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(12)

(KR)
(A)

(51) . Int. Cl. 7
C09K 11/06

(11)
(43)

2003-0074996
2003 09 22

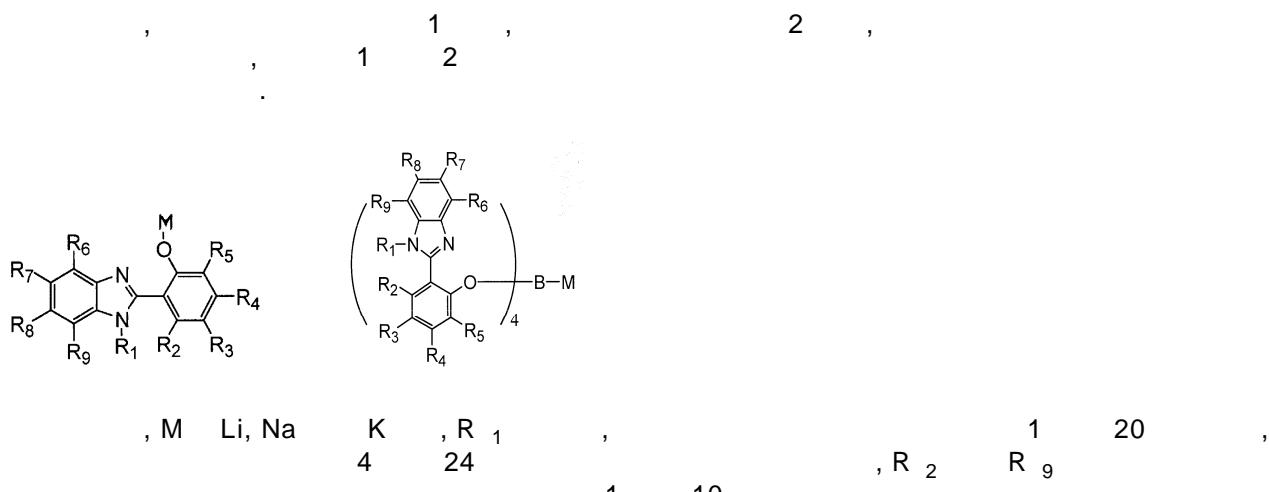
(21) 10-2002-0014058
(22) 2002 03 15

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(72) 956-2 APT306-1404

(74)

(54)



1

2

가
/
electroluminescence device; OELD) , , , (Organic EL

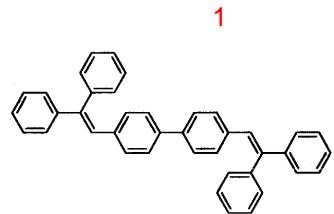
EL (Electroluminescence device) (Liquid Crystal Display
 ; LCD), (Plasma Display Panel; PDP), (Field Emission Display; F
 ED) , LCD 가 , 가

가 가 , (conjugated nap
 (host) (anthracene), (phenanthrene), (pyrene), (benzopyrene), (c
 hthalene), (picene), (carbazole), (fluorene), (biphenyl), (terphenyl), (qu
 hrysene), (triphenylene oxide), (dihalobiphenyl), (transstilbe
 rterphenyl), (diphenyl butadiene) , 가 1 μ m ,

(550nm) (Alq₃: aluminum-tris(8-hydroxyquinolinate), 4,539,507 5,150,006), BeBq2 (10-benzo[h]quinolinol- beryllium complex. Chemistry Letters(1993), 905-906), Almq (tris(4-methyl-8-quinolinolate)aluminum), Zn(BTZ)₂, Zn(NBTZ)₂, An(Oc-BTAZ)₂ (Jpn. J. Appl. Phys. Vol. 35 (1996), 1339-1341) , (460nm) ZnPBOX (Chemistry Letters(1994), 1741-1742), Balq (Bis(2-methyl-8-quinolinolato)(para-phenyl-phenolato)aluminum) , (styrylarylene) DPVBi (1,4-bis (2,2-diphenyl-vinyl)biphenyl) BczVBi (4,4'-Bis((2-carbazole)vinylene)biphenyl) , (590nm) 4-()-2- -6-(p- (4-(dicyanomethylene)-2-methyl-6-(p-dimethyl aminostyryl)-4H-pyran: DCM) .
가
(guest-host) .

5,503,910 5,536,949) . DPVBi

1 DPVBi (

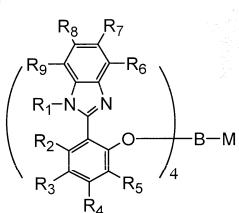
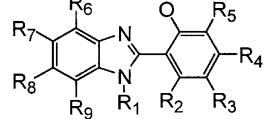


1

가 , 가

1 2

$$2 \quad , \quad 2$$



2

, M Li, Na K , R₁ , , R₂ R₉ 1 20 ,
 4 24 1 10 , , (fused ring)

2

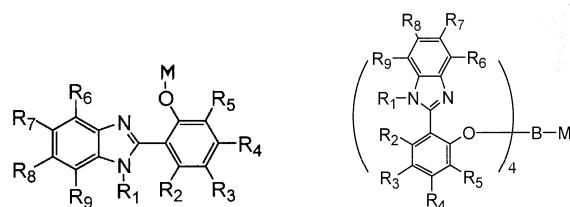
2

complex), Li-

가

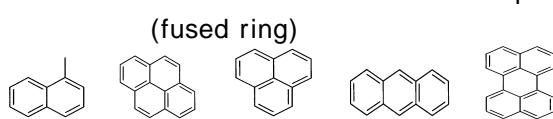
(boron

[2]



, M Li, Na K , Li R₁ , R₂
 1 20 , 4 24 1 10 , ,
 R₉ , , ,

(fused ring)



2

2

, N-²- 30 60 -2- LiBH₄, NaBH₄, KBH₄

, N- -2-, , 2
12-20 (lithium hydroxide)

$$1 \quad (10) \quad , \quad 1 \quad (12) \quad , \quad 1 \quad (12) \quad , \quad 1 \quad (hole \text{ } injection,) \quad , \quad (1)$$

4) (14)
 가 (fluorescent dye) / (dopant) (electron injection,) (14)
 2 (16) (12)

$$\begin{array}{ccccccccc}
 & & 1 & & 2 & & (12, 16) & & \\
 \text{가} & (14) & & , & & (14) & & \text{가} & , & 1 & 2 & (12, 16) \\
 & & & & 1 & & (12) & & (10)
 \end{array}$$

(10) , 1 (12) . 1
 (12) (hole injection, ,) , , 2 (16) 가 (I)
 ndium Tin Oxide; ITO), (Ag) , Al, Mg, Ca LiAl, Mg-Ag (electron
 injection, ,) , , ,

2
1 2 (12, 16) , 2
16) (14) (21, 22) (14) , 1 2 (12,
1 (25, 26)
(21, 22) (12)
,
(21) 4,356,429 ,
(porphyrinic)

[1]

	450mL	N-	- 2 -	28g(0.1mol)	,	LiBH ₄	0.52g (0.025 mol)
,			48			,	
450ml	,	,		(vacuum dry)		(boron complex)	21.43g(
: 65%)	.	.		1g		(sublimation)	
				3.4 x 10 ⁻³ torr	2 /min	420	,
				0.3g (40%)			

[2] 300mL N- -2- , 12 . 28g(0.1mol) , LiOH · H₂O 4.1g
18.7g(65%) .

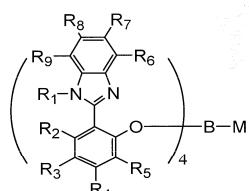
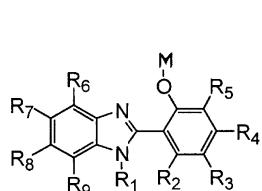
[3]
 (ITO)가
 . , ITO
 -NPD 400 m-MTDATA 200 , ,
 2 500 , ,
 200 LiF , ,
 2000 Mg-Ag
 cd/m² 3600
 460nm 0.7 lm/w

(57)

1.

2

[2]



, M Li, Na

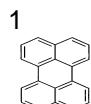
K 4 , R 1
24

1 10

, R 2
1 R 9
20

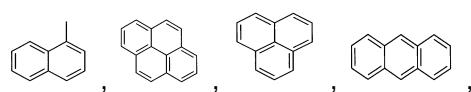
,

2.

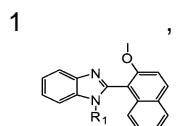


,

2

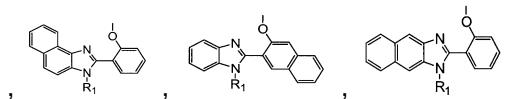


3.



, R 2 R 9

2



4.

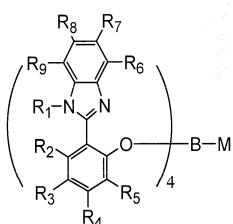
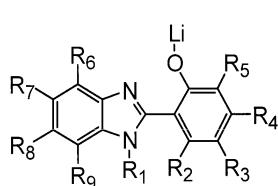
1 ;

2 ;

2

, 1 2

[2]



, M Li, Na

K 4 , R 1
24

1 10

, R 2
1 R 9
20

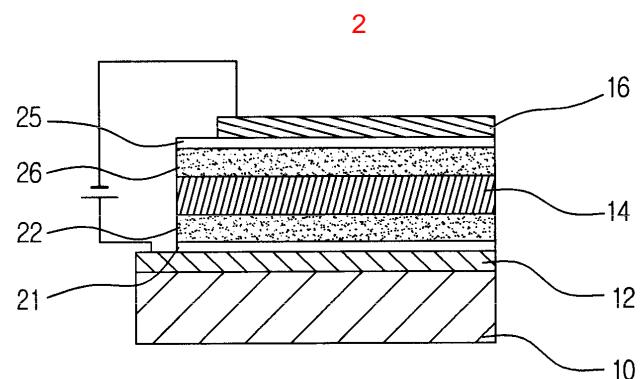
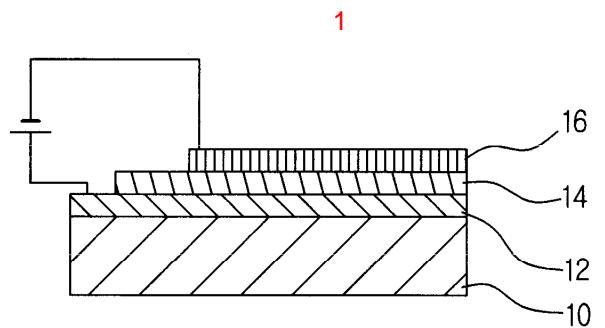
,

5.

4 ,

2

, 2



专利名称(译)	新型有机金属配合物和使用其的有机电致发光器件		
公开(公告)号	KR1020030074996A	公开(公告)日	2003-09-22
申请号	KR1020020014058	申请日	2002-03-15
[标]申请(专利权)人(译)	娜我比可隆株式会社		
申请(专利权)人(译)	Neoview的隆有限公司		
当前申请(专利权)人(译)	Neoview的隆有限公司		
[标]发明人	KIM KISEOK 김기석		
发明人	김기석		
IPC分类号	C09K11/06		
CPC分类号	C09K11/06 C09K2211/1007 C09K2211/1044 C09K2211/181 H01L51/0067 H01L51/0077 H01L51/5012 H01L51/5056 H01L2251/308 H05B33/14 Y10S428/917		
代理人(译)	李相HUN		
其他公开文献	KR100462047B1		
外部链接	Espacenet		

摘要(译)

本发明提供的有机电致发光器件包括至少一个有机化合物层，该有机化合物层包括作为第二电极表示的高功函数的新型有机金属配合物和具有第一电极的下列化学式，并且具有低功函数作为本发明关于具有高稳定性和耐热性的有机金属配合物，显示了高清晰度的蓝色和使用其的有机电致发光器件，并且位于第一和第二电极之间。等式中的M是Li，R 1是Na或K是氢的烷基或取代或未取代的碳数1至10，芳基，杂芳基或稠环基团取代或未取代的碳原子数为1至20的取代或未取代的取代或未取代的碳数为4至24的烷基或杂芳基是氢。苯并恶唑，苯并咪唑，硼，锂，有机电致发光器件，耐热性，稳定性。

