FORMATION OF AN ORDER IN A SYSTEM OF EXCITON CONDENSED PHASE ISLANDS IN QUANTUM WELLS

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S u m m a r y

A theory of exciton condensed phase creation in a two-dimensional system is presented. The consideration takes into account the mutual influence of exciton condensed phase islands through exciton concentration fields. For the solution of the problem the kinetic and Fokker—Planck equations are applied. The theory is applied to explain the appearance of the periodical fragmentation which was observed last years in luminescence from the ring around a laser spot in a crystal with double quantum wells. The dependence of the radius of condensed phase islands and the distance between islands is obtained as a function of temperature. The influence of fluctuations on the periodical structure is studied.