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SYNTHESIS OF CYANINE DYES CONTAINING QUINOLINIUM HALIDE AND INVESTIGATION OF FLUORESCENCE PROPERTIES

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ABSTRACT

In this study, seven synergists were prepared to improve the contrast ratio in blue color filters derived from cyanine by quenching fluorescence. Improving contrast ratio of LCD color filters, therefore, requires the use of the colorant that can quench the fluorescence without also influencing the color. The colorant must also to be soluble in commercial solvent and stable on typical thermal conditions in the manufacturing process. Four synergists, were prepared in this study, they had absorption maxima of approximately 570~620nm and quenched fluorescence by more than 24%. The synergists increased the contrast ratio by about 30%, due to effective quenching of the fluorescence from the blue color filter, without changing the chromaticity diagram values.

KEYWORDS: LCD Color Filters, Synthesis of Cyanine Dyes Containing Quinolinium Halide and Investigation

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