



Investigation of the third-order nonlinear optical properties in porphyrin solutions in the picosecond regime

Submitted by Jean-Luc Godet on Mon, 11/02/2015 - 17:34

Titre	Investigation of the third-order nonlinear optical properties in porphyrin solutions in the picosecond regime
Type de publication	Article de revue
Auteur	Chniti, M. [1], Cassagne, Christophe [2], Godet, Jean-Luc [3], Boudebs, Georges [4]
Pays	Singapour
Editeur	World Scientific Publishing
Ville	Singapour
Type	Article scientifique dans une revue à comité de lecture
Année	2015
Langue	Anglais
Date	Jan-09-2015
Numéro	03
Pagination	1550030
Volume	24
Section	03
Titre de la revue	Journal of Nonlinear Optical Physics & Materials
ISSN	0218-8635
Mots-clés	nonlinear absorption [5], nonlinear refractive index [6], porphyrins [7], Z-scan technique [8]
Résumé en anglais	<p>The D4σ-Z-scan technique is used to evaluate the sign and the magnitude of the nonlinear (NL) refractive index and the NL absorption (NLA) coefficient with a laser delivering single pulses in the picosecond regime at 355 nm, 532 nm and 1064 nm. The NL optical response of the zinc porphyrins (Pph) has been found to be significantly enhanced. The study of the NLA and refraction is performed, taking into account the time dependence and the spectral width of the incident laser. The variations of the NL coefficients as a function of the intensity and the concentration are provided and are found to be linear.</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua14156 [9]
DOI	10.1142/S0218863515500307 [10]
Lien vers le document	http://www.worldscientific.com/doi/abs/10.1142/S0218863515500307 [11]
Titre abrégé	J. Nonlinear Optic. Phys. Mat.

Liens

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- [10] <http://dx.doi.org/10.1142/S0218863515500307>
- [11] <http://www.worldscientific.com/doi/abs/10.1142/S0218863515500307>

Publié sur *Okina* (<http://okina.univ-angers.fr>)