

(19) (KR)
(12) (B1)

(51) 。 Int. Cl.⁷
C09K 11/06

(45)
(11)
(24)

2004 07 23
10-0440901
2004 07 13

(21) 10-2001-0042770
(22) 2001 07 16

(65)
(43)

10-2003-0006826
2003 01 23

(73)

가 900

가 900

(72)

가 900

가 900

가 900

가 900

가 900

가 900

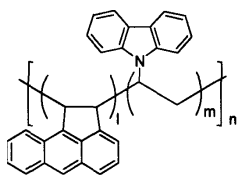
가 900

가 900

(74)

:

(54) () (- -)



[, l 1 (, m 0 .]

(, m 0)

(

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가

가

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가 .

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1

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2

2

3

3

2

¹ H-NMR

4

2

5

3

6

2

PL(:photoluminescence)

7

3

PL(photoluminescence)

8

2

EL(electroluminescence)

9

3

EL(electroluminescence)

*

*

11 :

12 :

(anode)

13 :

(hole transport layer)

14 :

(light emitting layer)

15 :

(electron transport layer)

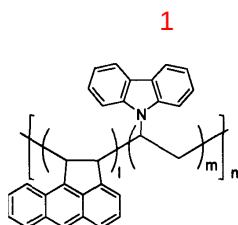
16 :

(cathode)

(electroluminescence device: EL device) , 가
(pericondensed) (, -) , 가
 ,
(photon) (electron) , (electron) (photon) (p-
hotelectronic device)
, (electroluminescence display) 가 (bac
klight) , 가 가 가
GaN, ZnS, SiC
p-n
, (light emitting diode)
(EL) 200V
(Appl. Phys. Letter., 51, p913(1987); Nat
ure, 347, p539(1990)).
(hole)
(Pope et al) , 1987 (Eastmann Kodak) 1963
(alumina-quinone) π - (Tang et al)
1 %, 가 1000 cd/m² 가 가 10 V 가
(Joule) 가 가 가
가
1 / / / /
(11) (anode; 12)가 (12)
(13), (14), (15) (cathode; 16)가
(13), (14) (15)
:(12) (16) 가 (12) (hole) (13)
(14) (14) (16) (15) (14)
(14) (exciton)
가
가
가
π -
(band gap) 'π - (π-conj
ugated polymer)'
(p-) (poly(p-phenylenevinylene): R. H. Friend
PPV) 가 1990
, LEP , 가
가 가, LEP
, ii)
, iii) () 가 가
, LEP , 5~10
(electroluminophore) 가
가 가 가

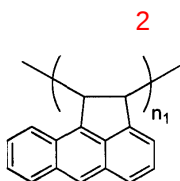
가

() 가
1



, l 1 , m 0 , n 10 10,000

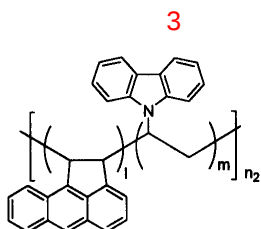
2 가



2 , n 1 10-10000

2

3 가



l	:	m	=	중합체 I
3	:	7	=	중합체 II
5	:	5	=	중합체 III
7	:	3	=	중합체 III

3 , n 2 가 1-10,000

(ZnO) (Al), Al:Li (ITO), (work function)가 (SnO₂), (Li), (Mg), 가 / / , / , 100 2000 , 100 2000 N,N'- (3-)-N,N- -[1,1'-]-4,4'- (TPD) (aluminum trihydroxyquinoline; Alq₃), 1,3,4-yl-1,3,4-oxadiazole) PBD(2-(4-biphenyl)-5-phenyl-3 , / / / / / / , / / / / , 500 Mℓ 3 AlCl₃ , 가 , -10 , 15 NaHCO₃ , 9- (A) (: 35%). 250 Mℓ 2 AlCl₃ 가 , 24 250 Mℓ 9- (A) , 1 ℓ Na₂CO₃ HCl 35 % , MgSO₄ , 1- 50 Mℓ 가 , 1- CO₃ (78 %). B) 500 Mℓ 2 가 , 20 , 3 가 , 1- (C) (95 %). Dean-Stark trap 700 Mℓ 1- p- 1 ℓ 2 3~4 , NaHCO₃ (D) (43 %). 2 , 1 2 가 0.05 M WCl₆ , 12 , 1 Mℓ , 50 12 ¹H-NMR (> 90%). 2 3 , 0.05 M WCl₆ , 12 , 50 12 (,) (> 90%). 3 ITO(indium-tin oxide) , ITO Al:Li 1200 1 600

4, 1, 2, 3, 3

PL 6, PL 1, 490 nm() 490 nm() (2)

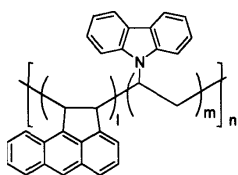
365 nm, 2, PL 7, 495 nm, (shoulder) 5

30 nm, 3, 4, EL, 8, 9

가

(57)

1.

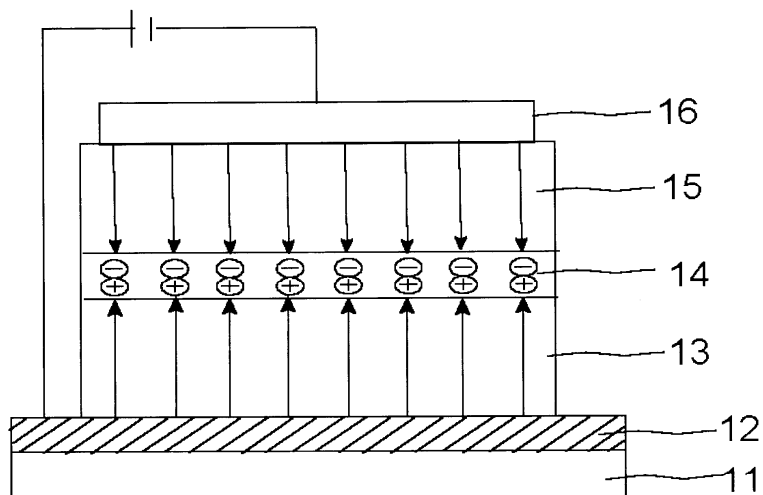


[1, 1000, m 0 1000, n 10-10000]

2.

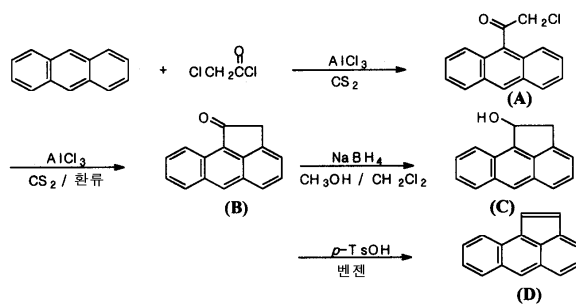
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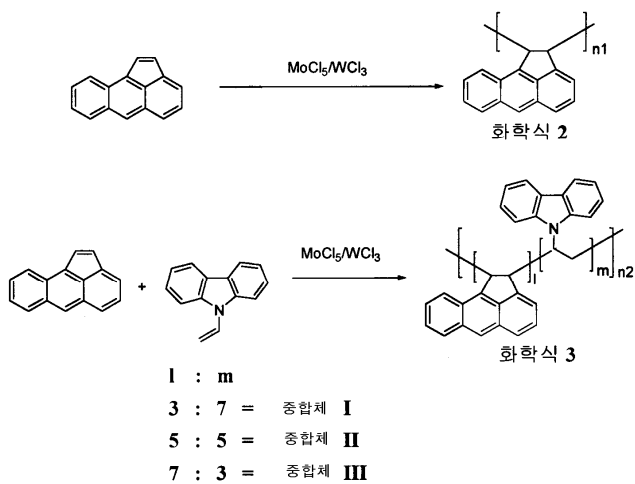


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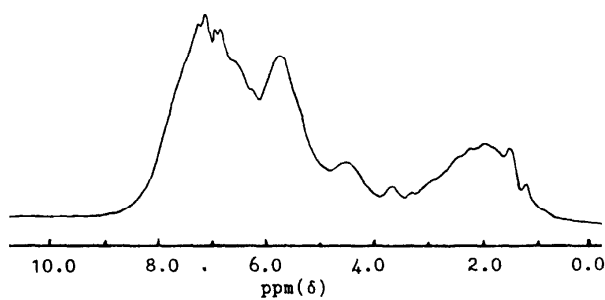
◆ 모노머 합성



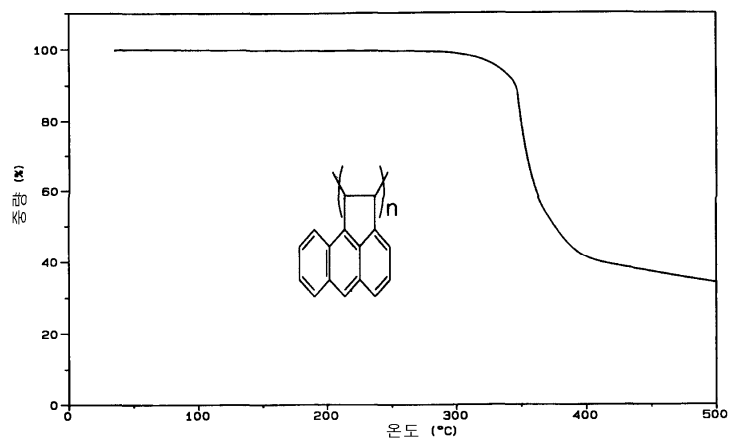
◆ 고분자 합성



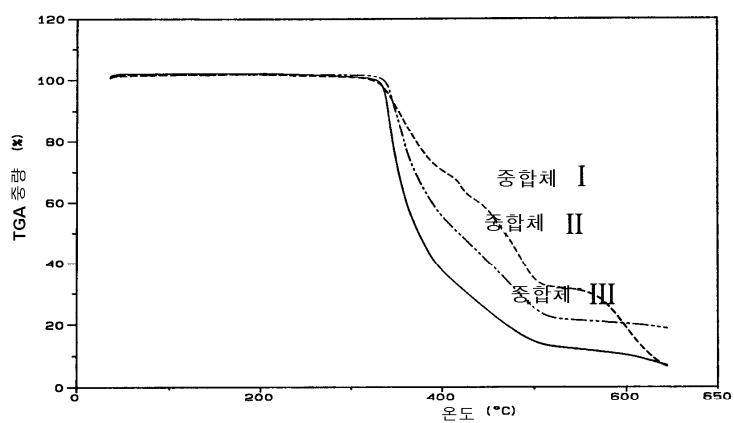
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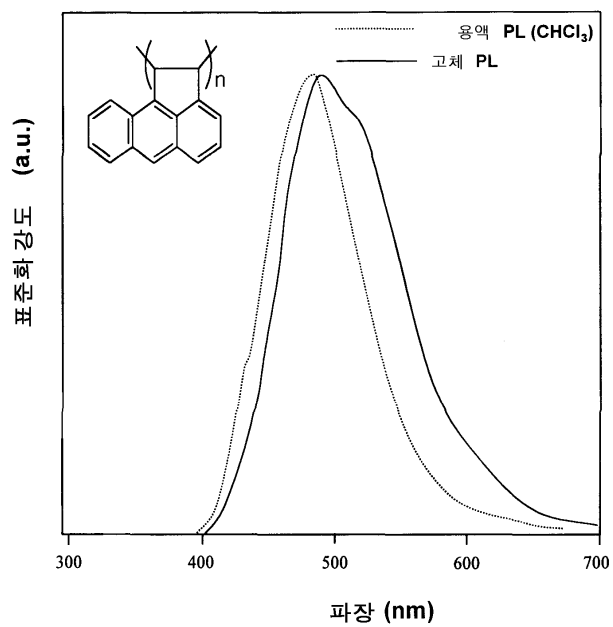
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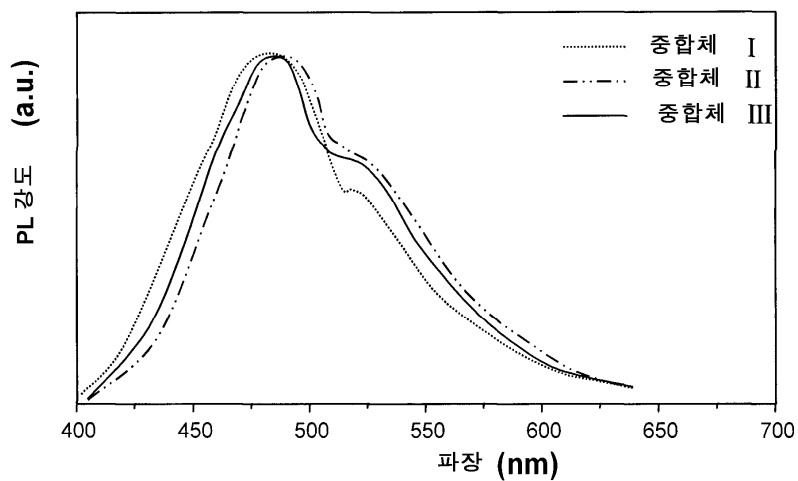
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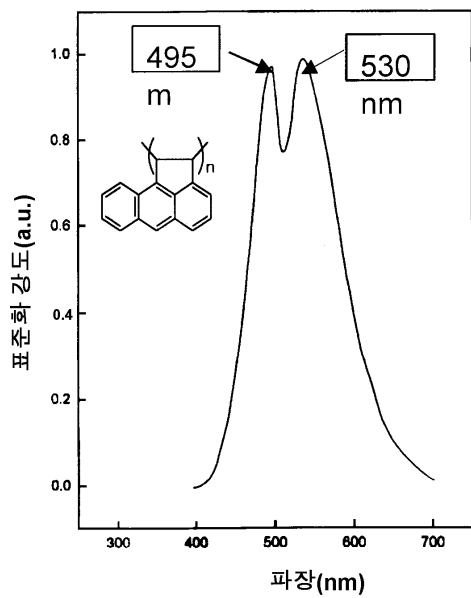
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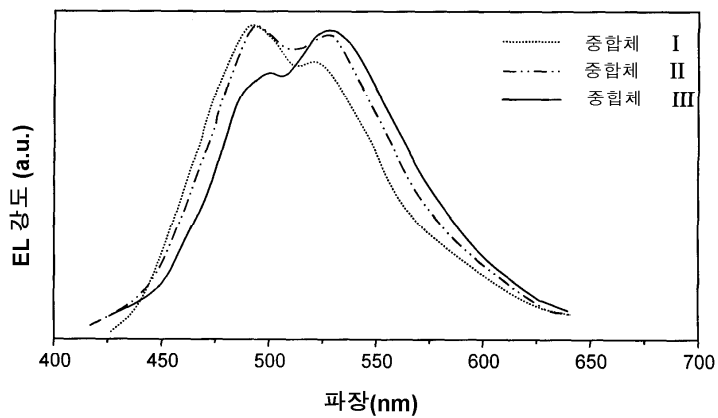
7



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9



专利名称(译)	聚 (ASA) , 聚 (ASA) - 共 - 乙烯基咔唑) 发光聚合物和使用其的电致发光器件		
公开(公告)号	KR100440901B1	公开(公告)日	2004-07-23
申请号	KR1020010042770	申请日	2001-07-16
[标]申请(专利权)人(译)	KWON KI SOON Gwonsungi LIM苏槿 Imsugeun		
申请(专利权)人(译)	Gwonsungi Imsugeun		
当前申请(专利权)人(译)	Gwonsungi Imsugeun		
[标]发明人	KWON SOON KI 권순기 KIM YUNHI 김윤희 SHIN DONGCHEOL 신동철 JUNG SUNGOUK 정성욱 KIM HYUNGSUN 김형선 JUNG HYUNCHEOL 정현철 JUNG SANGYUN 정상윤 LEE KISUK 이기숙		
发明人	권순기 김윤희 신동철 정성욱 김형선 정현철 정상윤 이기숙		
IPC分类号	C09K11/06		
CPC分类号	C09K11/06 H01L51/0035 H01L51/0042 H01L51/5012 H05B33/14 Y10S428/917		
代理人(译)	KIM , YOON BAE		
其他公开文献	KR1020030006826A		
外部链接	Espacenet		

摘要(译)

用途：提供聚 (乙炔) 和聚 (乙炔 - 共 - 乙烯基咔唑) 的发光聚合物和使用该聚合物的电致发光器件，以提高发光效率并通过不含空穴传输层使器件简化。组成：聚 (aceanthhlene) 和聚 (aceanthhlene-co-vinyl carbazole) 的发光聚合物由通式1表示，其中I是

1或更大的整数; m是0或更大的整数; n是10-10,000的整数。通过使聚(乙炔)或聚(乙炔-共-乙烯基咔唑)与过渡金属催化剂和乙烯基聚合引发剂聚合来制备聚合物。

