

Abstract Submitted  
for the MAR07 Meeting of  
The American Physical Society

**Gas Adsorption on Carbon Nanohorns Aggregates** JEFF WAGNER, M. MERCEDES CALBI, Dept. of Physics, Southern Illinois University Carbondale — We evaluate a simple model of adsorption to predict the possible adsorbed phases of gases on a triangular array of tubes as a function of the distance between the tubes and the external pressure. Specific results are presented for the cases of Ne and  $\text{CF}_4$ . In addition, Grand Canonical Monte Carlo simulations are performed for particular choices of the aggregates' geometry. Adsorption isotherms and isosteric heats of adsorption as a function of coverage are obtained. Comparison with experimental results allows us to obtain information on the structure of the aggregates that is then use to predict the adsorption behavior of other gases.

M. Mercedes Calbi  
Dept. of Physics, Southern Illinois University Carbondale

Date submitted: 19 Nov 2006

Electronic form version 1.4