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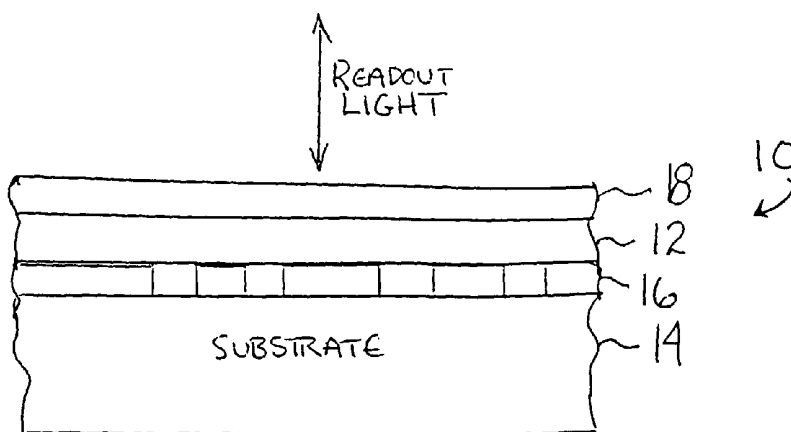
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(54) Title: LIGHTFAST LIMITED REPLAY DISK AND METHOD OF USE



(57) Abstract: An optically readable media (10) has an information-encoding layer (16) and at least one color-forming layer (12) that embodies an optical readout-limiting mechanism. In a first embodiment the at least one color-forming layer contains an additive that does not interfere with the optical readability of the media for a duration of a readout period. The additive, upon exposure to a source of optical radiation that is suitable for reversing the color-forming layer from an optical readout inhibiting state to an optical readout enabling state, undergoes a transformation that maintains the color-forming layer in the optical readout inhibiting state. More specifically, exposure to the source causes the color-forming layer to photobleach and the additive to oxidize, where the oxidation of the additive permanently inhibits the optical readability of the media. The additive may be a leuco dye. In one embodiment the color-forming layer is comprised of 3-[2,3-bis(4-diethylaminophenyl)vinyl]-6-dimethylaminophthalide and the additive is comprised of benzoyl leucomethylene blue. In a further embodiment the additive is placed into a protective layer (18) that overlies the color-forming layer.



WO 02/049010 A3

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER		
IPC(7) : B32B 3/00		
US CL : 428/64.1, 64.4, 64.8; 369/275.5, 283,288; 430/270.1, 945		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
U.S. : 428/64.1, 64.4, 64.8; 369/275.5, 283,288; 430/270.1, 945		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
West Database, Search Terms: Photochromic, limit?, prevent?, inhibit?, unreadable, replay?, read?		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,815,484 A (SMITH et al.) 29 September 1998, entire document, particularly columns 4, 9-10 and figures 2-7.	1-24
Y	WO 99/41738 A (MAZAR) 19 August 1999, entire document particularly pages 5,6,11,12,18 and figure 1.	1-24
Y	WO 99/67085 A (SPECTRADISC CORPORATION) 29 December 1999, entire document, particularly figures 6-7 and pages 18-21,25,26.	1-24
Y	US 6,011,772 A (ROLLHAUS et al.) 04 January 2000, entire document, particularly column 7-8 and table 2.	1-24
Y	US 4,412,231 A (NAMBA et al.) 25 October 1983, column 1/lines 41-65 and column 2/lines 62-66.	1-24
Y	US 5,994,262 A (IIDA et al.) 30 November 1999, column 4/lines 55-57.	3,9,15,21
Y	US 5,480,765 A (YANAGIHARA et al.) 02 January 1996, example 17.	3,9,15,21
Y	US 4,772,922 A (KAWAHARA et al.) 20 September 1988, column 3/lines 32-50.	3,9,15,21
Y	US 5,521,138 A (SHIMADA et al.) 28 May 1996, column 14/lines 30-31 and 48-49.	3,9,15,21
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"P"	document published prior to the international filing date but later than the priority date claimed	
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C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,392,141 A (INOUE et al.) 05 July 1983, column 5/lines 30-3 and 52-53.	3,9,15,21
Y	US 5,627,287 A (SASAKI et al.) 06 May 1997, column 19/lines 19-23 and 42-43.	3,9,15,21