CONDITIONS FOR SELF-ORGANIZED MODULATION

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S u m m a r y

Conditions for the creation of a limit cycle, which provide the transition of a nonequilibrium system into a self-organized modulation mode, have been studied. An approach, which allows one to replace the equations of self-consistent evolution for a pair of real-valued variables by a single equation of motion for a complex-valued order parameter, is proposed. The optimum basis has been found, in which the evolution of the complex-valued order parameter is described by the Ginzburg–Landau equation characterized by a complex-valued nonlinearity only. Conditions for the system to transit into the self-organized modulation mode are determined.