Combining spin labeling ESR and single molecule FRET to study the protein structure and dynamics

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Abstract:
We use both spin labeling ESR and single molecule FRET to better understand the structure and dynamics of membrane proteins. In particular, we investigate the dynamic structure of the SNARE complex sandwiched in between two nano-sized membranes, which is known to be essential for synaptic vesicle fusion. We will demonstrate the judicious use of both ESR and single molecule FRET to gain deep insights into the dynamic details of the fusion-competent SNARE complex.