

Abstract Submitted
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Optical absorption in a spherical artificial atom YIMING MI, College of Fundamental Studies, Shanghai University of Engineering Science, SHUICHI IWATA, RACE, The University of Tokyo — Considering the nonlocal coupling between the electric field of the incident electromagnetic wave and the polarizability of a spherical semiconductor artificial atom, the optical absorption of the artificial atom is studied theoretically. This nonlocal coupling results in a small size and field dependent shift and broadening of the excitonic resonance. These acquired theoretical results are perhaps of great interest and would get precise experimental validations in future.

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