

# 가

2 , 4 가 가

2 ,

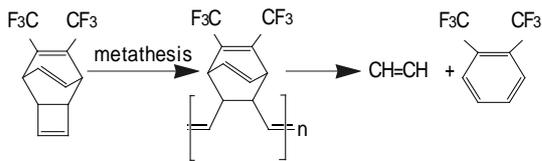
1980  
가

A. J. Heeger A. G. Macdimid 가

가  
가  
가

가

## 【 1】



## 【 1】PPy-CiO<sub>4</sub>

Pot'l V @SCE	0.32 C/cm <sup>2</sup>		1.13 C/cm <sup>2</sup>		3.53 C/cm <sup>2</sup>	
	R	C	R	C	R	C
0.4	8.72	14.0	8.26	65.6	8.72	191
0.3	8.72	14.0	9.23	58.6	9.81	153
0.2	8.72	12.7	10.5	66.9	13.1	140
0.1	8.72	14.0	10.5	66.9	13.1	140
0.0	8.72	12.7	12.1	66.9	15.7	115
-0.1	8.72	10.2	11.2	72.0	13.1	102
-0.2	8.72	10.2	14.3	57.3	14.3	76.4

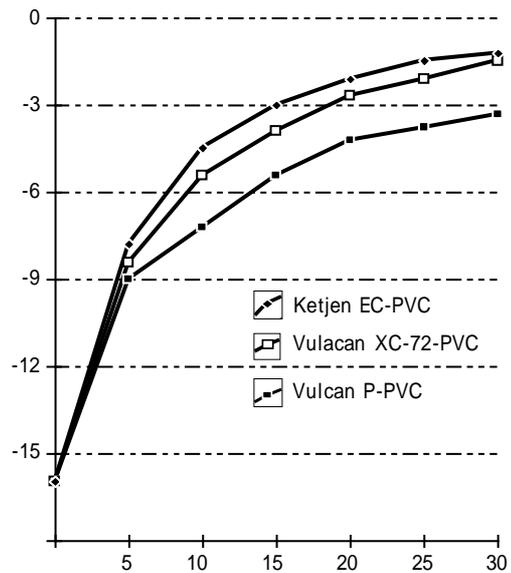
) R cm<sup>2</sup> , C mF /cm<sup>2</sup>

## 【 2】PPy-Nafion

Pot'l V @SCE	0.32 C/cm <sup>2</sup>		1.13 C/cm <sup>2</sup>		3.53 C/cm <sup>2</sup>	
	R	C	R	C	R	C
0.4	11.6	9.55	13.1	45.9	8.73	121
0.3	14.3	12.1	13.1	45.9	8.73	121
0.2	14.9	8.92	12.1	28.0	9.51	115
0.1	12.9	15.9	11.2	38.2	9.81	138
0.0	14.3	19.1	13.1	33.1	11.2	145
-0.1	14.3	19.1	12.1	28.0	12.6	140
-0.2	13.7	19.7	17.4	39.5		

) R cm<sup>2</sup> , C mF /cm<sup>2</sup>

## 【 2】Carbon Black



(Precursor Polymer)

가

가 가

I2 AsF5

p- Dupont

Li, Na, K

n-

가 가

가

10-5 ~ 10-9

cm-1

/

가

가

가

가

가

가

가

【 3】Pyro PAN

【 4】Dipropargylphenylcarbinol

Sample	T <sub>p</sub> ( )	RT (S/cm)	S <sub>RT</sub> ( $\mu$ V/K)	(ppm/g)
1	1000	~0.1	-	160
2	1000	~20	-0.9	348
3	1000	~1	+0.5	390
4	1000	~50	+0.6	180
5	1000	~50	-3	130
6	950	~50	-3	129
7	900	~20	-4	345
8	1050	~40	-2	1095
9	1050	~50	$\pm$ 0.5	-
10	1000	~90	-1	105

1	Chloro benzene	2	85
2	Chloro benzene	1.5	89
3	Toluene	1.5	92
4	Benzene	1.5	93
5	Tetrahydrofuran	1.5	100
6	Dioxane	1.5	100
7	Nitro benzene	1.5	10
8	Pyridine	1.5	0

Potential

가

(non -Linear Optical Properties)

가

가

가

가

가

Polypyrrole, Polyaniline

가

가

70

Polyacetylene(CHx)

가

가

Pyrrrole, Thiophene, Aniline, Carbazole, Diketene, P-Phenylene

가

(Doping)

Polypyrrole, Polythiophene

Nafion

Fe(CN)6 Z-

Polypyrrole

가

Pyrrrole

30

【 5】 Diphenyldipropargyl Germanium

1	Chlorovenzene	17
2	Benzene	26
3	Toluene	15
4	Tetrahydrofurane	30
5	Dimethyl formamide	0
6	Carbon tetrachloride	38
7	Chloroform	17

【 6】 PMVK

PMVK	(Mw x 10 <sup>-5</sup> )	( <sup>-1</sup> cm <sup>-1</sup> )
5.00		8.4 x 10 <sup>-7</sup>
5.49		2.3 x 10 <sup>-6</sup>
5.67		4.4 x 10 <sup>-6</sup>
7.03		7.4 x 10 <sup>-5</sup>

Capacitance가

/

가

가

PPy-Nafion, PPy-Fe(CN)6, PPy-CIO4

1, 2

가

(Electrochromic Device),

103S/cm  
1974 Shirakawa  
가  
가  
가  
가 Poly(1, 6-Heptadiyne) 1  
10-12S/cm 10  
Poly(1, 6-Heptadiyne) 12  
10-2S/cm 가  
Dipropargyl DPPC  
Chlorobenzene  
THF Dioxane Nitrobenzene DMF  
DPC DPC

【 7】

	Nylon 6	PET	pyrrole	aniline
(cal/cm <sup>3</sup> ) <sup>1/2</sup>	13.5	aliphatic parts:12.1 aromatic parts:9.8	10.5	10.3

MoCl<sub>5</sub> (n-Bu)<sub>4</sub>Sn MoCl<sub>5</sub>  
Mo(OEt)<sub>5</sub> MoCl<sub>5</sub> DPPGe  
MoCl<sub>5</sub>-EtAlCl<sub>2</sub>  
THF Dioxane  
가 Dipropargyl Carbinol  
가  
Degenerate Ground PPV  
Nondegenerate Ground 1  
Interchain Hopping Dupont  
p-n 가 /Li , n- Si  
PPV 10-5 ~ 103Scm-  
1 PPV , PPV PPV 가 가  
가 가  
가 가  
가

가 , Main Chain

가

7 Precursor (POCl<sub>3</sub>)

P(MVK-co-MAH)TP P(AAm-co-MAH)TP

, 가 가 ,

가 가

가 (Crosslink) 가 (Imide)

가

PET, Nitrile, Amide, Cu<sub>x</sub>S

, Polyacrylonitrile(PAN) NH<sub>2</sub>OH Amidoximation Cu<sub>2</sub><sup>+</sup>

Cd<sup>2+</sup> S<sup>2-</sup> 가 PAN CuS CdS

PEO-LiClO<sub>4</sub>

Poly(Ethylene Glycol) 가

Polypyrrole, Polyiophene Heterocyclic Polymer 6

가 Polypyrrole, Polyaniline 가

Polymer , ,

6 가 Porous 6

Matal Sulfide , , CuS

CdS 가

Method CuS CdS 가 PVA Hydrosol

가 가

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