

()

1. (laser irradiation)

, ,

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‘Polymers for advanced technologies’

Eastman Kodak

J.M.Pearson Microlithograph

Xerox

Webster Research Center M. Abkowitz, M. Stokla

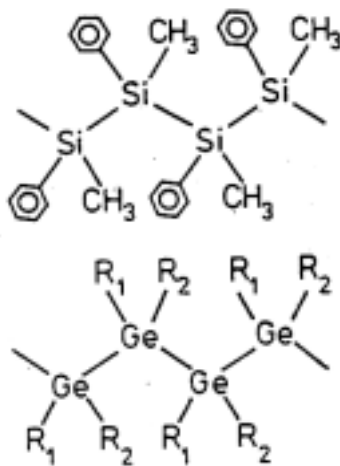
(polysililane)

(polygermylene)

,

가

< 1>.



< 1>

6

(chip)

가

(photoresist: lithographic)

1 μm .

, X

0.1 μm 가 .

Laboratory of General

Photochemistry CNRS Ch. Decker .

. PVC 가 ,

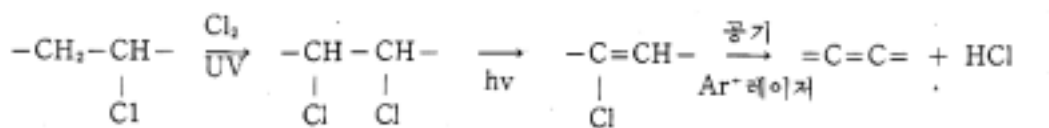
-

, < 2>.

μm

1/10,000 ,

, $10^3(\Omega \cdot \text{m})^{-1}$ 가 .



< 2> PVC

2.

,

Hermann Mark

,

Max Planck Institute on

Polymers

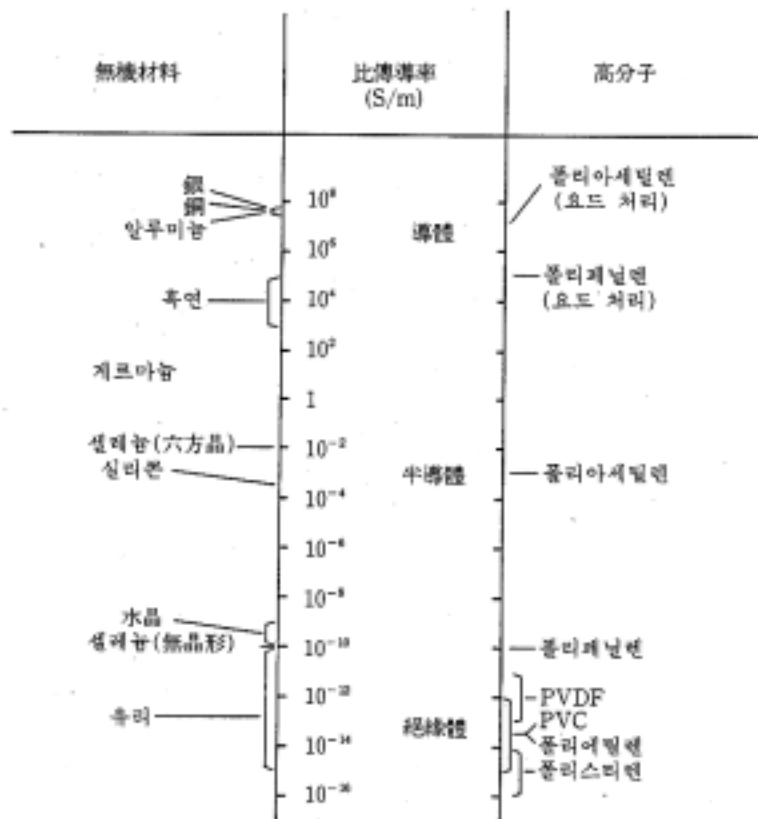
G.. Wegner Raleigh

North Carolina

S. P.

< 3> 가

가



< 3> 가

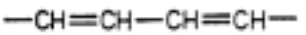
(sulfonitrile)

(polyphenylene)

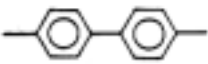
(polythiophene)

(heterocyclic) (

4). (charge-transferring additives) 가



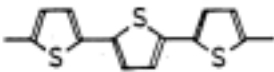
폴리아세틸렌



폴리페닐렌



폴리술포니트릴



폴리티오펜

< 4>

BASF (specific conductivity)

(CP117) 가

가

S P. Hersh가

PAM,

PET, , ,

(20~200keV) F^+ , Br^+ , Kr^+ , Ar^+
(1,018~1,020ions/m²) .

, RF (shielding),
가 .

. Du Pont Weizmann Institute

S. Mazur .

, , PVC, PVDF 가 ,
가 (Ag^{++} , Au^{++} , Cu^{++} , Hg^{++}) .

2 (sintering)

가 가 . ,

, , ,
가 .

3.

70 ,

,

(PVDF) . Case Western Reserve J.Fuhrmann, Rutgers

J.I. Scheinbeim

D. Jungbauer

(pyroelectricity), , (ferroelectricity)
PVDG

4.

H. Mark D. Tanner ,

80 30% 가 .

757 767, 310 320

8~10t , 가

가

, 가

,

, 가

가 .

, Du Pont

149 Teijin

Technora

가 Celanese

Du Pont ,
 , 95% /5% -
 가
 (D. Tanner).

Allied Signal Corp. D.
 Prevrsek “Theoretical strength and modulus of polyethylene”
 , UMIST R.J. Young “Single crystals of poly-diacetylene” “A
 model polymer with a high degree of structural perfection” ,
 Weizmann Institute of Science H.D. Wagner “Size effect in fibers and
 whiskers” , 가

(flat) -
 가 . UHMW, , PVA
 (flexible chain)
 () 가 ,
 가 .

5. (ionizing radiation)

CNRS A.
 Chapiro Energy Science International J.R. Seidel

가 , (curing),

,
.
,
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가 .

, ,

.

6.

“Strategies for advanced polymers in the world”

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○ 가?

○ 가?

○ 가?

○

가?

○ , , 가?

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