University of Minnesota
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Department of Chemistry

Seminar

9:45 a.m. Thursday, October 25, 2012 • 331 Smith Hall

Associate Professor

Lane Baker

Department of Chemistry
Indiana University

Electroanalytical Applications of Scanning Ion Conductance Microscopy

Research interests: electrochemical methods for analysis and imaging. Current work is focused on applications of nanopores for the development of chemical and biochemically selective membranes, sensor development and electrochemical imaging.

Website: http://baker.chem.indiana.edu/

Abstract

Scanning ion conductance microscopy (SICM) is a powerful tool to control the local position of probes for electrochemical measurement. We have utilized nanometer scale pipettes to examine electrochemical phenomena at chemical and biological interfaces. Central to these explorations has been the development of hybrid electrochemical probes and new instrumentation for localized ion conductance measurement. Applications of these instruments to measure nanoscale transport through porous membranes and at the tight junctions of cell-cell contacts will be described.

Host: Christy Haynes
Refreshments will be served prior to the seminar.