Abstract Submitted for the MAR05 Meeting of The American Physical Society

Water at a Hydrophobic Surface WINA TJEN, ADELÉ POYNOR, STEVE GRANICK, University of Illinois Urbana-Champaign — It has been proposed that a low-density water layer forms at the hydrophobic/water interface, yet the evidence is mixed. We have investigated this using phase-modulated ellipsometry and many experimental conditions. Using water of various compositions and a wide assortment of hydrophobic surfaces prepared by different methods, we find that the proposed effect under some circumstances, and fail to find it under other circumstances. This provides a pleasing resolution to controversies in the literature.

> Wina Tjen University of Illinois Urbana-Champaign

Date submitted: 01 Dec 2004

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