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Direct Surface Patterning Using Carbazole-based Azopolymer

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This paper is devoted to the investigations of the recording of 1-D and 2-D holographic gratings using thin films of polyepoxypropylcarbazole (PEPC) obtained by deposition from solutions and their use as registering media for. For the direct recording azopolymer films based on polyepoxypropylcarbazole: methyl red with magnetic particles of Fe_2SO_4 were used. Diffraction efficiency in transmission of the recorded gratings consisted ~ 34%. Morphology of films surface and obtained surface relief's was investigated using AFM and good quality of films surfaces and obtained relief's was shown. For the first time simultaneously surface and magnetic relief were directly recorded using PEPC thin films as registering media.