OP-B-51

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MODIFICATION 0F ORIENTATION BIREFRINGENCE IN CELLULOSE ESTER FOR MULTI-BAND RETARDATION FILMS BY BLENDING TECHNIQUE

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Biomass-derived cellulose esters are useful optical materials, and have been used in such application for many decades by virtue of their excellent transparency and high heat resistance. Some cellulose esters such as cellulose acetate propionate (CAP) also show extraordinary wavelength dispersion of orientation birefringence, a characteristic required for a multi-band retardation film. In this study, CAP is blended with poly(lactic acid) (PLA) by melt mixing method, and the wavelength dispersion of orientation birefringence is studied. PLA, also a biomass-derived material, is not suitable as optical films due to its poor heat resistance and low impact strength, despite having high orientation birefringence. However, by blending CAP with PLA, a film having high orientation birefringence with extraordinary wavelength dispersion can be obtained.