Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Scanning electron microscopy studies of bacterial cultures[1]

TRACY SWINGER, BRITTNI BLUST, JOSEPH CALABRESE, MARIAN TZOLOV, Lock Haven University — Scanning electron microscopy is a powerful tool to study the morphology of bacteria. We have used conventional scanning electron microscope to follow the modification of the bacterial morphology over the course of the bacterial growth cycle. The bacteria were fixed in vapors of Glutaraldehyde and ruthenium oxide applied in sequence. A gold film of about 5 nm was deposited on top of the samples to avoid charging and to enhance the contrast. We have selected two types of bacteria Alcaligenes faecalis and Kocuria rhizophila. Their development was carefully monitored and samples were taken for imaging in equal time intervals during their cultivation. These studies are supporting our efforts to develop an optical method for identification of the Gram-type of bacterial cultures.

[1]Lock Haven University Nanotechnology Program

Tracy Swinger
Lock Haven University

Date submitted: 11 Nov 2011 Electronic form version 1.4