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202 NICHOLSON HALL
Louisiana State University
Baton Rouge, Louisiana 70803-4001

WEEKLY CALENDAR

April 22-26, 2013

DEPARTMENTAL COLLOQUIUM

"A Trio of Unintended Null Experiments"

3:30 PM April 25, 2013
109 Nicholson Hall

Rainer Weiss, Emeritus Professor

Massachusetts Institute of Technology (MIT) and Adjunct Professor, LSU

Host: Gabriela Gonzalez

• Refreshments served at 3:10 PM in 232 (Library) Nicholson Hall •

The talk is a mixture of: history of science, autobiography, and, hopefully, some interesting physics. It will include research which failed in its initial goals but then succeeded in various ways later.

The Trio consists of:

- * The Atomic Fountain
- * The Cosmic Background as a velocity reference
- * Tired Light as a means of explaining the Hubble red-shift

The talk is specifically designed to encourage graduate students not to give up hope.

LA-SIGMA
Louisiana Alliance for Simulation-Guided Materials Applications

Spring Seminar Series

3:30pm - 4:30pm, Wednesday April 24, 2013
338 Johnston Hall, Louisiana State University

**Extraction, Scorpion, and Retention Processes: Molecular-Level
Insights from Monte Carlo Simulations**

By

Professor J. Ilja Siepmann

University of Minnesota

PUBLICATIONS:

1. "Photon counting spectral Breast CT: effect of adaptive filtration on CT numbers, noise, and contrast to noise ratio." Silkwood J.D., **Matthews K.L.**, and **Shikhaliev P.M.**, Medical Physics 40(5):051905/15, DOI: 10.1118/1.47800504, 2013.

Spring Seminar Series
3:30pm - 4:30pm, Wednesday April 24, 2013
338 Johnston Hall, Louisiana State University

Extraction, Scorpion, and Retention Processes: Molecular-Level Insights from Monte Carlo Simulations

By
Professor J. Ilja Siepmann
University of Minnesota

Molecular simulations using efficient Monte Carlo algorithms and accurate force fields are used to explore complex separation processes: (i) the liquid-liquid extraction of ethanol from aqueous solution, (ii) the adsorption of binary and ternary mixtures of alcohols and water onto silicalite-1, and (iii) the retention of alkanes, alcohols, and arenes in reversed-phase liquid chromatography. The simulations yield molecular-level information on the factors that govern selectivity and capacity and aid in the design of more efficient separation processes.



J. Ilja Siepmann is the Distinguished McKnight University Professor, Distinguished Teaching Professor and Merck Professor in the Department of Chemistry at the University of Minnesota, where he is also Department Vice Chair and Director of Graduate Studies in Chemical Physics. He has an undergraduate degree in Chemistry from the University of Freiburg in Germany, and a Doctor of Philosophy degree in Chemistry from the University of Cambridge. After completing postdoctoral work at IBM Zurich, Koninklijke/Shell-Laboratorium in Amsterdam and the Department of Chemistry at the University of Pennsylvania, he joined the faculty at the University of Minnesota in 1994. Other honors include a Camille and Henry Dreyfus New Faculty Award (1994), an Alfred P. Sloan Research Fellowship (1998), and a Best-in-Show in the Third Industrial Fluid Properties Simulation Challenge (2006). His research interests include the use of statistical mechanics and molecular simulation in chromatography, phase equilibria, microheterogeneous fluids and planetary materials, as well as development of classical force fields and novel simulation algorithms.

This seminar will be broadcast at the following venues: Liberal Arts Building 234 (UNO), Qatar Pavilion Conference Room 226 (Xavier University), JB Moore Hall Room 211 (Southern University), PML 1015, Center for Instructional Technology, at the Wylly Tower (LA Tech), and via Adobe Connect at <https://connect.lsu.edu/la-sigma/>.