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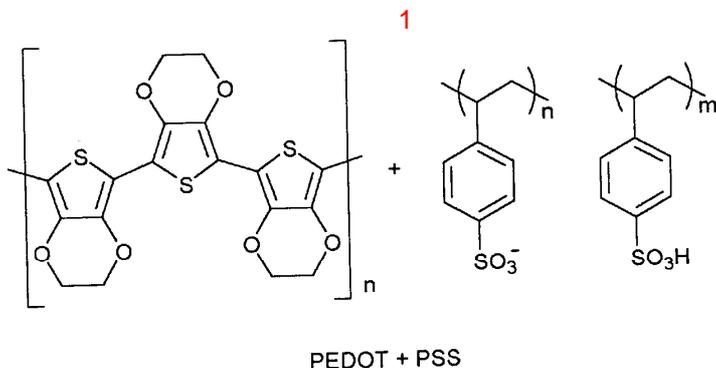
(54)

4- 가 )) , PEDOT( (3,4- ))-PSS( (

1

1 3 1 2

PEDOT( (3,4- (Bayer AG) ))-PSS( (4- (Baytron-P) )) , ITO( )  
 PEDOT - PSS 1 :



PEDOT - PSS 가  
 (S. Ghosh) PEDOT - PSS MgSO<sub>4</sub> CaSO<sub>4</sub> 가 PEDOT  
 (ionic bond) ( [S. Ghosh, J. R. Ra  
 smusson and O. Inganas, Adv. Mater., 10(14), 1097(1998); S. Ghosh and O. Inganas, Adv. Mater., 11(14),  
 1214(1999)] ).  
 PEDOT - PSS 가  
 (coordination bond) PEDOT - PSS가

가

), PEDOT( (3,4- ))-PSS( (4-  
 ), PEDOT - PSS

$M_a N_b$  ,  $M_4$  ,  
 $e^{2+}$  ,  $Fe^{3+}$  ,  $Mn^{2+}$  ,  $Mn^{7+}$  ,  $Cr^{3+}$  ,  $Cr^{6+}$  ,  $Cu^{2+}$  ,  $Ni^{2+}$  ,  $Zn^{2+}$  ,  $Co^{2+}$  ,  $F$   
 $SO_4^{2-}$  ,  $Cl^-$  ,  $OH^-$  ,  $HSO_4^-$  ,  $HCO_3^-$  ,  $O_2^-$  ,  $CN^-$  ,  $NO_3^-$  ,  $NO_2^-$  ,  $SO_3^{2-}$  ,  $CO_3^{2-}$  ,  $PO_4^{3-}$  ,  $HPO_4^{2-}$  ,  $H_2PO_4^-$  ,  $ClO_4^-$  ,  $ClO_3^-$  ,  $ClO_2^-$  ,  $ClO^-$  ,  $CrO_4^{2-}$  ,  $Cr_2O_7^{2-}$   
 , a b 1 10

0.001 0.5M , PEDOT - PSS 가  
 , PEDOT - PSS 가 가  
 PEDOT - PSS 가 (crosslinking)

가

가

( )  
가

가

1  
69 ml 0.75% PEDOT - PSS 1 ml CuSO<sub>4</sub> 1 ml 가 ,  
, CuSO<sub>4</sub> 0, 0.01, 0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.1, 0.2, 0.3, 0.4  
0.5M (mScm<sup>-1</sup>) 1  
1 , PEDOT - PSS CuSO<sub>4</sub>  
가

2  
1 , CuSO<sub>4</sub> 0, 0.001, 0.01, 0.05, 0.1 0.  
5M (hot plate) 0.45μm (annealing) ITO  
) , N,N'- (annealing) 50 nm ( (2-(  
9- )- -1- )- (BCzVBi) Ca -4,4'- (TPD), 4,4'- 50 nm  
60 nm 100 nm (a.u.) 2 3  
(V) (mA) , PEDOT - PSS CuSO<sub>4</sub>  
2 3 가  
MgSO<sub>4</sub> CuSO<sub>4</sub> PEDOT - PSS , CuSO<sub>4</sub> 0.05M  
0.05M CuSO<sub>4</sub> PEDOT - PSS/MgSO<sub>4</sub>  
(lm/W) 1000 cd/m<sup>2</sup> ( ) , 100 cd/m<sup>2</sup>  
1

[ 1 ]

( )	(lm/W)	( )
PEDOT - PSS/CuSO <sub>4</sub>	5.91	7.50
PEDOT - PSS	3.60	3.33
PEDOT - PSS/MgSO <sub>4</sub>	4.42	6.08

1 , PEDOT - PSS CuSO<sub>4</sub> 가

가  
가

(57)

1. PEDOT( (3,4- ) )-PSS( (4- ) )

2. 1 PEDOT - PSS

3. 1 4 6

4.

3

Cu<sup>2+</sup>, Ni<sup>2+</sup>, Zn<sup>2+</sup>, Co<sup>2+</sup>, Fe<sup>2+</sup>, Fe<sup>3+</sup>, Mn<sup>2+</sup>, Mn<sup>7+</sup>, Cr<sup>3+</sup> Cr<sup>6+</sup>

5.

4

Cu<sup>2+</sup>

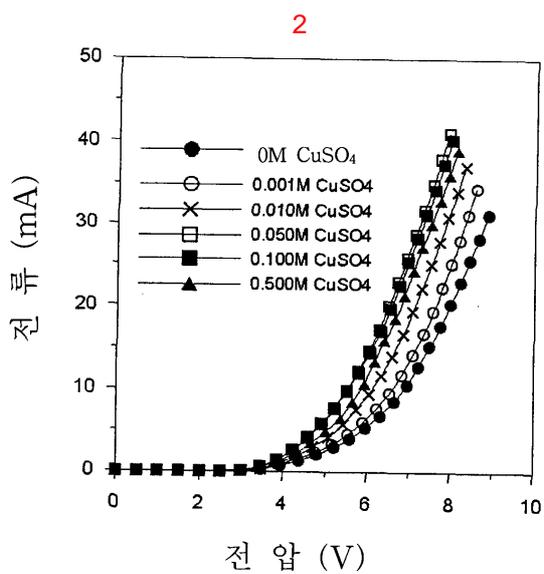
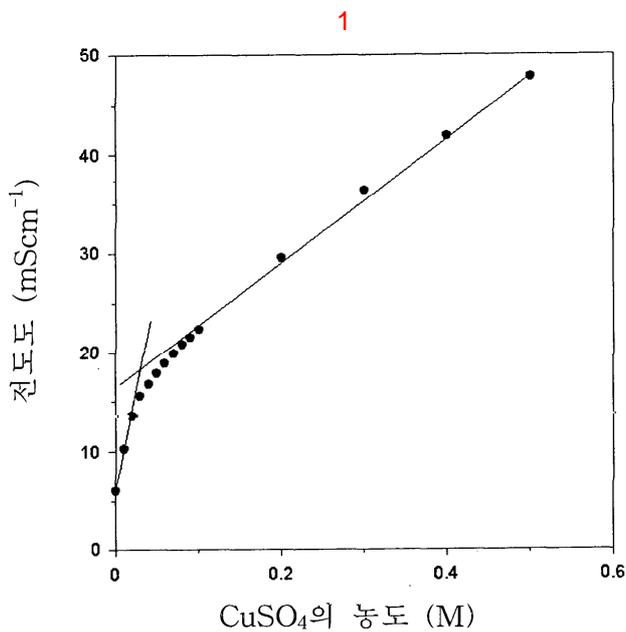
6.

1

5

7.

6



3

