

JEFERSON ARENZON
Instituto de Física, UFRGS

Titulo: On the onset of the percolating cluster in the kinetic Ising model

Resumo:

After a sudden quench from the disordered high-temperature phase to a final temperature well below the critical point, the non-conserved order parameter dynamics of the two-dimensional ferromagnetic Ising model on a square lattice initially approaches the critical percolation state before entering the coarsening regime. This approach involves two timescales associated with the first appearance and stabilization of a giant percolation cluster, as previously reported. We present some new results regarding the microscopic mechanisms that control such timescales.

Energy-lowering and constant-energy spin flips: Emergence of the percolating cluster in the kinetic Ising model, Amanda de Azevedo-Lopes, Renan A.L. Almeida, Paulo M.C. de Oliveira and J.J. Arenzon, 2022 *Phys. Rev. E* 106 044105