

Highly Sensitive Photoaligning Materials on a Base of Cellulose-Cinnamates

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We report on development and characterization of new photoaligning polymers based on cellulose main chain and side fragments based on cinnamic acid containing alkenyl groups. The materials possess excellent photosensitivity, rather strong anchoring energy, low sticking parameter and can be considered as a promising candidate for LCD application, especially for plastic LCDs.

Keywords: liquid crystal; photoalignment; pretilt angle; sticking effect

INTRODUCTION

Discovery of the effect of control of liquid crystal orientation by light at the end of 80-th brought forth a lot of expectations for astonishing applications of this effect for LCD technology [1–3]. Possibility to get unidirectional alignment of LCs on polymer surface by polarized light irradiation allows developing advanced aligning technique. Unlike rubbing technique, photoaligning technology is not-contact one and

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