Optical storage in photopolymers using 3D micrograting (Proceedings Paper)

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Paper Abstract

An optical system for writing and reading of microscopic holographic gratings in a photopolymer layer is presented. The reflection gratings created by a highly focused laser beam can be used to replace the pit-land structure in a disk-based optical storage system. The modulation range of such three-dimensional microgratings is clearly localized to the focal region of a focused write beam. Holographic recording allows for using various multiplexing methods. To achieve storage densities higher than currently available, we propose a combination of wavelength multiplexing and multilayer storage. The fist steps in the system development as well as microholographic recording in Aprilis CROP photopolymers are reported.

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