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Quasi-elastic Neutron Scattering as a Tool for Probing Membrane Dynamics

The properties of self-assembled amphiphilic molecules are of key relevance to understanding the complex processes that take place in biological membranes. Albeit structural characterization being the initial step to understanding such systems, ultimately the dynamics over a wider range of timescales are key to understanding function and the interactions that take place between the multitude of components that can be found in a cell membrane. In this talk I will show how neutron spectroscopy, in particular quasi-elastic scattering, offers attractive possibilities to learn more about the heterogeneous dynamical landscape that exists in membranes. I will use examples from simple micelles, simple model membranes and more complex lipidic assemblies.

Some relevant references

H. Nanda et al., *Soft Matter* 2018, 14, 6119-6127.

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L. Toppozini et al., *Soft Matter* 2016, 11, 8354-8371 and *Soft Matter* 2012, 8, 11839-11849

V. García Sakai and A. Arbe, *Current Opinion in Colloid and Interface Science* 2009, 14, 318.

V. García Sakai, C. Alba-Simionesco and S.-H. Chen, Eds. *Dynamics in Soft Matter*; Chs. 1, 2, 10, Springer: New York, 2012.

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