Abstract Submitted for the MAR12 Meeting of The American Physical Society

Water on a Hydrophobic Surface: Contact Angle vs. Depletion Layer CAITLYN NEIDIG, JACOB BREZINSKY, MENGJUE ZHOU, ADELE POYNOR, Allegheny College — Hydrophobic surfaces repel water. When this occurs, a depletion layer is formed between the water and the hydrophobic surface. We will be studying the effects from the contact angle, the angle at which the water droplet meets the surface, on the depletion layer. Larger contact angles create thicker depletion layers, which has lead us to determine if there is a direct relationship between the contact angle and depletion layer. In order to do this, we will be coating gold slides with a hydrophobic ODT solution, a hydrophilic Mercapto solution, and various mixtures of both of these solutions to create a large range of contact angles. We will be using Surface Plasmon Resonance to study to any depletion layer created by water on these surfaces.

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Date submitted: 09 Nov 2011

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