



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 0 629 512 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
10.01.1996 Bulletin 1996/02

(51) Int Cl.⁶: **B41M 5/28, G03C 1/73**

(43) Date of publication A2:
21.12.1994 Bulletin 1994/51

(21) Application number: **94401241.8**

(22) Date of filing: **06.06.1994**

(84) Designated Contracting States:
DE FR GB IT

(72) Inventor: **Muramoto, Akira,**
c/o Minnesota Mining and
St. Paul, Minnesota 55133-3427 (US)

(30) Priority: **07.06.1993 JP 135868/93**

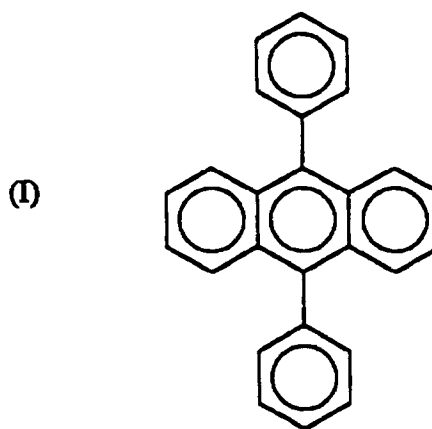
(74) Representative: **Warcoin, Jacques et al**
F-75116 Paris (FR)

(71) Applicant:
MINNESOTA MINING AND MANUFACTURING
COMPANY
St. Paul, Minnesota 55133-3427 (US)

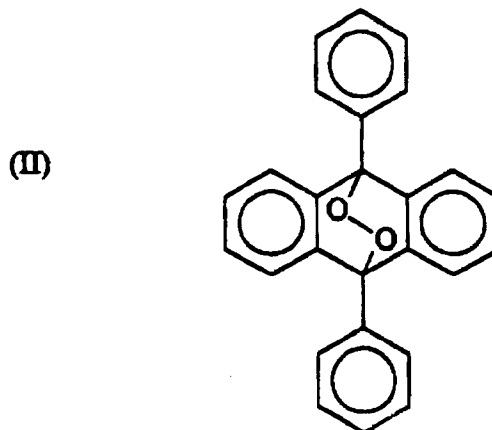
(54) **Reusable heat-sensitive colour imaging material**

(57) An imaging material that can repeatedly develop and erase an image, provide high color density and high gradation and is stable when exposed to heat and light, is provided.

A heat sensitive color material possessing a substrate, a color material layer laminated on the surface of said substrate, and a protective layer on said color material layer, characterized in that said color material layer comprises 100 parts by weight of a binder resin and 20 to 30 parts by weight of an aromatic polycyclic compound containing a 9,10-diphenylanthracene structure represented by the following formula:



or a corresponding endoperoxide construction represented by the following formula:



EP 0 629 512 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 94 40 1241

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
X	US-A-3 794 512 (T.H.BROWNEE ET AL) * column 1, line 25 - column 4, line 69 * * column 6, compound (B) * * examples I,II,VIII-XVI * * examples XXX-XXXVI * ---	1-3	B41M5/28 G03C1/73
X	DE-A-29 10 668 (H-D.BRAUER ET AL) * the whole document * ---	1-3	
X	PATENT ABSTRACTS OF JAPAN vol. 11, no. 241 (M-614) 7 August 1987 & JP-A-62 053 885 (KAO CORP) 9 March 1987 * abstract * & DATABASE WPI Week 8715, Derwent Publications Ltd., London, GB; AN 87-105797 * abstract * ---	1	
X	CHEMICAL ABSTRACTS, vol. 97, no. 4, 26 July 1982, Columbus, Ohio, US; abstract no. 31346z, V.V.BONDAR ET AL 'Light-sensitive material' page 512 ;column RIGHT ; * abstract * & SU-A-900 247 (INSTITUTE OF PHYSICS, ACADEMY OF SCIENCES, UKRAINIAN S.S.R.) ---	1	TECHNICAL FIELDS SEARCHED (Int.Cl.5) B41M G03C
-/--			
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 20 October 1995	Examiner Markham, R
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.92 (P4/C01)



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 94 40 1241

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
A,D	STUDIES IN ORGANIC CHEMISTRY, vol.40, 1990, AMSTERDAM pages 631 - 653 H.DURR ET AL Chapter 15. Cycloaddition reactions involving 4n+2 electrons. Photochromism based on the reversible reaction of singlet oxygen with aromatic compounds. * page 634 - page 635 * * page 643, line 25 - page 646 * * page 648, line 37 - page 652, line 7 * -----	1	
A	EP-A-0 518 470 (MINNESOTA MINING AND MANUFACTURING COMPANY) * page 3, line 52 - line 56 * * page 13, line 30 - line 32 * * examples * -----	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.5)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 20 October 1995	Examiner Markham, R
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.92 (P04C01)