

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl.7
H01L 21/66

(11)
(43)

10-2004-0072780
2004 08 19

(21) 10-2003-0008408
(22) 2003 02 11

(71) 416

(72) 535-27401

1167 5 524 701

(74)
:

(54)

XRF) , X , X (XRR) X X X (

1

1

2 X

(Ti)

(Fab)

dimension; CD) 가 (critical

EM), (transmission electron microscope; TEM), (scanning electron microscope; SEM),
 spectrometer; SIMS), X (X-ray fluorescence spectroscopy; XRF), X (secondary ion mass
 reflectometry; XRR) (X-ray

4,510,573 (issued to Boyce, et al.) X 가
 5,778,039 (issued to Hossain, et al.) X
 가 가 6,453,006 (issued to Koppel, et al.) X

carrier layer) 가 (b

가 50

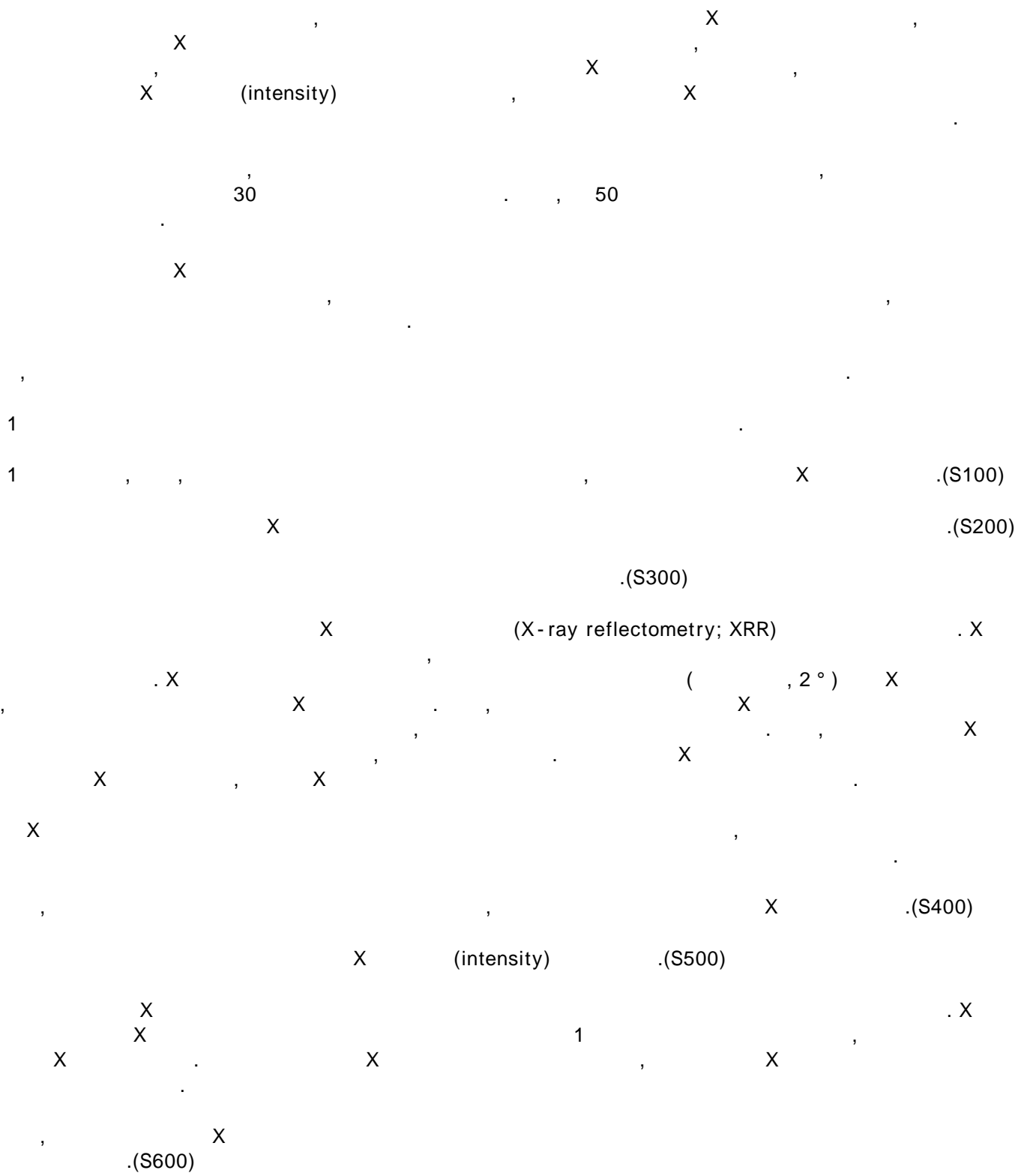
X 가 X (intensity) X

X

(roughness)가 50

50

가



[1]

. , X . 200 X
1

[1]

	X		X		X		X
30	6.1046	40	8.6833	50	10.056	75	13.018
	7.1716		9.8343		13.148		
	8.6401		7.2606		10.181		13.073
	8.6312		7.6992		10.075		13.029
	8.6999						
8.4236			7.1834		9.8066		13.167
100	16.649	200	28.725	300	41.668		
	16.284		28.739		41.935		
	16.366		28.901		41.628		
	16.322		28.123		41.625		
	16.216		28.207		41.506		

1 , X X 가 가
X

[2]

1 . 2 X , 2 .

[2]

	X	XRR
30	7.3727	43.52
40	8.7564	52.16
50	10.2048	59.3
75	13.2574	63.48
100	16.6556	90.91
200	29.4139	185.25
300	42.2257	268.99

2 2 , X X

X 15mm 35mm X , X (ro
ughness) X

X , X 30

[]

1 3

[3]

	1 TEM	2 TEM	
30	40 ~ 44	50	6 ~ 10
40	45 ~ 48	60	12 ~ 15
50	55 ~ 64	100	36 ~ 45
75	53 ~ 60	80	20 ~ 27

3 , 1 가 가 , 2 가

(57)

1. X ;
X ;
X ;
X ;

X (intensity) ;

X

2.

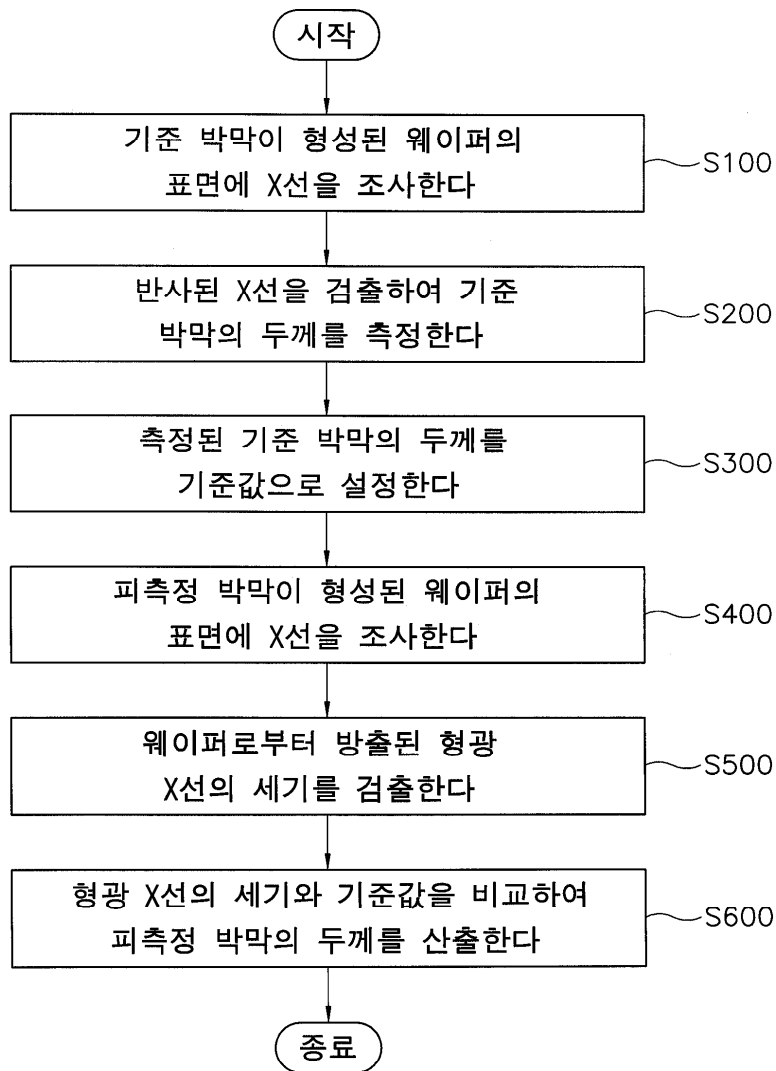
1

3.

1

30

1



2

