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We report on investigation of a light-induced anchoring of dye-doped liquid crystal(LC)in nematic phase. Contributions of light-induced dye adsorption and desorption processes as well as of the bulk-induced reorientation effect were separated by choosing specific geometries of the light irradiation. We propose a model that explains peculiarities of light-induced easy axis producing in nematic phase which differs from one in isotropic phase due to presence of anisotropic dark-adsorbed layer and effective bulk-induced director reorientation.

Keywords:

adsorption, desorption, dye doped liquid crystal, light-induced anchoring, nematic liquid crystal

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