



Third-order nonlinear optical response of push-pull azobenzene polymers

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Auteur	Papagiannouli, I. [1], Iliopoulos, Konstantinos [2], Gindre, Denis [3], Sahraoui, Bouchta [4], Krupka, Oksana [5], Smokal, Vitaliy [6], Kolendo, Aleksey [7], Couris, S. [8]
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Résumé en anglais	<p>The nonlinear optical response of a series of azo-containing side-chain polymers is investigated using Z-scan technique, employing 35 ps and 4 ns laser pulses, at 532 nm. The systems were found to exhibit strong nonlinear optical response, dominated by nonlinear refraction. In all cases, the nonlinear absorption and refraction have been determined and are compared with those of disperse red 1 considered as reference. The corresponding third-order susceptibilities $\chi^{(3)}$ were determined to be as large as 10 (7) and 10 (5) esu under ps and ns laser excitation, respectively. Finally, the results are discussed and compared with other reported data.</p>
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Liens

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