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(12) (A)

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(21) 10-2002-0010432
(22) 2002 02 27

(71) 19-9
136-104
311-1201

(72) 19-9
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2 7 ,

3 8 XRD ,

4 9 .

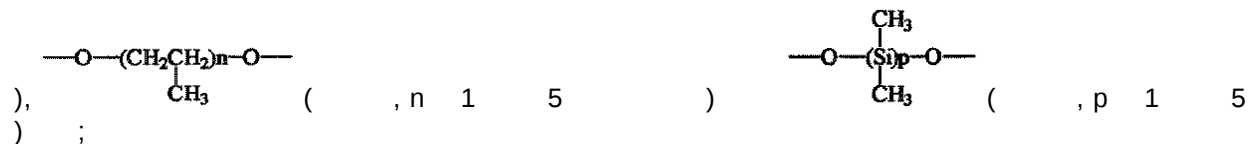
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polythiophene), ((p-) (PPV: poly(p-phenylenevinylene)), (TPD: tetraphenylbiphenyldiamine) PVK: polyvinylcarbazole) TPD 3 TPD 가

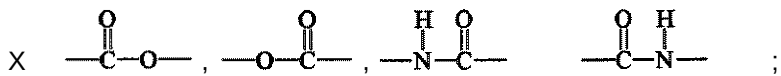
PVK 가 200 가 , 가 PVK (polysilane) 가

가 가 가 ,

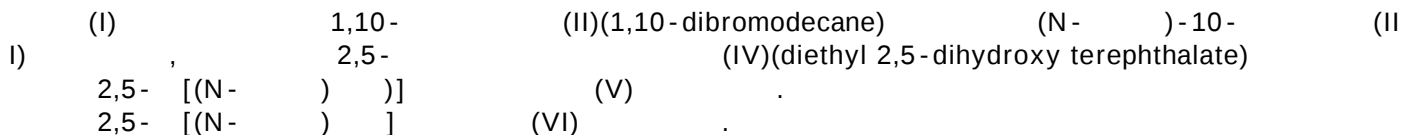
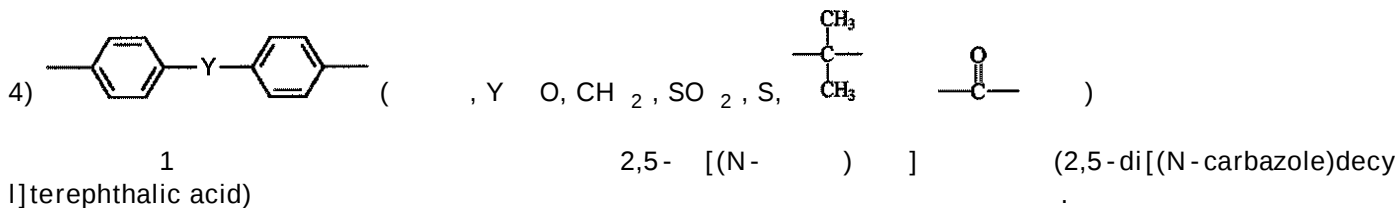
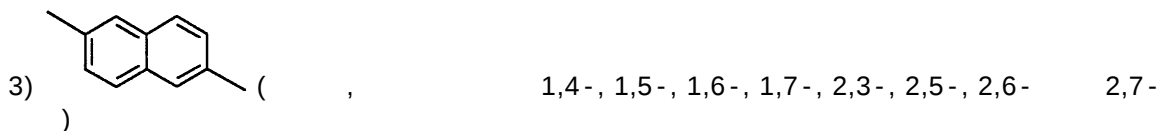
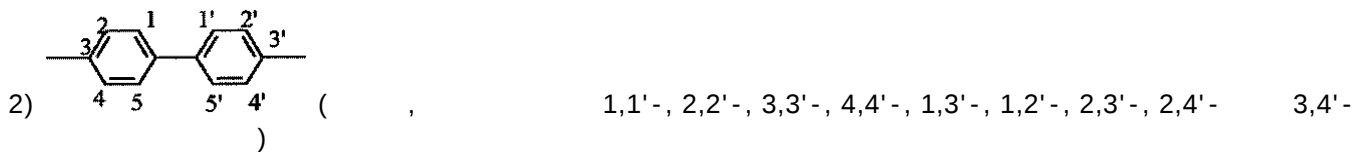
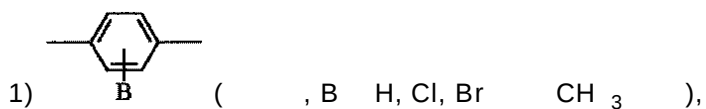
2 가 가 가 가 가 가 가



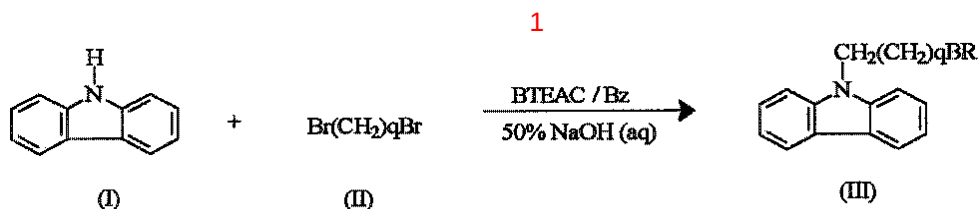
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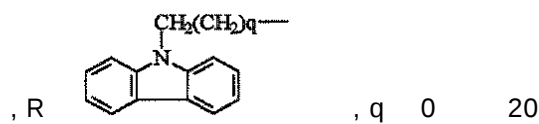
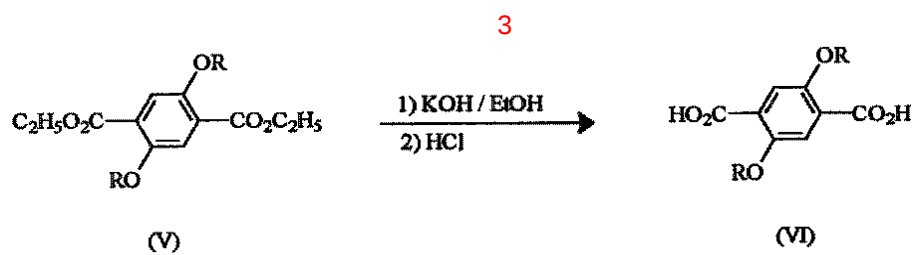
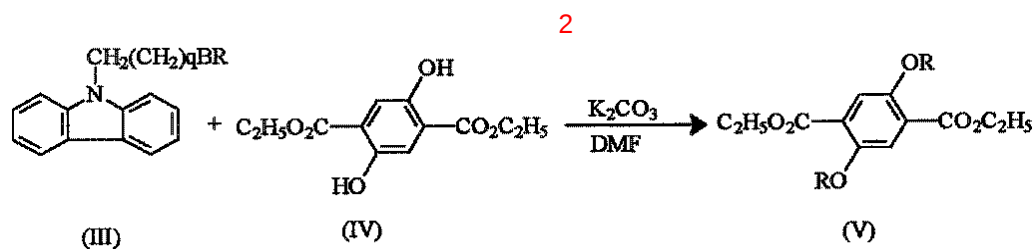


M 1) 4) 가 .

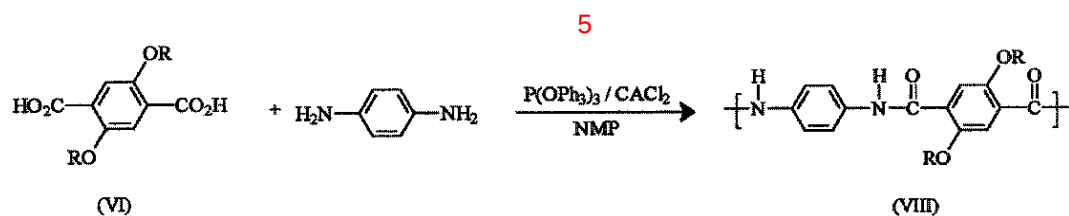
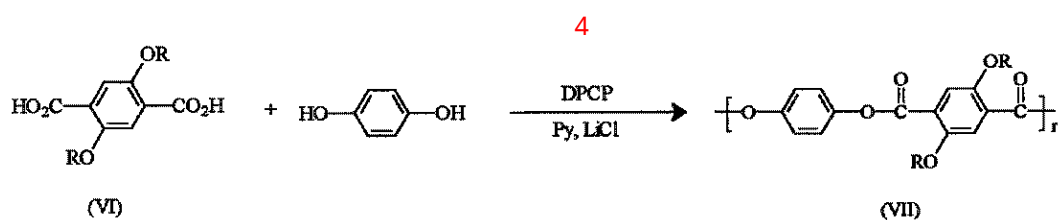


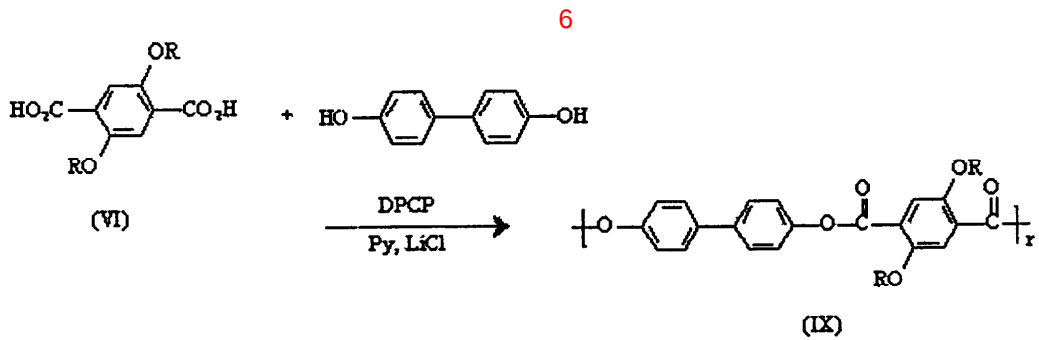
1 3 .





VI) (VII), (VIII) (IX) (

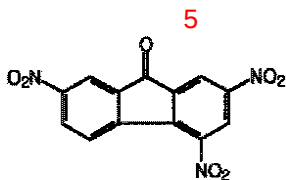




300 4 6 , R (, q 0 20) , r 3
 가 2,000 240,000 가
 가 가
 , 가 가

- (host-guest)

가 C₆₀ PVK 1 5 TNF(trinitro-fluorene-9-one) 1% 4
 4

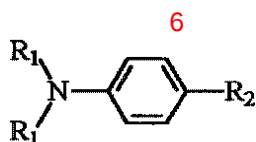


가 가 가 가 가
 , (layer structure) 가
 가 가 가 가 가
 가 가 가 가 가
 , 가
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가 가 가

가 1 (host-guest)

가 6 ()



10 , R₁ 1 10 , 가 1 10 , 5 (dicyanovinyl)

ITO(Indium Tin Oxide) 100 μm ITO 가

가 가 가 가 가 6 , 200 cm⁻¹ (50 V/μm) (two-beam coupling)

ning) 가 가 65% 가 (fan

1: (N-)-10- (III) (1)

(III) 1 (N-)-10- q=9 (N-)-10-

3 5.0 g(0.0299 mol) 50% NaOH 15 M 15 M BTEAC(benzyltriethylammonium chloride) 0.25 g 가 100 g 가 (20/1 V/V) (N-)-10- 80%

NMR IR

¹ H-NMR [CDCl₃, ppm]: 8.2(d, 2H), 7.5-7.2(m, 6H), 4.3(t, 2H), 3.4(t, 2H), 2.0-1.8(m, 4H), 1.6-1.3(m, 12H)

IR [cm^{-1}]: 3,100-3,000(aromatic C-H), 2,960-2,900(aliphatic C-H), 1,350-1,000(C-N), 750, 700(aromatic OOP)

2: 2,5- [(N-)] (V) (2)

2 2,5- [(N-)] (V)

250 Mℓ 3 K₂CO₃ 1.2 g(0.009 mol) 2,5- 1.14 g(0.0045 mol)
() DMF(dimethylformamide) 30 Mℓ , 1 (N-)-10- 4 g(0.01 mol) 가 50 가 24 K₂CO₃
DMF (10/1 V/V)

2,5- [(N-)] ,

90%

NMR IR ,

¹H-NMR [CDCl₃, ppm]: 8.1(d, 4H), 7.5-7.2(m, 14H), 4.3(m, 8H), 4.0(t, 4H), 2.0-1.7(m, 8H), 1.5-1.2(m, 30H)

IR [cm^{-1}]: 3,100-3,000(aromatic C-H), 2,960-2,900(aliphatic C-H), 1,750(C=O), 1,350-1,000(C-N), 750, 700(aromatic OOP)

3: 2,5- [(N-)] (VI) (3)

3 2,5- [(N-)] (VI)

가 2 가 2,5- [(N-)] 3.23 g(0.0037 mol) 100 Mℓ
KOH 0.84 g 30 Mℓ 가 6
, 2 N HCl

2,5- [(N-)]

90%

NMR IR ,

¹H-NMR [CDCl₃, ppm]: 11.0(s, 2H), 8.1(d, 4H), 7.8(s, 2H), 7.5-7.2(m, 12H), 4.4-4.2(m, 8H), 2.0-1.7(m, 8H), 1.5-1.2(m, 24H)

IR [cm^{-1}]: 3,600-2,400(-OH), 3,100-3,000(aromatic C-H), 2,960-2,900(aliphatic C-H), 1,750(C=O), 1,350-1,000(C-N), 750, 700(aromatic OOP)

4: (VII) (4)

4 (VII)

1000 Mℓ 3 7.1 g(0.00877 mol) (pyridine) 80 Mℓ 3 2,5- [(N-)]
g(0.023 mol) LiCl 0.7 g(0.02 mol) 가 90 30 DPCP(diphenylcyclopropanone) 6.1
one) 0.96 g(0.00877 mol) 100 Mℓ 가 90 24 (hydroquin

60

99%

NMR IR ,

¹H-NMR [CDCl₃, ppm]: 8.1(d, 4H), 7.6-7.2(m, 18H), 4.3(t, 4H), 4.1(m, 4H), 2.0-1.7(m, 8H), 1.5-1.2(m, 24H)

IR [cm^{-1}]: 3,100-3,000(aromatic C-H), 2,960-2,900(aliphatic C-H), 1,750(C=O), 1,350-1,000(C-N), 820(para-aromatic OOP)

가 28.6 1 , 100,000 .

5: (VII) (5)

5 (VII)

1000 Mℓ 3 7 g(0.0087 mol) CaCl₂ 6 g NMP(N-methyl-2-pyrrolidone) 80 Mℓ 2,5- [(N-)] 9 Mℓ
(paraphenyldiamine) 0.94 g(0.0087 mol) 가 P(Oph₃)₃ 5.4 g(0.017
4mol) 가 , 90 2 60
98%

NMR IR

¹H-NMR [CDCl₃, ppm]: 8.1(d, 4H), 7.6-7.2(m, 18H), 4.3(t, 4H), 4.1(m, 4H), 2.0-1.7(m, 8H), 1.5-1.2(m, 24H)

IR [cm⁻¹]: 3,440(N-H), 3,100-3,000(aromatic C-H), 2,960-2,900(aliphatic C-H), 1,750(C=O), 1,350-1,000(C-N), 820(para-aromatic OOP)

6: (IX) (6)

6 (IX)

1000 Mℓ 3 7.1 g(0.00877 mol) 80 Mℓ 3 2,5- [(N-)]
가 90 30 DPCP 6.1 g(0.023 mol) LiCl 0.7 g(0.02 mol)
100 Mℓ 가 90 24 4,4'- (4,4'-biphenol) 1.63 g(0.00877 mol)
60
99%

NMR IR

¹H-NMR [CDCl₃, ppm]: 8.1(d, 4H), 7.6-6.6(m, 22H), 4.3(t, 4H), 4.1(m, 4H), 2.0-1.7(m, 8H), 1.5-1.2(m, 24H)

IR [cm⁻¹]: 3,100-3,000(aromatic C-H), 2,960-2,900(aliphatic C-H), 1,750(C=O), 1,350-1,000(C-N), 820(para-aromatic OOP)

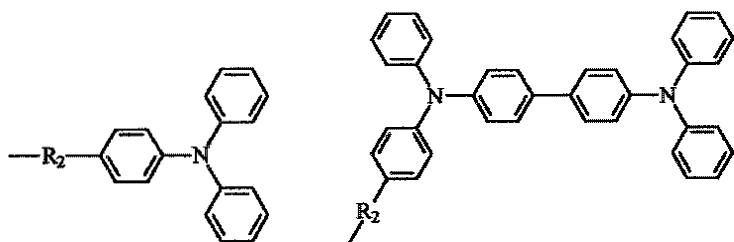
7:

4 4 C₆₀ 99:1
5 15 %가
ITO 가
100 μm 가 633 nm He-Ne ITO
PVK 4 2

8:

4 6 C₆₀ 64.5:35:1
5 15 %가

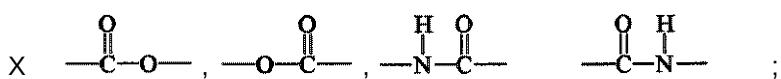
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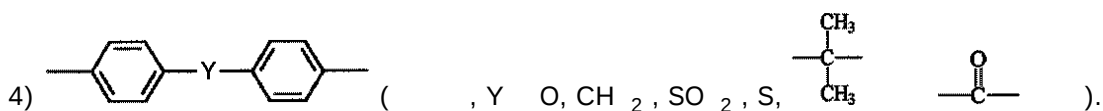
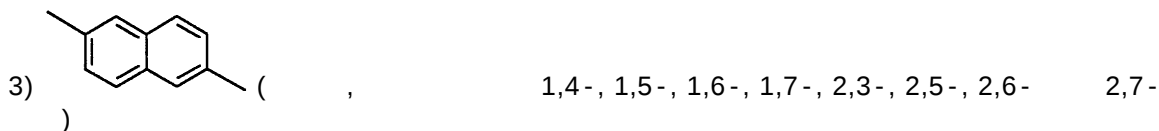
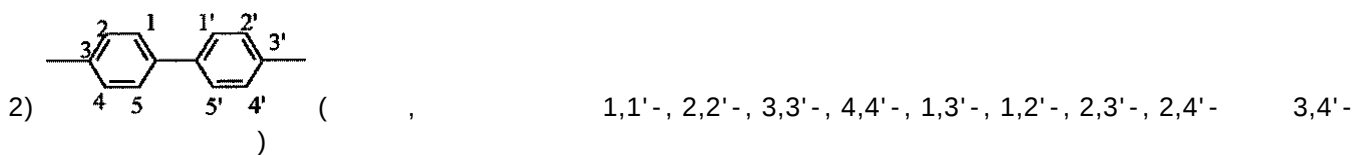
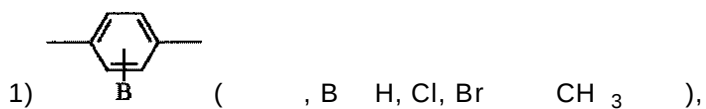
, R_2 -O-(CH₂)_v-O-(, v 1 20), -S-(CH₂)_w-S-(w 1 20

-O-(CH₂CH₂)_n-O-
),
) ;
 (, n 1 5)
 -O-(Si(CH₃)₂)_p-O-
 (, p 1 5

r , 3 300 ;



M 1) 4) 가 ;



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1 , 2,000 240,000 .

3.

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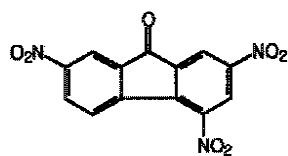
4.

3 , 4 5 가

4



5

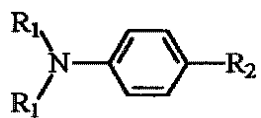


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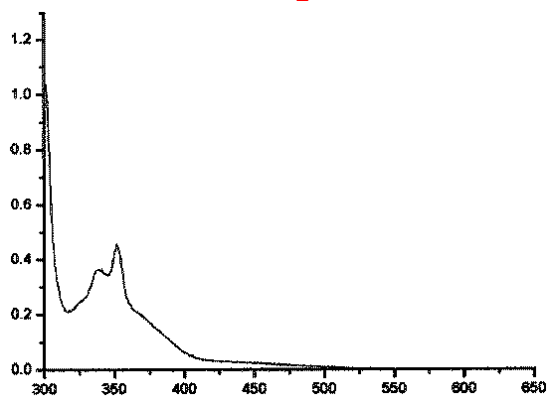
6 가

6

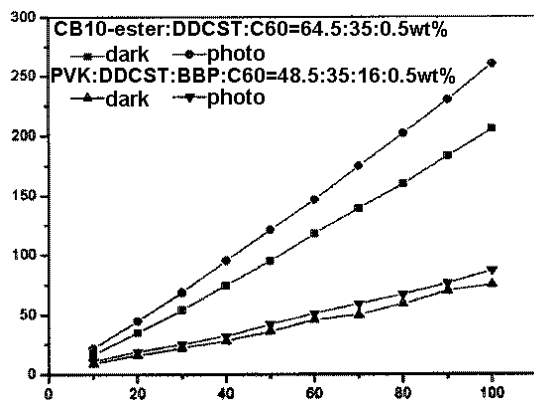


(5 10 , R_1 1 10 , 가 1 10 , R_2)

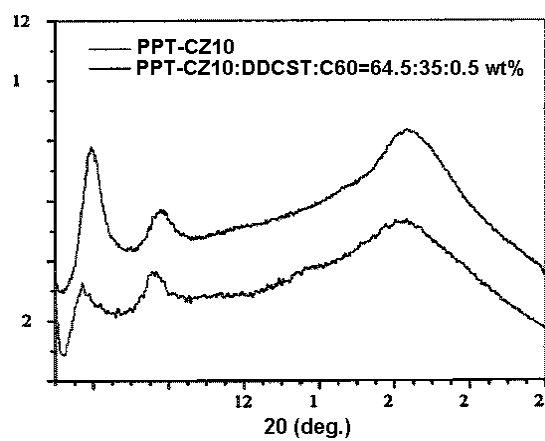
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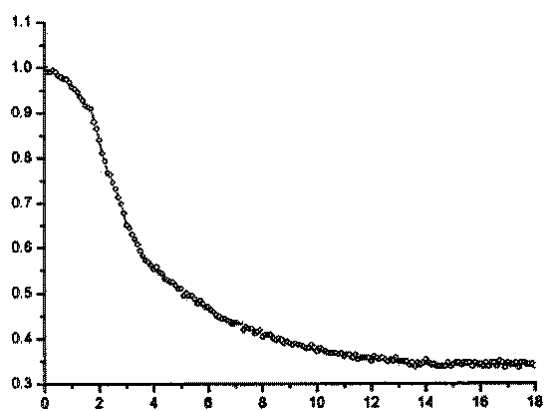
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3



4



专利名称(译)	具有空穴传输能力的自对准聚合物用于有机光折变材料和含有它们的光折射化合物		
公开(公告)号	KR1020030070958A	公开(公告)日	2003-09-03
申请号	KR1020020010432	申请日	2002-02-27
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发明人	이석현 이찬우 윤호성 김영범 권오필		
IPC分类号	H01L51/30 H01L51/50 C08G61/02		
CPC分类号	B82Y10/00 H01L51/5048 H01L51/0046 H01L51/0035 H01L51/0052		
代理人(译)	LEE , JONG WOO 朴YONG		
其他公开文献	KR100481315B1		
外部链接	Espacenet		

摘要(译)

本发明涉及用于有机光致折射材料的空穴传输层，其具有自排列聚合物和包含其的光折射混合物，提供引入的聚合物和包含其的光折射混合物，具有软侧链主链中的空穴传输特性强，同时由化学式1的重复单元结构组成。本发明的自排式聚合物具有高水平磁性构型性质的层结构。并且光折射混合物除了具有优异的稳定性而没有相分离问题和高光折变效果之外，还具有来自强主链的高热稳定性和来自软侧链的低玻璃化转变温度作为导电材料具有优异的性能光电导率使用相同的新型空穴传输聚合物，在光学信息处理装置，光学截止装置和有机发光装置的自然配置方面表现出优异的可加工性，快速响应率和高光电导率。可以制作。光折射，磁性结构，聚合物，可携带孔，电荷发生器，电光材料。

