

Abstract Submitted
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Water on a Hydrophobic surface RYAN SCRUGGS, MENGJUE ZHU, ADELE POYNOR, Allegheny College — Hydrophobicity, meaning literally fear of water, is exhibited on the surfaces of non-stick cooking pans and water resistant clothing, on the leaves of the lotus plant, or even during the protein folding process in our bodies. Hydrophobicity is directly measured by determining a contact angle between water and an object's surface. Associated with a hydrophobic surface is the depletion layer, a low density region approximately 0.2 nm thick. We study this region by comparing data found in lab using surface plasmon resonance techniques to theoretical calculations. Experiments use gold slides coated in ODT and Mercapto solutions to model both hydrophobic and hydrophilic surfaces respectively.

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