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A (1 + 1)-dimensional model to study the kinetic roughening transition in molecular beam epitaxial growth[1] CRISTÓVÃO DIAS, GCEP-Centro de Fisica da Universidade do Minho, 4710-057 Braga, Portugal, NUNO ARAÚJO, Computational Physics for Engineering Materials, IfB, ETH Zurich, Schafmattstr. 6, 8093 Zurich, Switzerland, ANTÓNIO CADILHE, T-1 Group, MS B268, Los Alamos National Laboratory, Los Alamos, NM 87545, USA — We present a novel model to study the molecular beam epitaxial growth which belongs to different universality classes depending on the values of the flux and temperature. In the present work, we take that thermally activated processes evolve by bond counting. The model exhibits different regimes that from the ballistic deposition limit (at particle low mobility) to layer-by-layer growth (at high particle mobility). Finally, we provide a detailed analysis of the properties of the model at the roughening transition.

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