

**UCLA**

*Department of Chemistry & Biochemistry*

# SCOTT LECTURE

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University of California, Berkeley



*presenting*

## Three Phases of Water: Cold, Confined and Frustrated

Water at ambient conditions exists close to phase coexistence between liquid and vapor and between liquid and crystal. As such, mesoscopic manifestations of these three phases can appear in response to interfacial perturbations. For example, hydrophobic forces appearing in biophysical contexts reflect modulation of the liquid-vapor transition, and in some cases appear as if in a nano-scale steam engine. Polyamorphism of cold or confined water reflects modulation of the liquid-ice transition, in this case trapping water at conditions far from equilibrium. This lecture will describe aspects of these phenomena, and also point to related issues relevant to the chemistry of water at metal surfaces.

Monday, April 1, 2013  
4:00 P.M.

2033 Young Hall

**Reception**  
5:15 P.M.  
3037 Young Hall

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