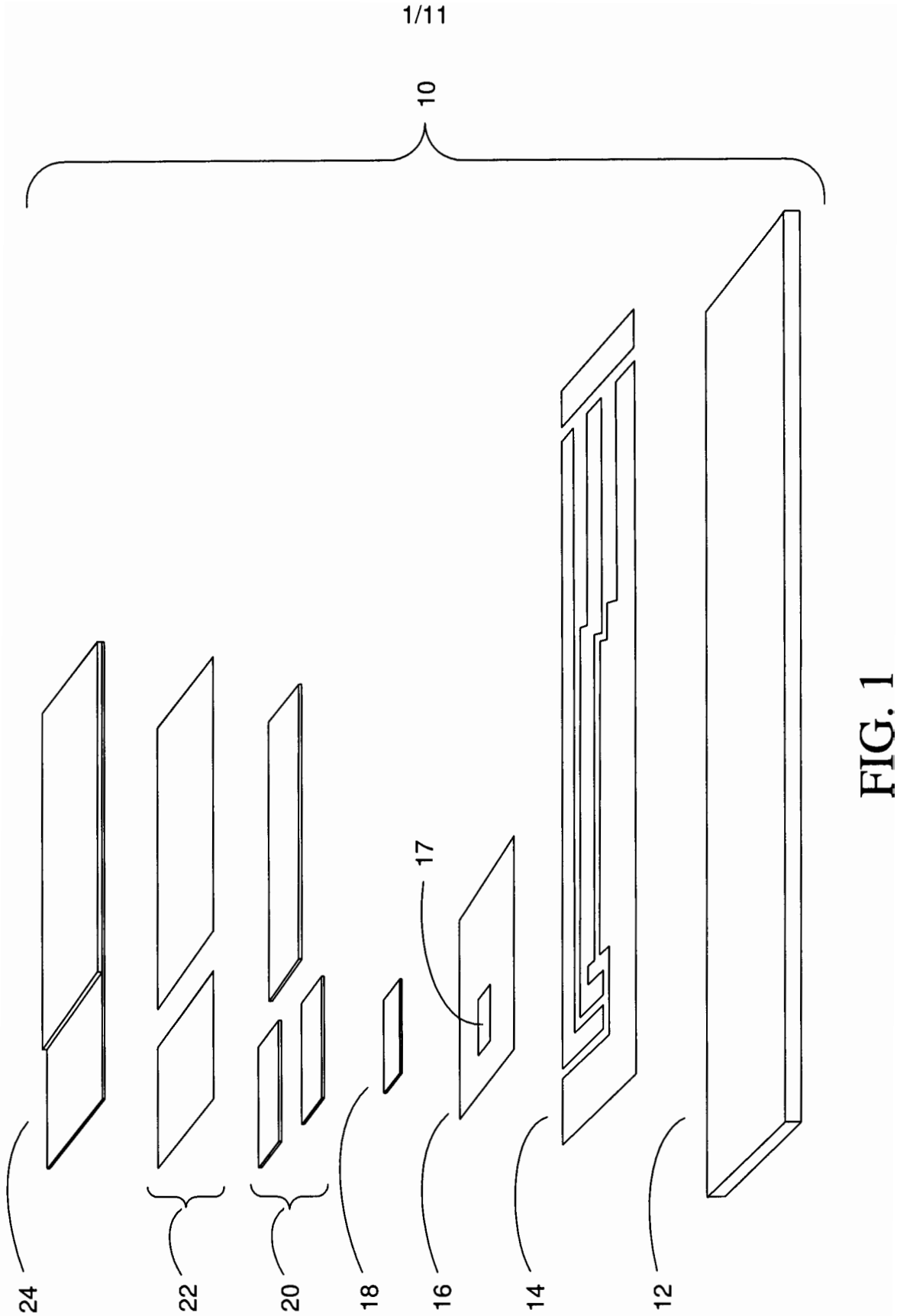


FIG. 1

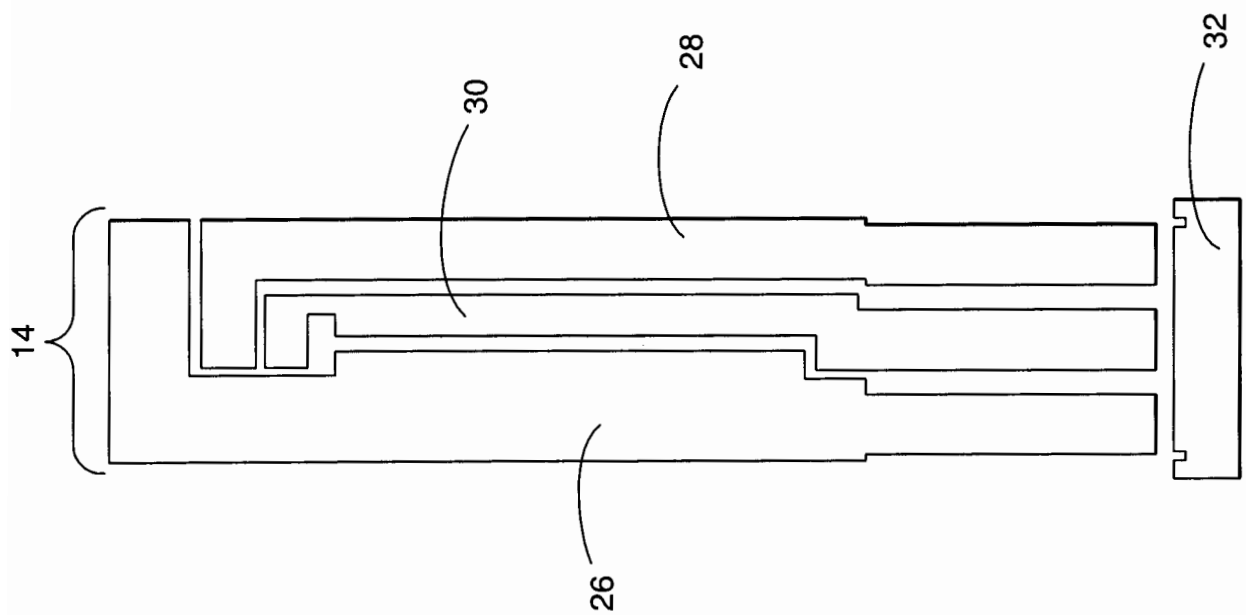


FIG. 2

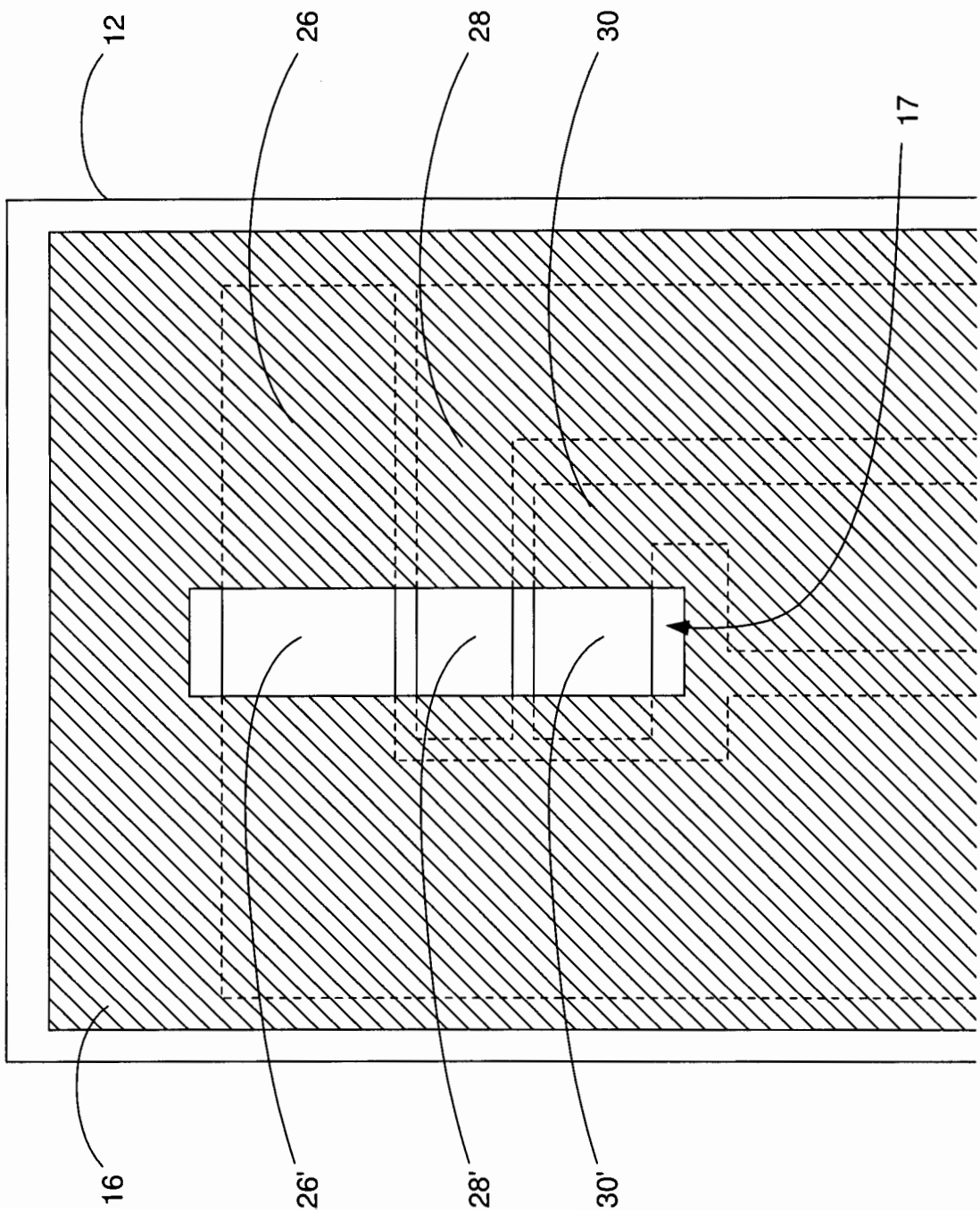


FIG. 3

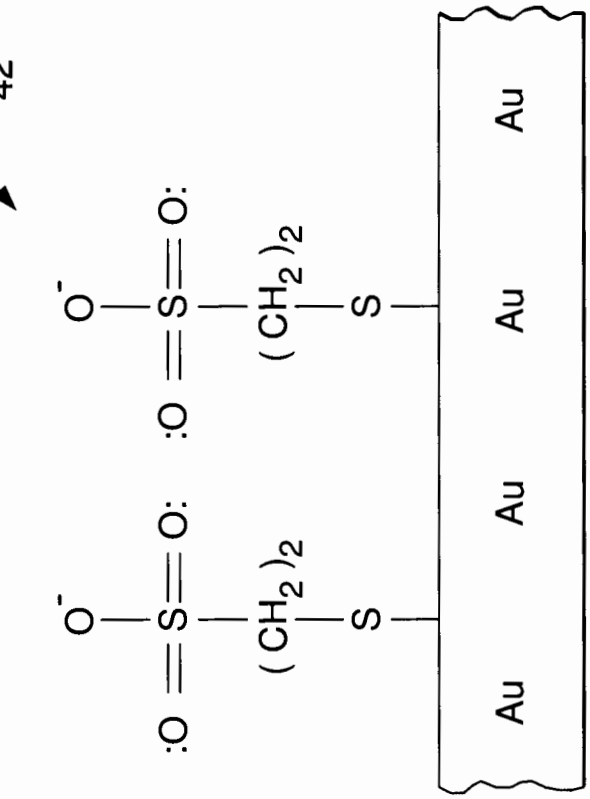


FIG. 4B

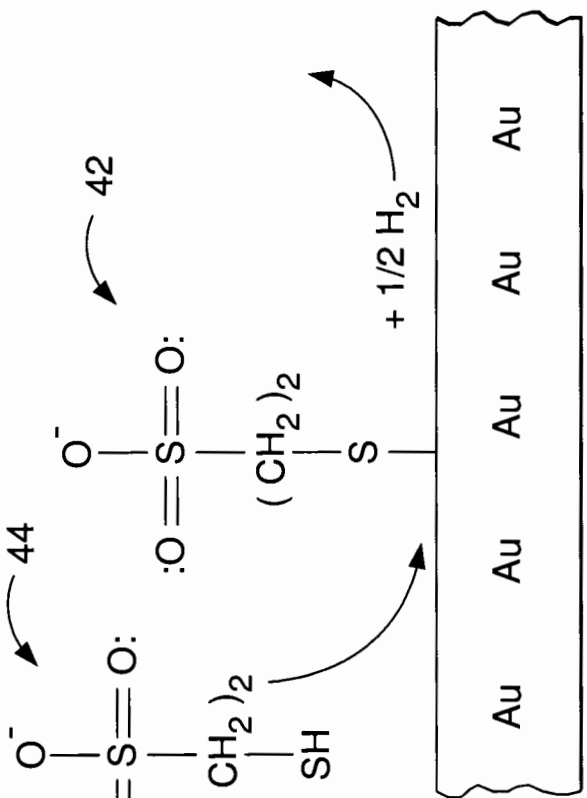


FIG. 4A

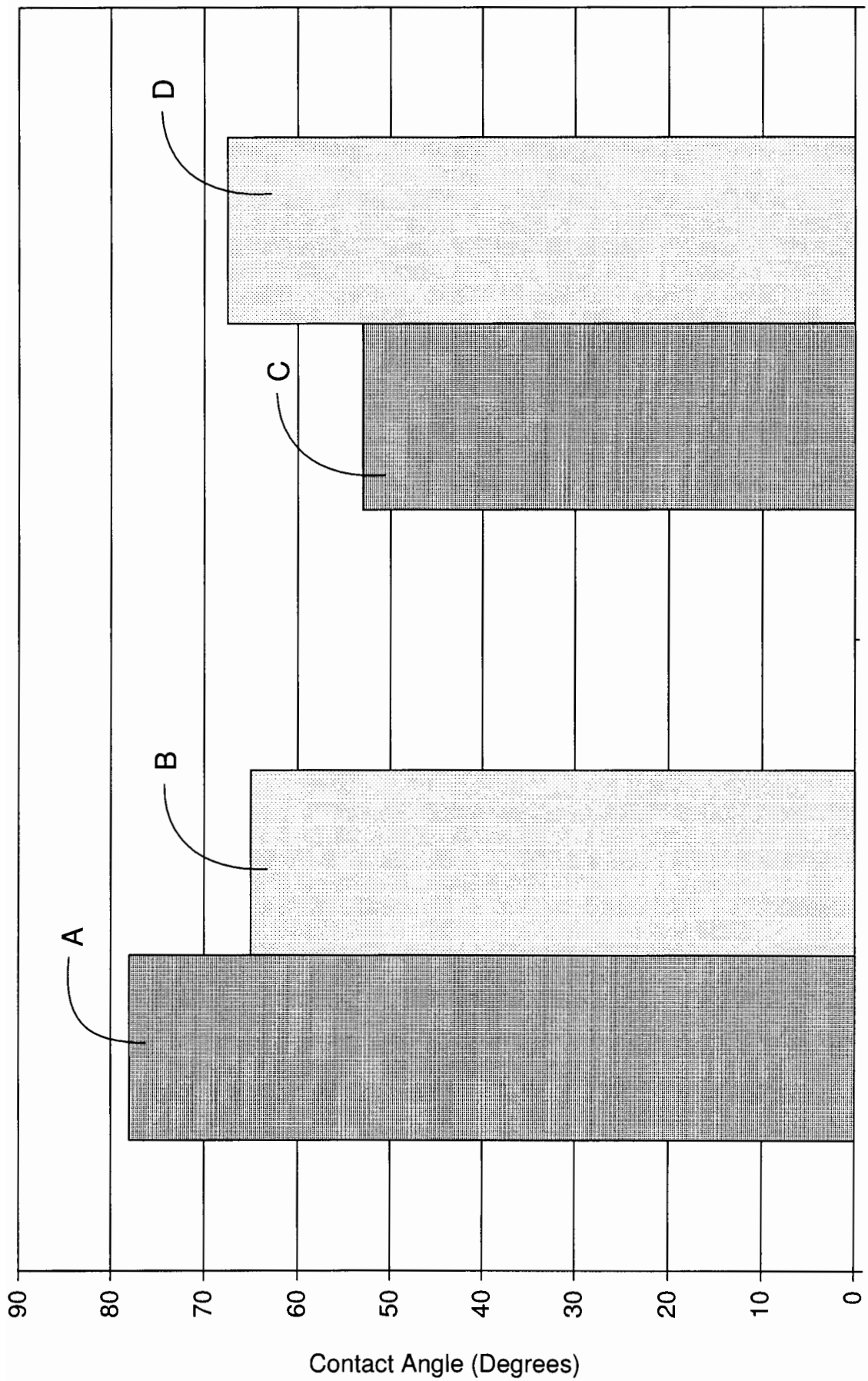

A
B
C
D
Substrate
90
80
70
60
50
40
30
20
10
0
Contact Angle (Degrees)

FIG. 5

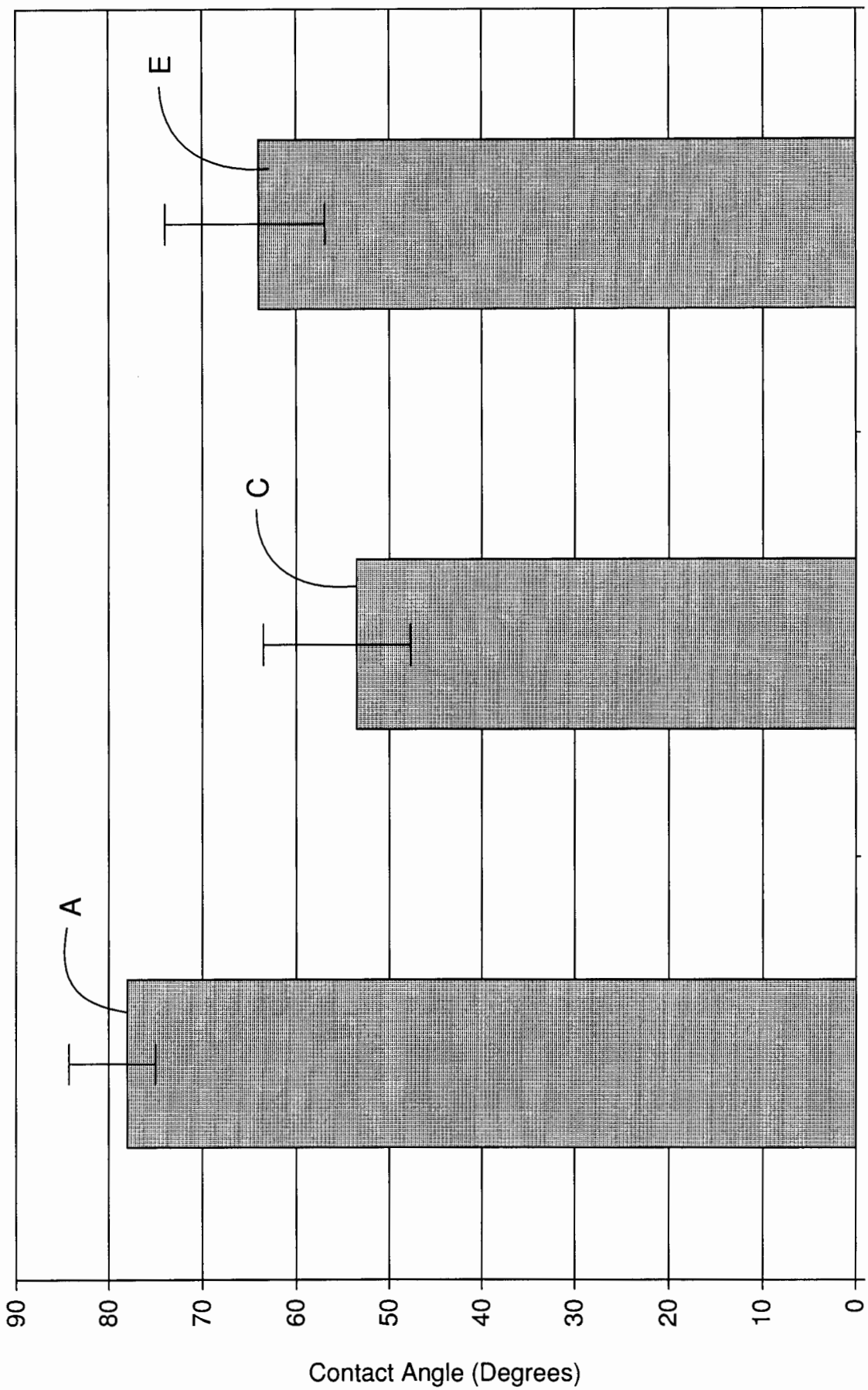


FIG. 6

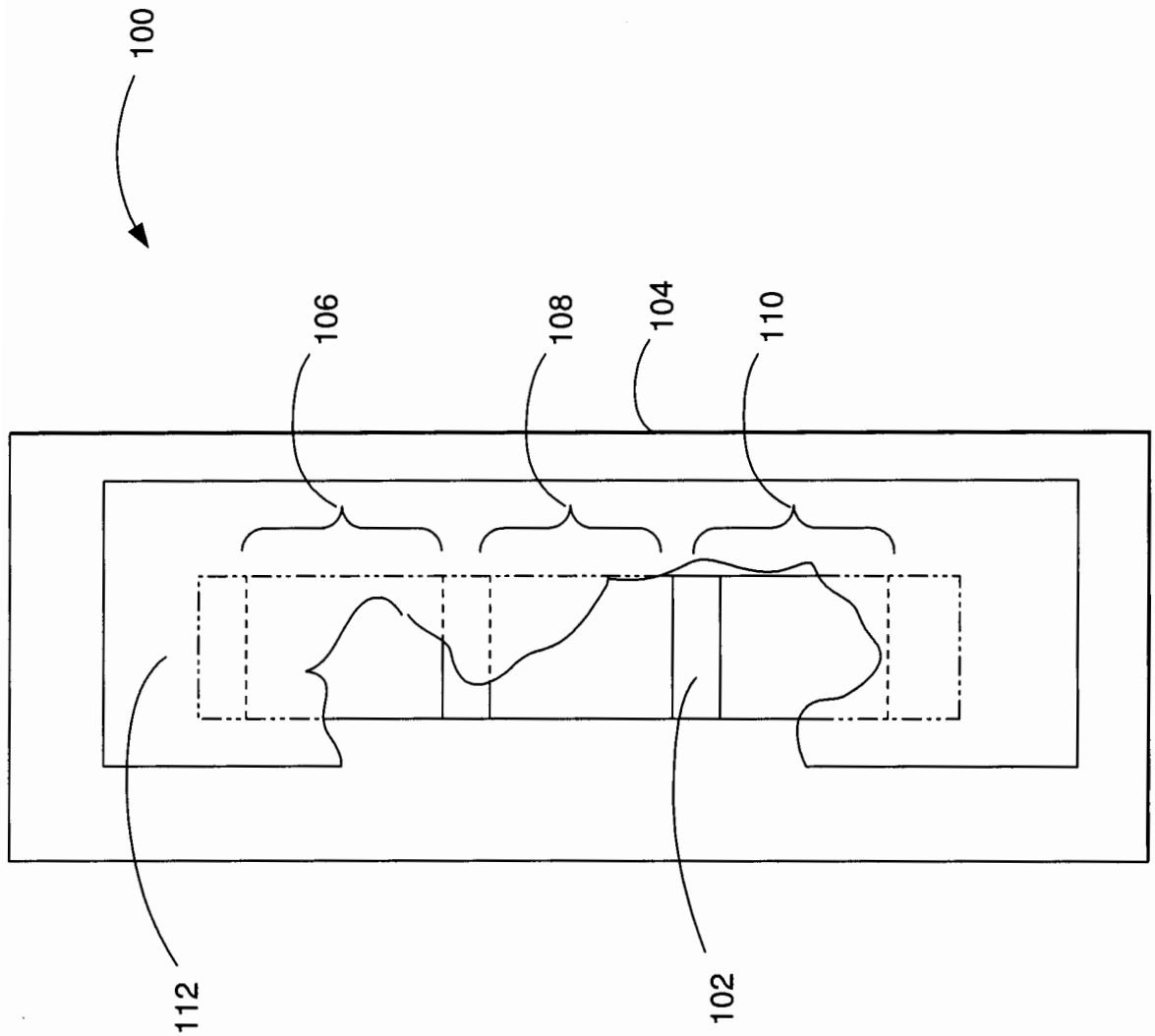


FIG. 7

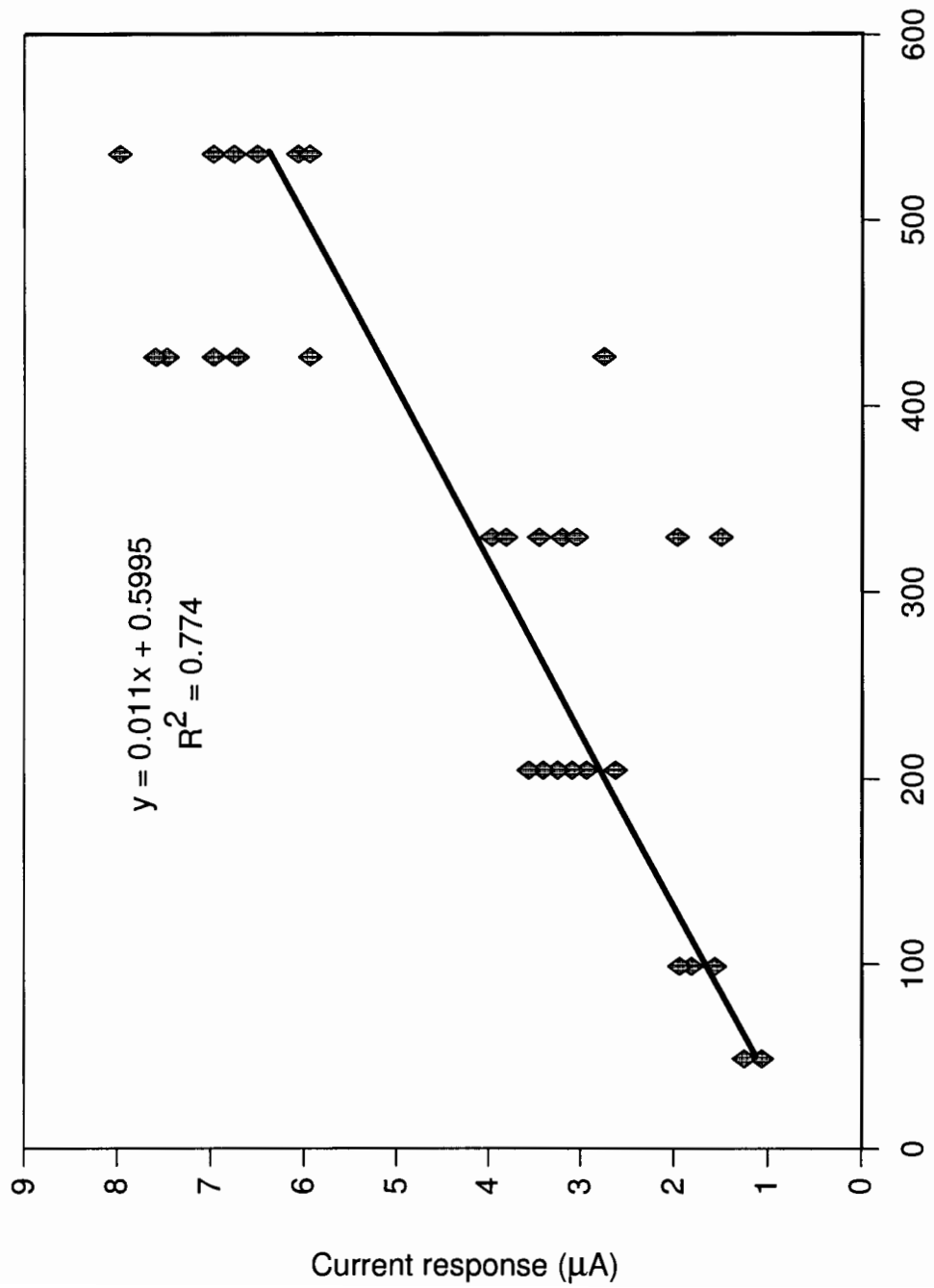

y = 0.011x + 0.5995
R2 = 0.774
Current response (µA)
YSi Glucose (mg/dL)
0
1
2
3
4
5
6
7
8
9
0
100
200
300
400
500
600

FIG. 8

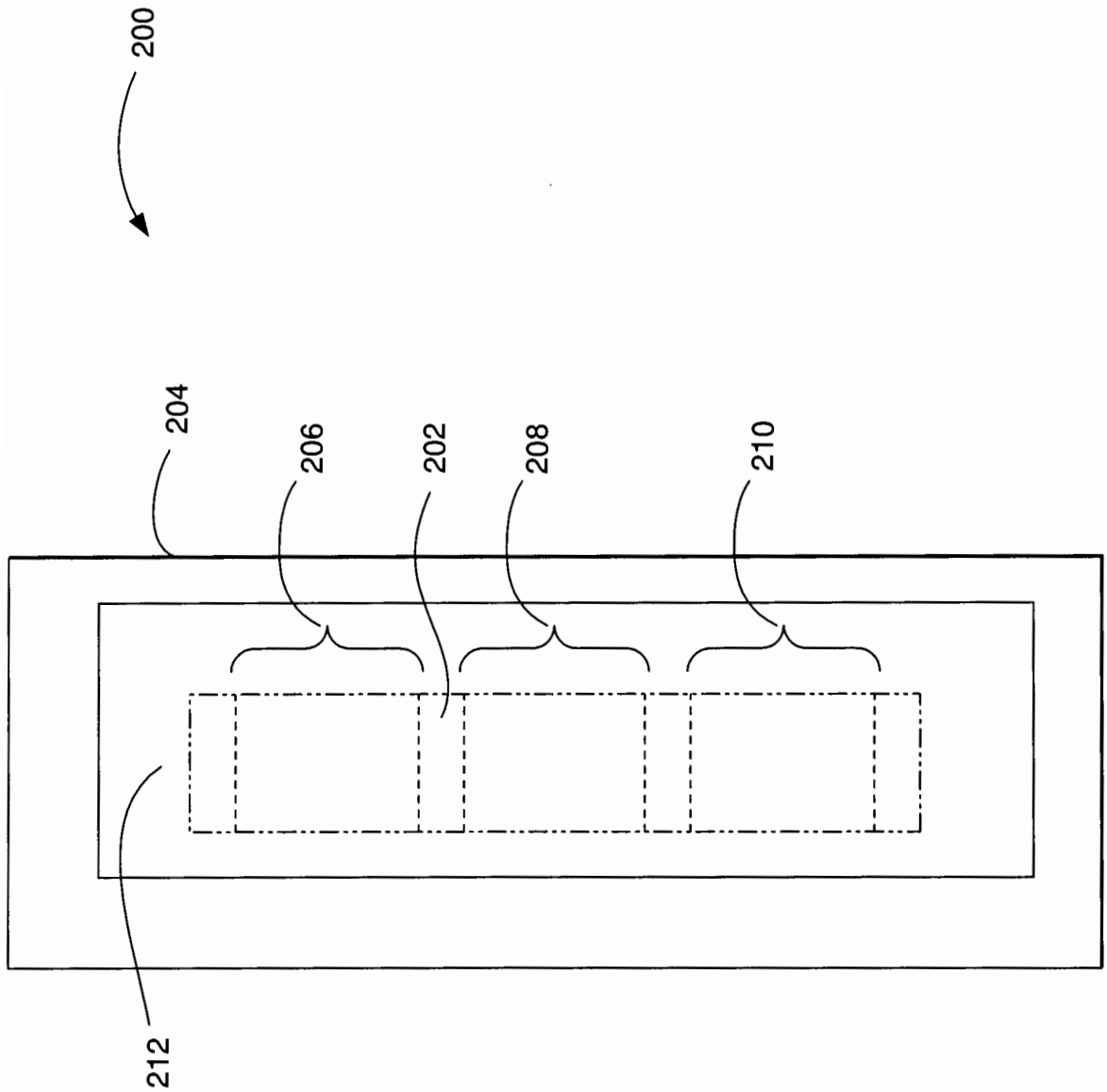


FIG. 9

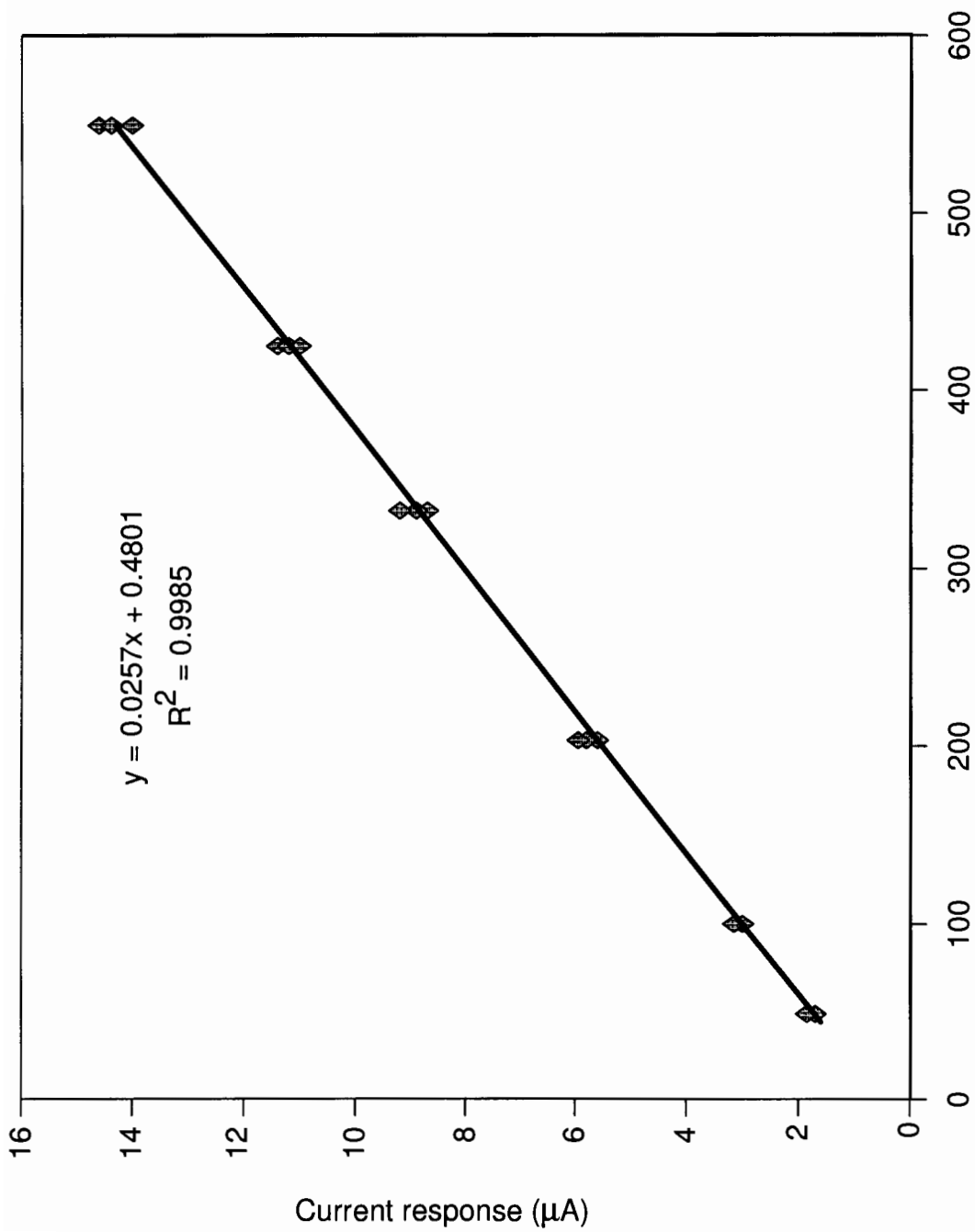

y = 0.0257x + 0.4801
R2 = 0.9985
Current response (µA)
YSi Glucose (mg/dL)
0
2
4
6
8
10
12
14
16
0
100
200
300
400
500
600

FIG. 10

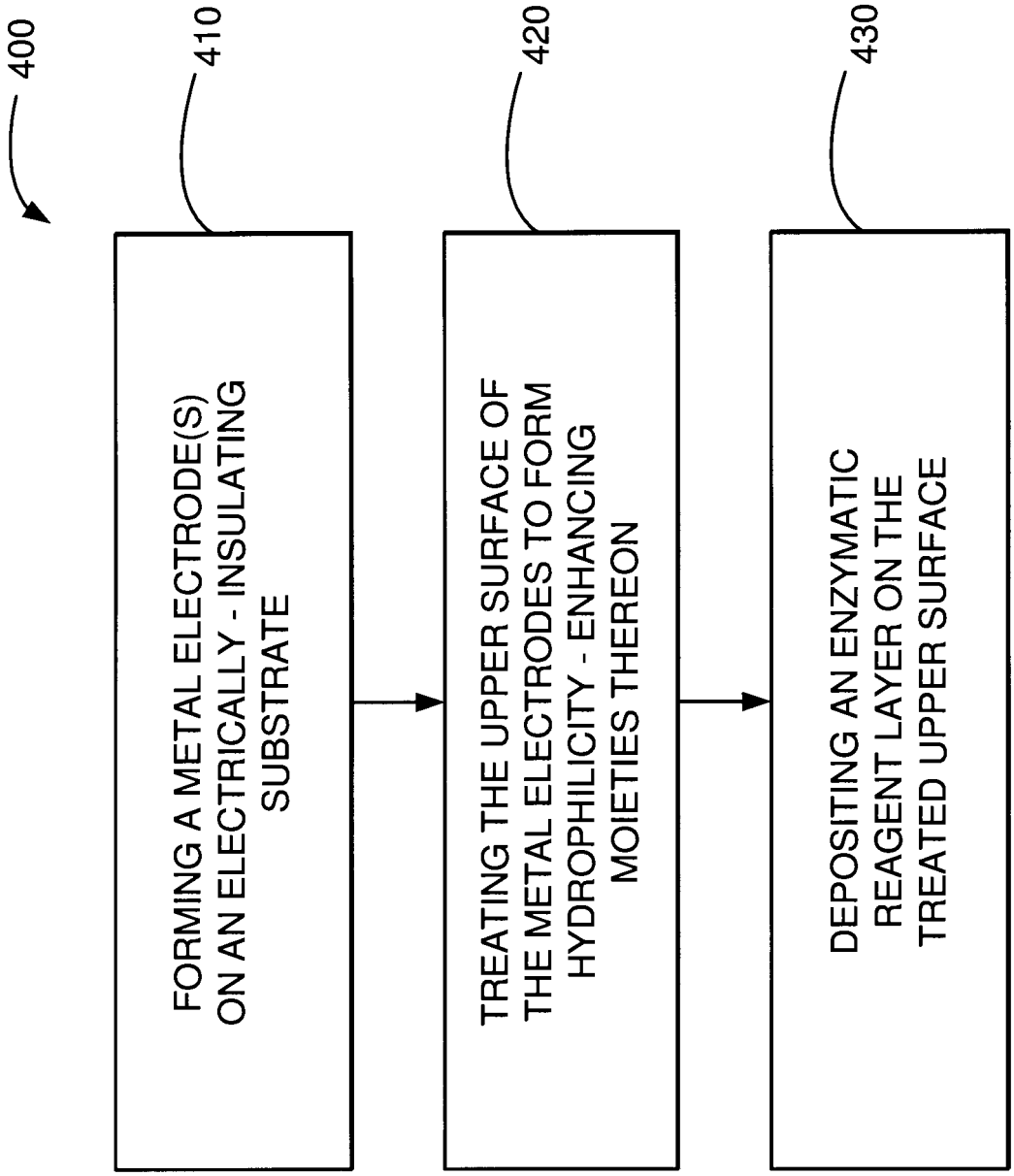

400
410
FORMING A METAL ELECTRODE(S) ON AN ELECTRICALLY - INSULATING SUBSTRATE
420
TREATING THE UPPER SURFACE OF THE METAL ELECTRODES TO FORM HYDROPHILICITY - ENHANCING MOIETIES THEREON
430
DEPOSITING AN ENZYMATIC REAGENT LAYER ON THE TREATED UPPER SURFACE

FIG. 11