

Theory of photorefractive resonance for localized beams in two-carrier photorefractive systems

Submitted by Emmanuel Lemoine on Wed, 10/29/2014 - 11:46

Titre Theory of photorefractive resonance for localized beams in two-carrier photorefractive systems

Type de publication Article de revue

Auteur Leblond, Herv  [1], Fressengeas, Nicolas [2]

Editeur American Physical Society

Type Article scientifique dans une revue   comit  de lecture

Ann e 2009

Langue Anglais

Date 2009/09/25

Num ro 3

Pagination 033837

Volume 80

Titre de la revue Physical Review A

ISSN 1050-2947

R sum  en anglais

This paper extends the existing theory of two-carrier photorefractivity resonance, which is generally applied to iron doped indium phosphide (InP:Fe), to the case of low nonharmonic illumination. The space charge field profile is computed, and the variations of its amplitude, width and position are determined as functions of the background intensity. The effect of photorefractive resonance on these quantities is evidenced, contributing to the understanding of published experimental results in InP:Fe.

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DOI 10.1103/PhysRevA.80.033837 [4]

Lien vers le document <http://dx.doi.org/10.1103/PhysRevA.80.033837> [4]

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