## SL 8.33

## Molecular Dynamics and Glass Transition Temperature in Thin Polymer Layers

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Confining geometries are realized in nature and technology in manifold ways, e.g. in molecular compartments of (living) biological cells, in nanoporous media, in thin (~ 10 nm) polymer layers or in long channels with nanometer diameter. In the talk briefly the dynamics of low molecular weight systems (as model system) will be discussed and then emphasis is given to polymeric systems - prepared as isolated chains, as thin glassy layers or as brushes. It will turn out that the lengthscale on which molecular fluctuations take place becomes essential and that the confinement can given rise to new relaxational modes.

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