

# PHYSICAL SEMINAR

## Membrane Biophysics

We study the dynamics, structure, and environment of lipid membranes.

Guest Speaker:

**Professor Carlos Baiz**

University of Texas at Austin

Department of Chemistry



Monday, March 27th, 4:00pm

Hutchison Hall Room 473

University of Rochester

Department of Chemistry

## “Investigating Complex Environments with Ultrafast Infrared Spectroscopy”

**Abstract:** Infrared spectroscopy, coupled with molecular dynamics simulations, provides an atomistic view of molecular structure, heterogeneity, and dynamics. In this talk I will present our work towards developing simple structure-frequency models to interpret experimental spectra. Within this context I will discuss three projects that exploit the combination of experimental IR spectroscopy and molecular modeling: 1. understanding the lipid-water environment at membrane interfaces, 2. exploring the mechanisms of peptide and protein folding into membranes, 3. quantifying the hydrogen bonding environment in complex solvents.

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