

Thoughts on US and mechanosensing

Most discussion of mechanosensing molecules are about second - minute time scale. Effectively static

1 MHz \approx 1 μ s conformation changes?


1 GHz = 1 ns time to equilibrate at new cond.
time correlation functions

1 THz = 1 ps $\sim 10^3$ timesteps in MD

MHz US is too slow to act as extra thermal bath.
to nucleate phase changes in small volume

* is sufficient time to reach new equilibrium densities and conformations of relatively simple molecules & structures

 how stable is this distance
how compressible?

 is there enough time to flow around more static structures?

Stress - changes activation energy of a transition

Broschadsky 2006

Bruny Geiger!