[Fig. 1]

FIG. 1A

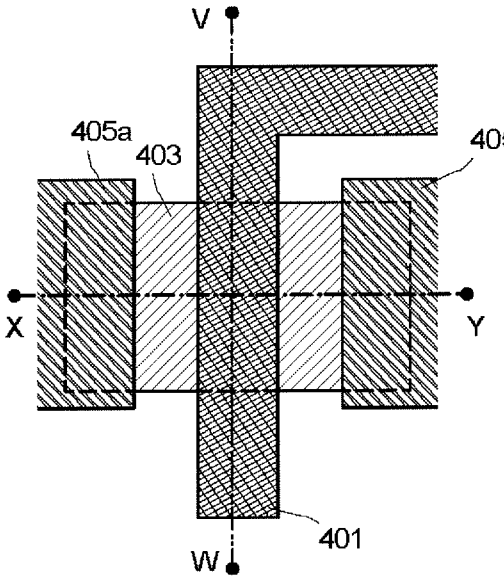


FIG. 1B

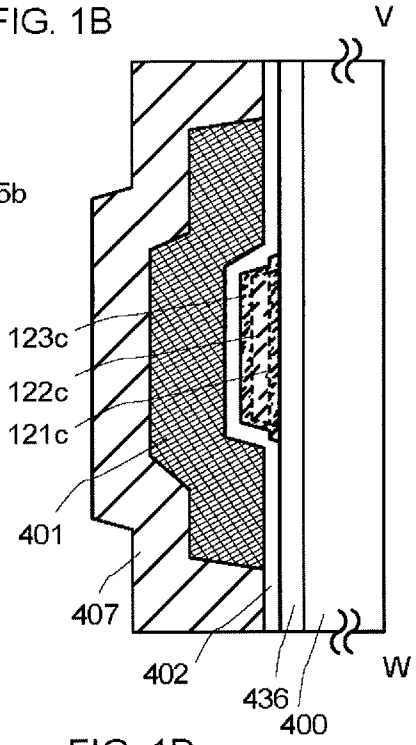


FIG. 1C

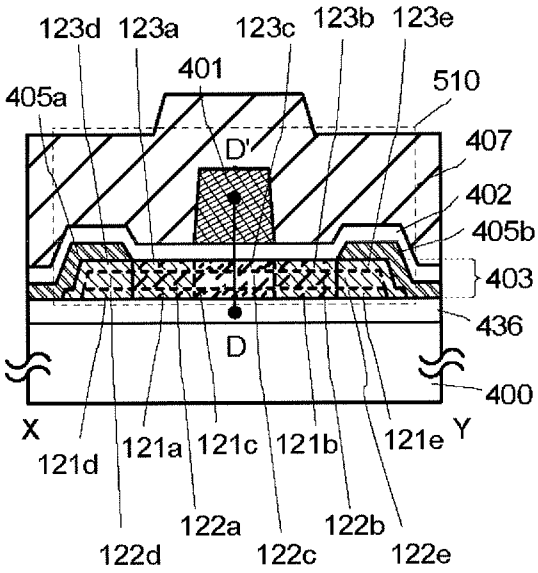


FIG. 1D

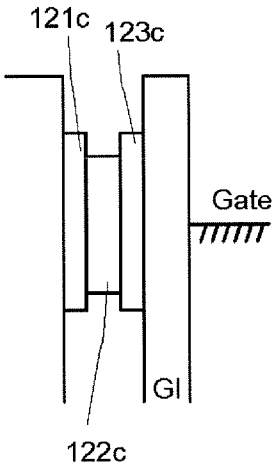


FIG. 2A

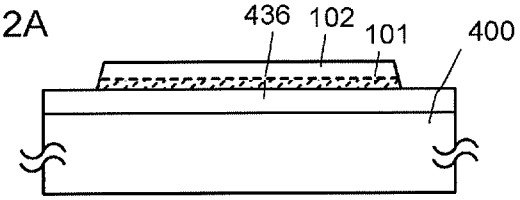


FIG. 2B

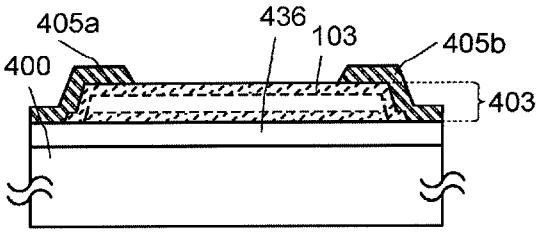


FIG. 2C

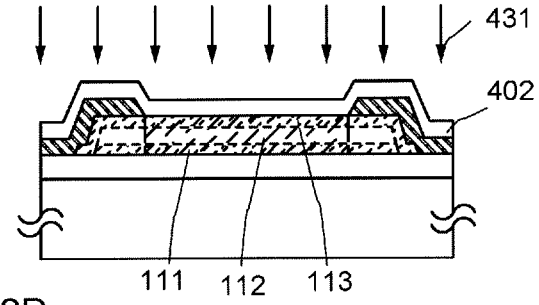
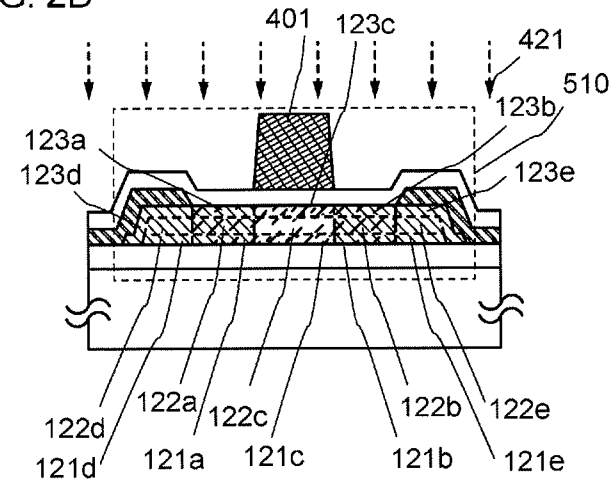


FIG. 2D



[Fig. 3]

FIG. 3

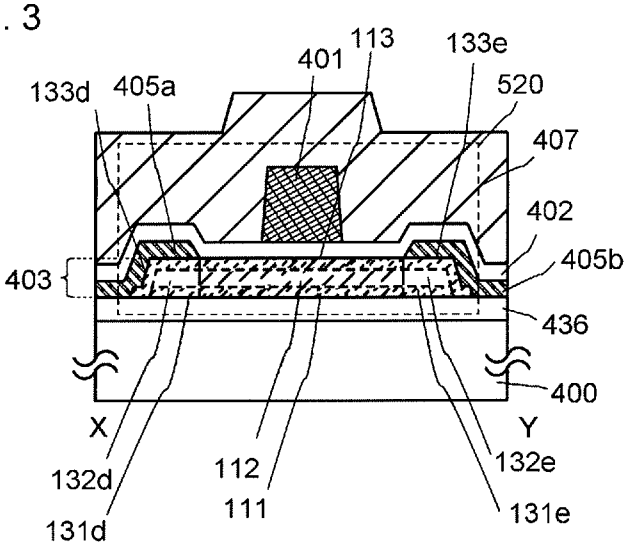

133d
405a
401
113
133e
520
407
402
405b
403
436
400
X
Y
132d
131d
112
111
132e
131e

FIG. 4A

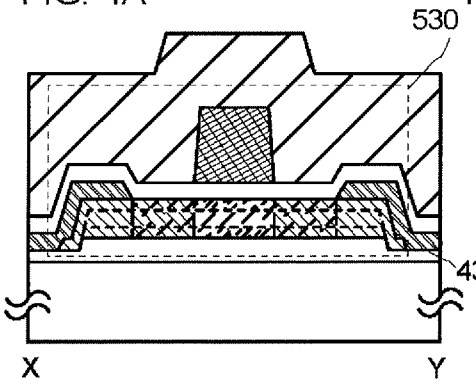


FIG. 4B

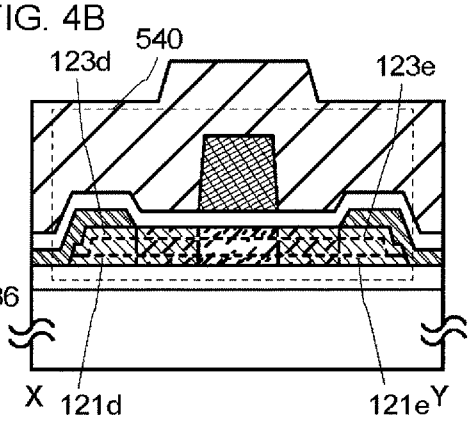


FIG. 4C

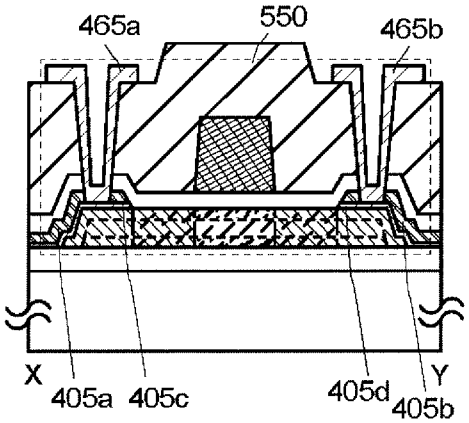


FIG. 4D

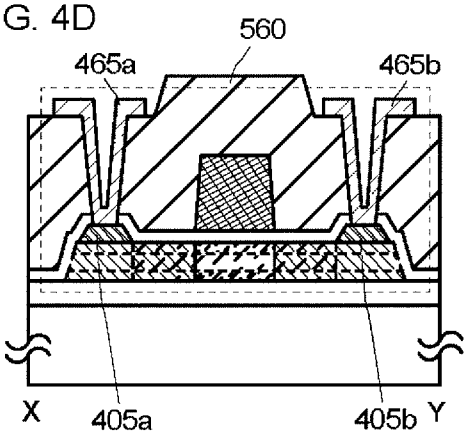


FIG. 4E

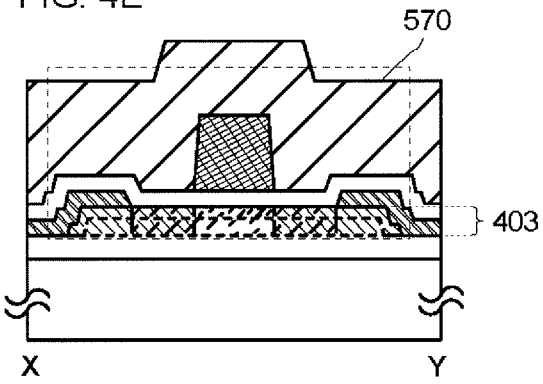


FIG. 5A

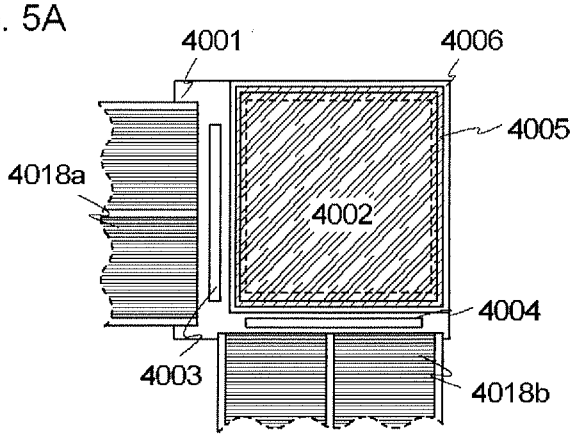


FIG. 5B

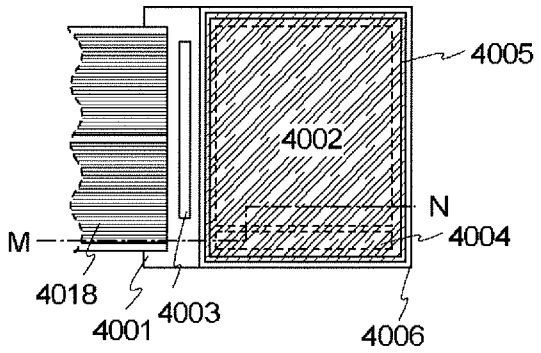
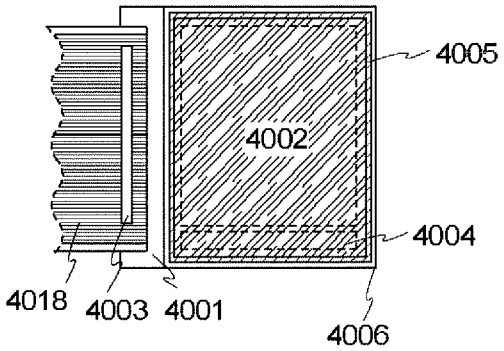


FIG. 5C



[Fig. 6]

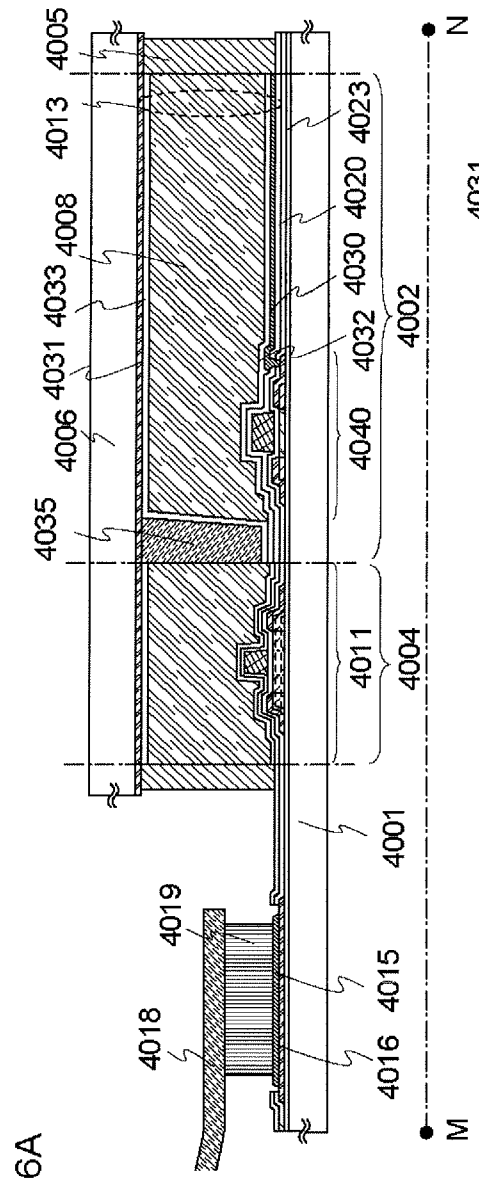


FIG. 6A

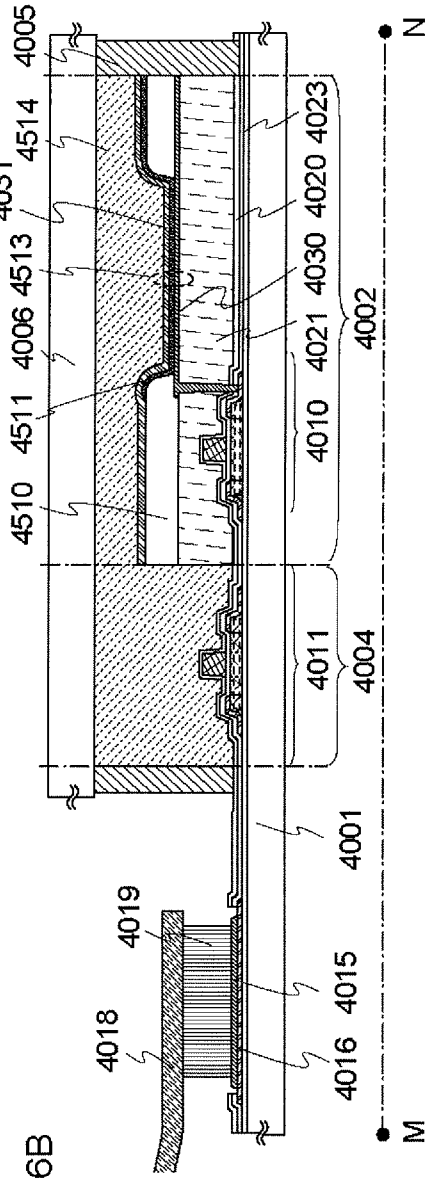


FIG. 6B

[Fig. 7]

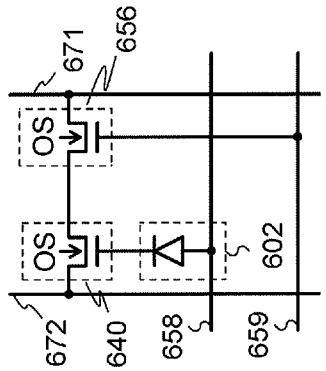


FIG. 7A

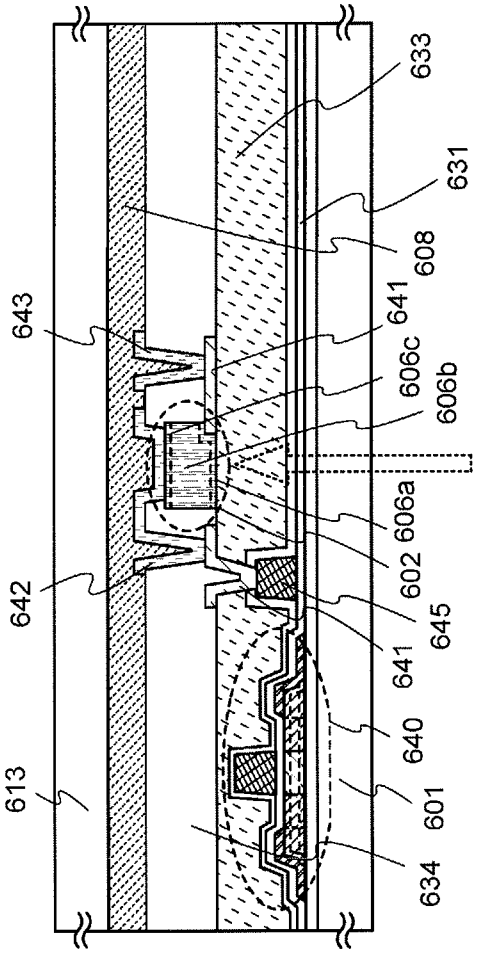


FIG. 7B

[Fig. 8]

FIG. 8A

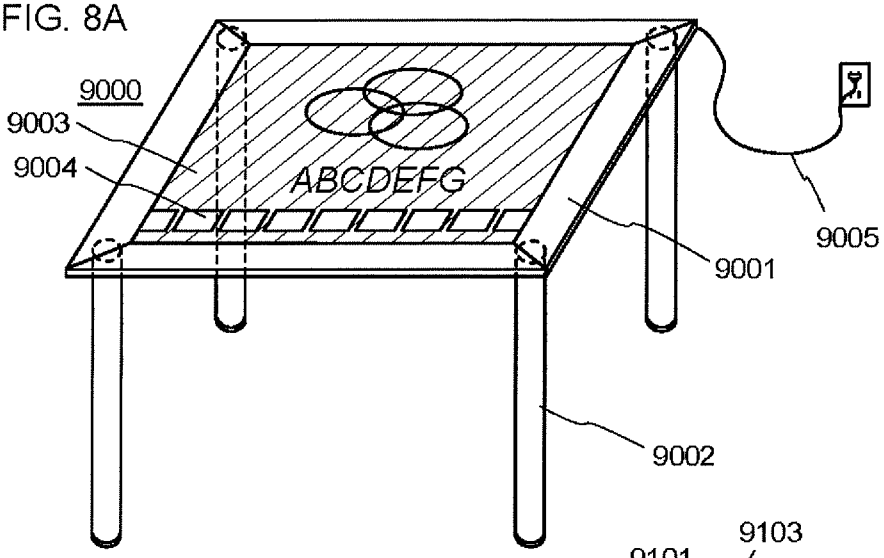


FIG. 8B

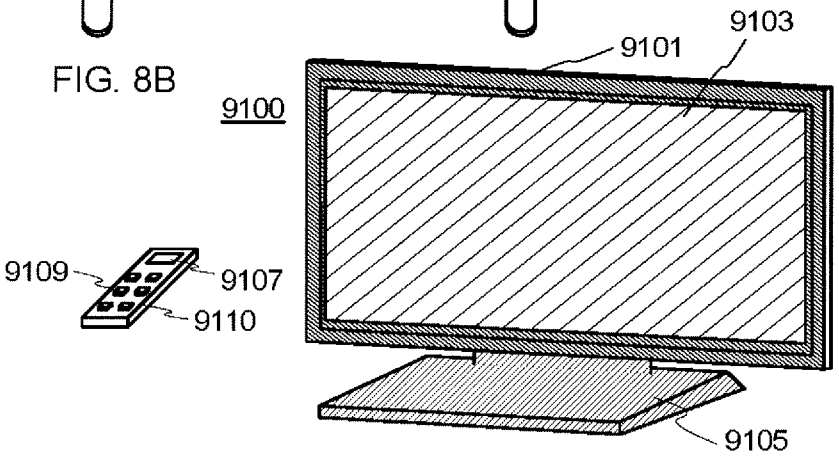


FIG. 8C

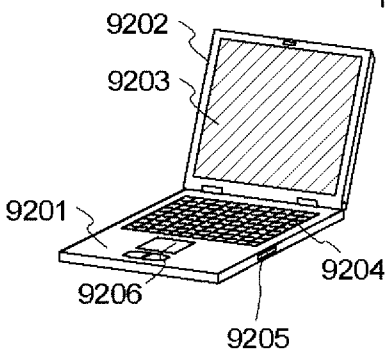
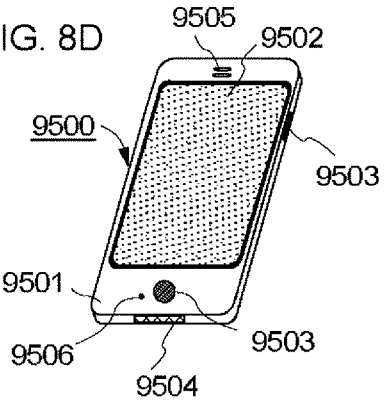
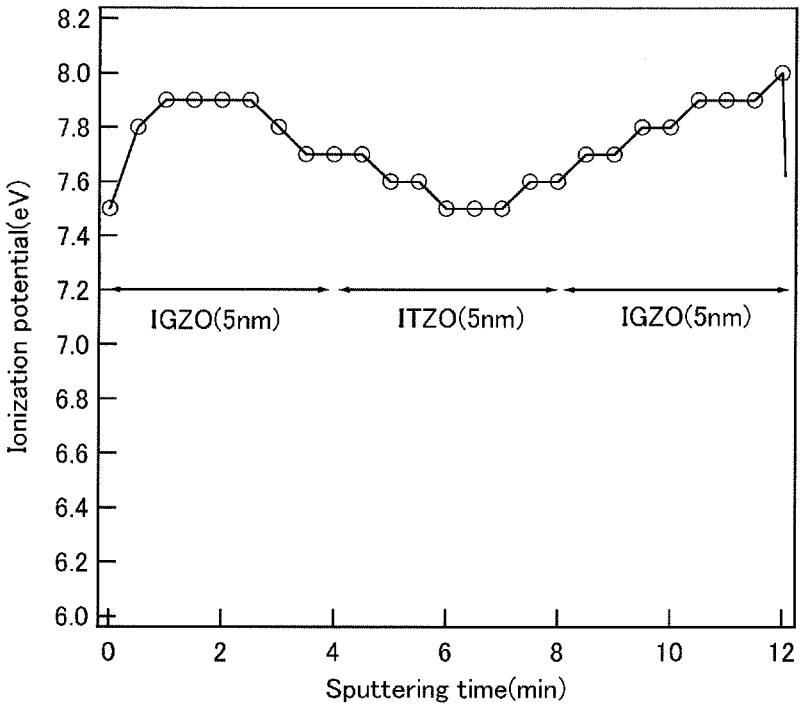


FIG. 8D



[Fig. 9]

FIG. 9


8.2
8.0
7.8
7.6
7.4
7.2
7.0
6.8
6.6
6.4
6.2
6.0
Ionization potential(eV)
IGZO(5nm)
ITZO(5nm)
IGZO(5nm)
0
2
4
6
8
10
12
Sputtering time(min)

[Fig. 10]

FIG. 10

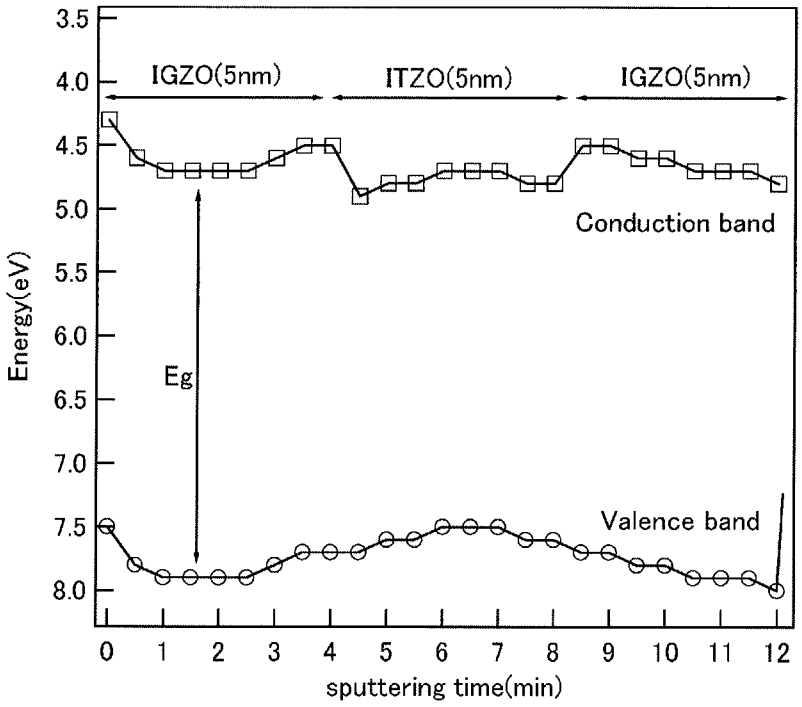

3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
IGZO(5nm)
ITZO(5nm)
IGZO(5nm)
Conduction band
Valence band
Eg
Energy(eV)
0
1
2
3
4
5
6
7
8
9
10
11
12
sputtering time(min)

FIG. 11A

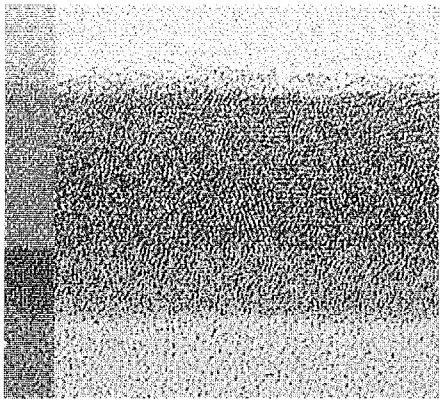


FIG. 11B

