MONTANA STATE UNIVERSITY

Physics, Chemistry, and Materials Science Joint Colloquium

Letters and Science Distinguished Speakers Series

Friday, February 19, 2016
4:10 – 5:00 PM
EPS103

The mystery of water and its condensed phases

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Irving J. Langmuir Award in Chemical Physics, American Chemical Society
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Abstract:

The properties of water, an important and unusual substance, have been difficult to understand and model theoretically, especially in its many condensed phases. In this talk I will introduce a new approach, involving explicit three-body interactions, to model water at the molecular level. Using this model we will study the bulk liquid, the liquid/vapor interface, crystalline and amorphous ices, and water clusters. We will make extensive comparison to experiment, especially various types of time- and frequency-domain vibrational spectroscopy such as Raman, one- and two-dimensional infrared, and one- and two-dimensional sum-frequency generation.

Hosts:

Rob Walker and Erik Grumstrup, MSU Department of Chemistry
and
Rufus Cone, MSU Department of Physics

****** Refreshments served in the EPS second floor atrium at 3:45 ******