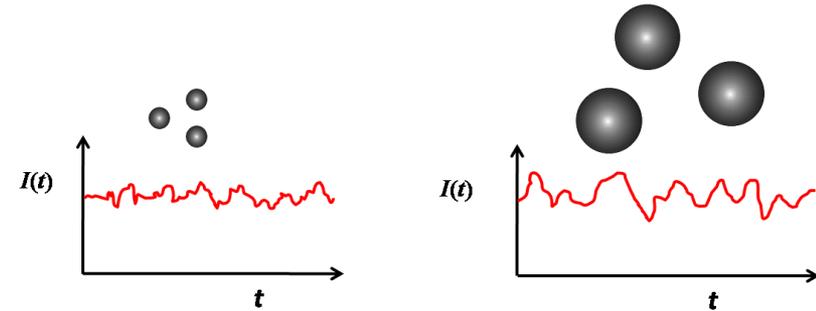
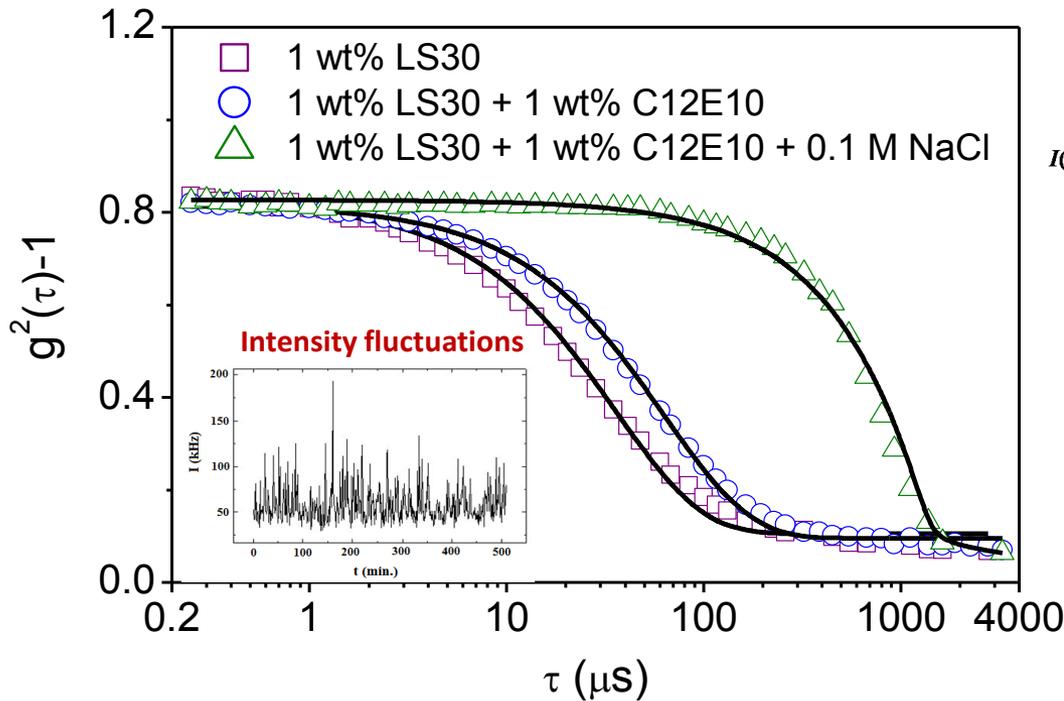


# Dynamic Light Scattering (DLS)

Dynamic Light Scattering technique is based on the scattering of diffusing particles. It gives the hydrodynamic size of particles measured from the rate of diffusion of particles via intensity fluctuations.



## Auto correlation Function

$$g^{(2)}(\tau) = \frac{\langle I(t)I(t+\tau) \rangle}{\langle I(t) \rangle^2}$$

$$= 1 + \exp[-2DQ^2\tau]$$

## Stokes-Einstein Relation

Hydrodynamic size

$$d_H = \frac{k_B T}{3\pi\eta D}$$

Scattering technique	Information obtained
<b>SANS</b>	<b>Structure of different components of the system</b>
<b>DLS</b>	<b>Overall size along with attached hydration</b>