

STRICT CONVEXITY OF THE SURFACE TENSION FOR ANHARMONIC CRYSTALS

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We consider a gradient interface model with interaction potential which is a non-convex perturbation of a quadratic potential. We show using a multiple scale analysis the strict convexity of the surface tension. This is an extension of Funaki and Spohn's result, where the strict convexity of potential was crucial in their proof. We also give an estimate of the covariances for the gradients Gibbs states.

Joint work with Codina Cotar and Stefan Mueller.