

Abstract Submitted  
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**Self-Assembly of Submonolayer-Coverage Organic Films**<sup>1</sup> T.P. CORRALES, P. HOMM, P. FERRARI, M.J. RETAMAL, E.A. CISTERNAS<sup>2</sup>, V. DEL CAMPO<sup>3</sup>, U.G. VOLKMANN, Dept. de Fisica, Pontificia Univ. Catolica de Chile, H. TAUB, Dept. of Phys. and Astr., Univ. of Mo-Columbia, F.Y. HANSEN, Dept. of Chem., T. Univ. of Denmark — We used velocity controlled dip-coating to adsorb of *n*-dotriacontane onto silicon substrates coated with their native oxide film ( $\sim 15$  Å). The withdrawal velocity of the samples is varied from 0.2 cm/min to 6 cm/min and the films were studied using SEM and AFM after coating. We observe the formation of monolayered structures with different coverage and morphology depending on the withdrawal velocity. Between 0.2 cm/min and 0.5 cm/min we observe an abrupt decrease in the coverage of the monolayered structures, reaching a minimum at 1cm/min. Above 1cm/min we observe a rise in coverage, reaching a plateau around 6 cm/min. We relate this behavior to the transition from a gravity driven film growth to an entrained film regime proposed by M. Ghosh et al. [1]. We also find that the morphology of these structure depend strongly on the pulling velocity.

[1] M. Ghosh, F. Fan, K.J. Stebe, Langmuir **23** (4), 2007.

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