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Cahn-Hilliard Simulation of Anisotropic Coarsening JAIME WAL-
LACE, BENJAMIN VOLLMAYR-LEE, Bucknell University — The influence of
surface tension anisotropy on the dynamics of coarsening is studied via computer
simulations. The Cahn-Hilliard equation in dimension $d = 2$ is modified to include
an arbitrary surface tension anisotropy. For all cases studied, we find asymptotic
late-stage scaling with the growth law $L \sim t^{1/3}$ unchanged. The structure factor
$S(\mathbf{k}, t)$ is binned into angular wedges, and is found to exhibit scaling collapse dis-
tinct for each wedge, indicating that the asymptotic domain structure is indeed
anisotropic. The Porod tail is found to be a sensitive diagnostic, allowing for quan-
titative measurement of the degree of anisotropy in the domain structure.

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