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标题: Terahertz wave generation in coupled quantum dots
作者: Ma, YR (Ma Yu-Rong); Guo, SF (Guo Shi-Fang); Duan, SQ (Duan Su-Qing)
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摘要: Based on coupled quantum dots, we present an interesting optical effect in a four-level loop coupled system. Both the two upper levels and the two lower levels are designed to be almost degenerate, which induces a considerable dipole moment. The terahertz wave is obtained from the low-frequency component of the photon emission spectrum. The frequency of the terahertz wave can be controlled by tuning the energy levels via designing the nanostructure appropriately or tuning the driving laser field. A terahertz wave with adjustable frequency and considerable intensity (100 times higher than that of the Rayleigh line) can be obtained. It provides an effective scheme for a terahertz source.
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地址: [Guo Shi-Fang; Duan Su-Qing] Inst Appl Phys & Computat Math, Beijing 100088, Peoples R China
[Ma Yu-Rong] Beijing Vocat Coll Elect Sci, Beijing 100176, Peoples R China
通讯作者地址: Duan, SQ (通讯作者),Inst Appl Phys & Computat Math, POB 8009, Beijing 100088, Peoples R China
电子邮件地址: duan_suqing@iapcm.ac.cn
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