

Abstract Submitted
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Unstable and metastable states of dynamics governed by surface diffusion B. DAVIDOVITCH, H. KING , C.D. SANTANGELO, UMass — Under certain kinetic conditions, the dynamics of solid surfaces is governed by surface diffusion processes. This type of dynamics is relevant, for example, in high-temperature sintering processes, and in the coarsening of nanoporous metals coated by catalytic elements. For compact surfaces, the fixed points of this dynamics are surfaces of constant mean curvature (CMC). It is thus natural to ask whether there exist non-trivial CMC's which are stable under dynamics governed by surface diffusion. This question will be addressed in this talk. We will discuss some subtleties concerning an analytic approach to the problem, and will present some numerical results for simple CMC surfaces.

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