

Subject: MSD Colloquium, Thurs, Dec. 7, 11am, 212, A-157
From: Janice Coble <coble@msd.anl.gov>
Date: Fri, 17 Nov 2006 09:11:23 -0600
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SPEAKER: PROF. HUEY W. HUANG
Rice University
Houston, TX

TITLE: "Material Research on Lipid
Bilayers: A Way to Study
Protein-Lipid Interactions"

DATE: Thursday, December 7, 2006

TIME: 11:00 a.m.

PLACE: Building 212, Room A-157

HOST: Gian Felcher

Refreshments will be available at 10:45 a.m.

Abstract: Biological membranes are traditionally described as hydrophobic/dielectric barriers in which specialized proteins are embedded, and, with exception of electrical insulation, virtually all of membrane function has been assumed to be performed by the embedded proteins. This protein-centric view neglects the role of lipids and lipid-protein interactions. In the last decade or so, there has been a growing body of evidence indicating the importance of lipid-protein interactions where the physical properties of lipid bilayers come into play. Prominent examples are membrane fusion and pore formation by antimicrobial peptides, where the lipid bilayers themselves undergo drastic configuration transformation. In this talk I will describe the material properties of lipid bilayers, and show by several examples how to use the material properties of lipid bilayers to study lipid-protein interactions.