

Abstract Submitted  
for the MAR05 Meeting of  
The American Physical Society

**Co-Adsorption of  $\text{CF}_4$  and  $\text{SF}_6$  on Graphite<sup>1</sup>** GEORGE HESS,  
TODD HOPKINS, YU XIA, University of Virginia — We have used infrared absorption (IRRAS) and ellipsometry concurrently to study adsorption of  $\text{CF}_4$  on graphite (HOPG) precoated with a monolayer of  $\text{SF}_6$ . Over the temperature range studied, 50 to 120 K, multiple layers of  $\text{CF}_4$  adsorb on top of the  $\text{SF}_6$ . At the higher temperatures,  $>85$  K, partial but not complete displacement of the  $\text{SF}_6$  is observed. At the lower temperatures,  $<75$  K, no displacement is seen, including cases starting with partial monolayers of  $\text{SF}_6$ . Data on spectral shifts will be interpreted to give information on compression and mixing of components.

<sup>1</sup>Supported by NSF grants DMR9320860 and DMR0305194

George Hess  
University of Virginia

Date submitted: 03 Dec 2004

Electronic form version 1.4