

Abstract Submitted
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Probing Interfaces of Multilayer Polymeric Compensation Films for Liquid Crystal Display system¹ WUMIN YU, MARK FOSTER, The University of Akron — Highly anisotropic polymer films formed by rigid-rod like aromatic polyimides show uniaxial negative birefringence and can be used as compensation films to widen the viewing angles of liquid crystal display system (LCD). Fluorinated pendent groups have been introduced to polyimide molecules to improve their solubility in common organic solvents. A new procedure for incorporating the compensation film in the multilayer LCD assembly by directly casting the polyimide film on a LCD unit as a substrate film, e.g. triacetate cellulose (TAC), is preferred in industry for its simplicity and cost-effectiveness. To obtain high quality multilayer films with excellent durability, the compensation films must adhere well to the TAC substrates. X-ray and neutron reflectivity techniques are being used to determine how the interface width between the polyimide film and TAC substrate varies with changes in polyimide chemistry or casting process parameters.

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