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Inhomogeneous and glassy electronic phases driven by competing orders I. VEKHTER, Louisiana State University, Z. NUSSINOV, Washington University, A. V. BALATSKY, Los Alamos National Laboratory — Emergence of inhomogeneous and glassy states in interacting systems has been a focus of much attention recently. It has been well established that such states may arise a) in the presence of disorder; b) in pure systems in the presence of interactions at competing length scales. Here we investigate the emergence of inhomogeneous states as a result of competing orders. We use a Ginzburg-Landau theory and find that, even if the theory is local, negative amplitude-gradient coupling leads to states of inhomogeneous coexistence of order parameters. Proliferation of low lying modes in such systems triggers slow dynamics and low critical temperatures.

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