



Amplified spontaneous emission of 3-(1,1-dicyanoethenyl)-1-phenyl-4,5-dihydro-1H-pyrazole molecule embedded in various polymer matrices

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Auteur	Mysliwiec, Jaroslaw [1], Sznitko, Lech [2], Szukalski, A. [3], Parafiniuk, K. [4], Bartkiewicz, Stanislaw [5], Miniewicz, Andrzej [6], Sahraoui, Bouchta [7], Rau, Ileana [8], Kajzar, François [9]
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Résumé en anglais	Results of studies on the amplified spontaneous emission (ASE) phenomenon in 3-(1,1-dicyanoethenyl)-1-phenyl-4,5-dihydro-1H-pyrazole (DCNP) molecules in four different polymeric matrices are reported. We have analyzed ASE spectra coming from thin films of DCNP-matrix samples when excited by the Nd:YAG nanosecond pulsed laser doubled in frequency ($\lambda = 532$ nm). We report on ASE characteristics in function of different excitation pulse energy densities evaluating ASE thresholds, exponential gain coefficients and reporting the influence of the specific matrix-dye interactions on the photo-degradation process of the dye.
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Liens

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