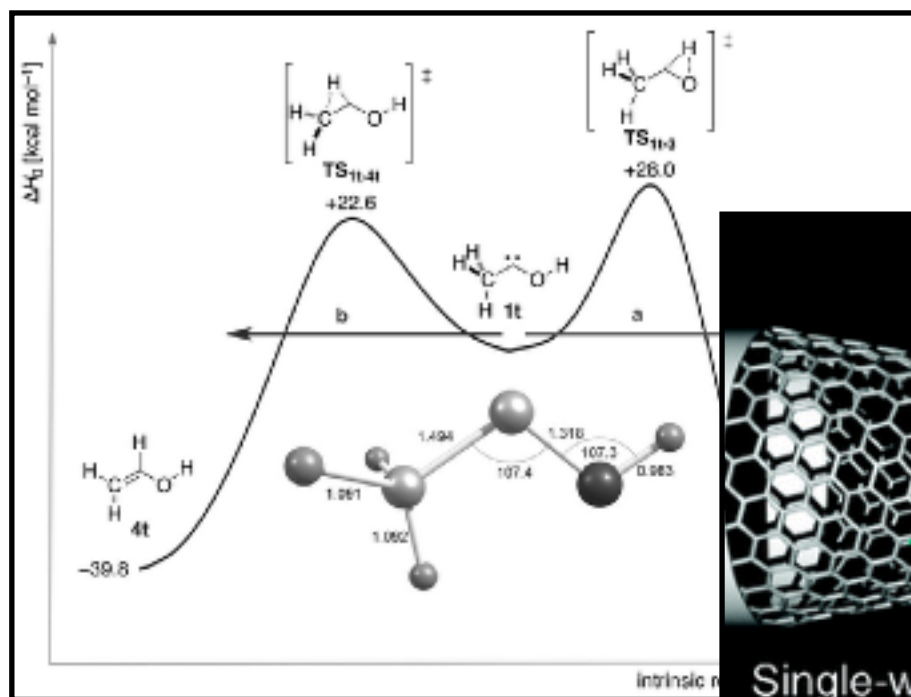


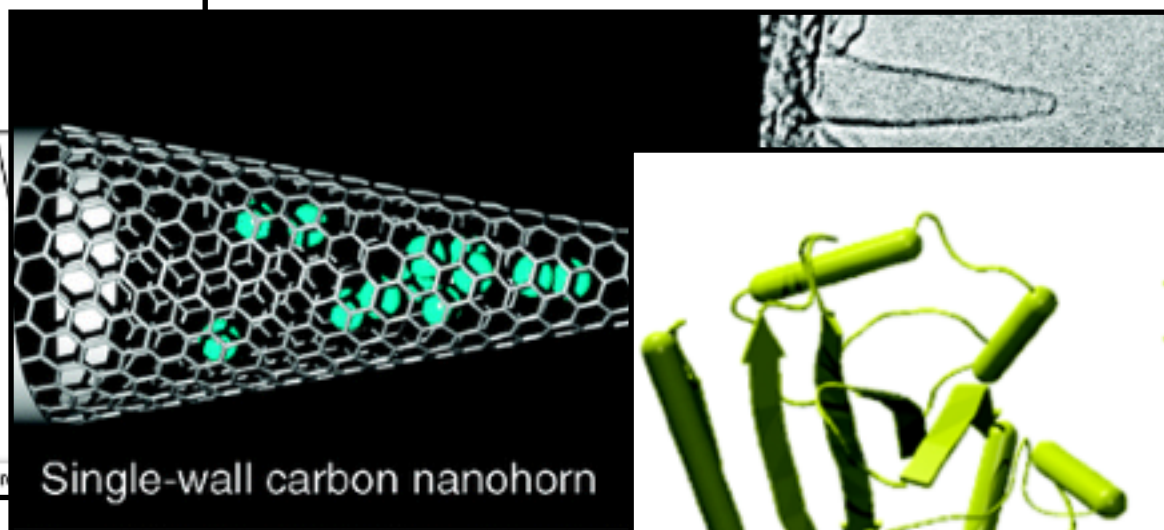
Why quantum dynamics?

“The usual suspects” for quantum effects



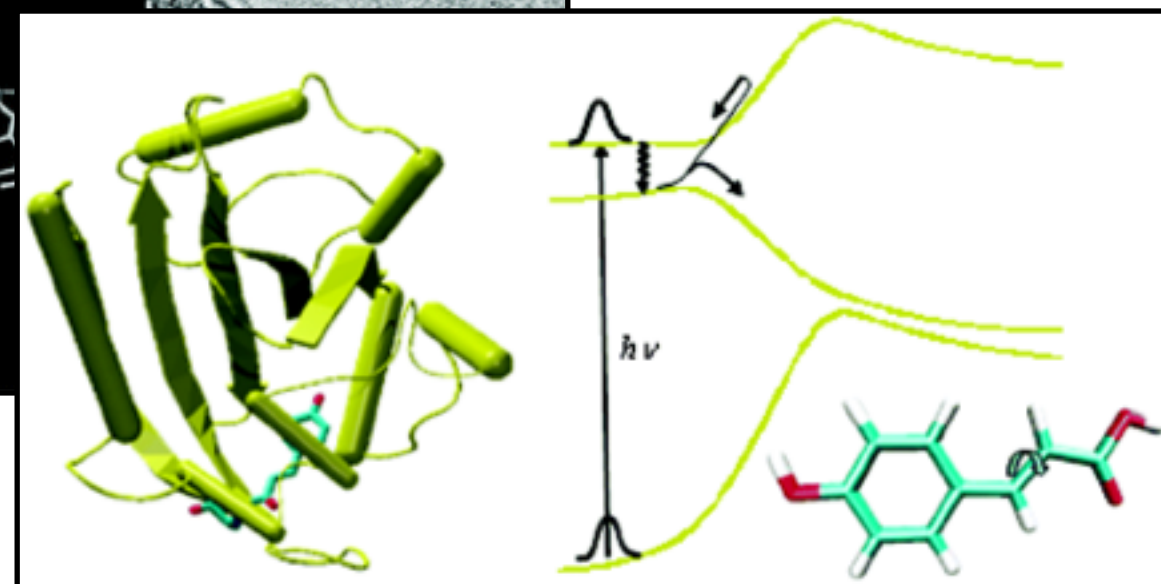
Tunneling of
light atoms

Schreiner et al. Science
332, 1300 (2011)



Nanoscale
materials

Tanaka et al. JACS
127, 7511 (2005)

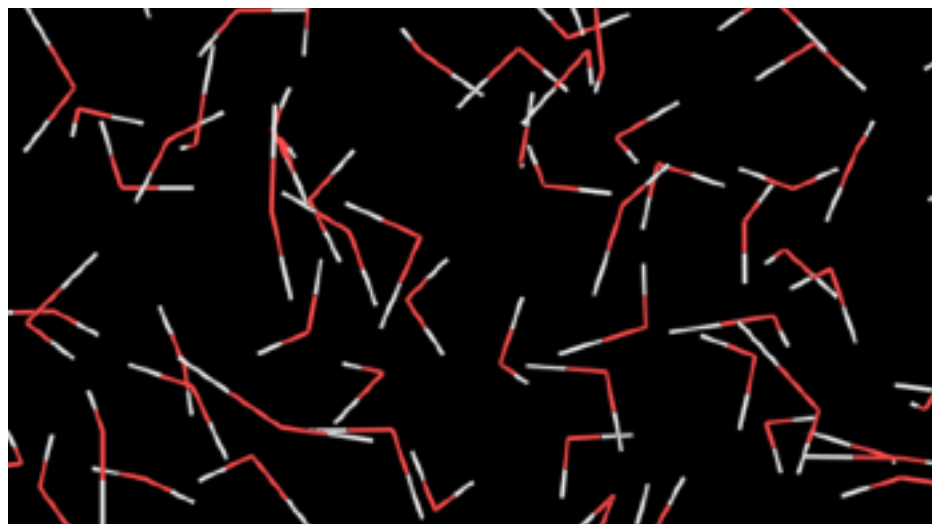


Nonadiabatic energy
or charge transfer

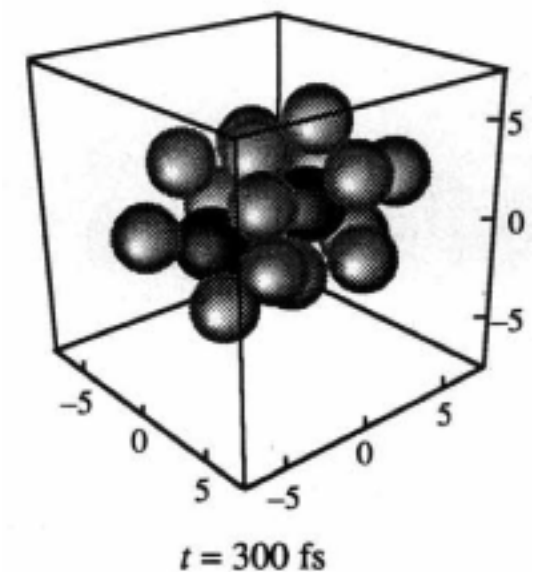
Ko et al. JACS **125**,
12710 (2003)

Why quantum dynamics?

Quantum effects can be important,
even with condensed phases or heavy atoms!



I₂ in Ar



Selfdiffusion

$$D_{\text{QM}} \approx 1.5 D_{\text{Cl}}$$

