United States Patent [19]

Kanda et al.

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[54] **PHTHALIDE DERIVATIVES AND RECORDING SYSTEM UTILIZING THE SAME**

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[52] **U.S. Cl.** **346/220**; 346/223; 427/151

[58] **Field of Search** 346/217, 220, 223, 225; 427/151; 549/307, 308, 309

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,591,888 5/1986 Satake et al. 346/220

FOREIGN PATENT DOCUMENTS

124377 7/1984 European Pat. Off. 346/221
2004294 3/1979 United Kingdom 549/309

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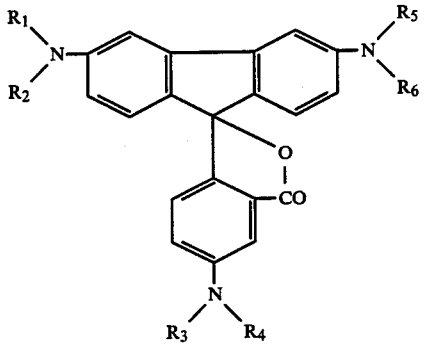
[57] **ABSTRACT**

A new phthalide derivative useful as a colorless chromogenic material has the following formula:



wherein R_1, R_2, R_3, R_4, R_5 and R_6 have the same meaning as defined hereinbefore.

3 Claims, No Drawings