

Metastability and interface motion in disordered media

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We will first review the return to equilibrium of the Ising model when a small external field is applied. The relaxation time is extremely long and can be estimated as the time needed to create critical droplets of the stable phase which will invade the whole system. We will then discuss the impact of disorder on this metastable behavior and show that for Ising model with random interactions (dilution of the couplings) the relaxation time is much faster as the disorder acts as a catalyst. In the last part of the talk, we will focus on the droplet growth and study a toy model describing interface motion in disordered media.