

1

(I),



가

Ar 가 4 20 , C₁ - C₂₀ - , C₃ - C₂₀ - , C₁ - C₂₀ - , C₃ - C₂₀ - (group)가 4

R₂ R''₂ C₁ - C₂₀ - C₄ - C₂₀ - ,

(composition)

(I)

(substrate)

(use)

(electronic device)

WO - A - 99/21936

- Ar -

Cl - CH₂ - Ar - CH₂ - Cl (monomer)

가 , 가 - Ar - CHCl - CH₂ - Gilch

(electroluminescent property)

PPV

PPV

, Ar (I)

, Cl 가 가

PPV

, (I) PPV

1

2

3

가

4

1 , 300 kg/ 가 , 500 kg/ 가
 (head)가 elongational viscosity) (thread) 가
 가 , 가 가

(conjugated chain)

p -

(蛇行) (reptation model)

rbazole)

, EP - A - 892028

0.75 % () EP - A - 892028 가

(polyvinylca

PPV

1,4 - , 2,6 - (naphthalenediyl), 1,4 - , 1,4 - - (anthracenediyl), 2,6 - , 9,10 - , 2,5 - (thienylene), 2,5 - (furanediyl), 2,5 - (pyrr olediyl), 1,3,4 - - 2,5 - (1,3,4 - oxadiazole - 2,5 - diyl), 1,3,4 - - 2,5 - (1,3,4 - thia diazole - 2,5 - diyl), 2,5 - [c] - , 2,5 - [c] - , 2,5 - [c] , [3,2 - b] - 2,5 - , [3,2 - b] - 2,5 - , - 2,7 - , 4,5,9,10 - - 2,7 - , 4,4' - , - 2,7 - , 9,10 - - 2,7 - , - 2,7 - , - 2,7 - , - 2, Ar - , 가 C₁ - C₂₂ - C₂ - C₁₀ - , C₁ - C₂₂ , C₄ - C₁₄ - , C₁ - C₂₂ (electron - donating group), (cyano), (electron - attracting group) , C₁ - C₁₄ -

, - Ar - 1,4 - , (1) (2) , r 0 , 1 , 0.5
 OC₁₀ 3,7 - , - Ar , OC₄ 2 - , r 0 , 1 , 0.5



(2)



(I)

(polythienylene - vinylene)

- Ar -

(IV)



(IV)

X O, S, NR₆

R₃ R₃' 가
(carbonitryl)

C₁ - C₄ -

R₆ C₁ - C₂₀ - C₁ - C₂₀ - C₁ - C₂₀ - C₁ - C₂₀ -

300 kg/

(II)

(I)

Z F, Cl, Br, I



(II)

(aggregate)가 / 가

PPV

10 20

, 0 30

. Z Cl

00201911.5

(Newtonian liquid)

가

(wetting agent)

0.5 2.0 % 75 kg/ 300 kg/ ,
 150 kg/ 500 kg/ ,
 가 PPV ,
 1.0 1.5 % ,
 75 kg/ 225 kg/ , 150 kg/ 450 kg/ ,

300 kg/ 9 ,
 PPV 가 , 1
 PPV , 2 PPV , 3
 (polyfluorine) PPV 가 , 2

1

1

1

()

1

-OC₁₀ 3,7 -

, r 0.5 (I)
NRS - PPV

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(I)

NRS - PPV (M_n) 9 × 10⁵g/ , (M_w) 2 × 10⁶g/ .
 1.2 % 가 Bransonic B32 . 4
 가 , M_n 3.9 × 10⁵g/ ,
 M_w 8.9 × 10⁵g/ 가 , M_n 2.3 × 10³g/
 , M_w 6.0 × 10³g/ 가 .
 1 " US" .
 2
 (anisole) NRS - PPV . 1 25
 M_n 4.5 × 10⁵g/ , M_w 5.3 × 10⁵g/ . US
 onifier 450 , 280W 13 (rod system) 가 Branson S
 ry manner) , 60% , (pulsato
 , M_n = 170 × 10³g/ , M_w = 110 × 10³g/ , 가 .
 1 , " (harsh) US" .
 3
 , 1 % PPV가 1 PPV .
 , 50μm (Microdop GmbH)가 .
 (ITO) (cavity) 가
 가 Hoechst AZ 4562 ,
 , 1.0mm ,
 (凹處) , V , U
 (h_{ini}) f.V/U.B , f , U
 , B . NRS - PPV 1
 , f = 300 Hz, V = 220 pl, U = 0.03 m/s, B = 260μm , h_{ini} 8.5μm .
 가 .
 1 가 가 (thread),
 , 가 가 .
 가 (landing position) 가 M_n/M_w 가 가 , 가
 가 M_w ,

[1]

		(g/l)	40s - 1	500s - 1	US(h)	US(h)	M _w /10 ³	M _n /10 ³	
1		8.81	11.6	11.0	21	10	170	90	
2		9.92	7.5	7.1	22	20	190	110	
3	4 - -	9.24	10.9	8.5	14.5	12	250	130	
4		7.56	8.4	6.8	23	0	370	150	
5		11.47	12.4	9.3	29	7.5	265	150	
6		8.86	8.5	7.7	7	13	310	170	
7	4 - /o - 3:1	8.40	8.7	8.2	16	12	350	170	
8		8.80	11.3	9.6	32	0	400	180	
9	o -	7.93	9.5	8.3	22	13	390	180	
10	/o - 1:1	11.7	13	12.5	23	24.5	380	190	
11	/o - 1:1	8.1	8.8	8.6	9.5	12	400	190	
12	o -	7.81	9.4	9.6	16.5	20	400	200	
13	/o -	8.89	9.3	9.3	15	10	450	210	
14	o - /	8.98	11.9	11.4	13.5	30	440	215	
15		7.81	8.7	8.1	21	0	490	220	
16		5.99	6.5	6.1	4	0	600	230	
17	o -	9.00	17.3	16.3	52	0	520	240	
18	/o - 3:1	8.29	13.3	12.0	20	0	500	250	가
19	/o - 1:1	8.89	23.4	19.1	9.5	0	690	290	가
20		6.72	14.7		4	0	880	310	가
21		6.75	18.1		3	0	980	320	가
22		5.99	7.60	7.12	2	0	890	390	
23		6.85	16.1		2	0	840	400	가
24		6.52	25.2		1	0	1100	420	가
25		4.3	11.0	11.7	0	0	530	450	가

4

, 11, 13 19 , 64 가

50μm

5

1 (10) 1 (10) (11) , 1 (12)
 , 1 (13) , (hole injection layer)(14) , (15) , 2 (16)
 . (11) 가 1.1mm . ITO 1 (12) , 280
 μm 30μm (11) , 1 (row electrode)
 (1) (anode)

(spin coating)(1000 rpm) AZ5218 - e (AZ Hoechst)
 (照射) 20 μ m 290 μ m
 (40 μ m) 230 mJ/cm²
 , 10 110 가 , 400 mJ/cm²
 , 45 ° (negative angle) , 1:1 AZ
 : DI 100 15 가
 1 (13) , 30 μ m , 280 μ m ,
 30 μ m , 20 μ m
 (13) 5.0 μ m
 rpm 3% -3,4- (PEDOT) , 2000
 130 3 , 가 250nm 가 8.3 μ m ,
 (14) , 100 M / PEDOT
 , 0.6 % NRS - PPV 3
 (15)
 , 2 (16) , 3nm Ba 200nm Al (15)
 , (13) (shadow mask) . 2 (16) (co
 lumn electrode)()
 r getter) (10) (envelop) (wate
 , BaO가
 6
 5가 , (1) NRS/PPV 1 , 3 5 (cavity)
 , (2) PPV 2 , 4 6
 60 x 60 μ m 가 1 , 3 , 4
 (=590nm) , 2 , 4 , 6 가 , 1 , 3 , 4
 가 , (=550nm)
 , PPV ,

가

(I)
 (substrate) 가 .

(57)

1.

(I),



(I)

가 ,

Ar 가 4 20 , C₁ - C₂₀ - , C₃ - C₂₀ - , C₁ - C₂₀ - , C₃ - C₂₀ - (group)가 4

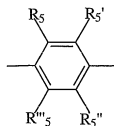
R₂ R''₂ C₁ - C₂₀ - C₄ - C₂₀ - , 300 kg/ , 500 kg/

2.

1 , 75 kg/ 225 kg/ , 150 kg/ 45 0 kg/

3.

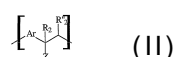
1 , (I) - Ar - ,



tryl) , R₅, R'₅, R''₅, R'''₅ , , , C₁ - C₄ - , (carboni

4.

1 , ,



Z F, Cl, Br, I , (II) (I)

5.

1 4

6.

5 , 0.5 2.0 % , 75 kg/
 , 150 kg/ , .

7.

(I)

300 kg/

300 kg/

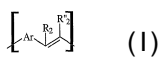
8.

(I)

, 5 6

9.

(I)

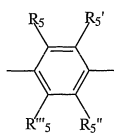


Ar 가 4 20 , C₁ - C₂₀ - , C₃ - C₂₀ - , C₁ - C₂₀ - , C₃ - C₂₀ -
 , C₁ - C₂₀ - , C₃ - C₂₀ - (group)가
 4

R₂ R''₂ C₁ - C₂₀ - C₄ - C₂₀ - ,
 300 kg/ , 500 kg/

10.

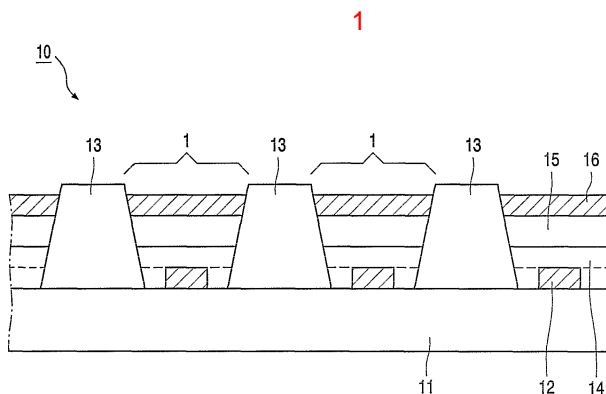
9 , -Ar- ,



tryl) , R₅, R'₅, R''₅, R'''₅ , C₁ - C₄ - (carboni

11.

10 , 2 1 , 2 1
 1 1 , 2 2 , 1 1
 1 2 2 , 2



专利名称(译)	聚合物，生产聚合物的方法和电子器件		
公开(公告)号	KR1020030022313A	公开(公告)日	2003-03-15
申请号	KR1020037001088	申请日	2002-05-27
申请(专利权)人(译)	默克比肩10吨geem BEHA		
当前申请(专利权)人(译)	默克比肩10吨geem BEHA		
[标]发明人	DUINEVELD PAULUS C 두인에펠트파울루스체 DEKOK VANBREEMEN MARGARETHA M 데콧반브레멘마르가레타엠 LIPS PRISCILLA A M 립스프리스실라아엠 DEKONING JOCHEM P M 데코닝요켄피엠 ROELANDSE CORNELIS D 로엘란제코넬리스데		
发明人	두인에펠트, 파울루스, 체. 데콧 반브레멘, 마르가레타, 엠. 립스, 프리스실라, 아., 엠. 데코닝, 요켄, 피., 엠. 로엘란제, 코넬리스, 데.		
IPC分类号	H01L51/50 C08G61/10 C08F8/26 C08G61/02 H01L51/00		
CPC分类号	H01L51/0004 H01L51/0038 Y10S428/917 C08G2261/312 C08G61/02 C08F8/26		
代理人(译)	韩国专利公司		
优先权	2001202029 2001-05-29 EP		
其他公开文献	KR100921361B1		
外部链接	Espacenet		

摘要(译)

包含式(1)结构单元的聚合物的数均分子量小于300kg/mol且重均分子量小于500kg/mol。其优选的实例是聚亚苯基-亚乙烯基。可以通过喷墨印刷将这种聚合物的组合物沉积在基材上。该组合物尤其可用于制备电致发光器件，例如多色电致发光器件。 - 1 - 1

