Probing spatial heterogeneity in supercooled glycerol and temporal heterogeneity with single-molecule FRET in polyprolines
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Stellingen

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1. Supercooled liquids can behave like yield-stress solids at temperatures well above the glass transition.
   *Chapter 2*

2. The thermal history is crucial for the onset of solidification in supercooled glycerol.
   *Chapter 3*

3. Fluorescent probes can be used to image spatial heterogeneity in a thin film of glycerol.
   *Chapter 4*

4. The proposed temperature-cycle microscopy combined with optical probing methods can be used to study fast molecular dynamics at the single-molecule level.
   *Chapter 6*

6. Chromophores whose spontaneous emissions are dominated by their fast non-radiative decay can be detectable by using stimulated emission, which competes effectively with the non-radiative decay. Min et al., Nature 461 (2009) 1105–1109.

7. Non-blinking and -bleaching properties of nano-gold particles have made themselves promising labels in biological applications.


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