Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Surface adhesion and confinement variation of Escherichia coli on SAM surfaces[1] KARISA BOWERSOX, KRISTA SITLER, JOSEPH CALABRESE, Lock Haven University of Pennsylvania, RESHANI SENEVIRATHNE, Don's Food Products, INDRAJITH SENEVIRATHNE, Lock Haven University of Pennsylvania — Controlled surface adhesion of non - pathogenic gram negative bacterial strain, Escherichia coli, DH5 alpha is interesting as a model system due to possible development of respective biosensors for prevention and detection of the pathogenic strain Escherichia coli and further as a study in biological and monolayer interactions. Self Assembled Monolayers (SAM) with engineered surfaces of linear thiols on Au(111) were used as the substrate. Sub cultured E. coli were used for the analysis. The SAM layered surfaces were dipped in varying concentrations of 2 – 4 Log/ml E. coli solutions. Subsequent surface adhesion at different bacterial dilutions on surfaces will be discussed, and correlated with quantitative and qualitative adhesion properties of bacteria on the engineered SAM surfaces. The bacteria adhered SAM surfaces were investigated using intermittent contact, noncontact, lateral force and contact modes of Atomic Force Microscopy (AFM).

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Date submitted: 11 Nov 2011 Electronic form version 1.4