

Abstract Submitted
for the DAMOP07 Meeting of
The American Physical Society

Optical Absorption in Artificial Atoms YIMING MI, School of Materials Engineering, Shanghai University of Engineering Science, SUICHI IWATA, RACE, The University of Tokyo, RACE, THE UNIVERSITY OF TOKYO COLLABORATION — Optical transitions in an artificial atom (AA) interacting with longitudinal optical phonons are studied theoretically, which can be solved exactly under the condition of finite number of carrier levels in the system. The linear optical properties are calculated, and the obtained results are compared with the ones of other theoretical model. Perhaps, the acquired theoretical results are of great interest and would get precise validations experimentally in near future.

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Date submitted: 02 Feb 2007

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