

1.

가

가

2.

γ ,

ammonium nitrate, CAN)

< 1>.

2 (ceric

2

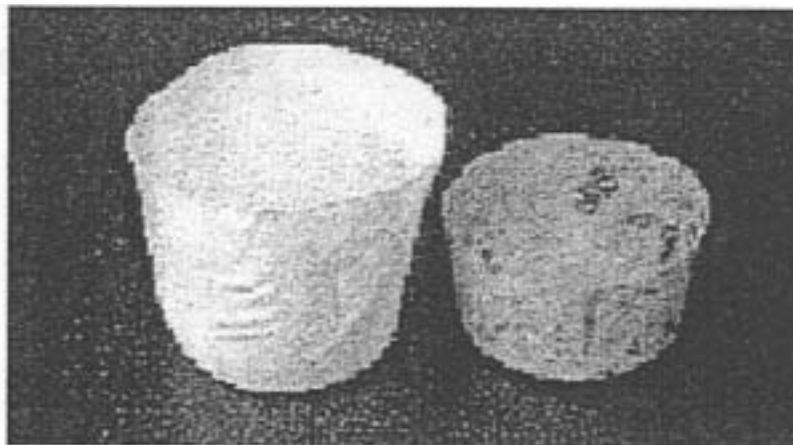
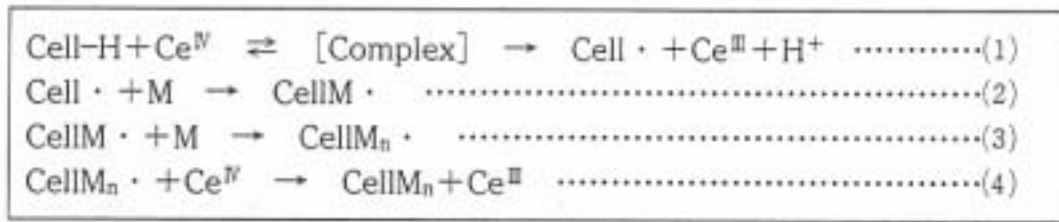
(methyl

methacrylate, MMA)

(heat press)

가 < 1>.

< 1> 2

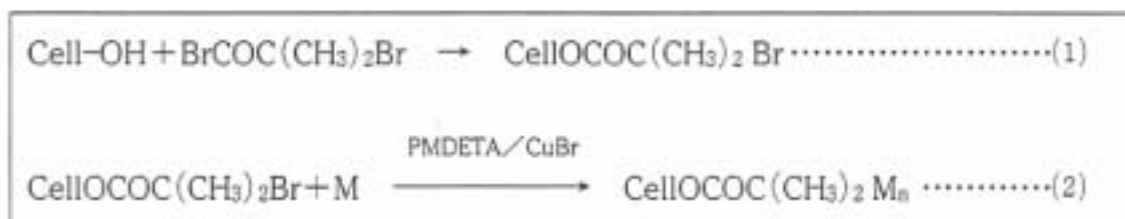


< 1>

, (AIBN, azobisisobutyronitrile)
 , (atom transfer
 radical polymerization, ATRP) 가 (reversible addition fragmentation
 chain transfer, RAFT)
 . (living polymerization)
 (branched polymer) 가 가 가
 . 가 가
 가 .
 , (MAN, methacrylonitrile)

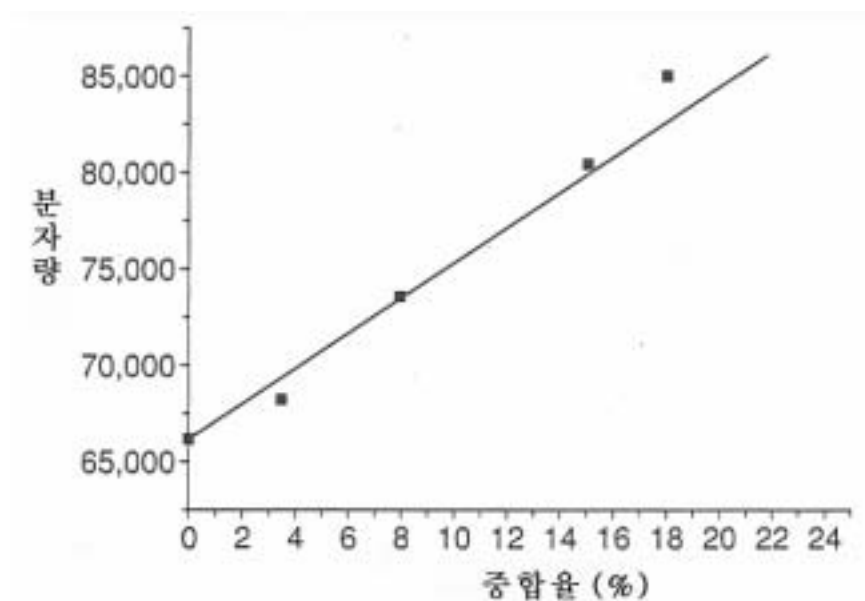
< 2>.

< 2>



, < 2>

가 . , 가



< 2>

,

(glycidyl methacrylate, GMA)

β -

가 .

< 3>

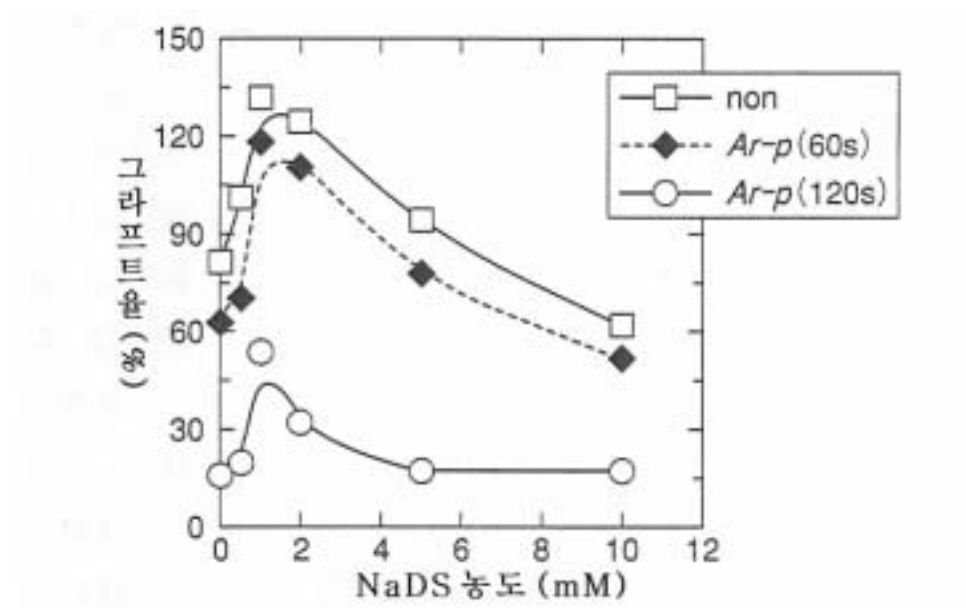
. ,

3%가 β -

. ,

가 가

.



< 3>

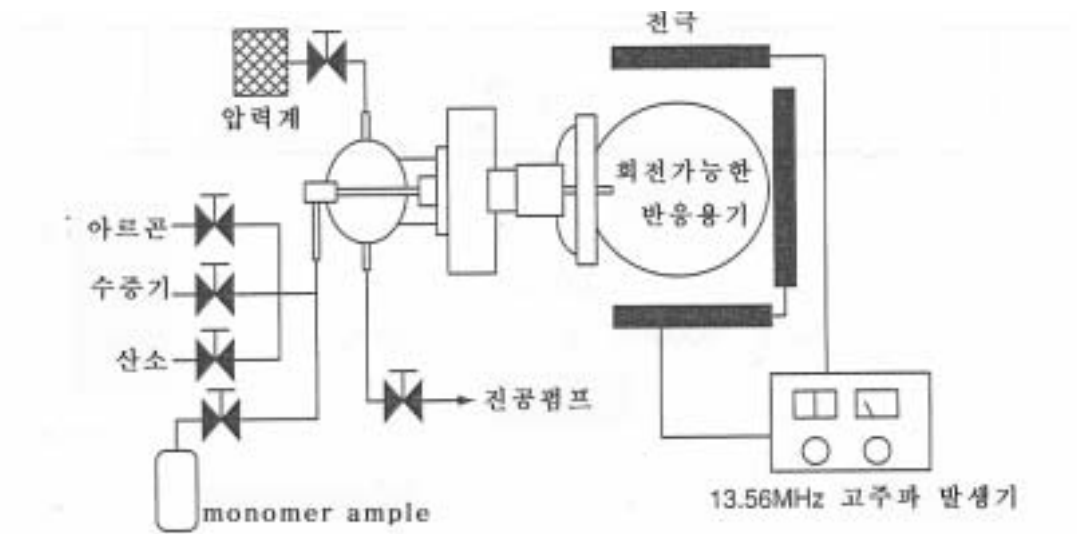
(%)

(NaDS : sodium dodecil sulfate)

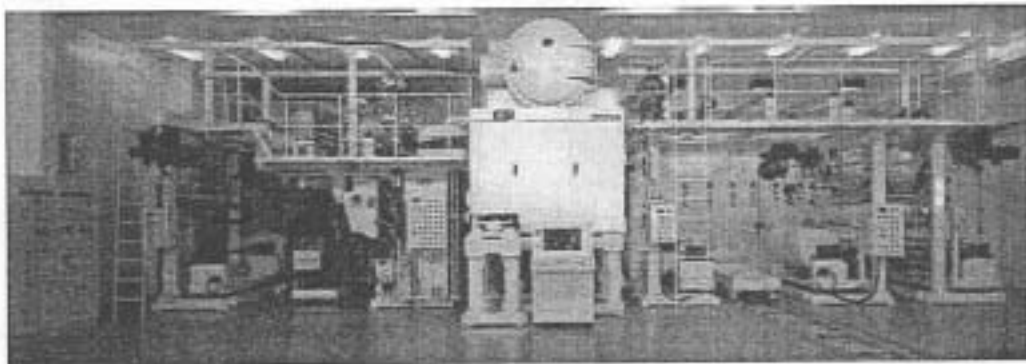
< 4>

, < 5>

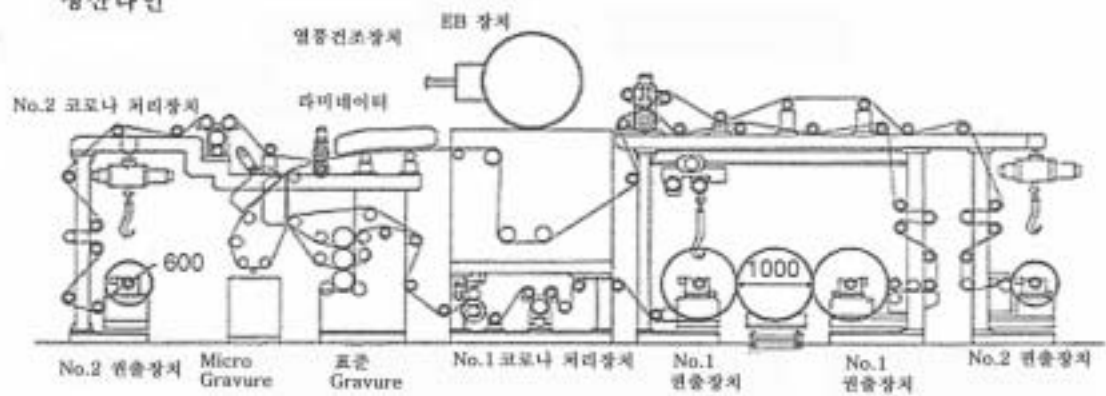
.



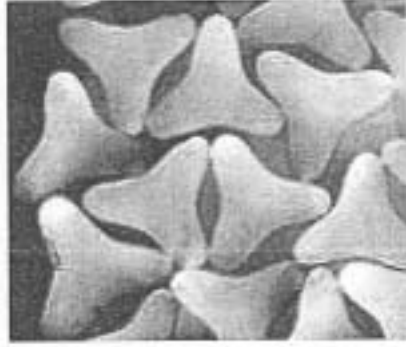
< 4>



생산라인



< 5>



(Toray)

, 가 ,

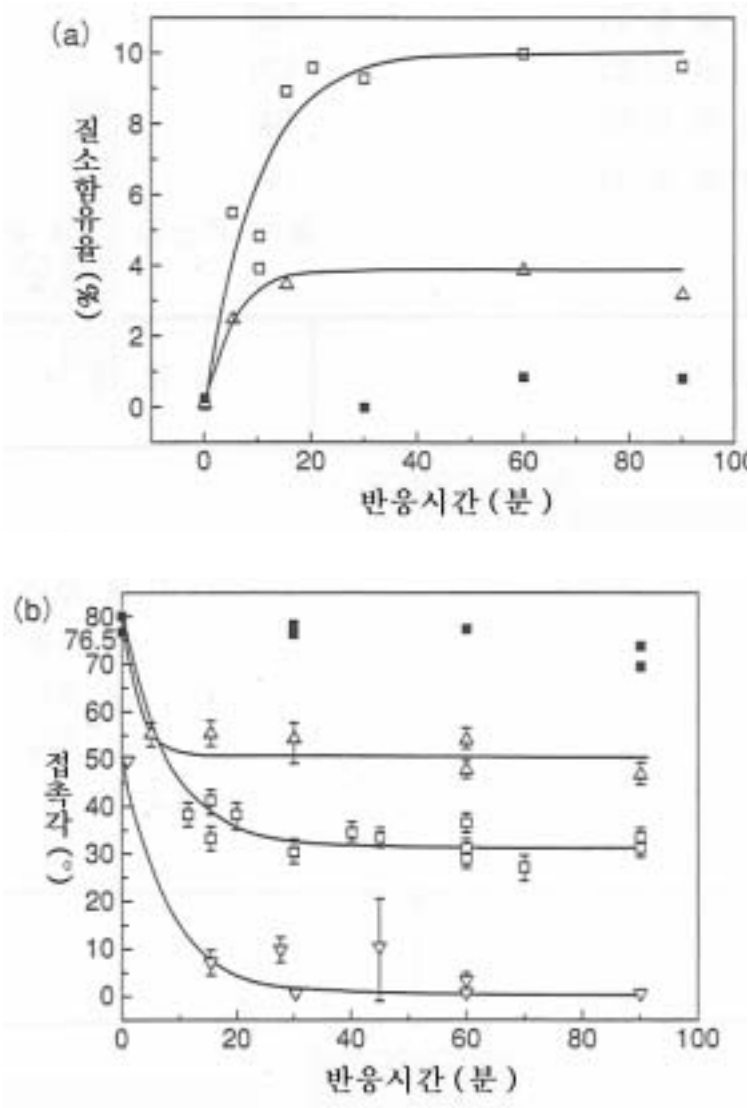
,

(vinyl imidazole)

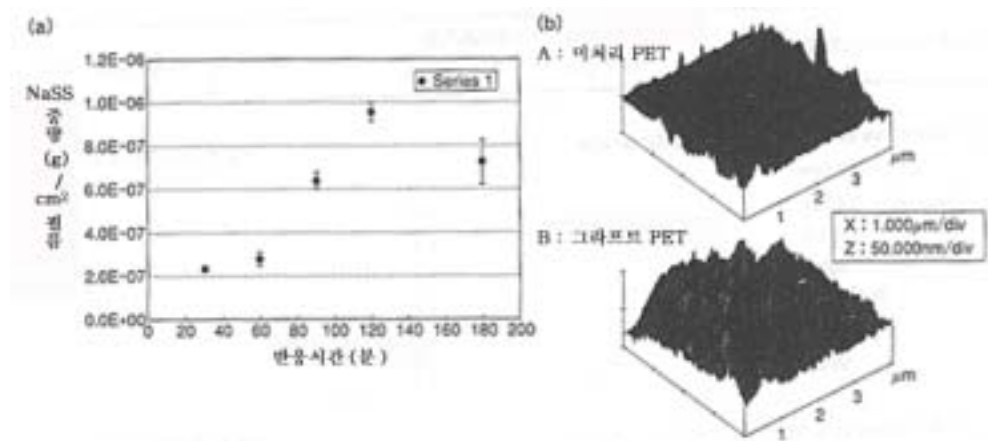
가 ,

.
 . ,
 ,
 .
 3. (PET)
 PET
 가 가 .
 PET N- -2- (n-vinyl-2-pyrrolidone, NVP)
 PET PET
 ,
 PET
 , PET UV N-
 -2- , PET
 UV
 . UV
 < 7(a)> 가 <
 7(b)> .
 PET
 (benzoyl peroxide, BPO) , -

(AIBN, azobisisobutyronitrile) , 2 (sodium styrene sulfonate, NaSS) (AFM, atomic force microscopy) < 8> .



< 7> UV PET (a) (b)

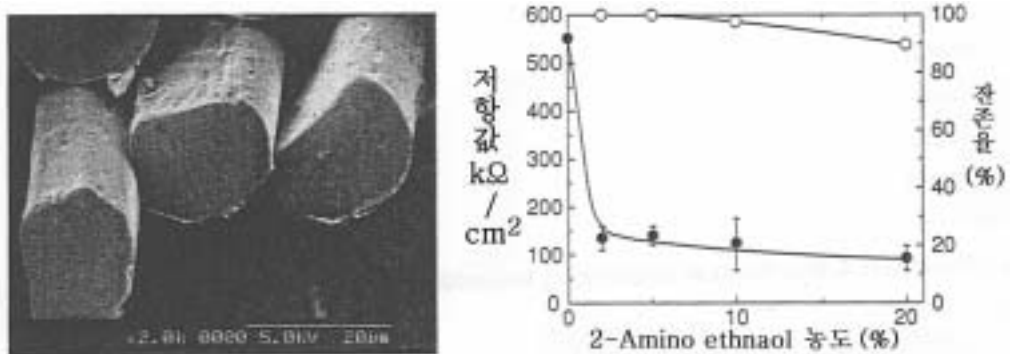


< 8> PET (a)

(stain repellence) , N-

< 9> ,

phosphonium (PH⁴⁺)



(○: , ●:)

< 9> (polypyrrol) PET

4.

가

가

가

.

<

4>

<

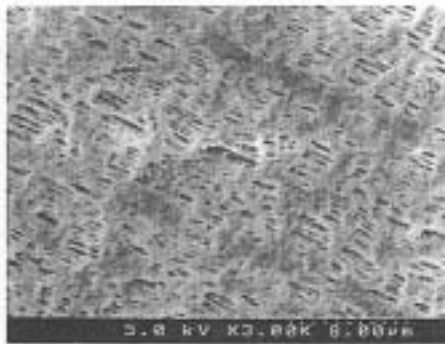
10> .

< 11>

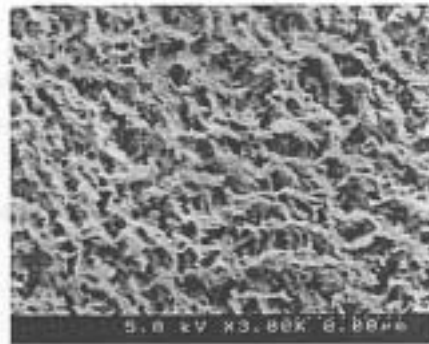
,

가

.



PE



O₂, 0.3kW, 0.4torr, 10

< 10>

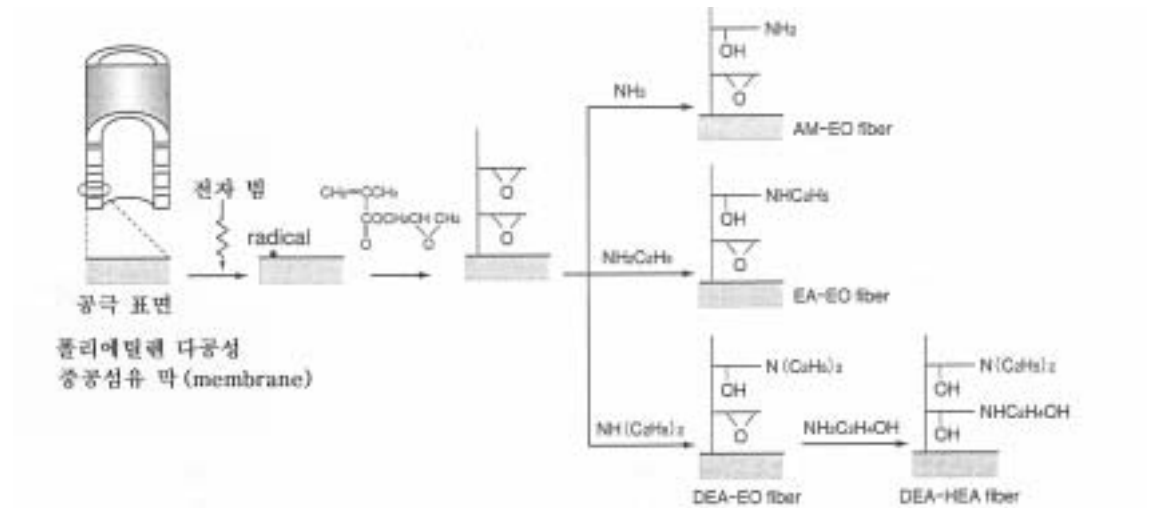
,

(thiol group)

. ,

4-

.



5.

가 . ABS (Acrylonitrile Butadiene Styrene))

가

가가 .

가 ,

가

가