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*On an Allen-Cahn/Cahn-Hilliard model with geometrically linear elastic energy*

I present an extension of the Allen-Cahn/Cahn-Hilliard model which incorporates a geometrically linear ansatz for the elastic energy of the precipitates. This accounts for microstructures on the microscopic scale. We prove the existence of weak solutions to the new model for a general class of energy functionals and give several examples of functionals that belong to this class. This is joint work with Thomas Blesgen, see arXiv:1202.5197v1