

PHASE ANALYSIS OF SUPERRADIANCE  
OF A QUANTUM-DOT ENSEMBLE

*I.A. Shuda*

Sumy State University  
(2, *Rymskyi-Korsakov Str.*, Sumy 40007, Ukraine)

S u m m a r y

The phase analysis of the dynamic equations obtained in [?] on the basis of both a microscopic representation of the polarization of a quantum-dot ensemble and the difference of electron-level populations is carried out. It is shown that, under pumping and real relations between the parameters of a quantum-dot ensemble, the superradiance is realized in the form of a giant pulse regardless of the resonator frequency detuning and the coupling parameters. The obtained results are compared with experimental data.