

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl. ⁷
C09K 11/06

(11)
(43)

2002 - 0083025
2002 11 01

(21) 10 - 2001 - 0022284
(22) 2001 04 25

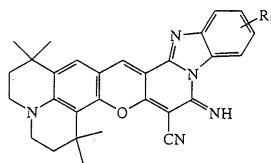
(71) 20

(72) 501 1302

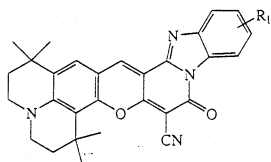
(74)
:

(54)

():



():



1

1

2

< >

: 20

: 30

: 40

: 36

(organic electroluminescent device : OLED)

가 가 가 ,

가 가 가 , 가 가 ,

가 가 가 .

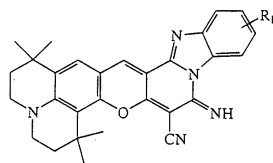
가 , 가 ,

nd state) 가 (exciton) 가, (excited state) (grou

, cd/m² 가 가 .

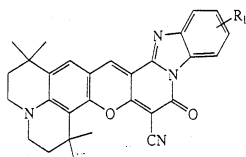
ITO(indium tin oxide, In₂O₃ + SnO₂)가
 (copper() Phthalocyanine) 10 30 nm
 - 1 -) - N,N' - (diphenylbenzidine) 30 60 nm
 (host)
 (hydroxyquinolate)) (Alq3) , Alq3
 ethylquinacridone) 30 60nm
 0 50nm 가 30 50nm
 Al/Li

가
 ()
 가
 (polarization effect)
 quenching)
 (concentration



()

()



R₁

() ()

가

()

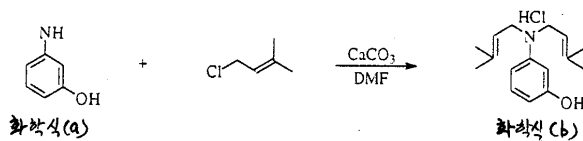
(1) 1

2- 80 (

(a))

(b)

1- -3- -2-



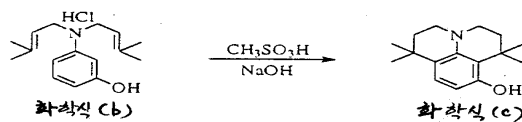
(2) 2

1

5

가 100

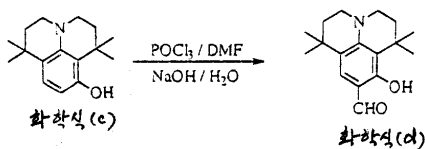
(c)



(3) 3

2

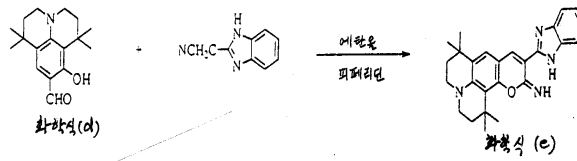
(d)



(4) 4

3

(d) 2- (piperidine)
(e)

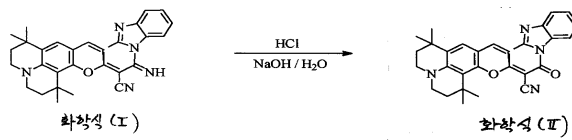


(5) 5

4

()

()
() 100



() ()

1 (10) (20), (30), (40)
(40) () ()

R₁ (H), (alkyl), (alkoxy), (halogen)
가 1 4 가 가 1 4
(F) (Cl)가

(20) (10) ITO(In₂O₃ + SnO₃) IZO(In₂O₃ + ZnO) (sputtering)
(40) (30) Ma/Ag, Al, Al/Li, Al/Nd

(30) () ()
() (8-) (Alq3) ()

(30) 2 (32), (34), (36), (38), (39)

(32) (20) (copper()Phthalocyanine)
 (34) N,N- (- 1 -) - N,N' -
 (triphenyl amine) (diphenylamine)
 (36) () ()
 (8 -) (Alq3) (dopant)
 (38) Alq3, 2 - (4 -)
 - 5 - (4 -) - 1,3,4 -
 (36)
 (39) (38) (Cs, Rb, K, Na, Li) (Li₂O)
 가 가

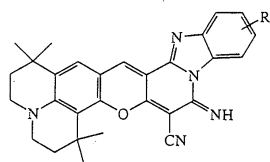
ITO 30nm
 N,N- (- 1 -) - N,N' -
 () () 50nm
 Alq3 40nm , Li₂O 25nm
 Mg, Ag 100nm
 가 가

() ()

(57)

1.

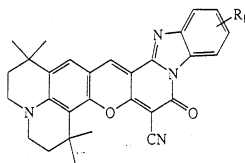
():



, R₁ (H), (alkyl), (alkoxy), (halogen)

2.

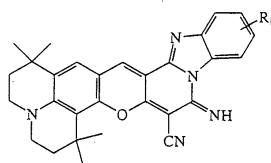
():



, R₁ (H), (alkyl), (alkoxy), (halogen)

3.

, , , ():



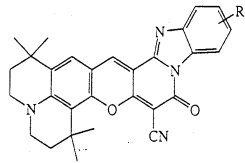
y), (halogen), R₁ (H), (alkyl), (alkox

4.

3, (8 -) (Alq3), ()

5.

, , , ():



halogen) , R₁ (H), (alkyl) , (alkoxy) , (

6.

5 ,

(8 -) (Alq3) , ()

7.

3 6 ,

R₁

8.

3 6 ,

R₁ 가 1 4

9.

3 6 ,

R₁ 가 1 4

10.

3 6 ,

R₁ (F) (Cl)

11.

3 6 ,

, , , , ,

12.

11 ,

R₁

13.

11 ,

R₁ 가 1 4

14.

11 ,

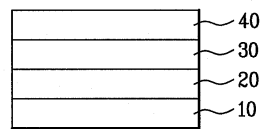
R₁ 가 1 4

15.

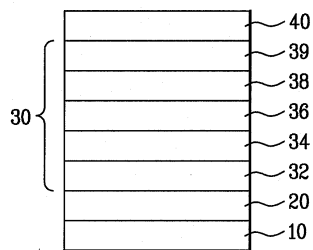
11 ,

R₁ (F) (Cl)

1



2



专利名称(译)	红色有机电致发光材料和使用其的有机电致发光器件		
公开(公告)号	KR1020020083025A	公开(公告)日	2002-11-01
申请号	KR1020010022284	申请日	2001-04-25
申请(专利权)人(译)	LG电子公司		
当前申请(专利权)人(译)	LG电子公司		
[标]发明人	KIM KIDONG 김기동		
发明人	김기동		
IPC分类号	C09K11/06		
CPC分类号	C09K11/06 C09K2211/1011 C09K2211/1018 H01L51/0071 H01L51/50 H05B33/14 Y10S428/917		
代理人(译)	李, SOO WOONG		
其他公开文献	KR100747309B1		
外部链接	Espacenet		

摘要(译)

本发明是以下化学式 (I) : 或者, 化学式 (II) : 具有高亮度的有机电致发光器件, 并且具有高效率的特性, 在片状结构和分子到期之间提高了器件的稳定性作为使用红色发光材料和表示为的材料有机电致发光器件, 提供了在电场下红光发射特性优异的保护性包装结构。发光材料和有机电致发光器件。

