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2002 04 03(21) 10 - 2000 - 0056761  
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(71)

575

(72) APT106 - 1602

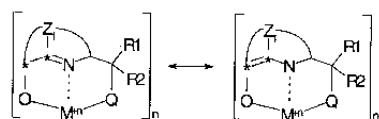
(74)

:

(54)

(Organic Electroluminescene Display) , (hole) (elect  
ron) ,  
(dioxinoid)

1



$$, M = Al, Ga, In, Zn, Mg$$

(fused aromatic ring)

$$, R_1, R_2$$

$$, Q$$

$$, n$$

$$, 1$$

$$, 1$$

$$, 3$$

$$, Z$$

$$, R$$

$$, (fused ring),$$

1

EL, , (tridentate), , ,

1 1 (2 - ) - 7 -

[ ]

, (EL Display)

[ ]

가 가

가 (Cathode Ray Tube: CRT), (Electroluminescene Display: ELD), (Light Emitting Diode: LED), (Plazma Display Panel: PDP)  
 가 (Liquid Crystal Display: LCD)

가 , , , , , ,  
 , 가 , , , , ,  
 가 , , , , , ,

가  
 , 1987 (Eastman Kodak) 200 V , 가 , 가  
 가 (color tuning) 가 , 가 , 가

가

가

, TPD  
(TPB)

2

가

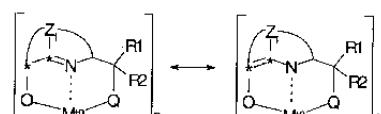
, 1,1,4,4 -

- 1,3 -

(bidentate)

1

(dioxinoid)

, M Al, Ga, In, Zn Mg  
(fused aromatic ring)

g),

1 , R<sub>1</sub>, R<sub>2</sub> , n 1 3 , Z<sub>1</sub>  
1 , Q , NR , R  
(fused rin

1

(OLED; Organic light emitting device)

가

(host)

(device)

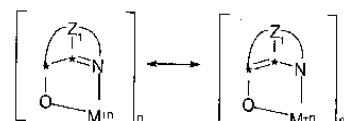
EL(Electrolumiscene)

(tridentate)

가 가

(bidentate)

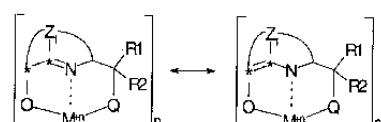
2



, M = Al, Ga, In, Zn, Mg  
(fused aromatic ring) .

1 가

1



, M = Al, Ga, In, Zn = Mg  
(fused aromatic ring) 1, R<sub>1</sub>, R<sub>2</sub>, n = 1, 3, Z = 1  
(fused ring)  
q), 1, Q, NR, R

Al, Ga, In, Zn Mg 1 , Al

$$1 \quad \quad \quad (2 - \quad \quad \quad ) \cdot 7 -$$

(FDA)  
(perylene), 6(exciton) N, - N -

1 (2 -  
diphenylhydroxymethyl) - 7 - hydroxyquinoline)  
rispropoxide)

1

(2 - ) - 7 -

opropoxide) (2 - ) - 7 - ((2 - diphenylhydroxymethyl) - 7 - hydroxyquinoline)  
inoline) 3 가 inumtris(2 - diphenylhydroxymethyl) - 7 - hydroxyquinoline)  
(alum  
CaH<sup>2</sup> (alum  
(rotary vaporization)

1 (2 - ) - 7 - PL  
(excitation wavelength) 380 nm 530 nm

1 ITO(1) ITO  
a - CuPc (buffer) (2) (buffer) alph  
20 nm 100 nm  
ITO(1) (IPA), TPD(3) 350  
2 × 10<sup>-6</sup> torr (2 - (4)  
( ) 0.1 10 % 400 Mg : Ag 10 : 1 1000  
Ag 500 LiF(5) (0.5 nm) (> 100 nm)(6) (OLED)

1 (400 ) /Al) -  
30,000 cd/m<sup>2</sup> 400 3 V  
5 cd/A  
, (2 - ) - 7 - (FDA),  
(2 - (Perlynene), 6 5 % 30 % EL  
가 35,000 - 40,000 cd/m<sup>2</sup> 가

Alq3  
520 nm  
5 V      6000 cd/m<sup>2</sup>      600

가

가

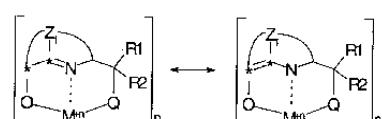
(57)

1.

1

(dioxinoid)

1



, M Al, Ga, In, Zn Mg  
(fused aromatic ring)      1, n 1 3 , Z 1  
g),      1 , R<sub>1</sub>, R<sub>2</sub>      , R<sub>1</sub>      , Q      NR      , R  
(fused rin

2.

1

,

(2 - ) - 7 -

3.

1

2

,

(FDA)

, (perylene),

6

N<sub>1</sub> - N<sub>2</sub> -

1

4.

3

,

5 30 %

5.

1

1

6
5
4
3
2
1
유리

专利名称(译)	用于电致发光器件的低分子着色化合物和使用其的有机电致发光器件		
公开(公告)号	<a href="#">KR1020020024915A</a>	公开(公告)日	2002-04-03
申请号	KR1020000056761	申请日	2000-09-27
申请(专利权)人(译)	三星SD眼有限公司		
当前申请(专利权)人(译)	三星SD眼有限公司		
[标]发明人	KIM SUNGHAN 김성한		
发明人	김성한		
IPC分类号	C09K11/06		
CPC分类号	C09K11/06 C09K2211/18 C09K2211/186 H01L51/0077 H01L51/0079 H01L51/5012 H01L51/5056 H01L51/5072 H05B33/14 Y10S428/917		
代理人(译)	PARK, 常树		
其他公开文献	KR100611207B1		
外部链接	<a href="#">Espacenet</a>		

## 摘要(译)

本发明涉及有机电致发光器件(有机电致发光显示器)的发光层,空穴传输层和低分子量发光用化合物,它可以应用于电子传输层。本发明提供一种有机电致发光器件,其为电致发光器件提供称为螯合的二恶英素化合物的低分子量发光化合物,其表达如下化学式1,并且以这种方式是热稳定的。化学式1化学式中的M为Al,选自Ga,In和Zn和Mg中的一种金属,n为固定数,为1~3。原子,其中Z1具有两个或多个稠合芳环R1,R2是单一性,这里,R是烷基化合物或热化合物Q是氧或NR,它们一起是稠合的(稠合环),选自由一种芳基化合物和烷基化合物组成的组的材料。有机EL,低分子量发光用化合物,三齿螯合化合物,掺杂剂,发光器件。

