



## Applications of the DNA-based material for lasing and dynamic holography

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Auteur	Mysliwec, Jaroslaw [1], Sznitko, Lech [2], Smoczynska, Barbara [3], Bartkiewicz, Stanislaw [4], Miniewicz, Andrzej [5], Sahraoui, Bouchta [6], Kajzar, François [7]
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Résumé en anglais	We present results of possible applications of a modified DNA-dye system for lasing and dynamic optical information recording. The system consisted of biopolymeric matrix made of deoxyribonucleic acid (DNA) substituted with cationic surfactant molecule cetyltrimethyl-ammonium chloride (CTMA) and doped with a photochromic (Disperse Red 1) or fluorescent (Rhodamine 6G) molecules. Results of optical information recording were obtained in a typical degenerate two wave mixing experiment. For sample excitation we used a linearly polarized light of $\lambda = 514.5$ nm delivered by an argon ion (Ar <sup>+</sup> ) laser. For amplified spontaneous emission measurements we used 6 ns pulses of 532 nm wavelength delivered by Nd:YAG laser doubled in frequency.
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