

M.E. Jabbour: Surface Instabilities during Step-flow Epitaxy. Adatom Electromigration and Elastic Step Interactions Revisited

A thermodynamically consistent theory for step-flow epitaxy that incorporates adatom electromigration and elastic step interactions is presented. The stability analysis of the resulting moving-boundary problem sheds new light on the onset of surface instabilities that remain unaccounted for by the standard Burton-Cabrera-Frank model.

This is joint work with N. Kirby and E. Fried.