

Generation of Four-Photon Coherent State via Degenerate Raman Interaction

CHEN Mei -Feng

Department of Electronic Science and Applied Physics, Fuzhou University, Fuzhou 350002, China
(Received: 2005-4-29; Revised: 2005-8-10)

Abstract: A scheme is presented for generating a four-photon coherent state via the degenerate Raman interaction. The scheme does not need classical fields to manipulate the atoms. Its another advantage is that the atomic spontaneous emission can be neglected. Therefore, the coherence of the system may be better maintained. The scheme can be generalized to generate superposition of 2^n coherent states and superposition of 2^n two-mode coherent states. The coherent states in each mode are on a circle symmetrically.

PACS: 42.50.Dv

Key words: four-photon coherent state, Raman interaction

[\[Full text: PDF\]](#)

Close