

Lyman Handy Colloquia

Presents

"Growth and Properties of Hybrid Organic-Inorganic Films Fabricated
Using Molecular Layer Deposition Techniques"

by

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Abstract

Atomic layer deposition (ALD) and molecular layer deposition (MLD) are based on sequential, self-limiting surface reactions that produce atomic layer controlled and conformal thin film growth. ALD can deposit inorganic films and MLD can deposit organic films containing inorganics. ALD and MLD can also be used together to fabricate a wide range of alloy films with variable inorganic and organic composition. This talk will focus on the growth and properties of metal alkoxide films known as "metalcones" that are grown using metal precursors and various organic alcohols. The talk will highlight the tunable mechanical properties of alucone alloys grown using Al_2O_3 ALD and alucone MLD and the tunable electrical conductivity of zincone alloys grown using ZnO ALD and zincone MLD. In addition, the talk will discuss the pyrolysis of hybrid organic-inorganic films to produce conducting metal oxide/carbon composite films.

Thursday, February 6, 2014

12:45 pm, ZHS Room 159

The scientific community is cordially invited.

