

Thursday 25 Feb 2010

VISUALIZING ATOMIC AND MOLECULAR BEHAVIOR

Dr. Michael R. Abraham
The University of Oklahoma

It can be said that the source of the roadblocks that many students face in learning chemistry concepts can be traced back to their difficulty with visualizing the actions and structure of atoms and molecules. Many kinds of instructional aids have been developed to help student make sense of atomic and molecular behavior. In recent years the use of computer animation and molecular modeling has gained favor as an instructional aid in teaching chemistry. This talk will examine a series of research studies of the visualization of atomic and molecular behavior and the role that computer animation can play in instruction. It will also look at the kinds of instructional materials that can aid students in visualizing atomic and molecular behavior and structure.

6:00-6:30 pm Social Hour **Halligan Presidential Suite**

6:30-7:30 pm Dinner **Halligan Presidential Suite**

8:00-9:00 pm Presentation **Jones Seminar Room**

Oklahoma State University, ConocoPhillips OSU Alumni Center

201 ConocoPhillips OSU Alumni Center, Stillwater, OK 74078-7043, (405) 744-2509

<http://www.osualumnicenter.org>

Menu

BBQ Beef

Chicken

Two Sides

Dessert

Coffee and Tea

Catered from Freddy Paul

Cost

\$20 members

\$5 students

RSVP Deadline

Wednesday, Feb 17th, 5 pm

Contact: Nick Materer

405-744-8671

materer@okstate.edu

Post deadline RSVPs are limited.

RSVP is NOT required to attend the presentation.

Dr. Michael R. Abraham Biographical Sketch

Dr. Michael R. Abraham is David Ross Boyd Professor of Chemistry, Adjunct Professor of Science Education, and director of freshman chemistry at the University of Oklahoma. Dr. Abraham received a BA in Chemistry at Grinnell College, a Masters of Arts in Teaching from Emory University, and a Ph.D. in Science Education from Florida State University. He has taught science at all academic levels from elementary school to college. Dr. Abraham is well known in the field of science/chemical education as a researcher of instructional strategies, student misconceptions, and the use of computers in teaching college chemistry. He is experienced in curriculum development at the high school and university levels and is well versed in the techniques and materials of science program assessment. He directs the Ph.D. program in Chemical Education at the University of Oklahoma. Currently his research and curriculum development efforts are focused on the role of laboratory in learning science, student misconceptions of chemistry concepts, and on the effects of computer-generated animation on student visualization of atomic and molecular behavior. Dr. Abraham is the 2010 recipient of the ACS Award for Achievement in Research for the Teaching and Learning of Chemistry.