

(19)
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C09K 11/06(11)
(43)2002 - 0096025
2002 12 28(21) 10 - 2002 - 0059637
(22) 2002 09 30

(71) () 284

(72) 73 - 69

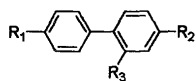
368 102 - 802

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(54)

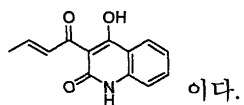
가 (aldehyde) (hydroxyquinoline) 1

【화학식 1】



상기식 중, R₁은 aldehyde로 이루어진 군으로부터 선택되고,

R₂는



R₃ 20 , , 1 20 1 20 , 1 20 가 6

1 , . , .
1

1

1 / / / / /

2 2 UV PL (Photoluminescence)
PL

*

*

11 :

12 : (anode)

13 : (hole transport layer)

14 : (light emitting layer)

15 : (electron transport layer) 16 : (cathode)

(aldehyde)

(hydroxy - quinoline)

(electroluminescence device: EL device)

가

가

EL (emitter layer)

EL

EL

가 가

가

EL

EL

EL ,
가

(anode)가
가

EL

가

citon)

가

(ex

, 1987

(Eastman Kodak)

.(Appl. Phys. Lett. 51, 913, 1987)

4 - (dicyanomethylene) - 2 - methyl - 6 - (p - dimethylaminostyryl) - 4H - pyran (DCM), DCJT, DCJ

TB Eu() complex (Chem. Lett. 1267, 1991)

(dopant) AlQ_3

. DCM

가
selfquenching

가

aldehyde hydroxyquinoline

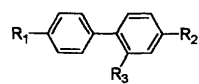
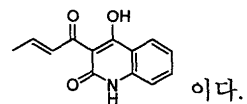
aldehyde hydroxyquinoline

1

aldehyde hydroxyquinolin

e

【화학식 1】

상기식 중, R_1 은 aldehyde로 이루어진 군으로부터 선택되고, R_2 는

이다.

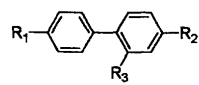
R_3 20 , , 1 20 , 1 20 가 6 20 .

(benzooxazole)

(benzooxazole)

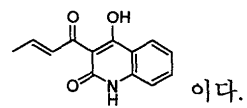
1

【화학식 1】



상기식 중, R_1 은 aldehyde로 이루어진 군으로부터 선택되고,

R_2 는



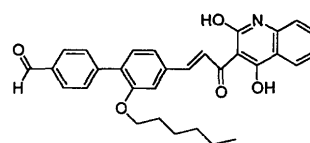
R_3 20 , , 1 20 , 1 20 가 6 20 .

1

R_3

2

【화학식 2】



2

π -

2

(hexyloxy) 가

π -

(benzooxazole)

가 .

EL

(ITO),

(SnO₂),

(ZnO)

(TPD), N,N' - (- 1 -) - N,N' - (3 -) - N,N' - [1,1' -] - 4,4' -
enzidine: α - NPD} {N,N' - di(naphthalene - 1 - yl) - N,N' - diphenyl - b

1

EL 가

(Mg - In), (Li), (Mg), (Al), - (Al - Li), (Ca),
- (Mg - Ag)

2

er: HIL)

가

(: α - NPD)(hole injection lay
(ITO)

CuPc, m - MTDATA, I - TNATA

1 1

ITO , N,N' - (3 -) - N,N' - [1,1' -] - 4,4' -
(TPD) 500

2

280

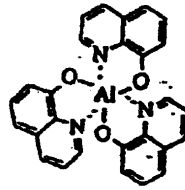
3

350

Al:Li

1500

【화학식 3】



2 2

가

- (turn - on) 5.5 V I - V , 2.5 cd/A .

1

1

1

(57)

1.

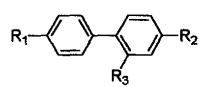
(aldehyde)

(hydroxyquinoline)

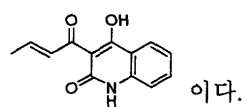
1

가

【화학식 1】



상기식 중, R₁은 aldehyde로 이루어진 군으로부터 선택되고,

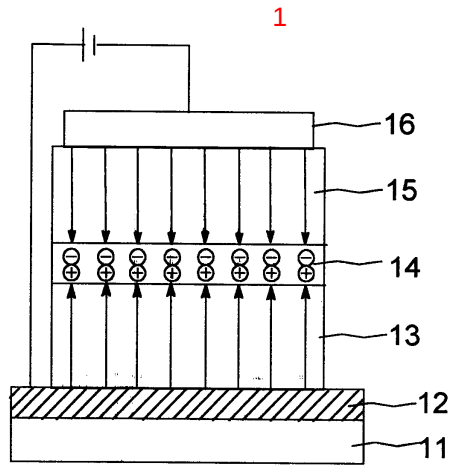
R₂는

이다.

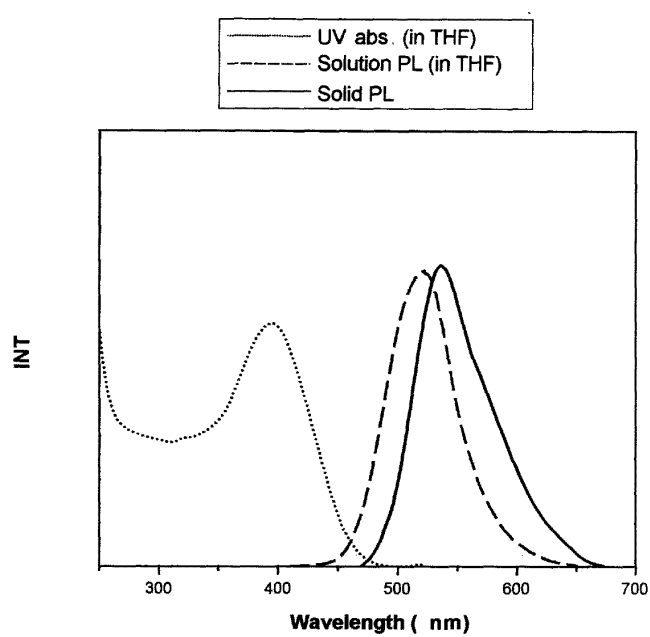
R_3 20 , , 1 20 가 6 20 가 6

2.

1 ,



2



<화학식 2>의 클로로포름 용액하에서의 UV 흡수 및 PL 스펙트럼과
필름상태에서의 PL 스펙트럼

专利名称(译)	一种具有醛和氢喹啉的联苯衍生物和有机电致发光元件		
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[标]申请(专利权)人(译)	KANGNAM JEVISCO		
申请(专利权)人(译)	江南是合作股份有限公司		
当前申请(专利权)人(译)	江南是合作股份有限公司		
[标]发明人	HWANG SUNGGUK 황승국 KIM YUNGKUN 김영근		
发明人	황승국 김영근		
IPC分类号	C09K11/06		
CPC分类号	C09K11/06 C09K2211/1007 C09K2211/1029 H05B33/14 Y10S428/917		
外部链接	Espacenet		

摘要(译)

本发明提供具有醛和氢喹啉的联苯衍生物，以及使用该联苯衍生物作为着色材料的有机电致发光器件。具有醛和氢喹啉的联苯衍生物具有下式(1)。

- 1 - R³为碳原子数1~20的烷基，例如氢，甲基或叔丁基，碳原子数6~20的芳基，碳原子数1~20的烷基，碳原子数6~20的芳基，碳原子数1~20的烷氧基。

< < < 根据本发明的式(1)化合物可用作显示元件的着色材料作为红色发光材料。另外，根据本发明的有机电致发光器件使用化学式1的化合物形成诸如发光层的有机膜并发射红光。 1

