

1a 1d

2

3a 3b

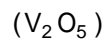
4a 4b

<

10 : 20 :

30 : 1 40 :

50 : 2



oneywell)

가

(mixed vanadium oxide)

1992

(H

(ion beam sputtering)

가

, 가 가

가 가

가

;

1

;

1

;

2

;

1a 1d

1a (10) (Plasm
a Enhanced Chemical Vapor Deposition : PECVD) (20)

1b (20) (Sputtering)
1 (V₂O₅) (30)

6 9(cm), 350 2 50(%), R. F. power 350W, /

V/O : 38.5% (30) : 50%, : 100 2000 , : 60(/min),

1c 1 (V₂O₅) (30)
(Vanadium Metal) (40)

(30) : 0%, : 100 2000 , : 200(/min), V/O
: 0%

(30) (Ar) 가

1d , (30) 2 (50)
 1 (V₂O₅)(30)/ (40)/ 2 (V₂O₅)(50)

, 2 50(%), R. F. power 350W, /
 6 9(cm), 350

, 2 (50) : 50%, : 100 2000 , : 60(/min),
 V/O : 38.5%

, 250 300 (Annealing) 1 24

,
 가

2

, (10) PECVD (20)
 1 (V₂O₅)(30)

, 1 (30) : 50%, : 100 2000 , : 60(/min), V/
 O : 38.5% .(S100)

, 1 (V₂O₅)(30) (Vanadi
 um Metal)(40)

, (30) : 0%, : 100 2000 , : 200(/min), V/O
 : 0% .(S110)

, (30) 2 (50) 1
 (V₂O₅)(30)/ (40)/ 2 (V₂O₅)(50)

, 2 (50) : 50%, : 100 2000 , : 60(/min), V/
 O : 38.5% .(S120)

, 250 300 1 24
 .(S130)

3a 3b

3a 3b X
 , (Rutherford backscattering spectrometry: RBS)

[1]

	(%)	()	(/min)	V/O atomic %
	0	100 2000	200	-
	50	100 2000	60	38.5

1 , 3a , 3b

4a 4b

4a 4b

AES(Auger electron spectrometry)

4a , (TCR) 가

, 4b (Stable Phase) , 가가

, 가가 (Mixed Vanadium Oxide)

가 .

가 .

(57)

1.

;

1 ;

1 ;

2 ;

2.

1 , 1 2

3.

1 , (Ar)가

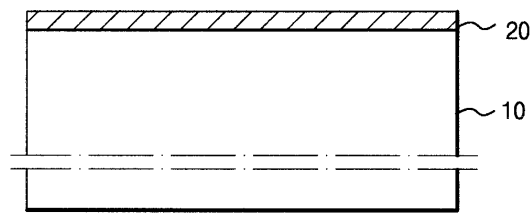
4.

1 ,

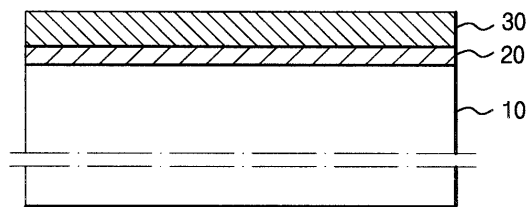
5.

1 , 200 ~ 300 1 24

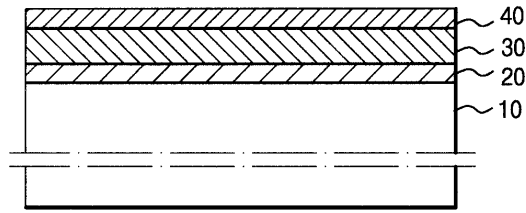
1a



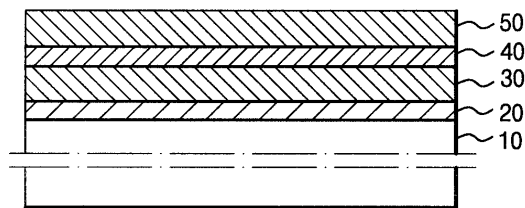
1b



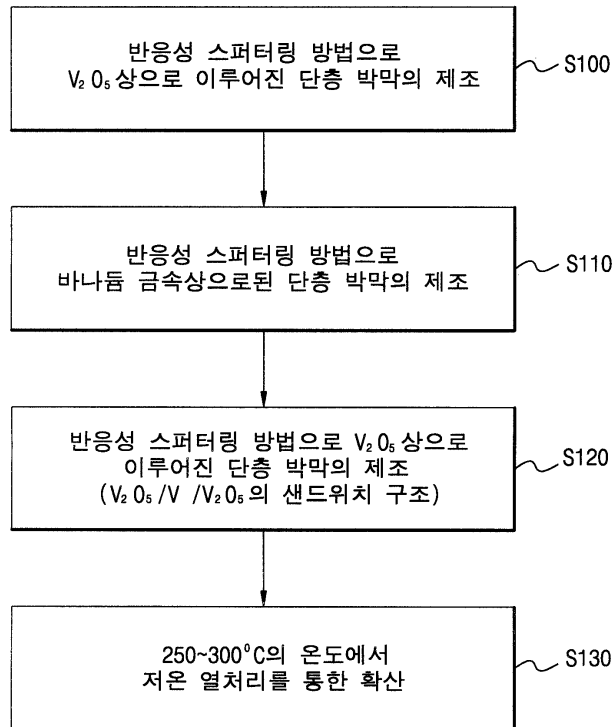
1c



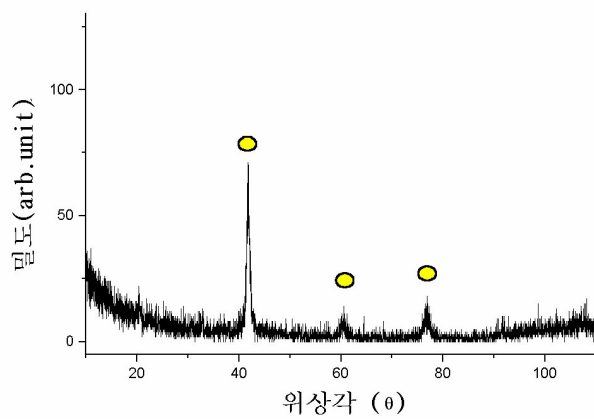
1d



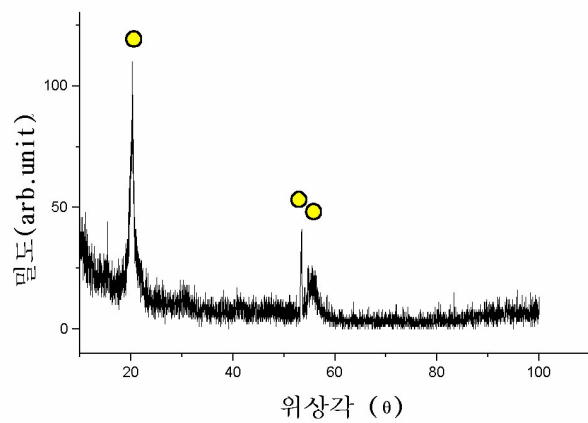
2



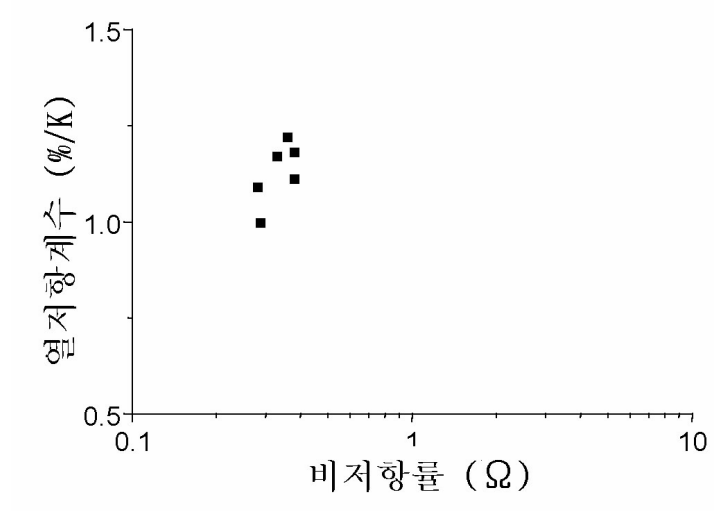
3a



3b



4a



4b

