

Abstract Submitted  
for the MAR10 Meeting of  
The American Physical Society

**First-principles calculation of novel group-IV nanostructures**<sup>1</sup> ED  
SANDBERG, LOK LEW YAN VOON, Wright State Univ Physics, RACHEL AGA,  
Wright State Univ Chemistry, AMIR FARAJIAN, Wright State Univ MME, COM-  
PUTATIONAL MATERIALS CLUSTER TEAM — The structure, stability and  
electronic properties of nanosheets of group-IV elements were studied using density-  
functional theory. The nature of bonding with hydrogen was investigated by ana-  
lyzing the electron density distribution and by calculating the binding energy.

<sup>1</sup>Funding: Ohio Board of Regents

Lok Lew Yan Voon  
Wright State Univ

Date submitted: 10 Nov 2009

Electronic form version 1.4