Chambolle, Antonin; **Thouroude, Gilles**

Homogenization of interfacial energies and construction of plane-like minimizers in periodic media through a cell problem. (English) Zbl 1186.35013

Netw. Heterog. Media 4, No. 1, 127-152 (2009).

The authors consider the homogenization of a periodic surface energy combined with (exploding in the limit $\epsilon \to 0$) bulk forcing term. After appropriate rescaling of the total energy, they show convergence (in the homogenization limit) to an anisotropic perimeter with interfacial energy characterized by the energies of plane-like minimizers in balls of large volume. The proof is based on Γ-convergence type arguments.

Reviewer: Adrian Muntean (Eindhoven)

MSC:

35B27	Homogenization in context of PDEs; PDEs in media with periodic structure	Cited in **10** Documents
74Q05	Homogenization in equilibrium problems of solid mechanics	
49Q20	Variational problems in a geometric measure-theoretic setting	
53A10	Minimal surfaces in differential geometry, surfaces with prescribed mean curvature	

Keywords:

Γ-convergence; minimal surfaces; BV functions

Full Text: DOI