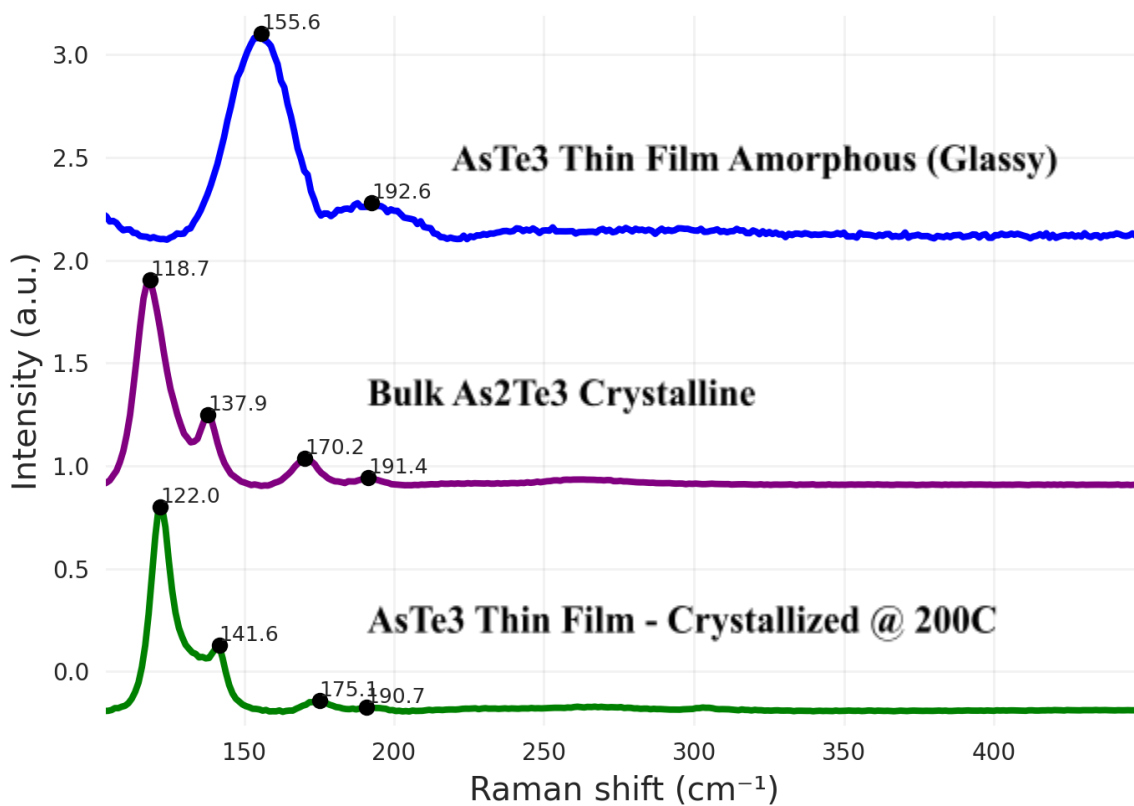


Tab 1

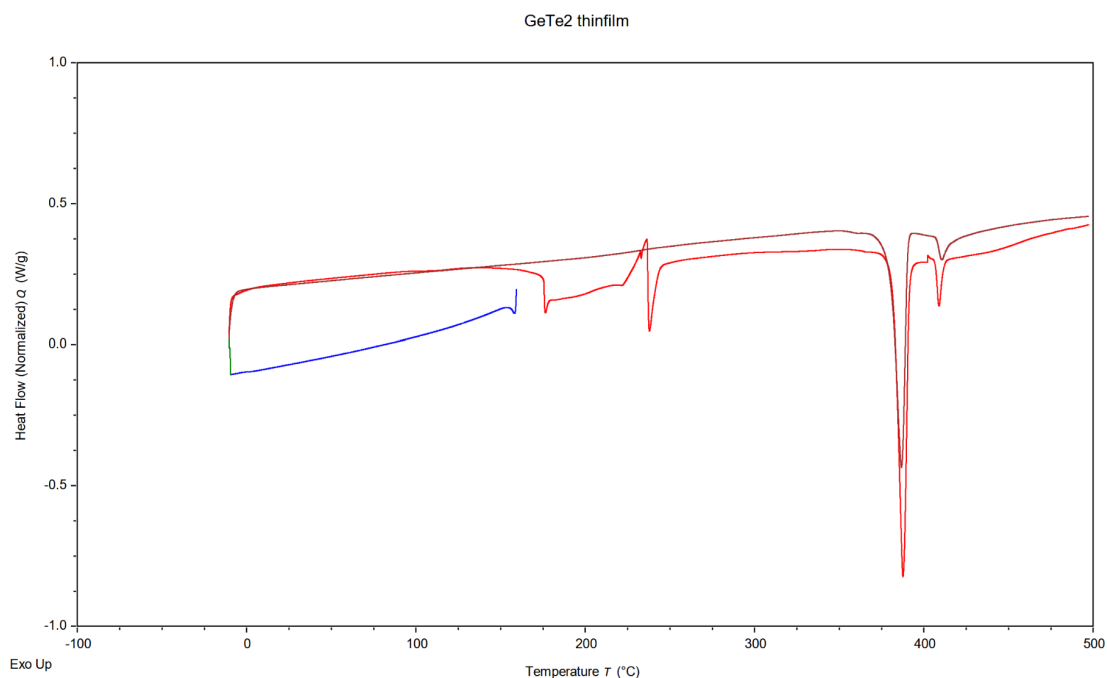
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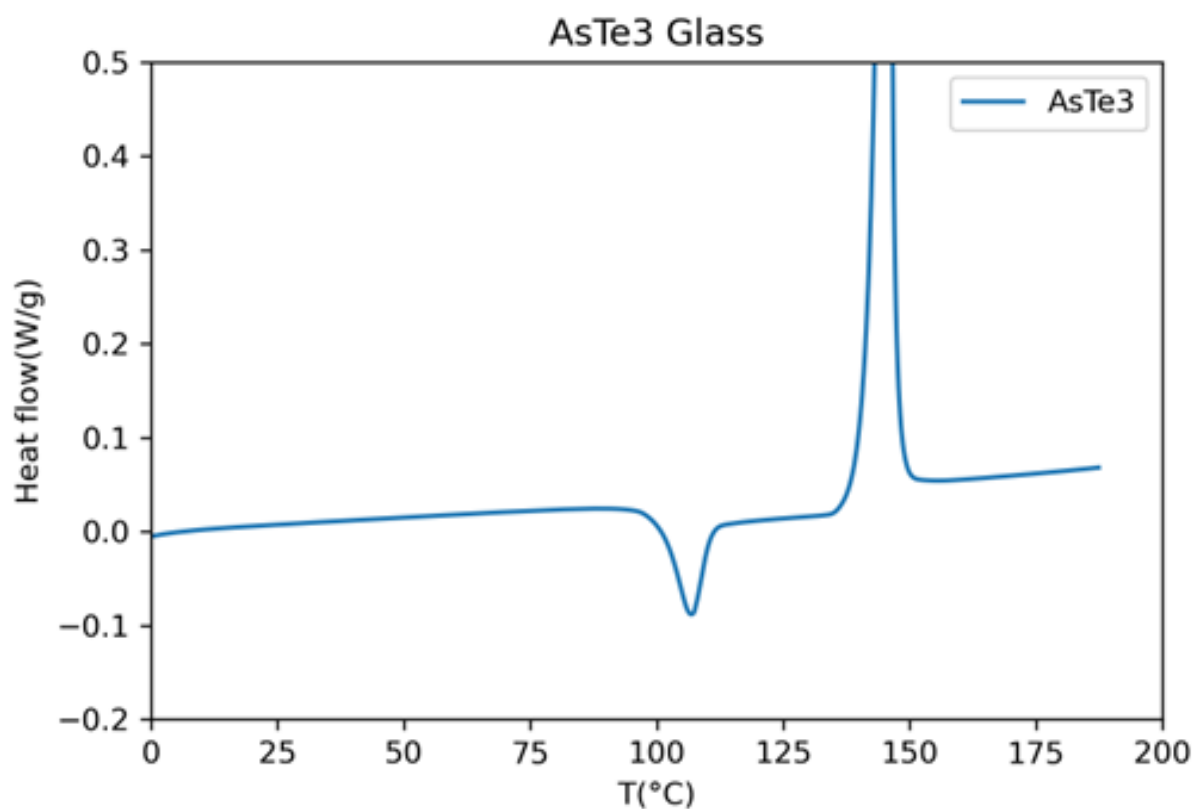
Supplemental Material



Supplemental Figure 1. Raman spectroscopy of AsTe materials in various phases. Similar vibrational modes in Bulk As₂Te₃ Crystalline and AsTe₃ Crystallized Thin Film spectra imply partial or full phase change of AsTe₃ into stable As₂Te₃ and excess crystalline Te. Metastable AsTe₃ exists, but was not produced here (Vaney, Cadars)



Supplemental Figure 2. DSC thermal analysis of GeTe₂ thin film. Glass transition begins around 160 °C and multiphase crystallization occurs between 200 and 250 C. 2 Distinct melting anti-peaks confirm the presence of two phase-separated materials after ~260 °C, likely crystalline GeTe and crystalline Te.



Supplemental Figure 3. DSC thermal analysis of *bulk* AsTe₃ glass shows the glass transition at a low 93 °C and crystallization soon after at 138.8 °C. This crystallization peak aligns with the reported thermal characteristics of metastable AsTe₃ (Vaney, Cadars). Supplemental Figure 1 suggests the presence of a 2nd crystallization peak when the material fully relaxes into As₂Te₃.

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