



Optica Applicata 2004(Vol.34), No.3, pp. 331-339

Multi-photon processes considering magnetic sublevels coherence

G.G. Adonts, E.G. Kanetsyan

SEARCH

[Advanced search](#)

Keywords

multi-photon processes

Abstract

The exact nonlinear theory of polarized radiation propagation is derived in adiabatic following approximation taking into account different populations and coherence of atom magnetic sublevels. The nonlinear refractive indices for circularly and linearly polarized waves in the resonant media with arbitrary angular moments j_1 and j_2 are obtained.

The exact formulas for rotation angle of polarization ellipse axes (without deformation) are found on the sample of medium with $j_1 = 1/2$ and $j_2 = 3/2$. The influence of coherence of magnetic sublevels on multi-photon phenomena and their specific behavior is analyzed.



173.4 kB

[Back to list](#)

© Copyright 2007 T.Przerwa-Tetmajer All Rights Reserved 2007

stat4u



About Optica Applicata

Current issue

Browse archives

Search

Editorial Board

Instructions for Authors

Ordering

Contact us