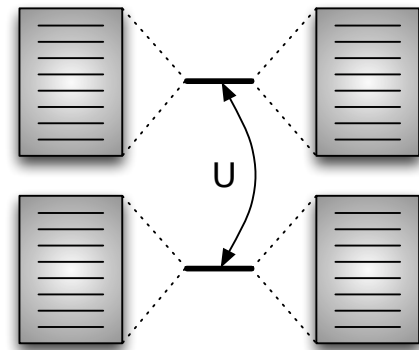
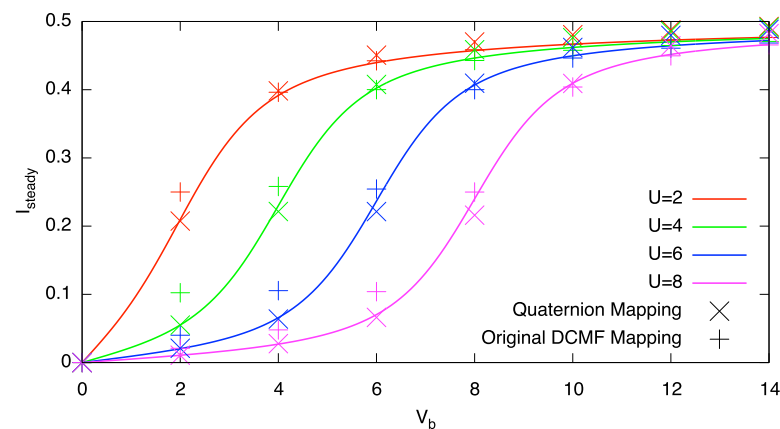
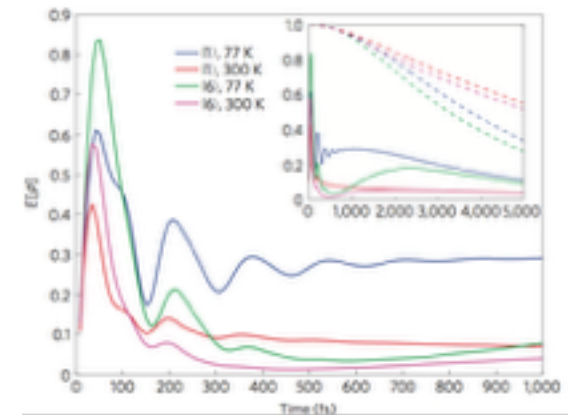
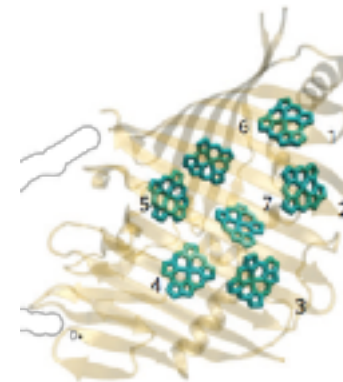


Dynamical interferences



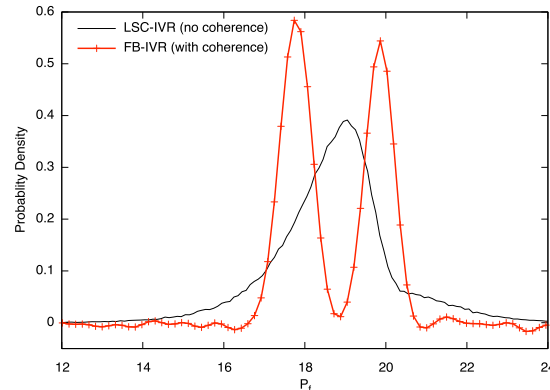
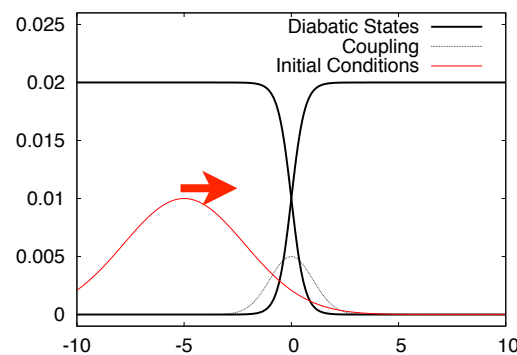
Are interference effects the reason our mapping changed for Coulomb blockade?

Li, Levy, DWHS, Rabani, Miller. JCP **138**, 104110 (2013)



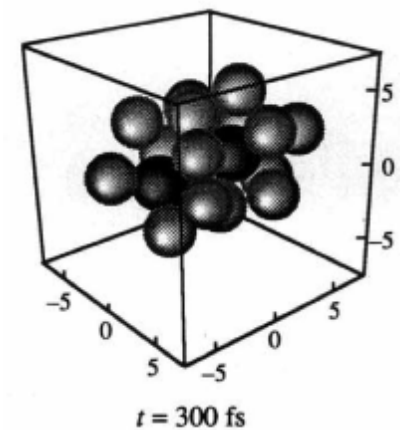
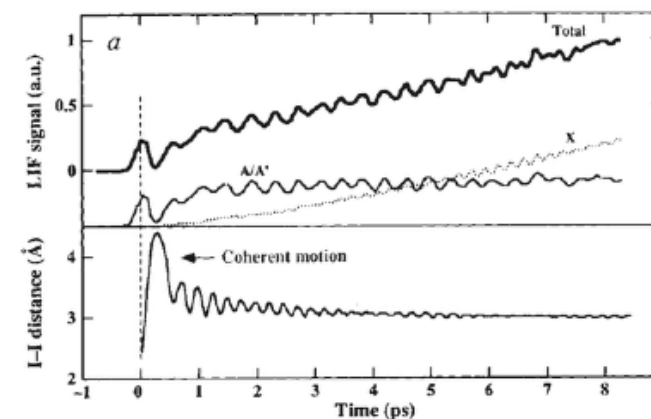
Do biological processes make use of dynamical quantum interferences?

Sarovar et al. Nature Phys **6**, 462 (2010)



Dynamical quantum interference effects are important for some properties in nonadiabatic dynamics

Ananth, Venkataraman, Miller. JCP **127**, 084114 (2007)



Dynamical interference effects are the quantum coherence effects seen in I2-Ar complexes

Liu, Wang, and Zewail. Nature **364**, 427 (1993)

Quantum Correlation Functions

$$C_{AB}(t) = \text{tr} \left(\hat{A} e^{i\hat{H}t/\hbar} \hat{B} e^{-i\hat{H}t/\hbar} \right)$$

Quantum correlation functions describe many experiments:

- electrical current
- transport properties
- position distributions
- populations of states
- reaction rates
- spectra

... and much, much more!