The Effect of Contact Angle on the Depletion Layer when Water Meets a Hydrophobic Surface

ADELE POYNOR, Allegheny College — By definition hydrophobic substances hate water. Water placed on a hydrophobic surface will form a drop in order to minimize its contact area. What happens when water is forced into contact with a hydrophobic surface? One theory is that an ultra-thin low-density depletion layer forms near the surface. We investigate the effect of contact angle on depletion layer formation using the surface sensitive technique of Surface Plasmon Resonance.