

Abstract Submitted  
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**Desorption Kinetics of Dodecanethiol Self-Assembled Monolayers Grown on  $\text{Cr}_2\text{O}_3(0001)/\text{Cr}(110)$**  CHRISTOPHER CUMBY, JENNIFER WALTERS, NICHOLAS CLARK, HEIKE GEISLER, CARL VENTRICE, Dept. of Physics, Texas State University — The most common method of growing self-assembled monolayers (SAMs) is by immersion of the substrate in solution, which limits the experiment to inert surfaces such as gold or silver. In this experiment, SAMs of dodecanethiol were grown under ultra-high vacuum (UHV) conditions on  $\text{Cr}_2\text{O}_3(0001)/\text{Cr}(110)$ . The adsorption geometry of the SAM was monitored with low energy electron diffraction (LEED) and the desorption kinetics were measured via temperature programmed desorption (TPD). For SAM growth on substrates held at 120 K, a multilayer peak is observed at 240 K and the monolayer peak at 480 K for a heating rate of 25 °C/min. TPD measurements at different heating rates are being performed to determine the activation energy for desorption.

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