

Beholding and Controlling the Quantum Nature of Excitons: Recent Advances in Spectroscopy and Theoretical Modeling

Exciton represents a pair of electron and hole that can exist across confines of atoms/molecules while being bound to each other, and is a virtual particle that requires fundamentally quantum mechanical description. Accurate characterization and control of the quantum nature of excitons have significant implications in many frontier fields of science and technology, including solar light harvesting, optical sensing, and imaging. This workshop brings together both experimentalists and theoreticians together to discuss recent advances in research on excitons and challenging issues to be addressed in the future.

Friday 20 April 2018
Science Center (Room 4102)

9:00 - 9:30 AM **Bagels and Coffee**

9:30 -10:30 AM **Exciton fission and fusion: From coherences to kinetics**
Christopher Bardeen, UC Riverside

10:45 - 11:45 AM **Energy transfer and equilibration among excitonically coupled chlorophylls of photosystem 1**
Jessica Anna, University of Pennsylvania

12:00 -1:00 PM **Excitons in flatland**
Vinod Menon, City College of New York

1:00 - 2:30 PM **Lunch**

2:30 - 3:30 PM **Electronic excitation in semiconductor nanoparticles: A quasiparticle perspective**
Ari Chakraborty, Syracuse University

3:45 - 4:45 PM **Probing excitonic dynamics with quantum light**
Eric Bittner, University of Houston