

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Thin-film morphology dependence on adatom-substrate interaction energy NUNO A.M. ARAUJO, GCEP-Centro de Fisica da Universidade do Minho, 4710 Braga, Portugal; T-12 Group, MS B268, Los Alamos National Laboratory, Los Alamos, NM 87545, USA, CRISTOVAO S. DIAS, GCEP-Centro de Fisica da Universidade do Minho, 4710 Braga, Portugal, ANTONIO CADILHE, T-12 Group, MS B268, Los Alamos National Laboratory, Los Alamos, NM 87545, USA; GCEP-Centro de Fisica da Universidade do Minho, 4710 Braga, Portugal — We study, by kinetic Monte Carlo, the influence of adatom-substrate interaction energy on the morphology of heteroepitaxial film growth. We take the case of (1+1)-dimensions for sake of simplicity. We also define α as the quotient between the above interaction and the adatom-adatom interaction. We measure the roughness in time. We show that changing the value of α it is possible to range from a wetting regime to a non-wetting one. We also show that above a critical thickness, film growth becomes independent of adatom-substrate interaction.

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Date submitted: 11 Dec 2007

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