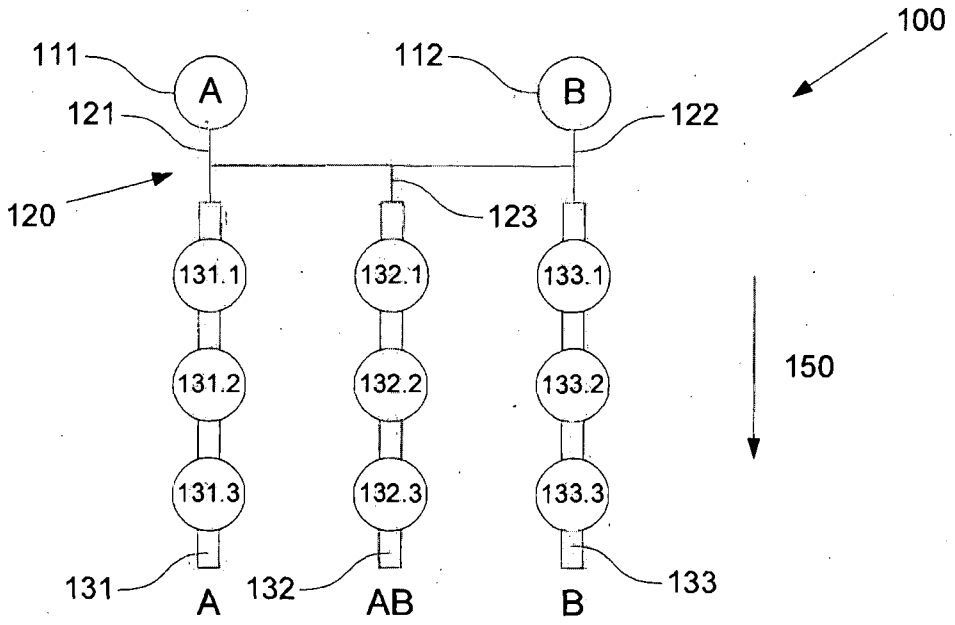

100
111
A
112
B
121
122
120
123
131.1
132.1
133.1
131.2
132.2
133.2
131.3
132.3
133.3
150
131
A
132
AB
B
133

Fig. 1A

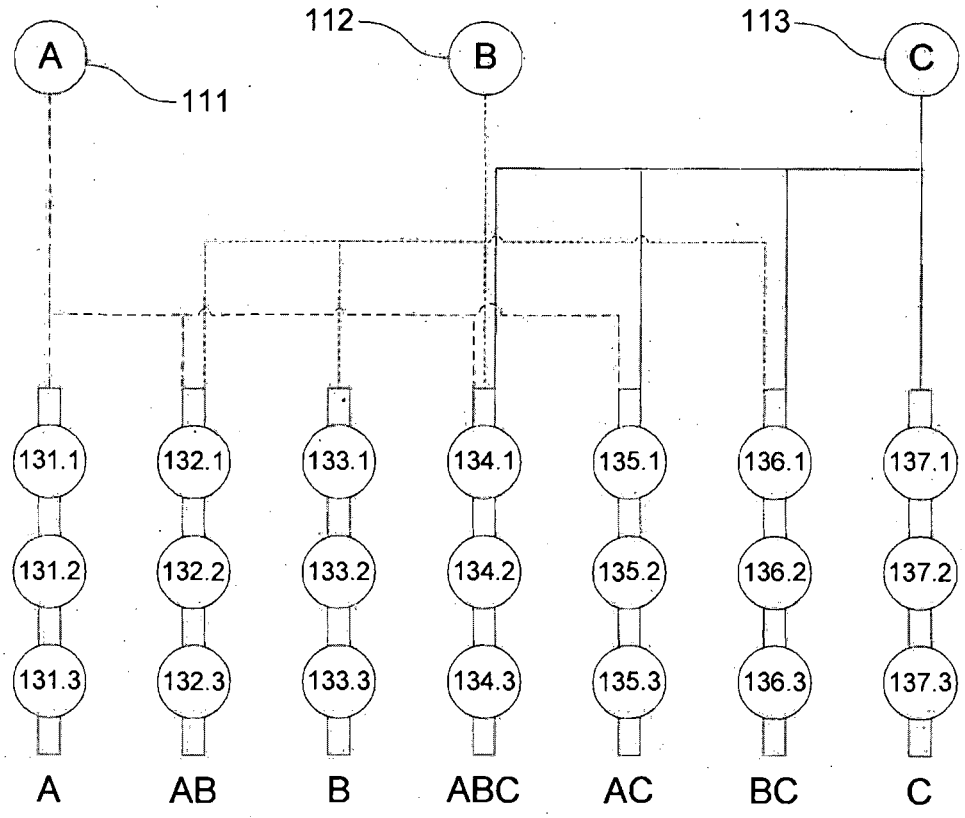

A
111
112
B
113
C
131.1
132.1
133.1
134.1
135.1
136.1
137.1
131.2
132.2
133.2
134.2
135.2
136.2
137.2
131.3
132.3
133.3
134.3
135.3
136.3
137.3
A
AB
B
ABC
AC
BC
C

Fig. 1B

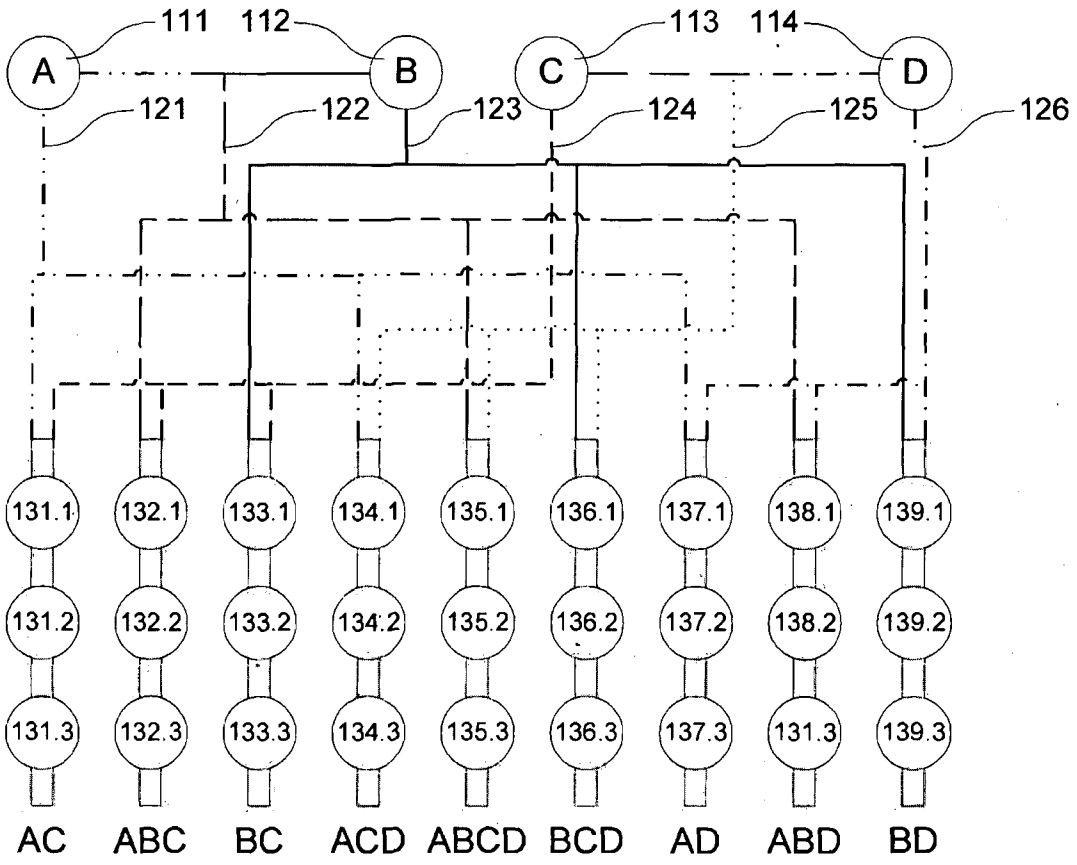


Fig. 1C

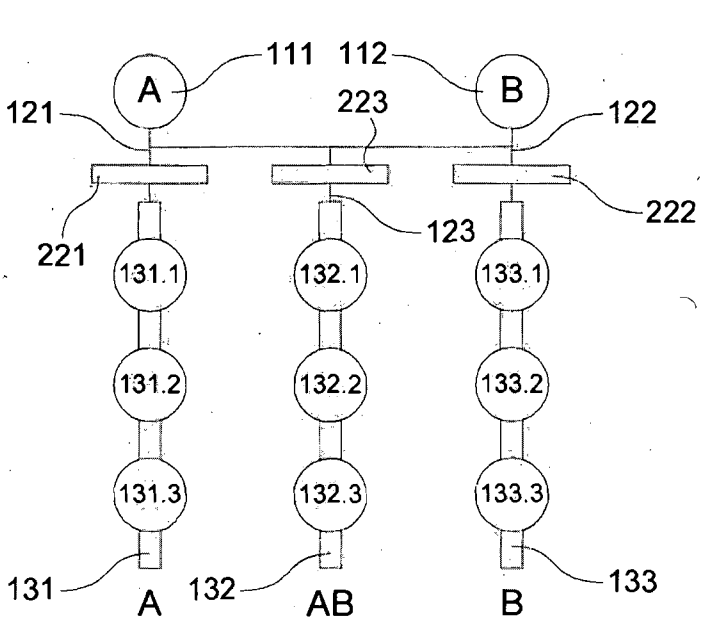


Fig. 2A

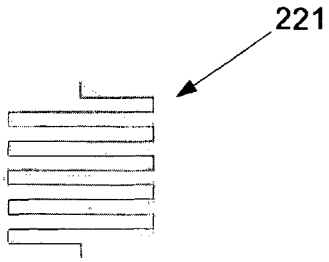


Fig. 2B

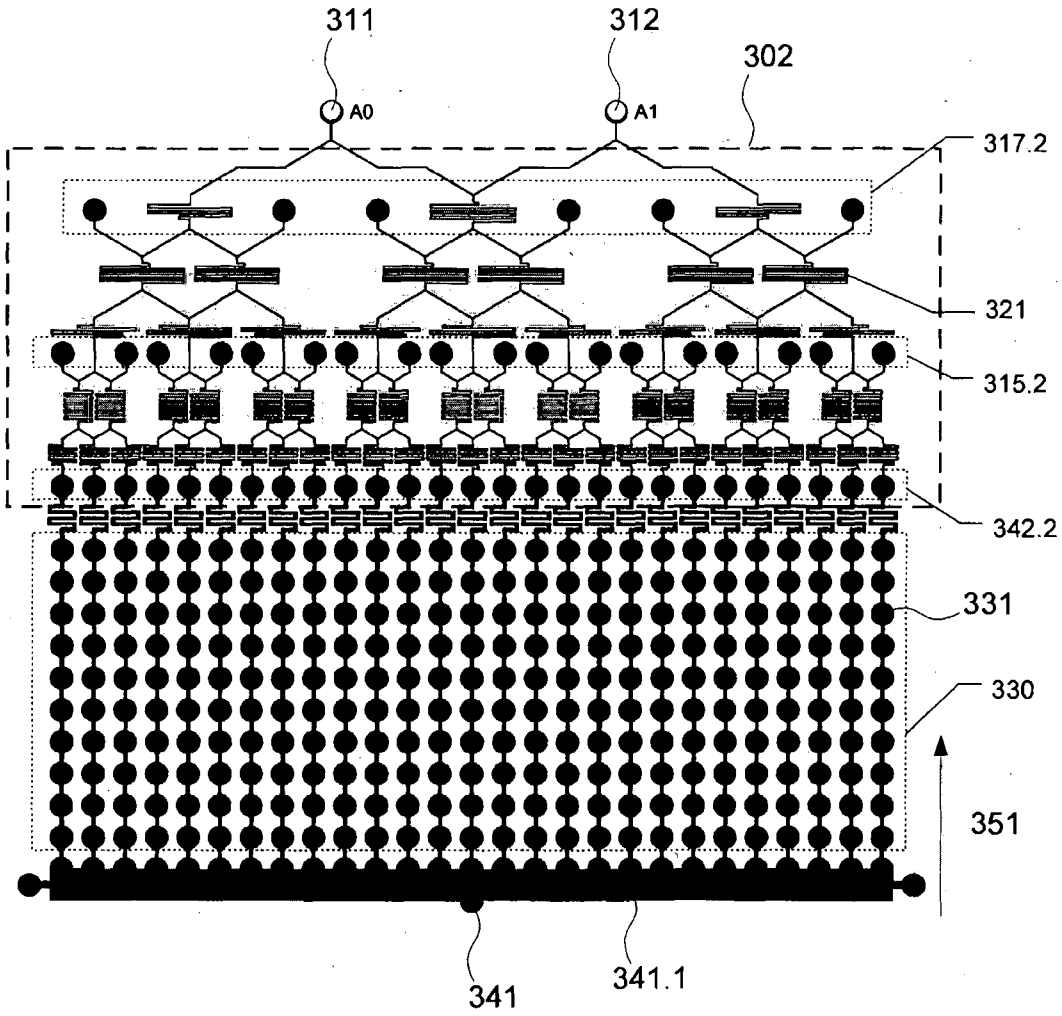

311
312
302
A0
A1
317.2
321
315.2
342.2
331
330
351
341
341.1

Fig. 3A

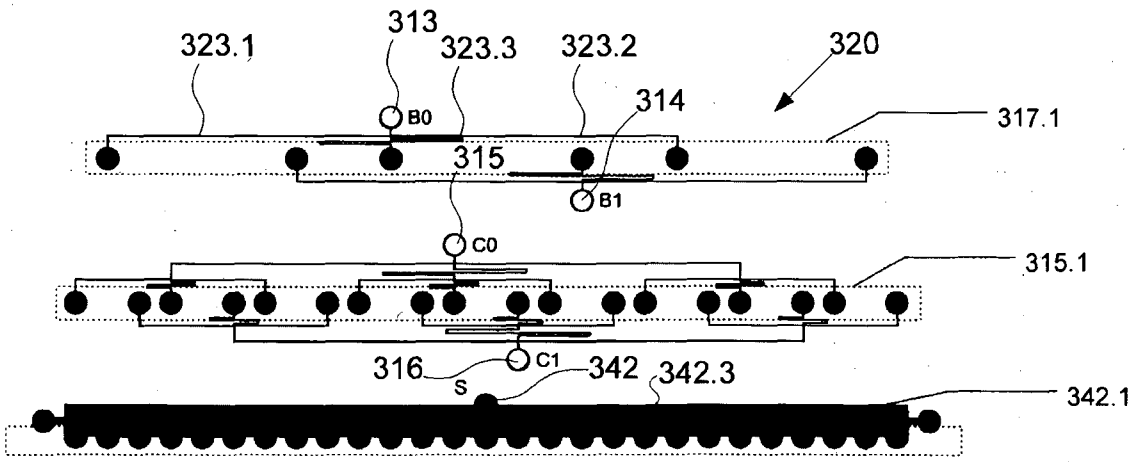

313
323.1
323.3
323.2
320
314
B0
317.1
315
B1
C0
315.1
316
S
C1
342
342.3
342.1

Fig. 3B

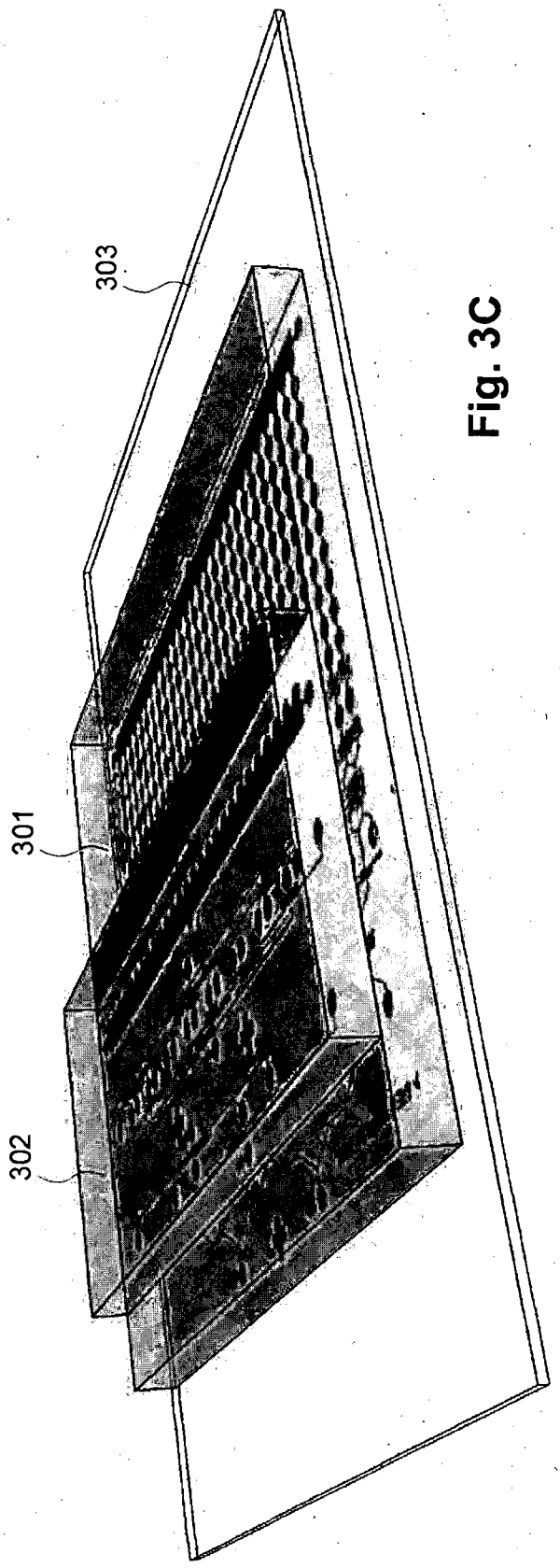


Fig. 3C

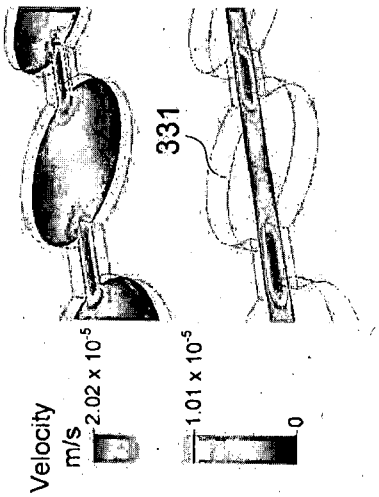


Fig. 3D

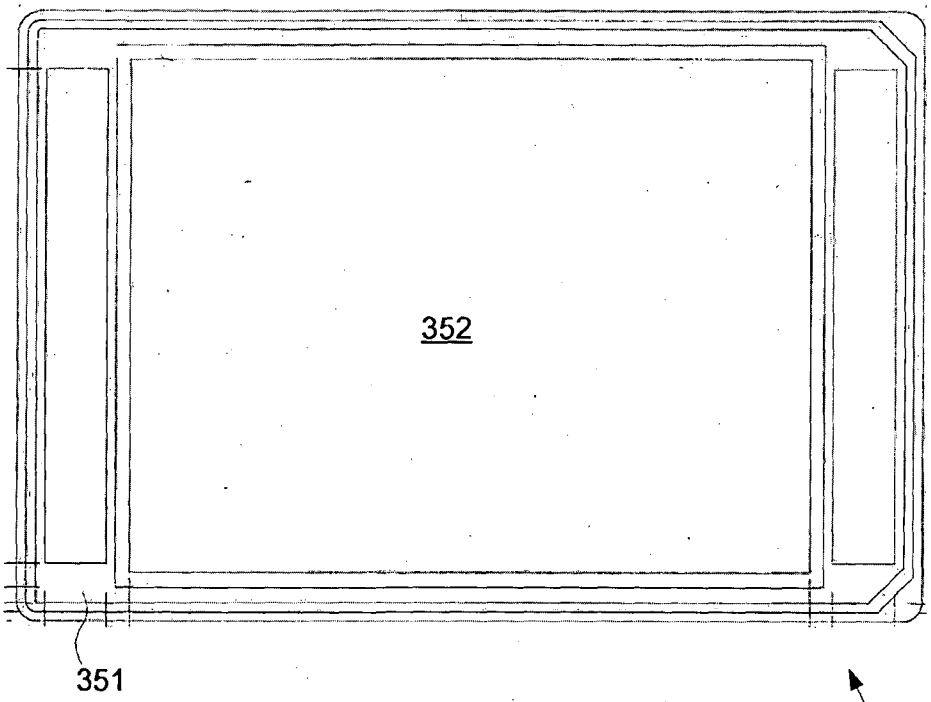


Fig. 3E

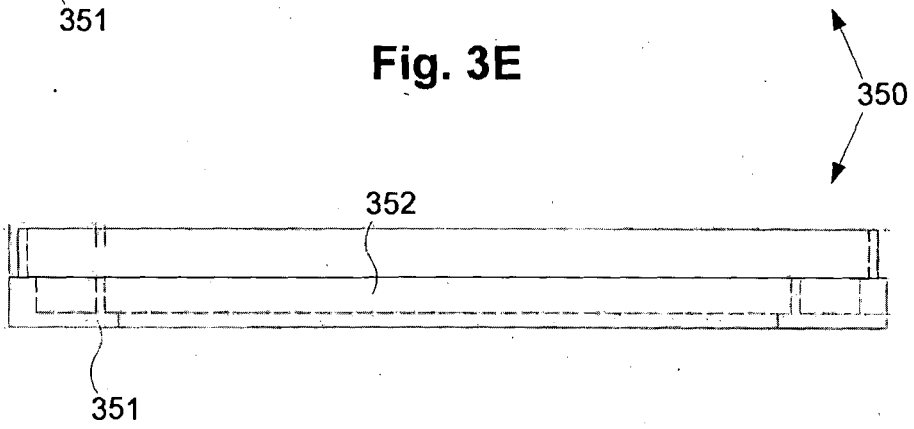


Fig. 3F

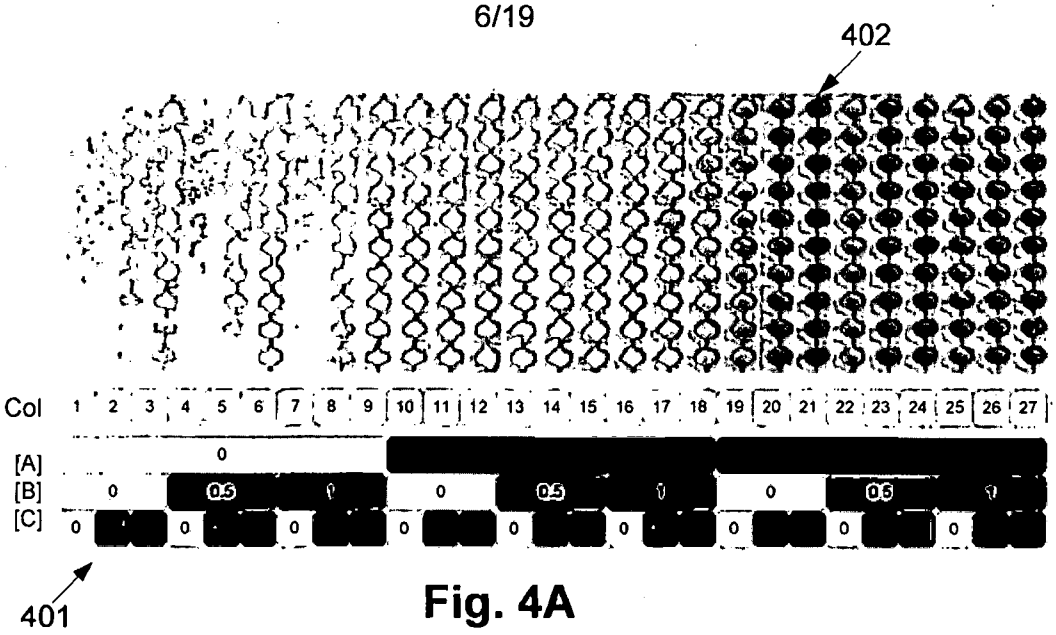

402
Col
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
[A]
[B]
[C]
0
0.5
401

Fig. 4A

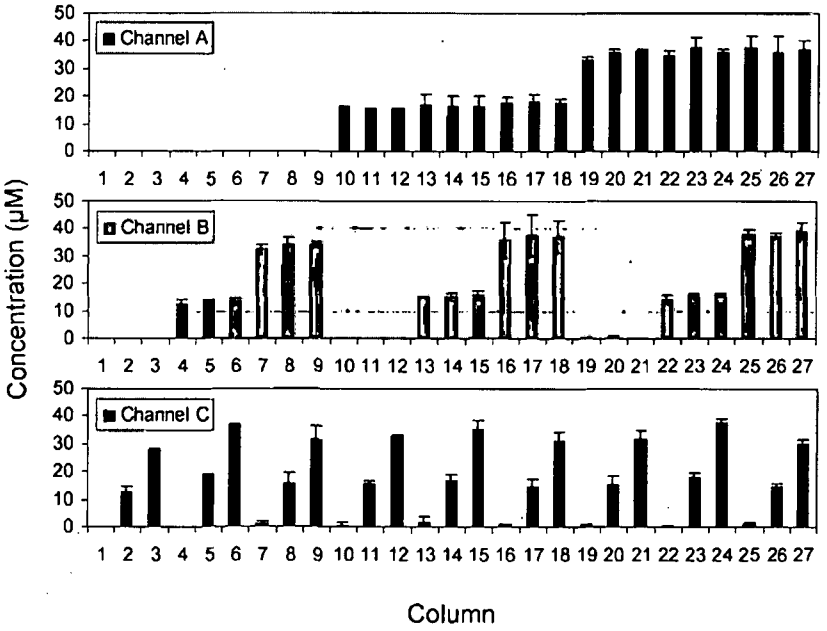

Channel A
Channel B
Channel C
Concentration (µM)
0 10 20 30 40 50
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
Column

Fig. 4B

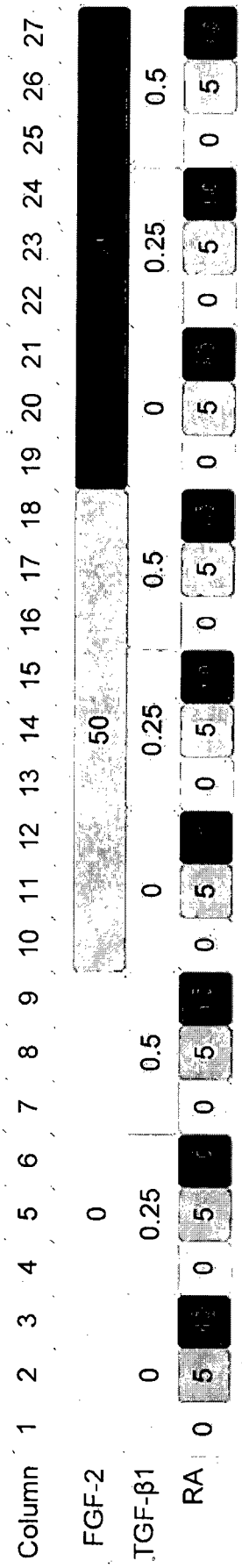

Column 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
FGF-2 0 50 0 0.25 0.5 0 0.25 0.5
TGF-β1 0 0.25 0.5 0 0.25 0.5 0 0.25 0.5
RA 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5

Fig. 5A

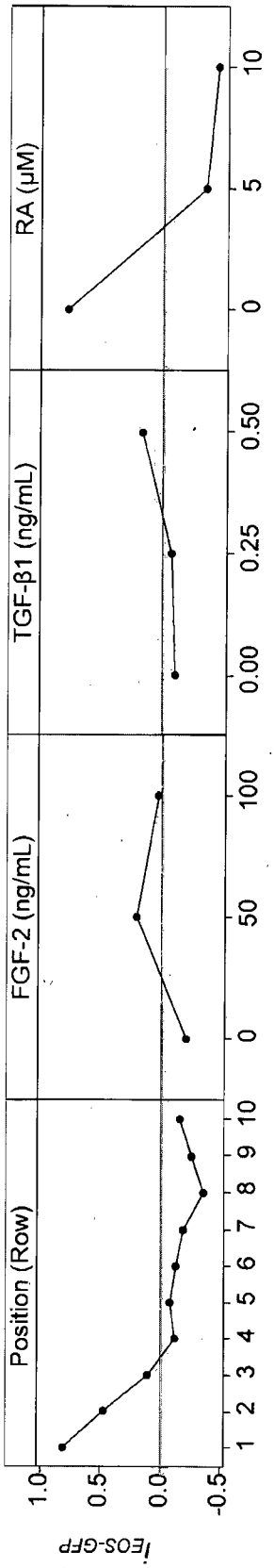

Position (Row)
FGF-2 (ng/mL)
TGF-β1 (ng/mL)
RA (μM)
IEOS-GFP
1.0
0.5
0.0
-0.5
1 2 3 4 5 6 7 8 9 10
0 50 100
0.00 0.25 0.50
0 5 10

Fig. 5F

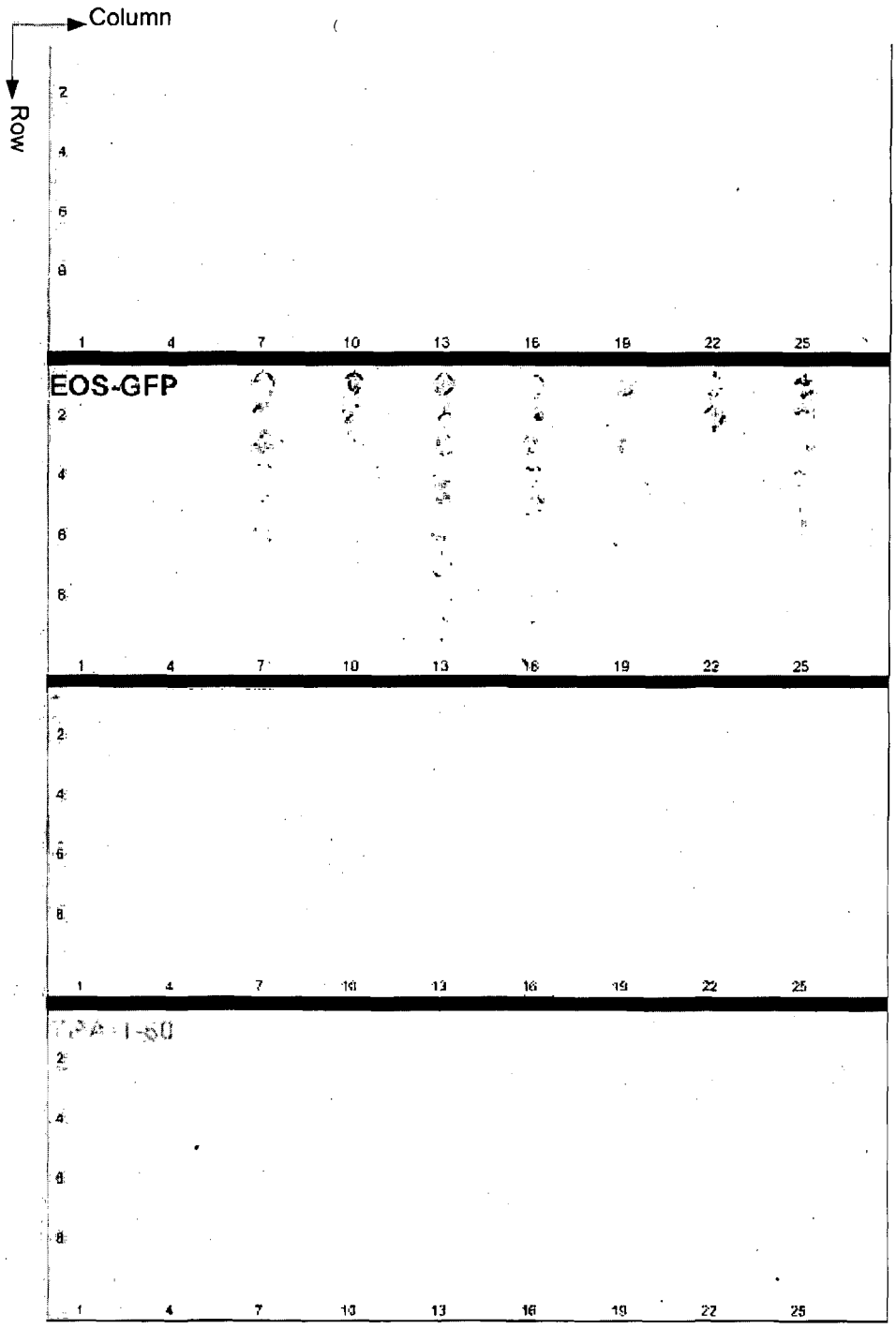


Fig. 5B

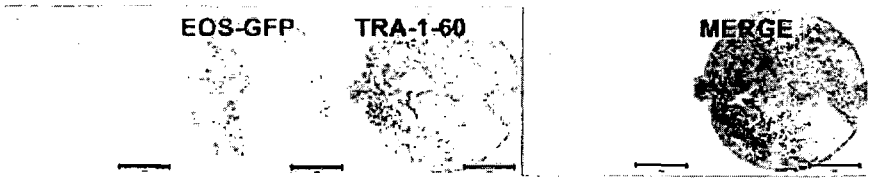


Fig. 5C

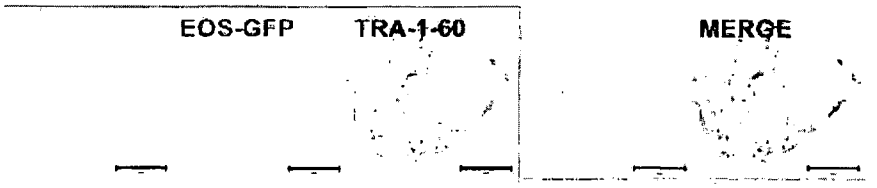


Fig. 5D

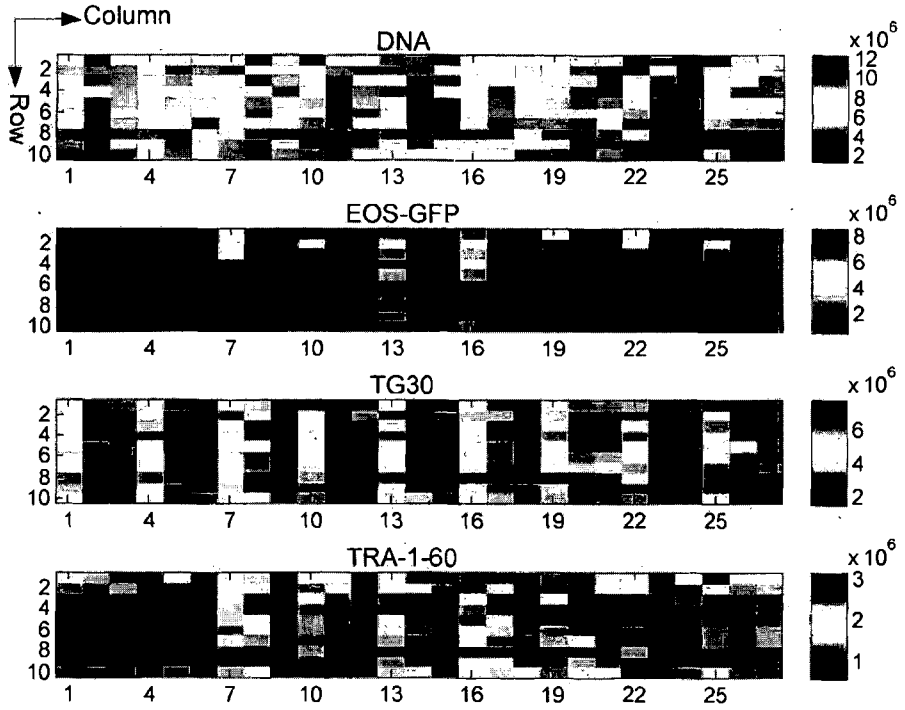


Fig. 5E

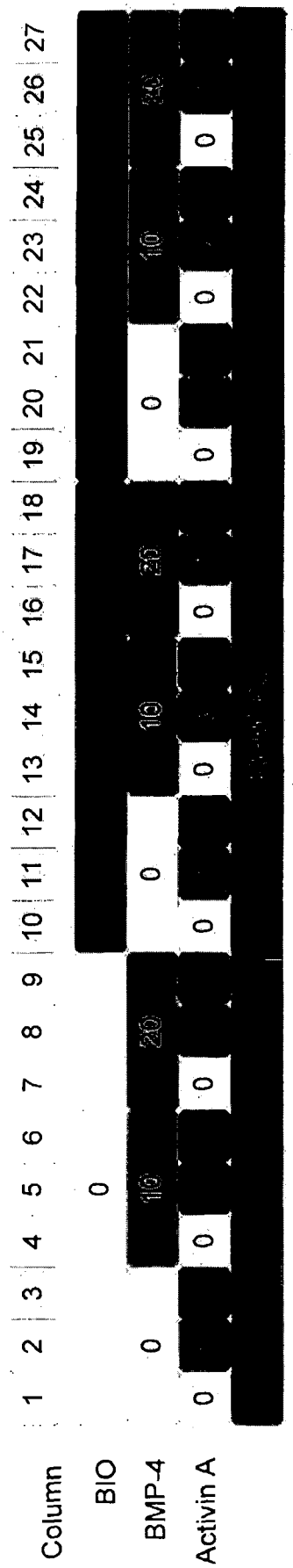

Column
BIO
BMP-4
Activin A
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
0 0 0 0 10 20 0 0 10 20 0 0 10 20 0 0 10 20 0 0 10 20 0 0 10 20 0

Fig. 6A

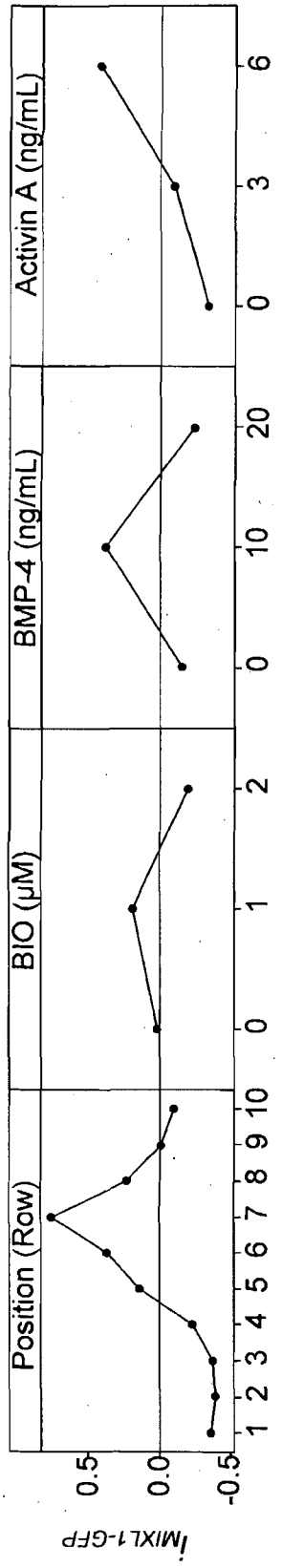

Position (Row)
BIO (μM)
BMP-4 (ng/mL)
Activin A (ng/mL)
1 2 3 4 5 6 7 8 9 10
0 1 2
0 10 20
0 3 6
-0.5 0.0 0.5
iMIXL1-GFP

Fig. 6E

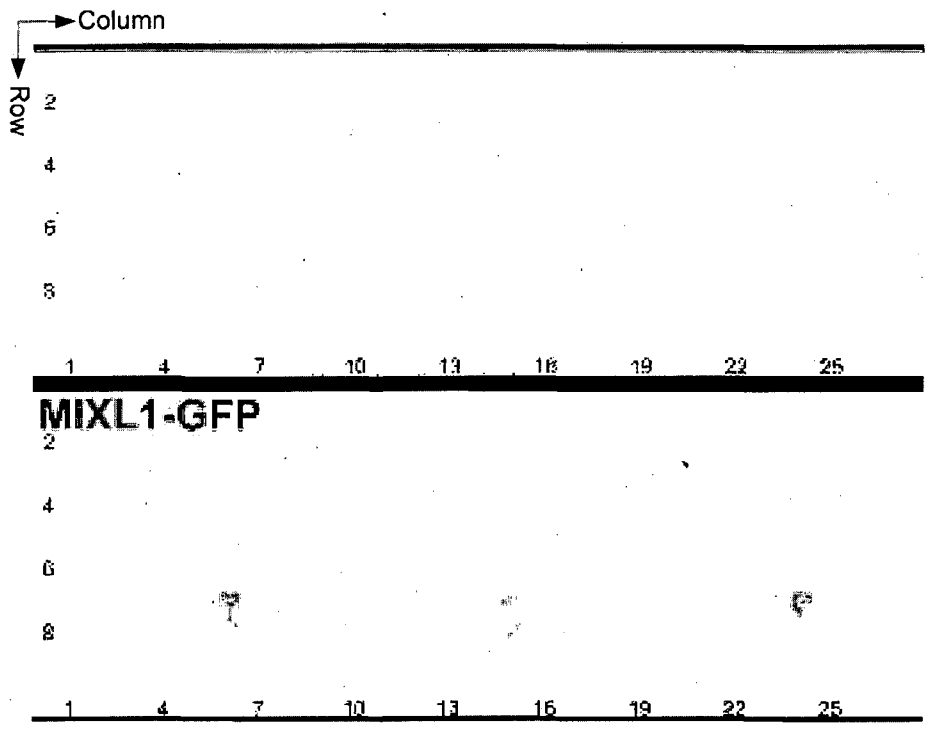


Fig. 6B

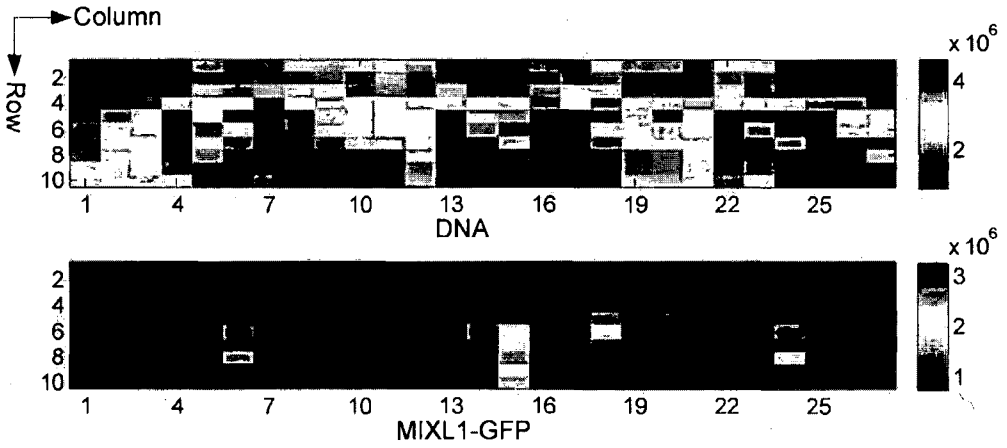


Fig. 6C



Fig. 6D

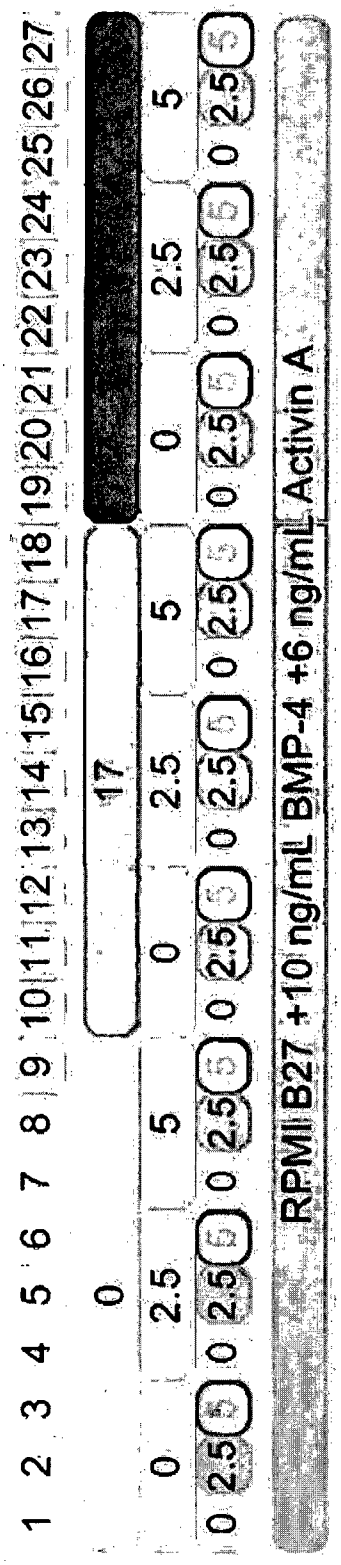

Column 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
CM 0 17
IWP 0 2.5 5 0 2.5 5 0 2.5 5 0 2.5 5
CHIR 0 2.5 5 0 2.5 5 0 2.5 5 0 2.5 5 0 2.5 5 0 2.5 5 0 2.5 5 0 2.5 5 0 2.5 5
RPMI B27 +10 ng/mL BMP-4 +6 ng/mL Activin A

Fig. 7A

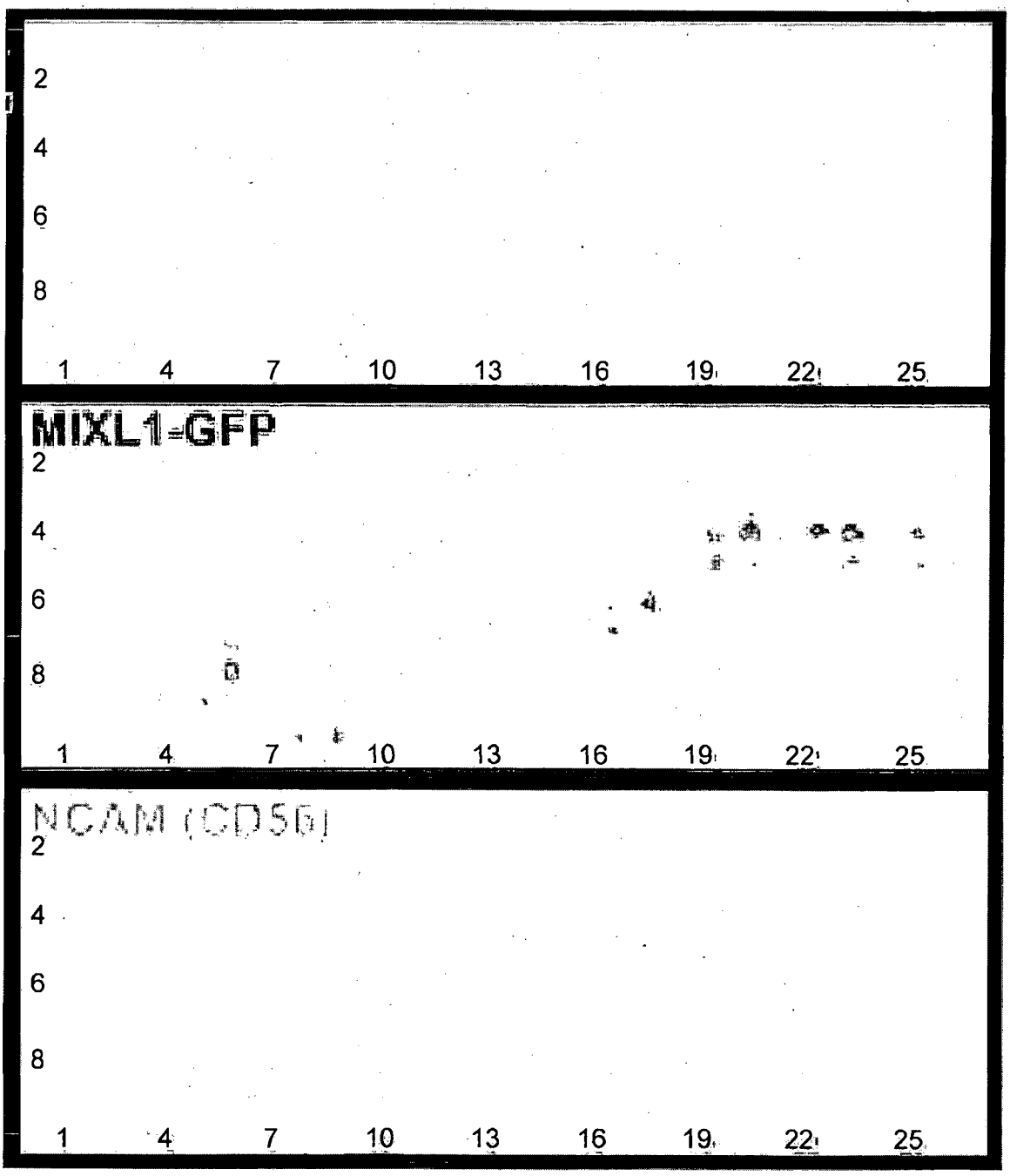

2
4
6
8
1 4 7 10 13 16 19 22 25
MIXL1-GFP
2
4
6
8
1 4 7 10 13 16 19 22 25
NCAM (CD56)
2
4
6
8
1 4 7 10 13 16 19 22 25

Fig. 7B

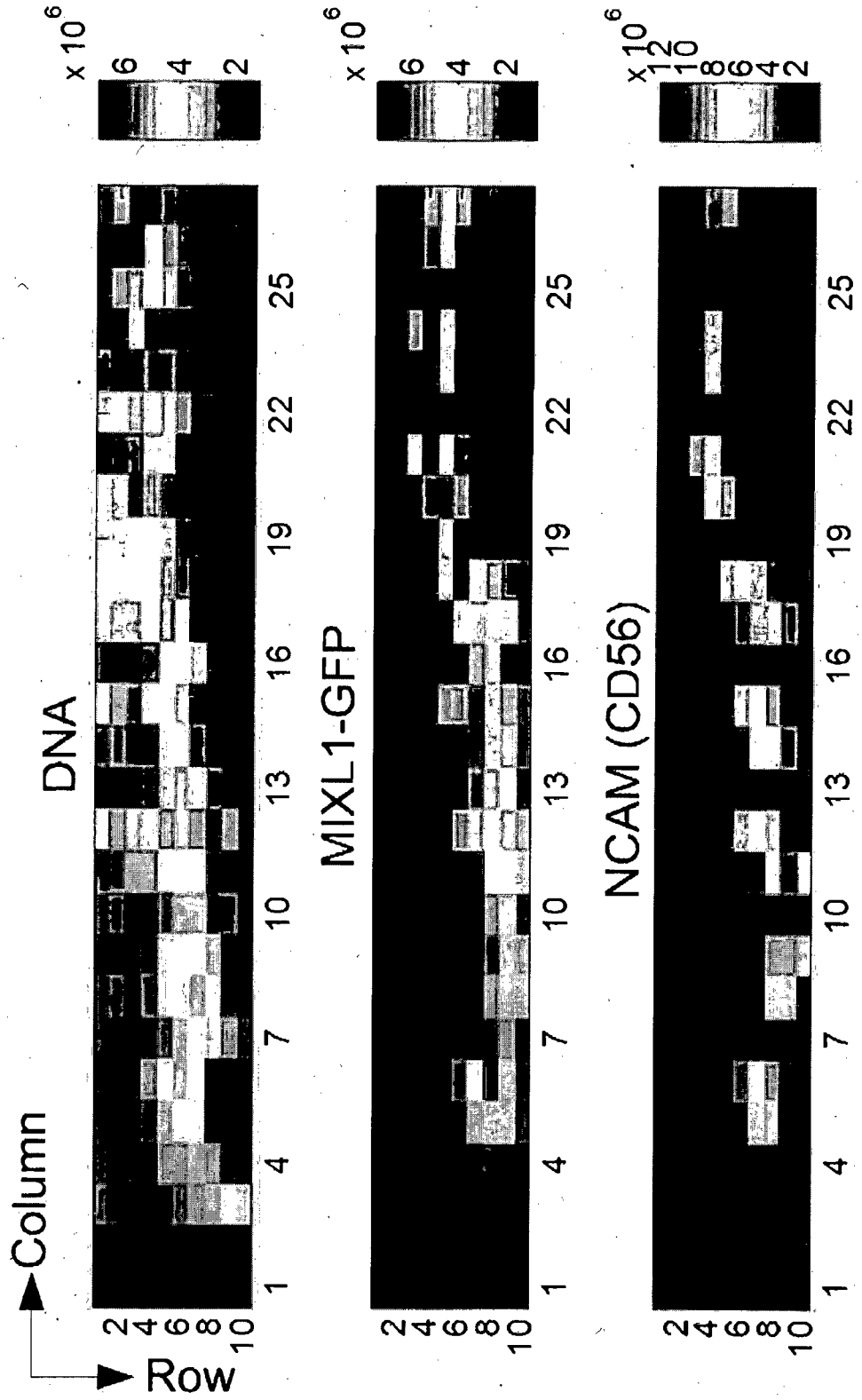

x 10^6
6
4
2
DNA
MIXL1-GFP
NCAM (CD56)
x 10^6
12
10
8
6
4
2
Column
Row
1
4
7
10
13
16
19
22
25
2
4
6
8
10

Fig. 7C

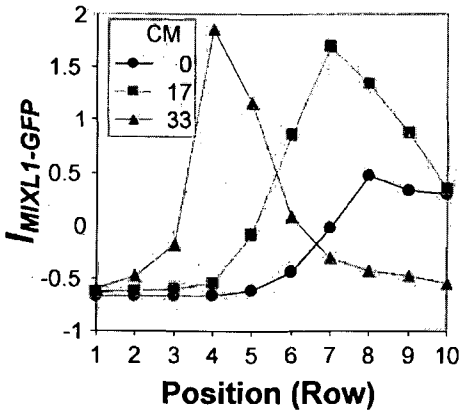


Fig. 7D

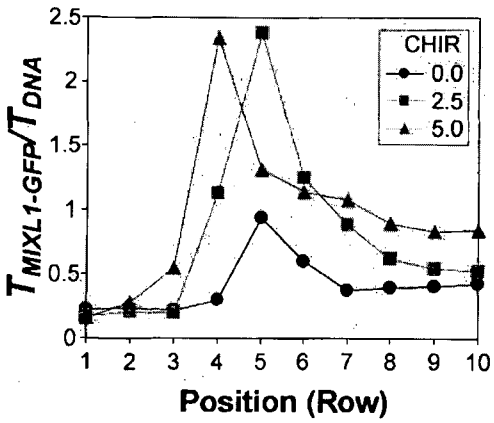


Fig. 7E

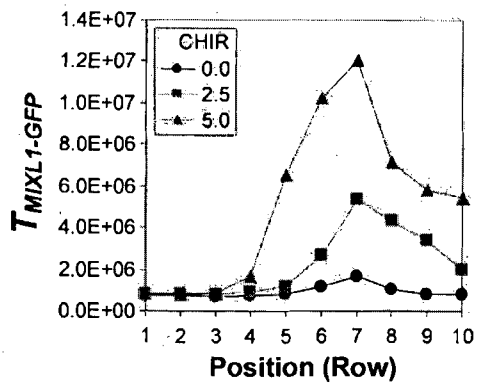


Fig. 7F

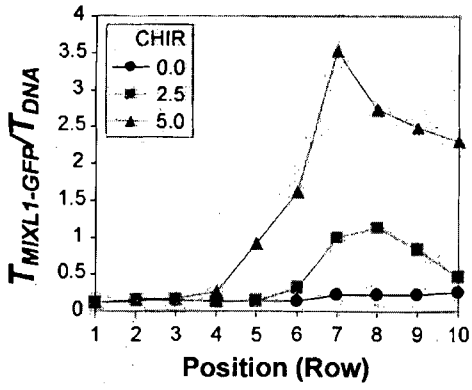


Fig. 7G

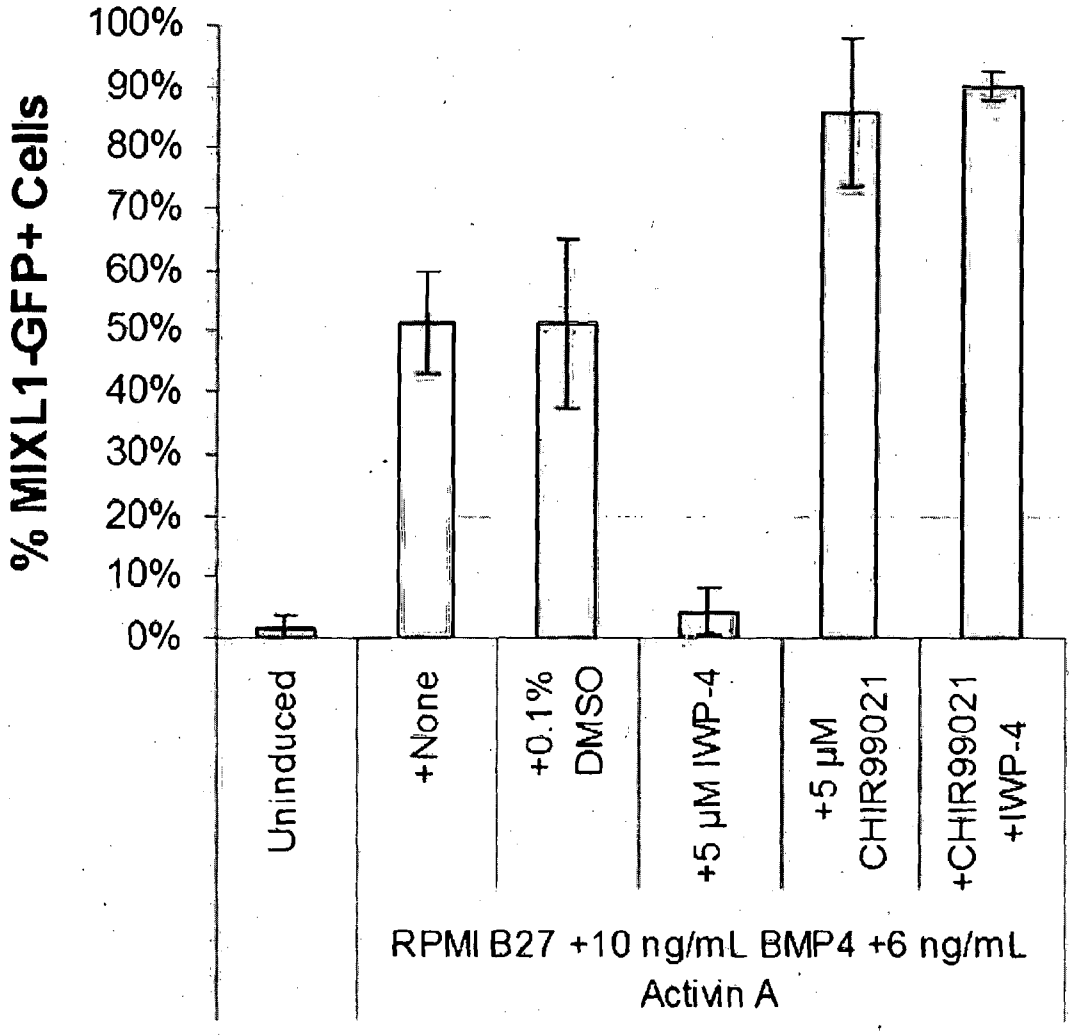

% MIXL1-GFP+ Cells
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Uninduced
+None
+0.1% DMSO
+5 µM IWP-4
+5 µM CHIR99021
+CHIR99021 +IWP-4
RPMI B27 +10 ng/mL BMP4 +6 ng/mL Activin A

Fig. 7H

Fig. 8A

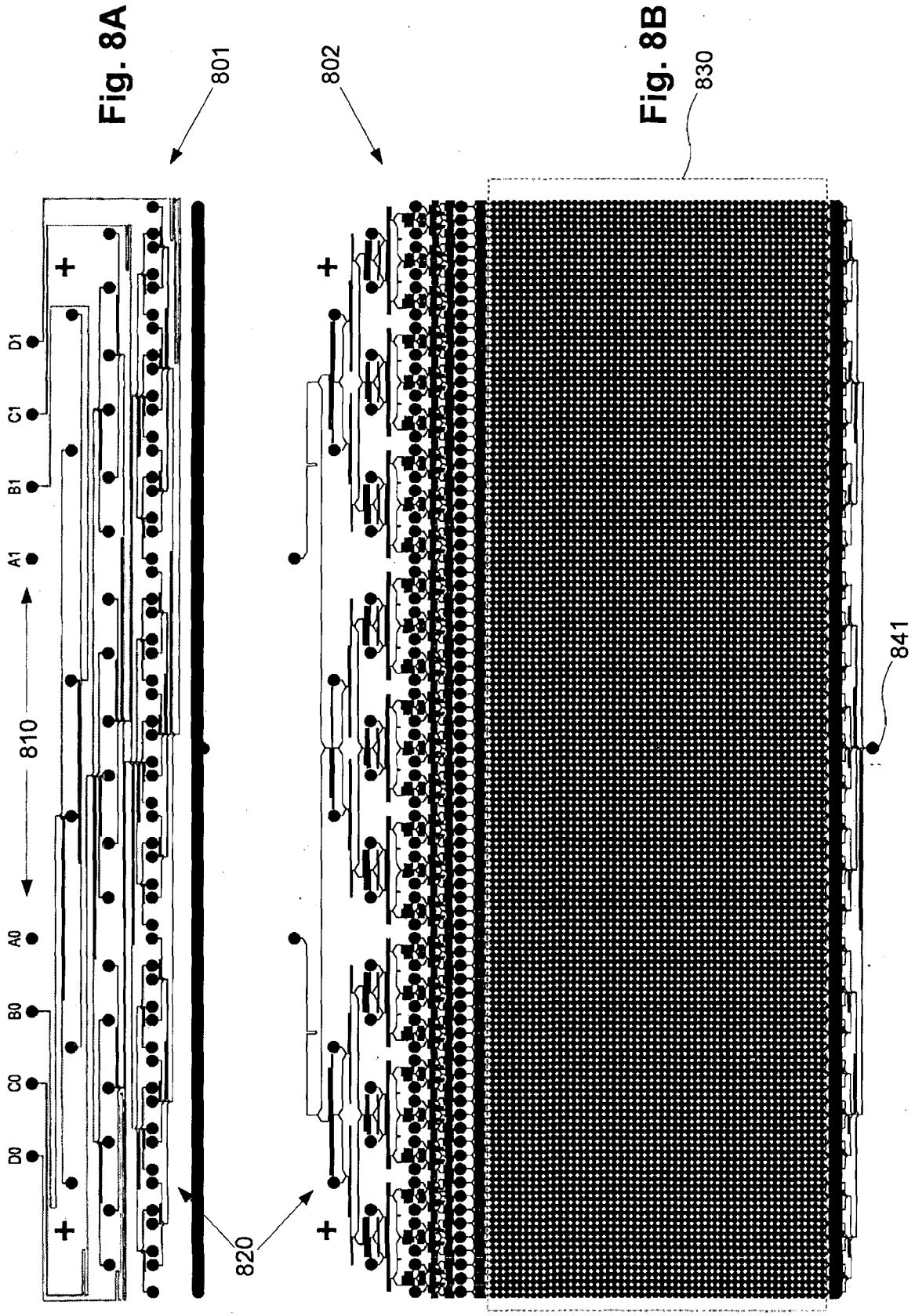


Fig. 8B

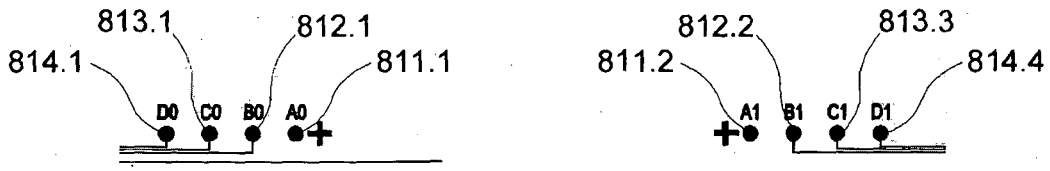

813.1
812.1
814.1
811.1
D0
C0
B0
A0
812.2
813.3
811.2
814.4
A1
B1
C1
D1

Fig. 8C

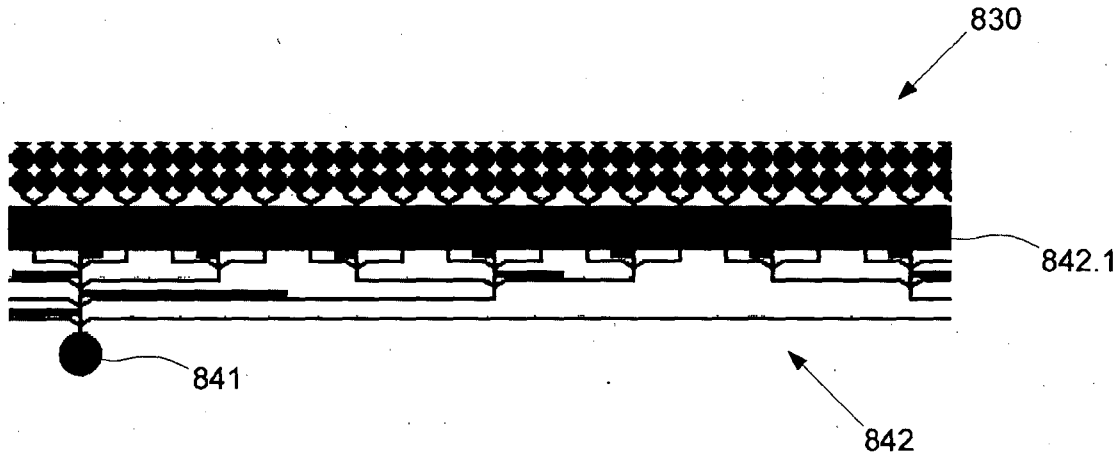

830
842.1
841
842

Fig. 8D

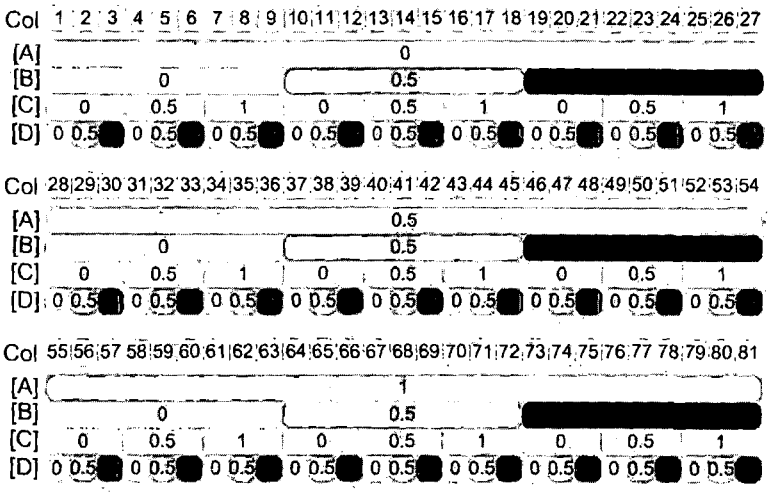


Fig. 8E

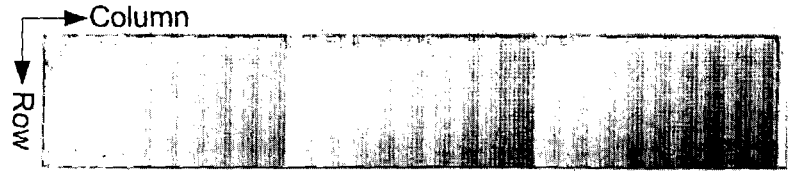


Fig. 8F

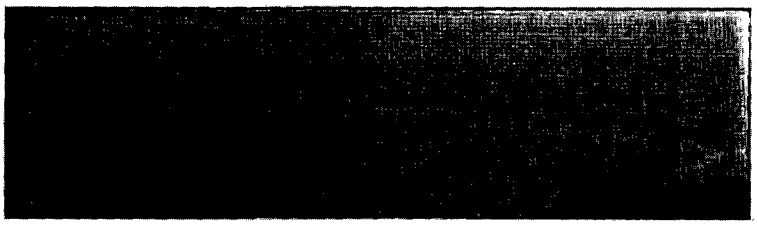


Fig. 8G

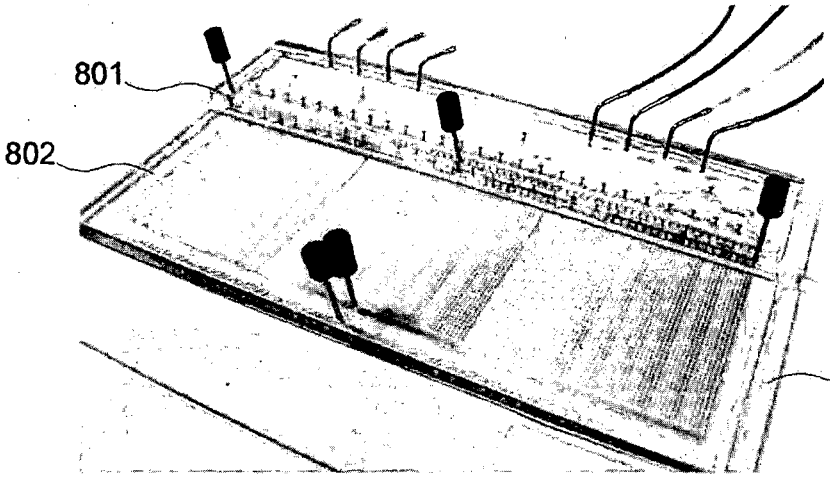


Fig. 8H