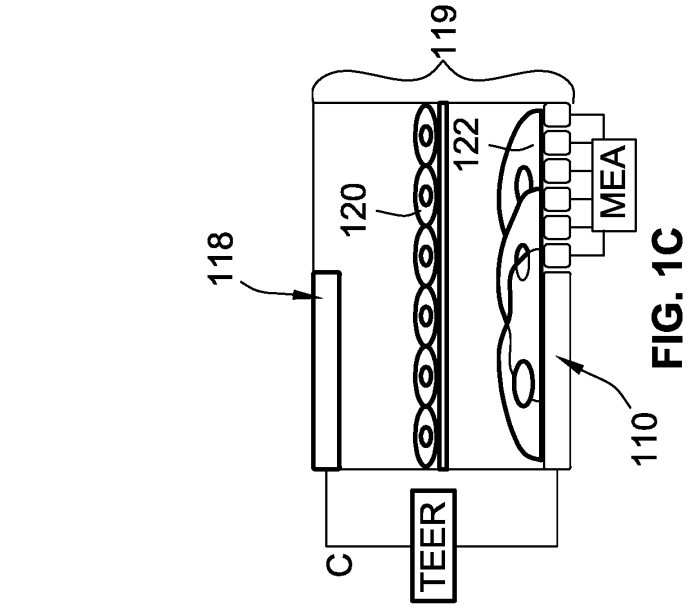

FIG. 1C

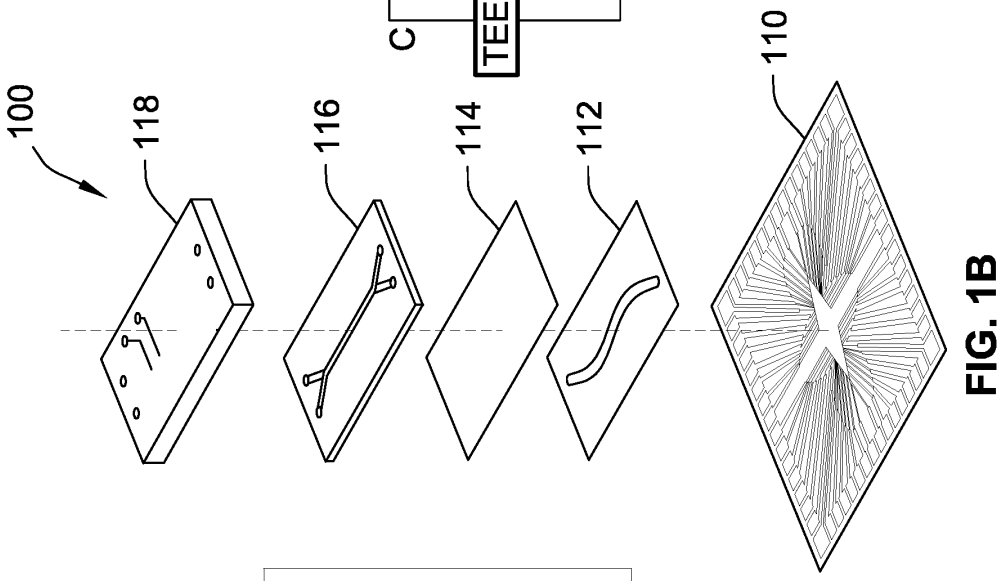

FIG. 1B

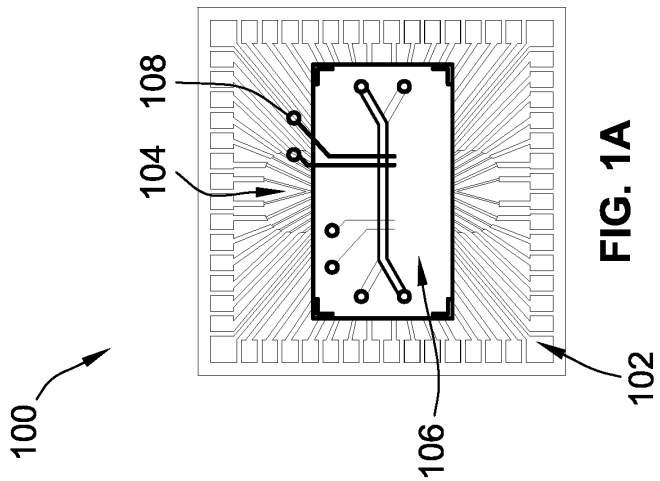

FIG. 1A

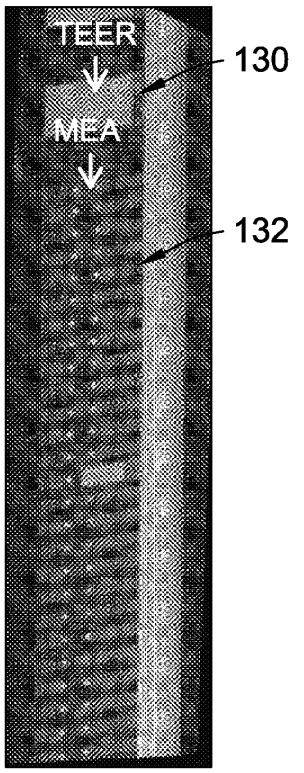

FIG. 2A

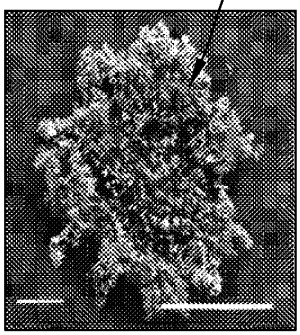

FIG. 2B

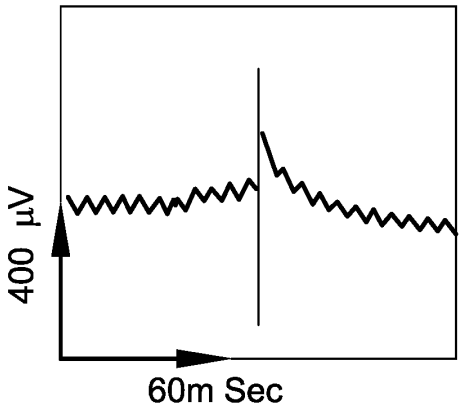

FIG. 2C

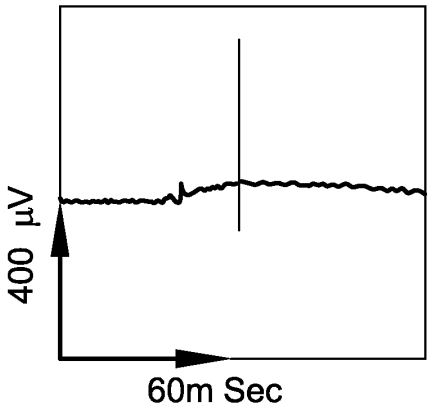

FIG. 2D

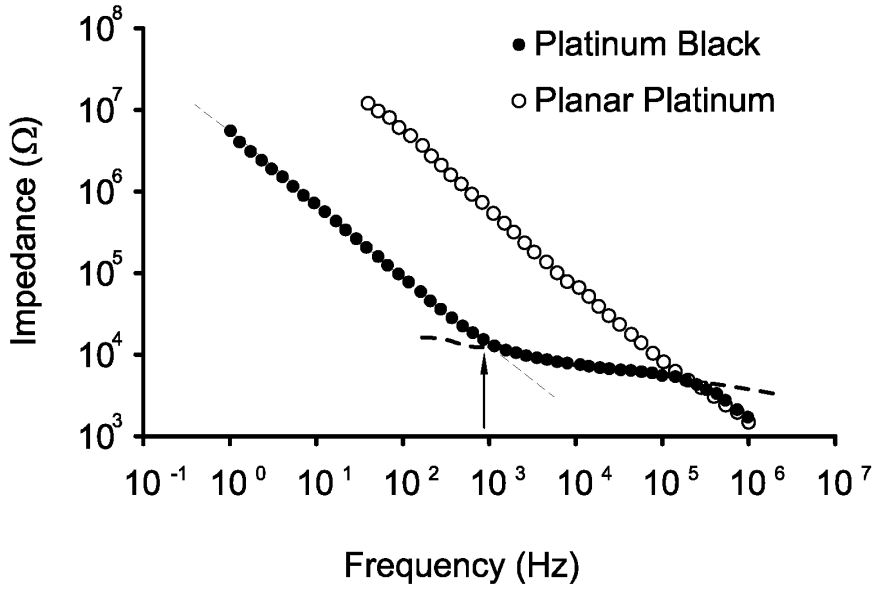
Platinum Black
Planar Platinum
Impedance (Ω)
10^8
10^7
10^6
10^5
10^4
10^3
10^{-1} 10^0 10^1 10^2 10^3 10^4 10^5 10^6 10^7
Frequency (Hz)

FIG. 2E

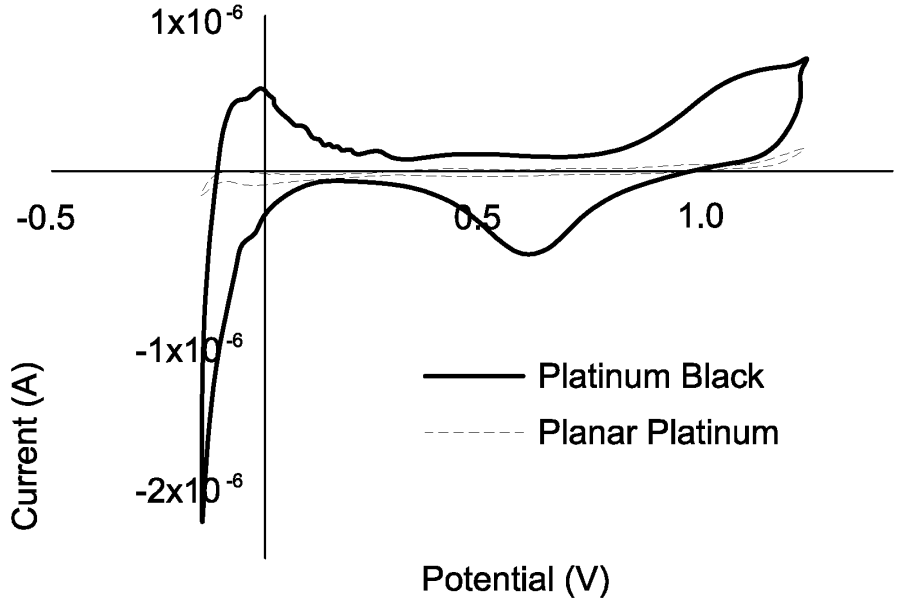
1x10-6
-0.5
0.5
1.0
-1x10-6
-2x10-6
Current (A)
Platinum Black
Planar Platinum
Potential (V)

FIG. 2F

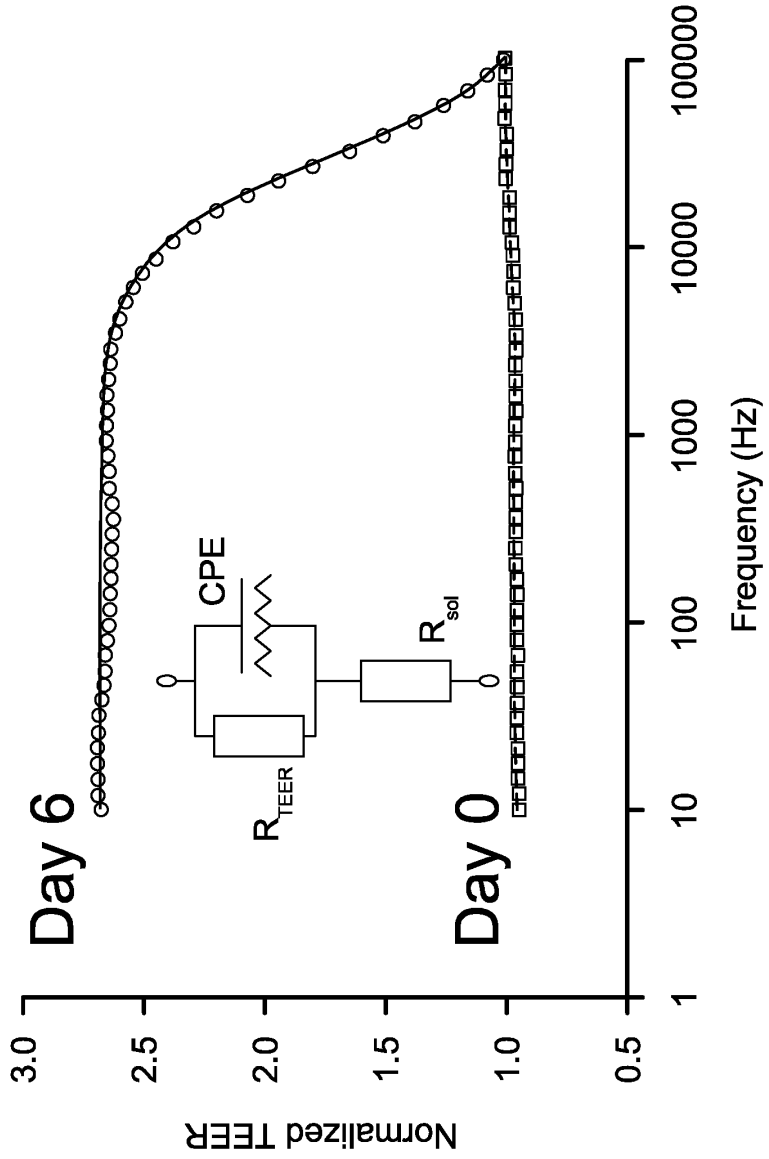
Normalized TEER
3.0
2.5
2.0
1.5
1.0
0.5
1
10
100
1000
10000
100000
Frequency (Hz)
Day 6
Day 0
CPE
R_{TEER}
R_{sol}

FIG. 3A

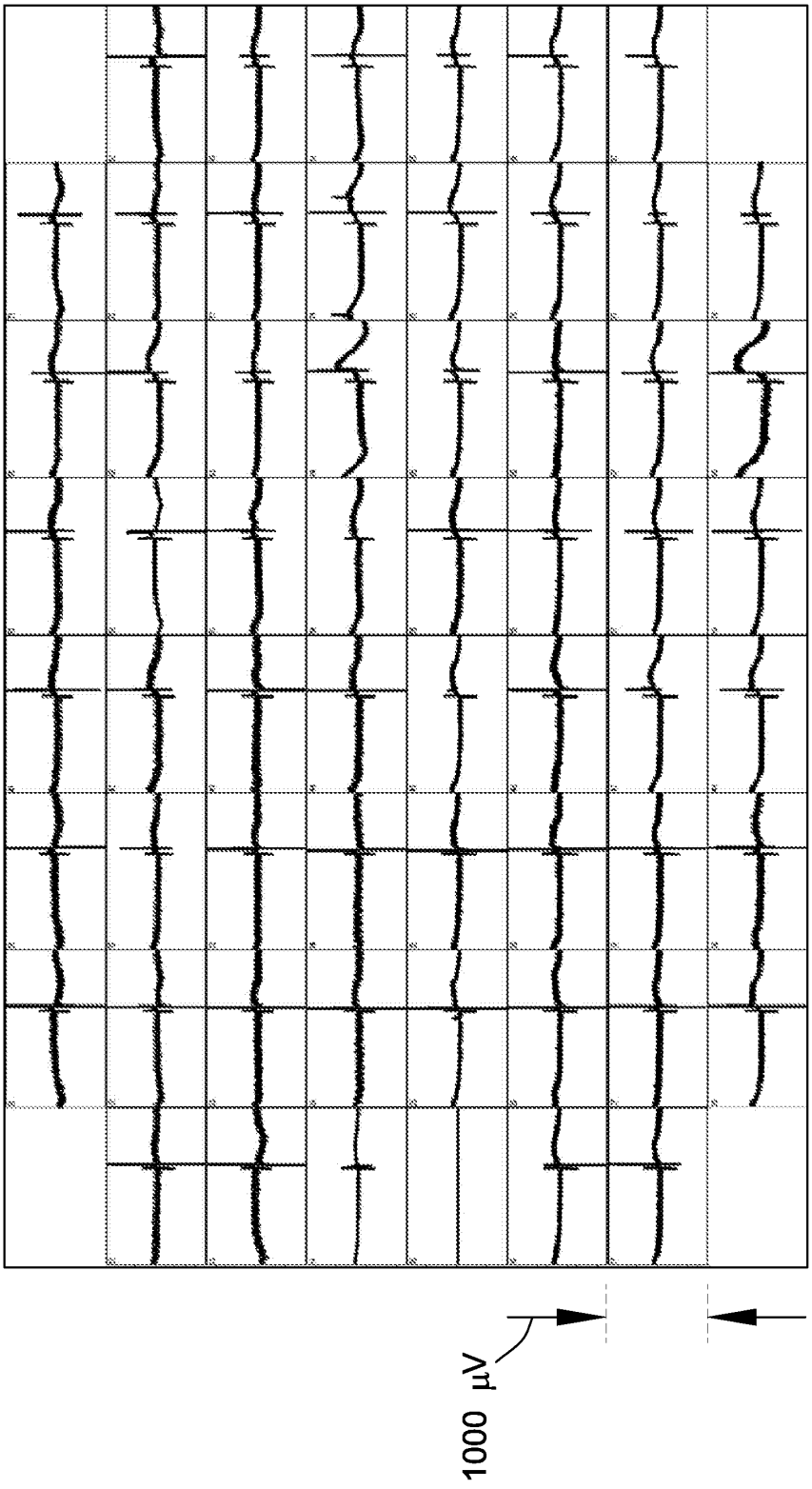

FIG. 3B

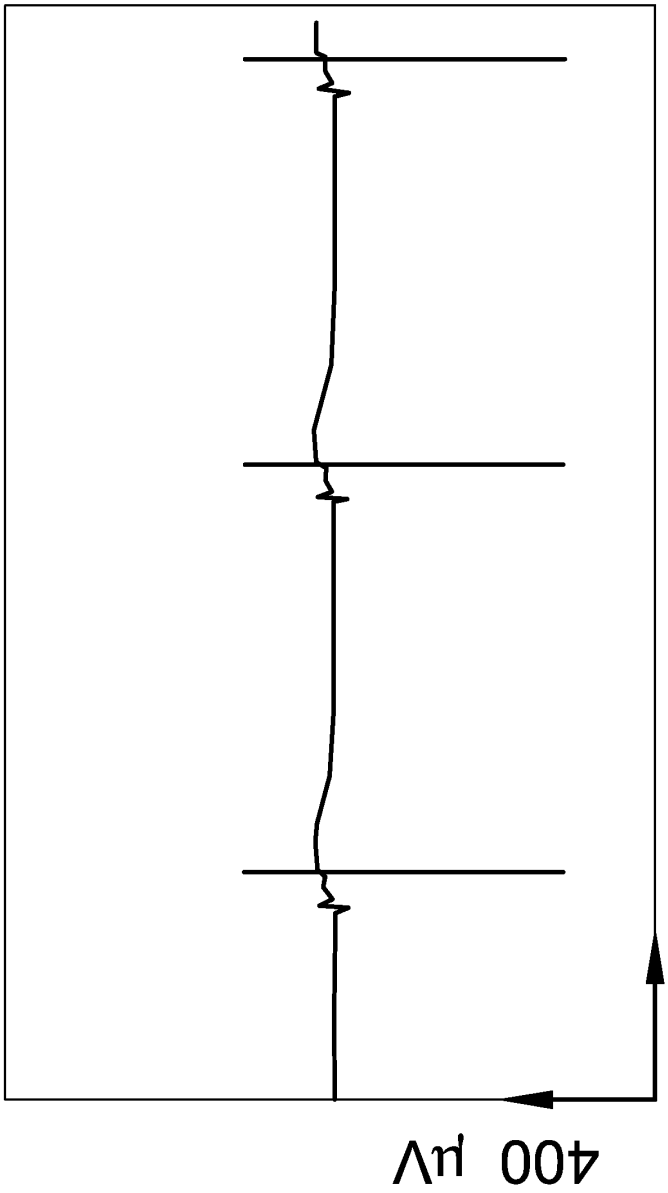

FIG. 3C

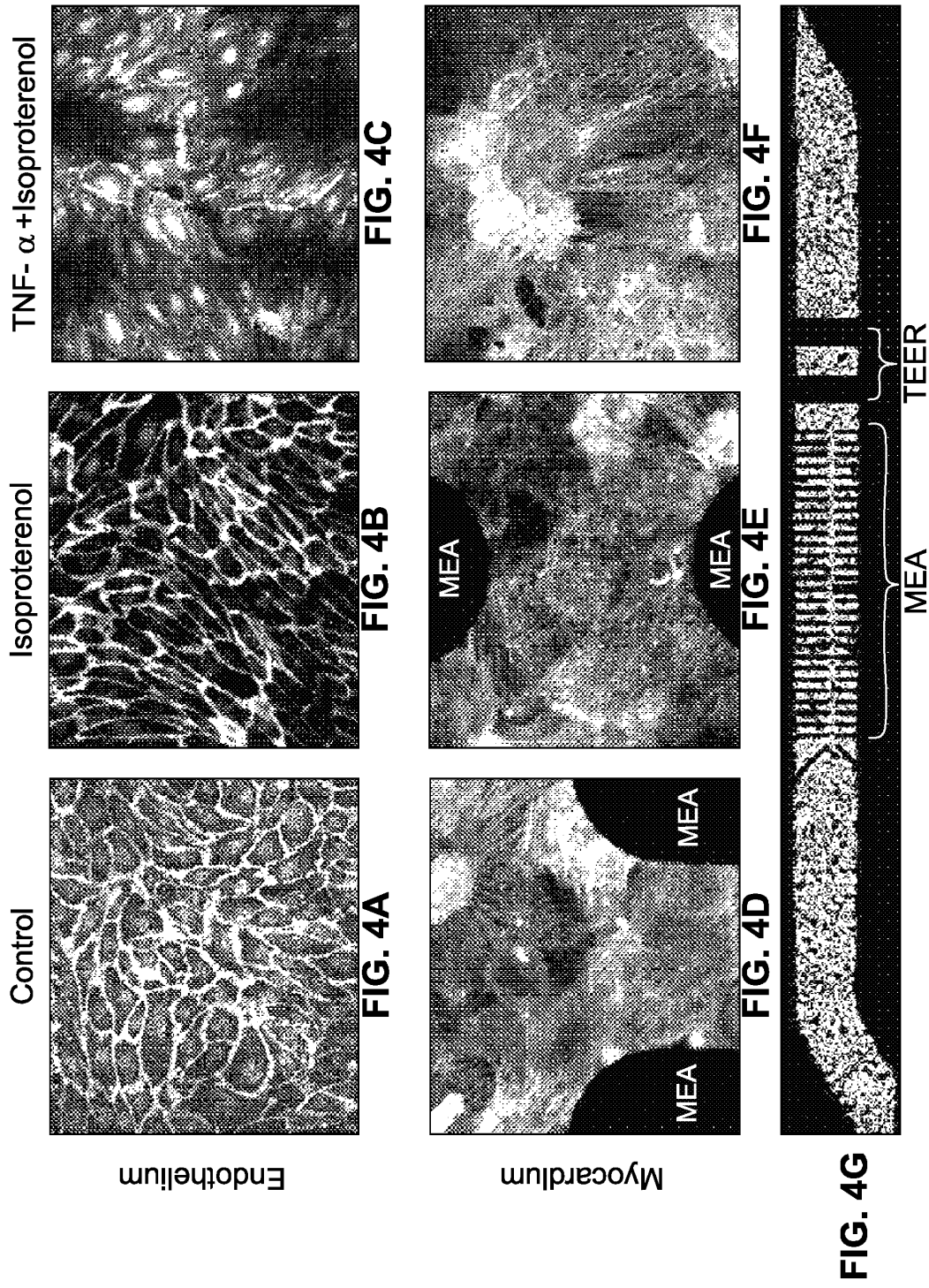

FIG. 4A FIG. 4B FIG. 4C

FIG. 4D FIG. 4E FIG. 4F

FIG. 4G

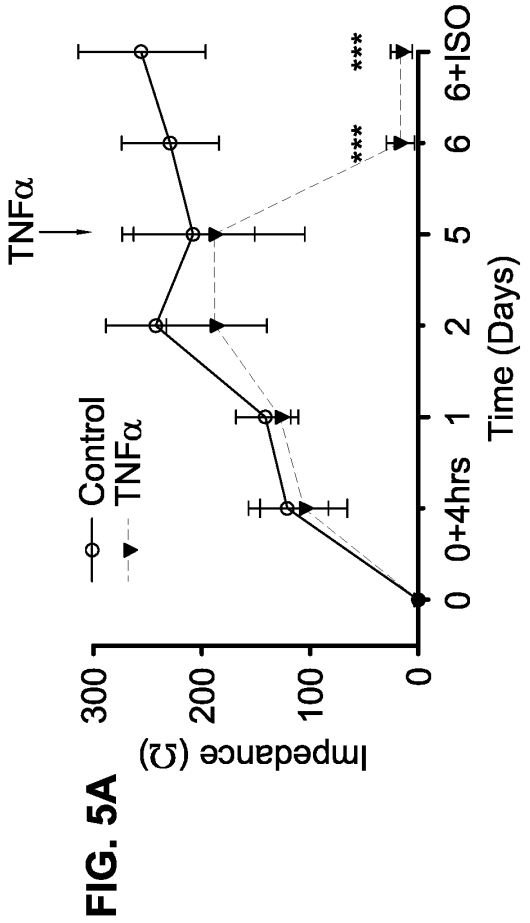

FIG. 5A

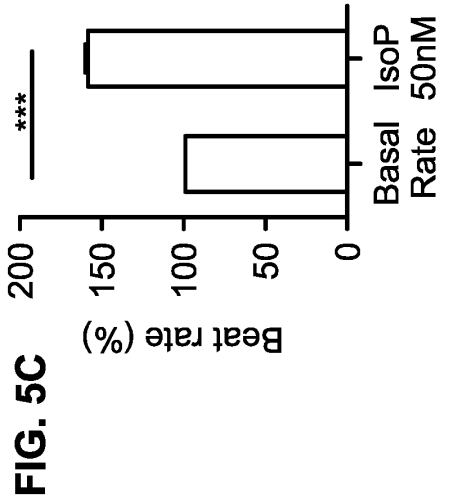

FIG. 5C

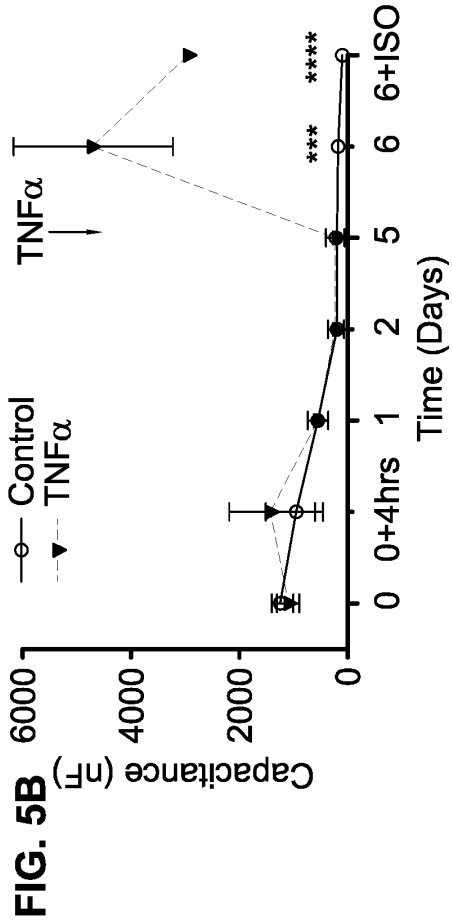

FIG. 5B

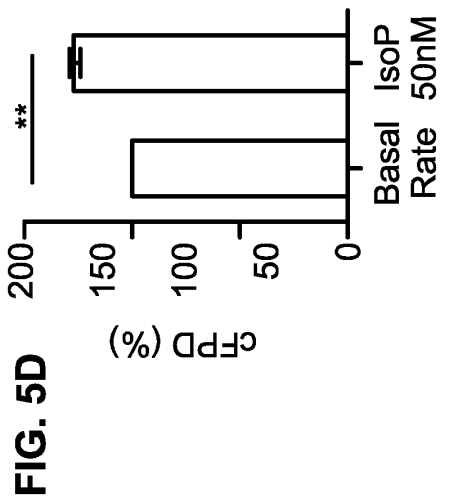

FIG. 5D

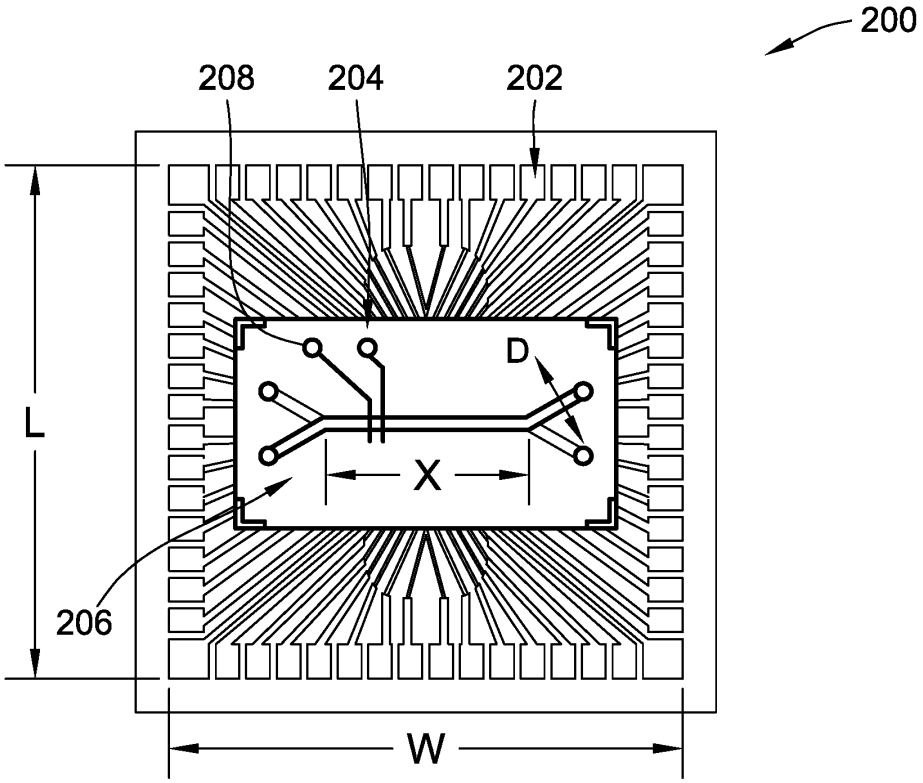
200
208
204
202
D
L
X
206
W

FIG. 6A

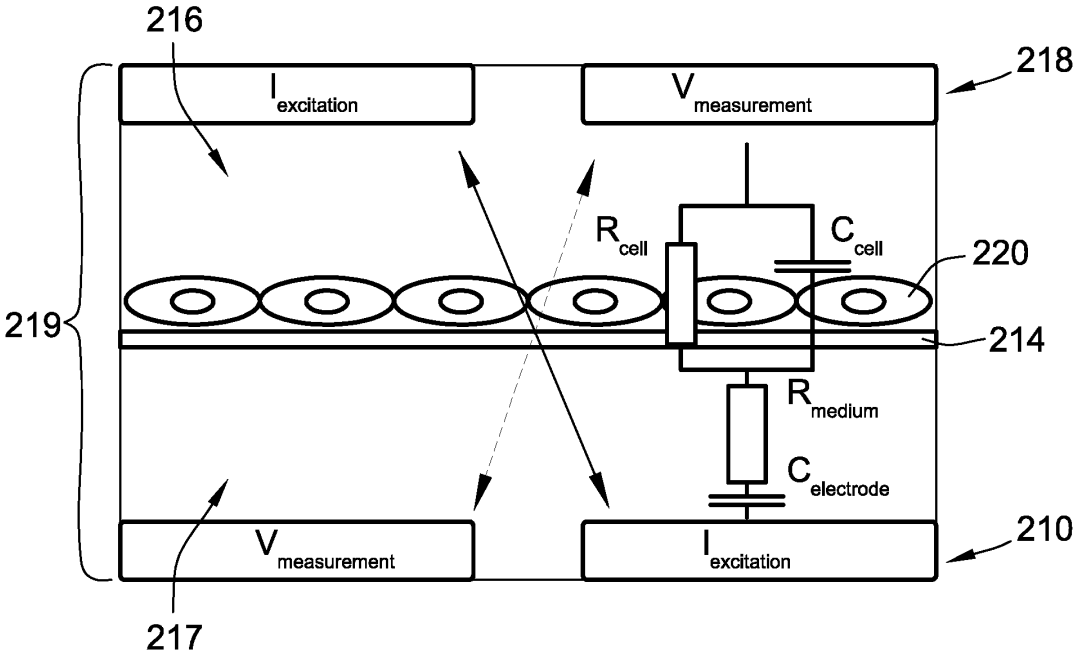
216
218
I excitation
V measurement
R cell
C cell
220
219
214
R medium
C electrode
V measurement
I excitation
210
217

FIG. 6B

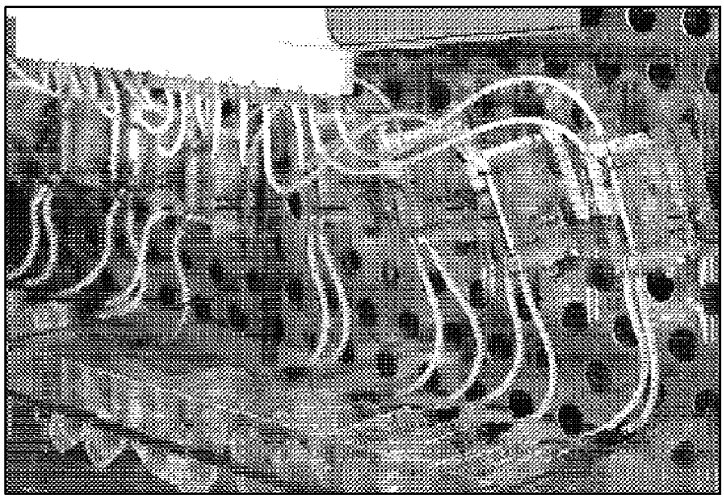

FIG. 7B

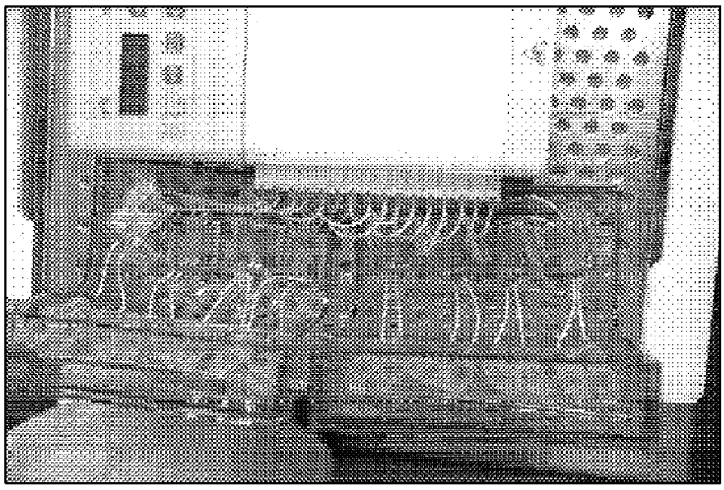

FIG. 7A

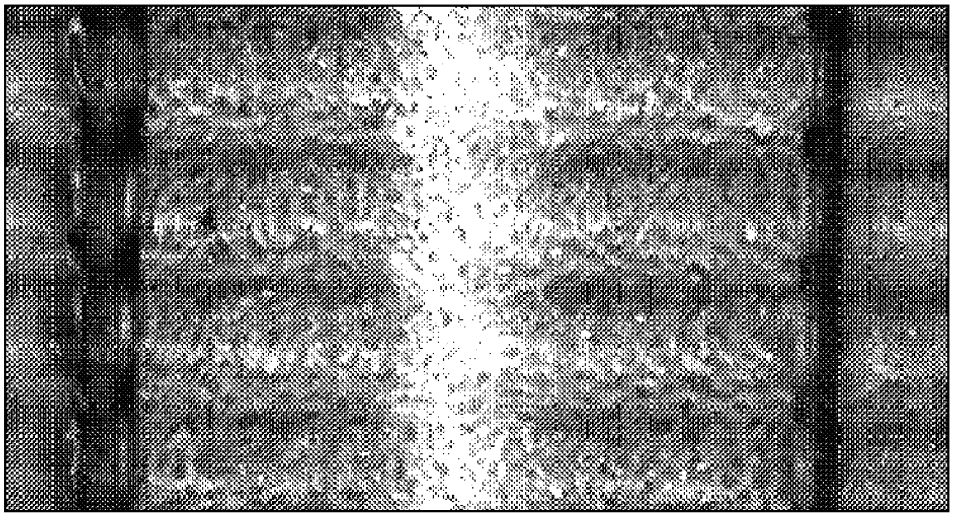

FIG. 8A

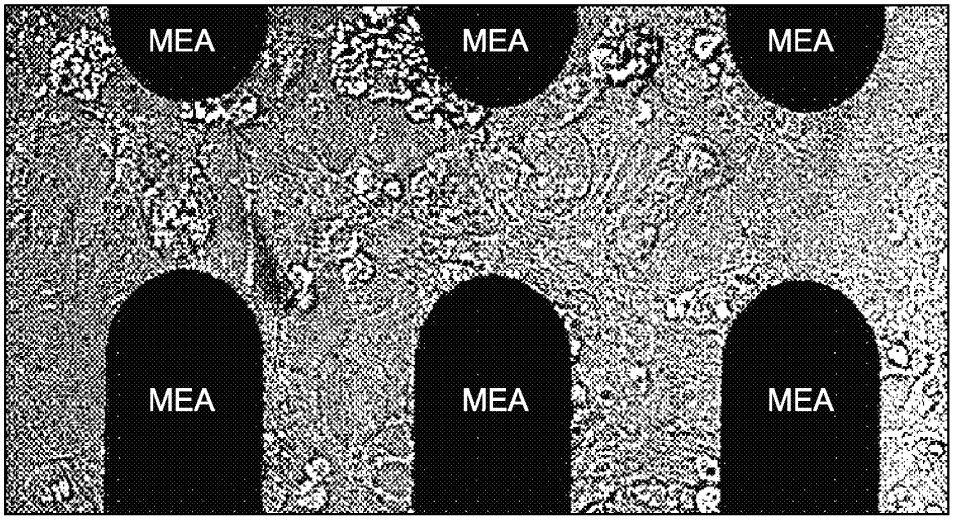

FIG. 8B

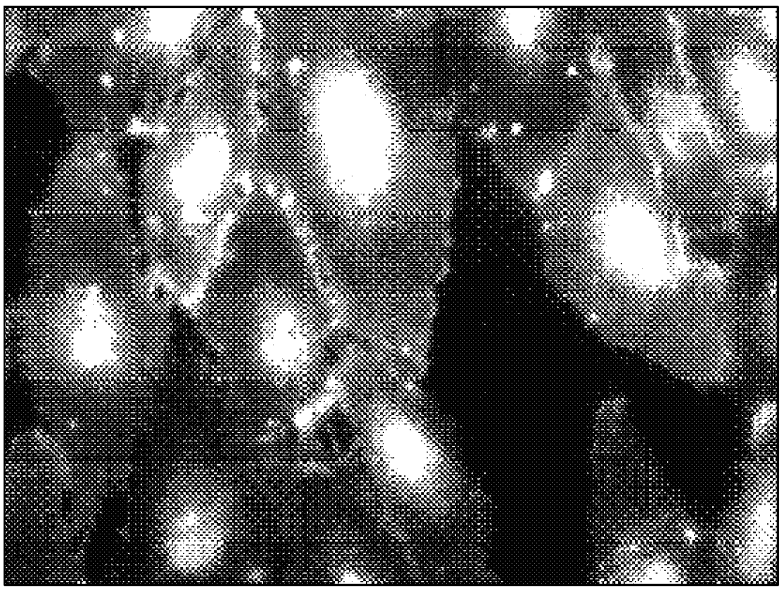

FIG. 9B

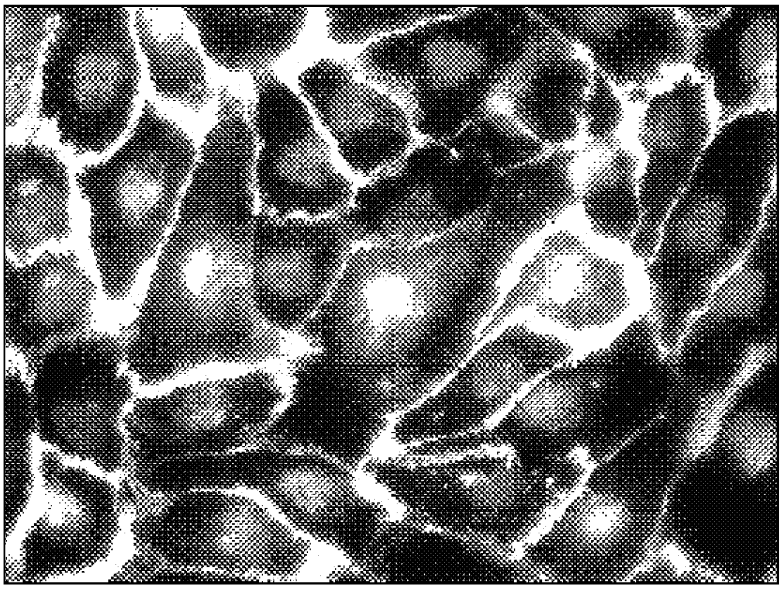

FIG. 9A

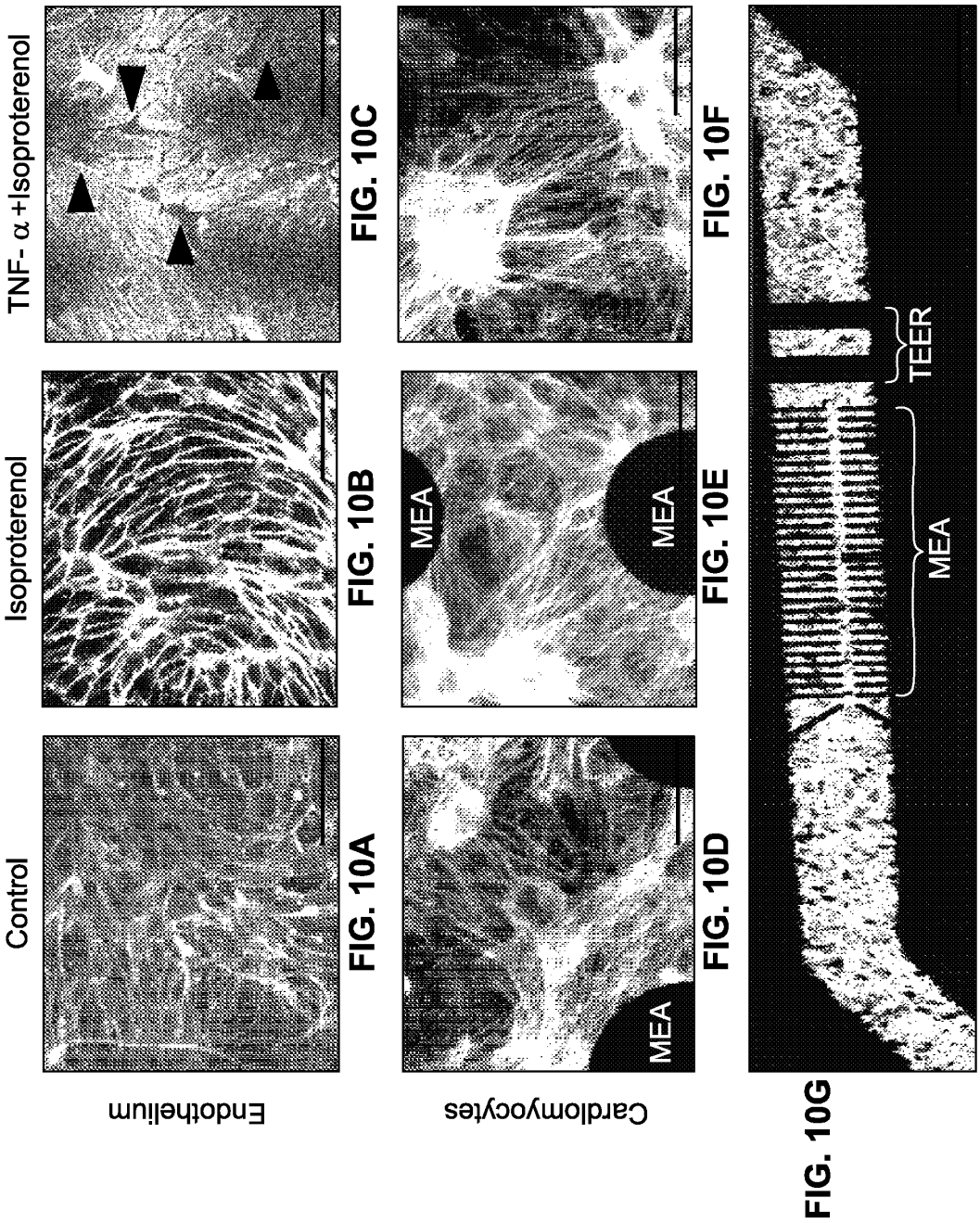

FIG. 10A FIG. 10B FIG. 10C

FIG. 10D FIG. 10E FIG. 10F

FIG. 10G