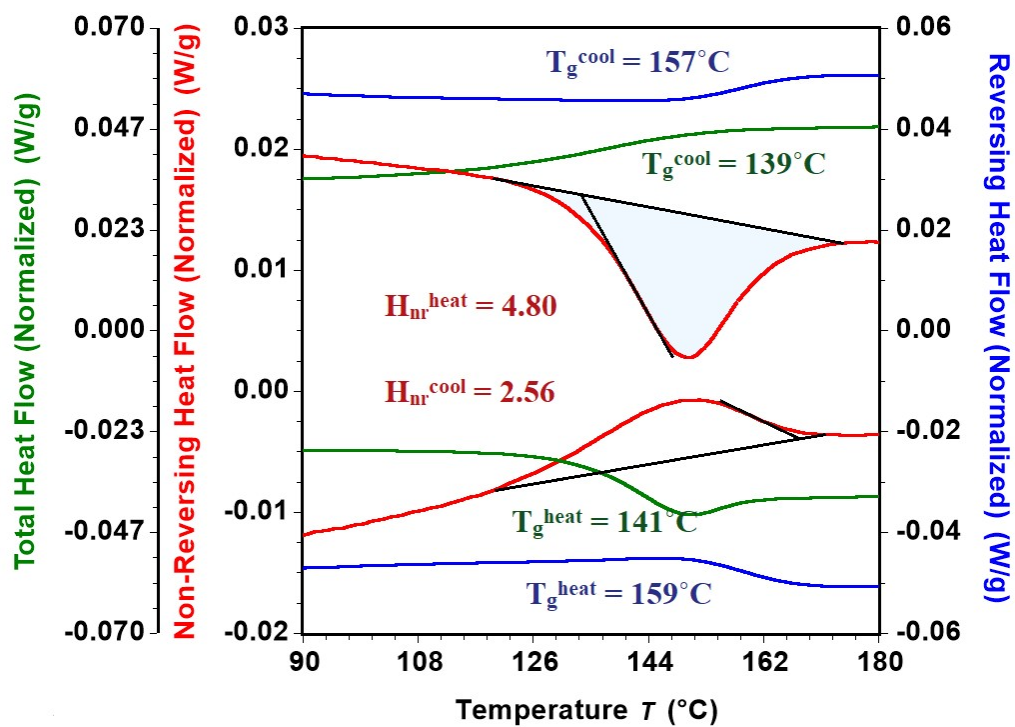


Fig.S3. Thermogram taken from MDSC showing Total heat flow, Non-Reversing heat flow and Reversing heat flow

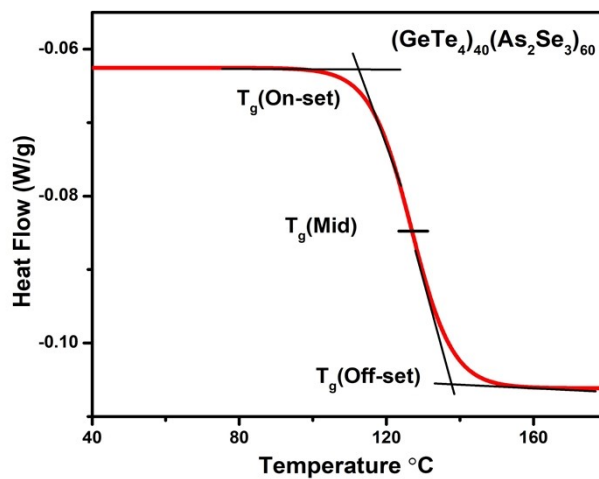


Fig.S4. DSC scan of  $(\text{GeTe}_4)_{40}(\text{As}_2\text{Se}_3)_{60}$  glass showing on-set, mid and off-set of glass transition at a heating rate of  $10^\circ\text{C}/\text{min}$

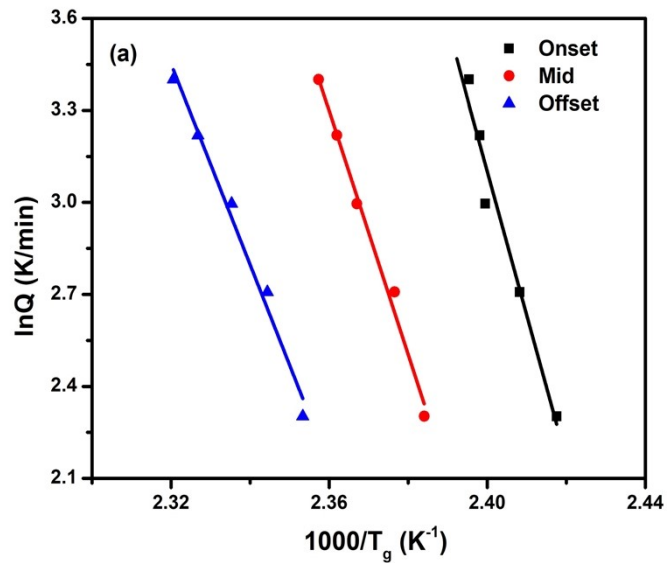


Fig.S5. Linear fit of  $\ln Q$  Vs  $1000/T_g$  of Ge<sub>20</sub>Te<sub>80</sub>

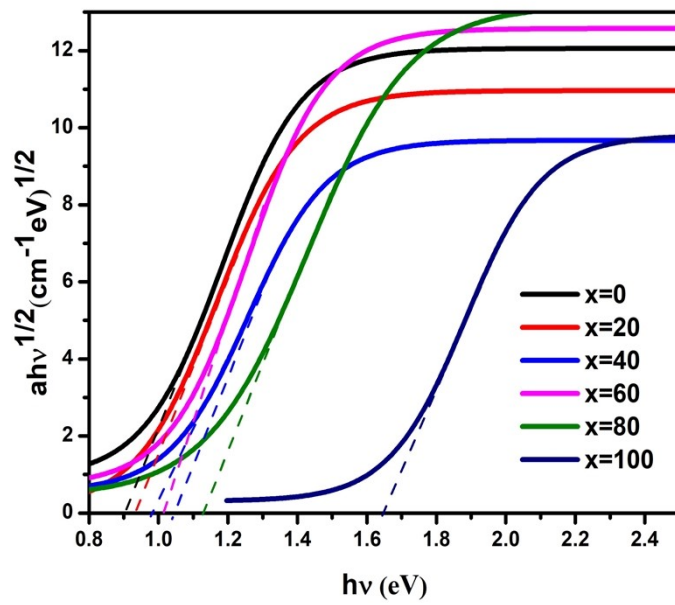


Fig.S6. Optical indirect bandgap of (As<sub>2</sub>Se<sub>3</sub>)<sub>x</sub>GeTe<sub>4</sub>(100-x) (0 ≤ x ≤ 100)

