Analytical Chemistry Colloquium

101 Brown Laboratory
September 13, 2017, 4:00pm

Surface Thermodynamics and Kinetics at Solid-Gas and Liquid-Gas Interfaces

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Solid-gas and liquid-gas interfaces are ubiquitous in physical, chemical, biological, environmental and technological processes. However, very little is known about the molecular level thermodynamic and kinetic processes of gas phase species interacting at these interfaces under near ambient conditions. This is due, in part, to the paucity of available surface spectroscopy techniques that are quantitative, chemically specific, and have the ability to probe interfaces under variable temperatures and pressures. Herein we present recent efforts examining solid and liquid interfaces in the presence of gas phase water using ambient pressure X-ray photoelectron spectroscopy (APXPS). Building off the strong foundation of ultra-high vacuum studies, we extend our understanding of surface chemical processes by examining metal oxide, salt, ice and ionic liquid interfaces under variable temperatures and pressures.

Light refreshments will be offered outside of 101 BRL at 3:45

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