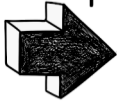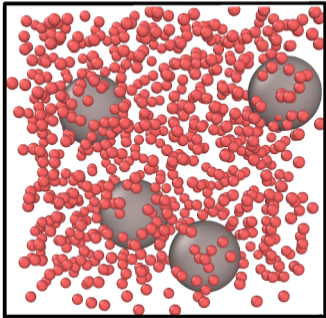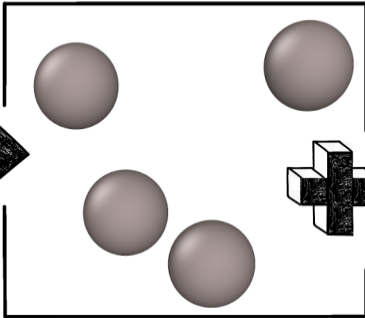**Micro**

Macro

$$\mathbf{F}(t) = -\int\limits_0^t \mathrm{d}s\,\mathbf{K}(t-s)\mathbf{V}(s) + \boldsymbol{\eta}(t)$$

Memory $\mathbf{K}(t)$

Time t