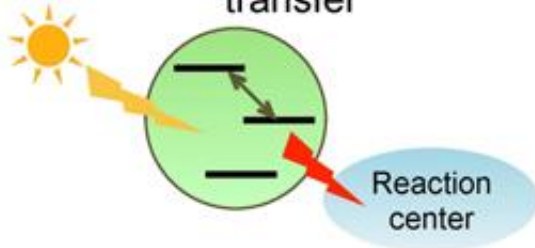
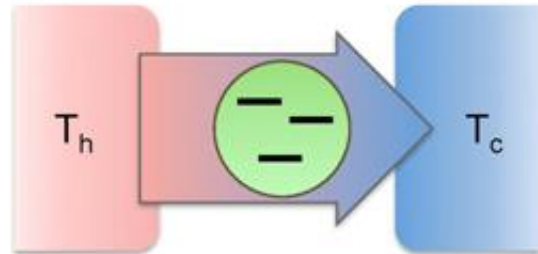


COLLOQUIUM

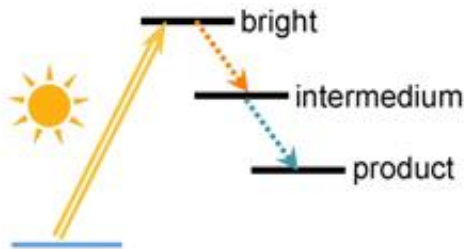
(a) light-harvesting energy transfer



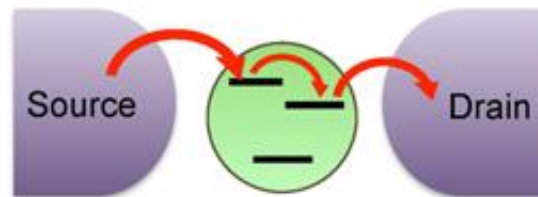
(c) heat transfer



(b) photoisomerization



(d) electron transfer



Dr. Timur Tscherbul
University of Nevada, Reno

Quantum noise-induced coherences in photosynthetic light-harvesting

Abstract

The question of how quantum coherences could be generated and preserved is central to quantum information processing and to the emerging field of quantum biology. I will present a brief overview of the concept of quantum coherence and then show how it can spontaneously arise and evolve in noisy systems, with very long coherence times possible under certain conditions. Time permitting, I will also discuss an experimental proposal for the realization of the noise-induced coherences in atomic systems.

3:00-4:30 p.m., Friday, October 13th in McLane 162