

Abstract Submitted
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A Study of 11-(Ferrocenyl)-1-Undecanethiol Self-Assembled Monolayers on Au(111) Surfaces JOHN MURPHY, Lock Haven Univ, RESHANI SENEVIRATHNE, Don's Food Products, INDRAJITH SENEVIRATHNE, Lock Haven Univ — SAM (Self-Assembled Monolayer) surfaces terminated with functional/charged groups have exhibited bioactive properties. Improved understanding of surface domain architecture of these systems is needed for bioengineering applications. Solutions of various concentrations of 11-Ferrocenyl-1-Undecanethiol and 1-Dodecanethiol in 200 proof ethanol in clean glassware were used to create a SAM on hydrogen flame annealed Au (111) on mica; 11-Ferrocenyl-1-Undecanethiol has been successfully used in semiconductor interfaces. The potential charge carrying effect of these thiols enables the use of STM (Scanning Tunneling Microscopy) to investigate these SAMs. These SAMs were then investigated further with an AFM (Atomic Force Microscopy) in Non-Contact mode, using topographic and phase imaging. These investigations help to characterize these SAMs from morphological, structural, and electronic perspectives.

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