Rheology of Soft Matter

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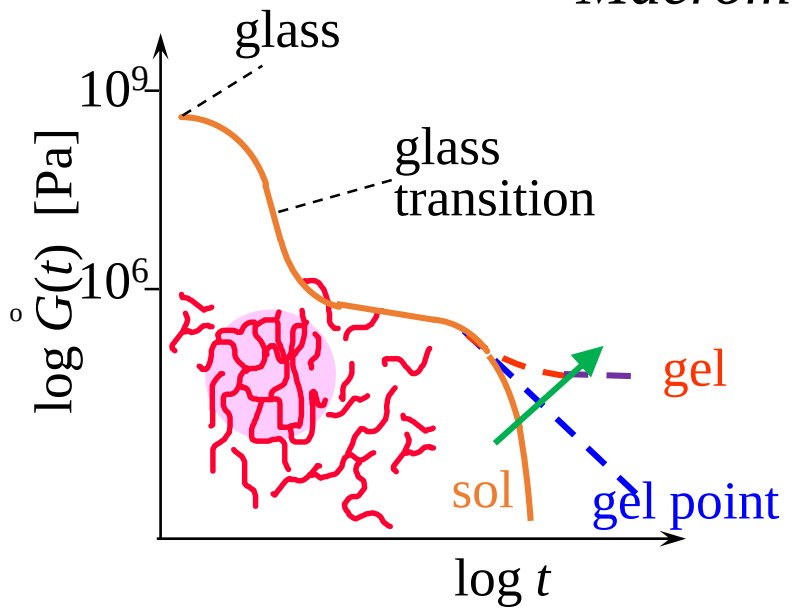
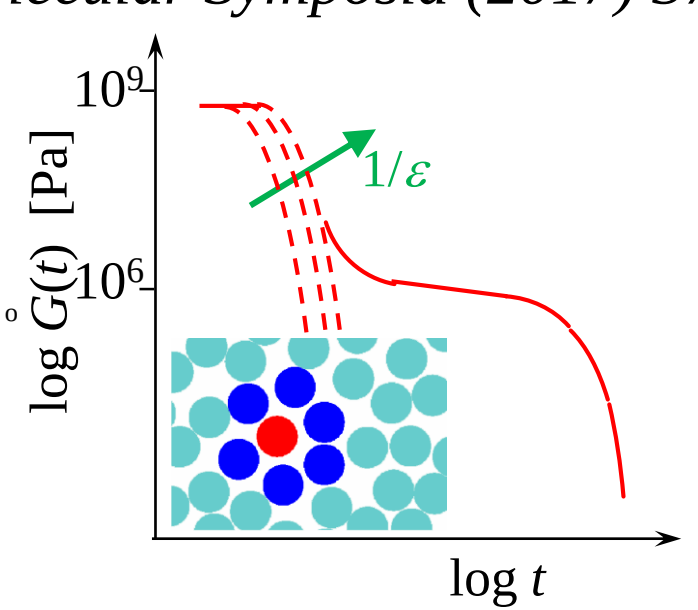
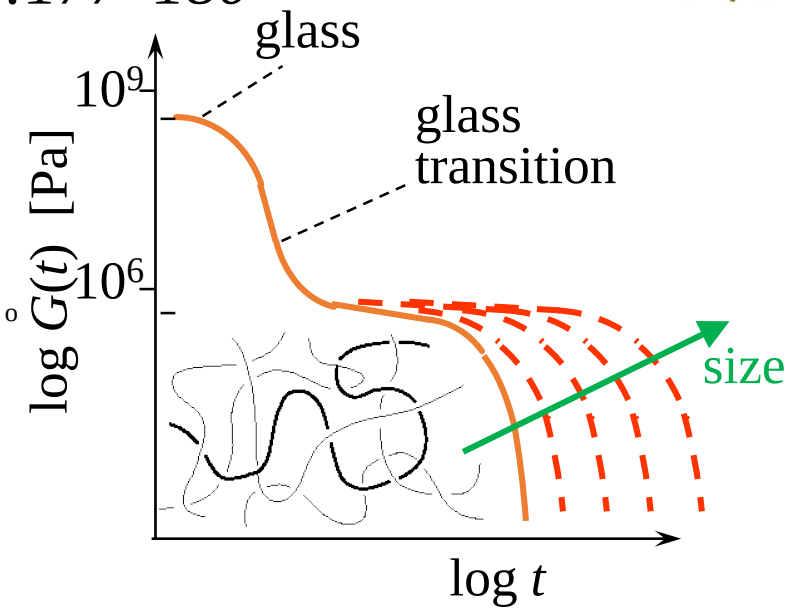


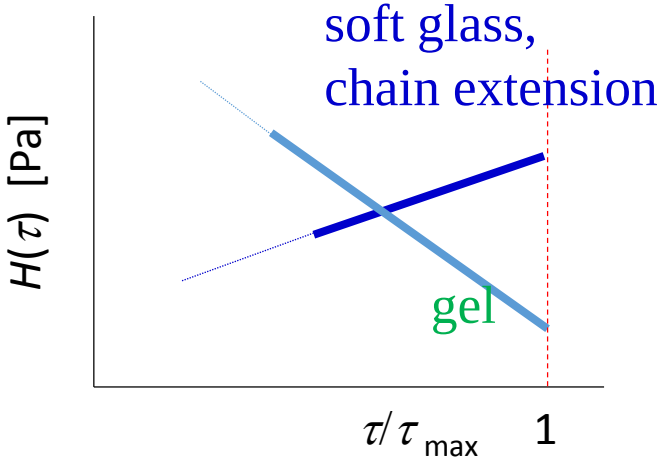
gelation



approaching the glass



polymer chain extension



The relaxation modulus ***G(t)*** was found to be governed by a powerlaw relaxation time spectrum ***H(τ)***. The powerlaw exponent ***n*** is negative for gelation and positive for the glass transition and chain extension:

$$G(t)=\int_0^\infty \frac{d\tau}{\tau} H(\tau)\, e^{-t/\tau} \text{ with } H(\tau)=H_0\left(\frac{\tau}{\tau_{max}}\right)^n$$