

## **Seminar**

### **Dynamic Heterogeneity: A Single-Molecule Approach**

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Disordered materials - polymers, colloids, ionic liquids, and molecular glasses - exhibit striking anomalies near the glass-transition temperature. Despite a century of study, the microscopic origins of these behaviours remain elusive; ensemble or simulation approaches capture only average, model-dependent dynamics. Single-molecule (SM) spectroscopy uncovers broad distributions of correlation times and non-Arrhenius relaxation. This talk will highlight how SM-level fluctuations can uncover the microscopic relaxation mechanisms in glassy materials-features rarely accessible in experiments.

***Wednesday, Dec 10<sup>th</sup> 2025***

***16:00 Hrs (Tea / Coffee 15:45 Hrs)***

***Auditorium, TIFRH***