

Abstract Submitted  
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**Direct Imaging of the Collapsed Langmuir Monolayers and Multilayer Formation** DOSEOK KIM, Department of physics and Interdisciplinary Program of Integrated Biotechnology, Sogang University, SANGJUN SEOK, Department of Physics, Sogang University, TAE JUNG KIM, YOUNG DONG KIM, Nano-Optical Property Laboratory and Department of Physics, Kyung Hee University, DAVID VAKNIN, Ames Laboratory, Iowa State University — *In-situ* ellipsometry imaging was used to monitor Langmuir monolayer of arachidic-acid spread on water and on  $\text{CaCl}_2$  solution before and after collapse. The Langmuir monolayer was collapsed by compressing it beyond the minimal closely-packed surface molecular area. The ellipsometry image showed clear domains of collapsed regions, and analysis of the image allowed determination of thicknesses of these domains. It was found that the structure of multilayer domain in the collapsed region was bilayer of arachidic acid on the surface of  $\text{CaCl}_2$  solution, while the trilayer was formed on the pure water surface.

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