

4<sup>th</sup> International Conference on

# PHYSICAL AND THEORETICAL CHEMISTRY

September 18-19, 2017 Dublin, Ireland

## Fragility of metallic liquids manifest in the high temperature structure and cohesive energy

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Glasses are traditionally classified as fragile or strong depending on the rates of change of dynamical properties (viscosity, diffusion coefficient) with temperature near the glass-transition temperature. It will be shown that the temperature dependence of viscosity far above the liquidus is an equally good measure of fragility. From the measurements of liquid structures of a large number of metallic glass-forming liquids using the electrostatic levitation (ESL) technique, combined with synchrotron X-rays, it will be demonstrated that the rates of structural changes of equilibrium and super cooled (metastable liquid below the liquidus) liquids with temperature are intimately connected with the liquid/glass fragilities. A strong connection between fragilities and average cohesive energies for metallic liquids will also be demonstrated.

### Biography

Anup K Gangopadhyay is working as a Research Scientist at Washington University in St. Louis, USA.

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