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Fragility correlates Thermodynamic and Kinetic properties of glass forming liquids

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Graphical abstract

The suggested new fragility parameter correlates viscosity and configurational entropy.

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Highlights

- A new fragility function, $F = \frac{\Delta T}{\Delta C_p} \times \frac{C_p^l}{T_g}$ has been proposed.
- A three parameter viscosity function using the new F reproduces Angell fragility plot.
- A new ΔC_p function is derived which directly relates Adam-Gibbs function with the fragility based viscosity function.

Graphical abstract The suggested new fragility parameter correlates viscosity and configurational entropy

Abstract

In our earlier communication we proposed a simple fragility determining function,

$\left(\frac{[NBO]}{V_m^3 T_g}\right)$, which we have now used to analyze several glass systems using available

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