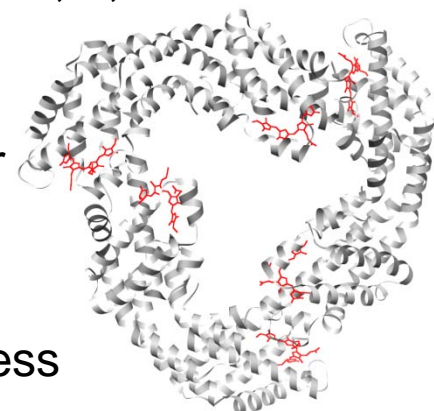


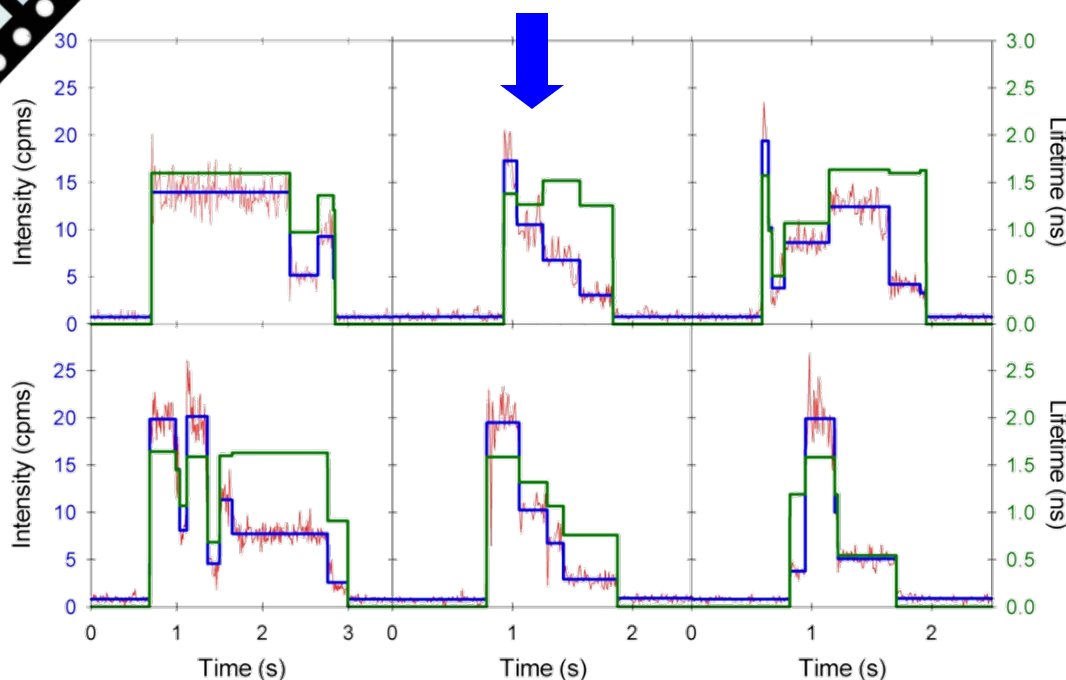
Watching conformational- and photodynamics of single proteins *in solution*

Randall H. Goldsmith and W.E. Moerner
Nature Chemistry, 2010, 2, 179

Single molecules of *solution-phase* Allophycocyanin, APC, can be observed for over 1 second *without immobilization*.



When trapped, single APC's show fluctuations in brightness and fluorescence lifetime, even showing discrete states!



Different molecular brightness-lifetime trajectories are observed, indicative of a fluctuating radiative and non-radiative rate constant!

