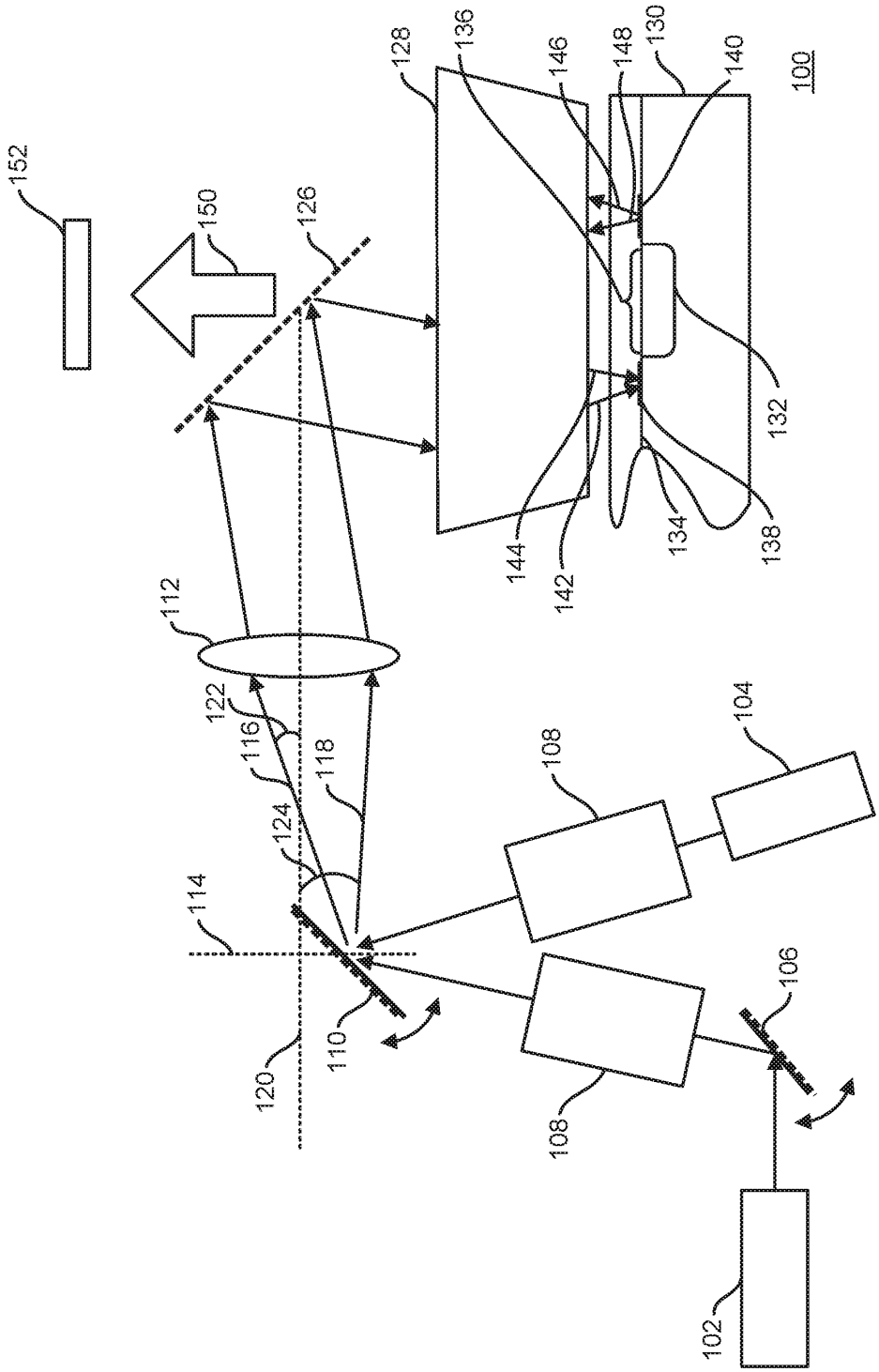
152
150
126
128
136
146
148
130
140
100
132
144
142
134
138
112
122
116
118
124
114
120
110
108
104
108
106
102

FIG. 1

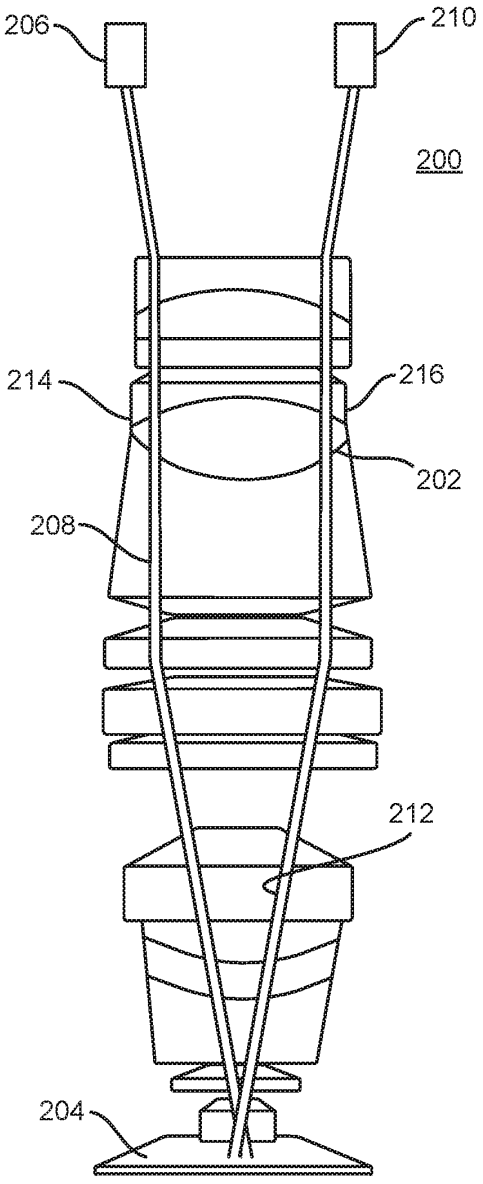

FIG. 2

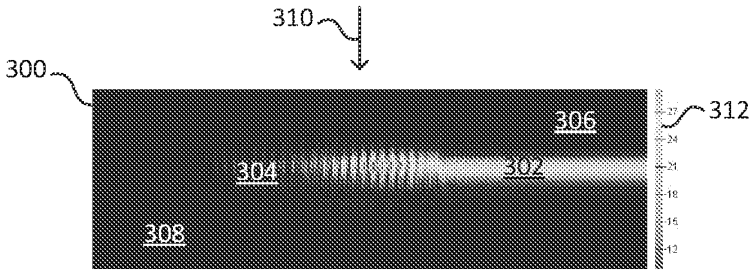
310
300
306
312
304
302
308

FIG. 3

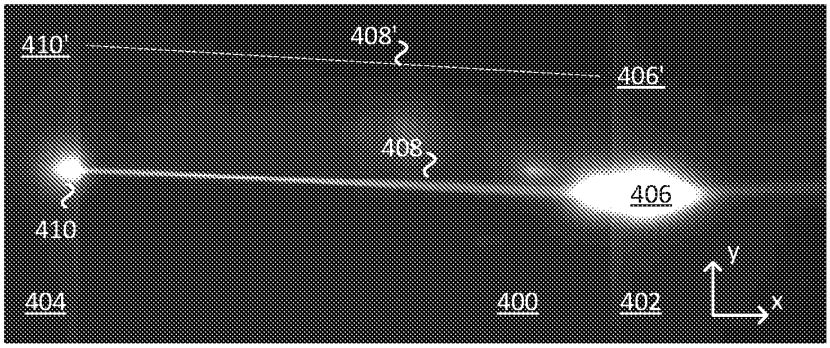
410'
408'
406'
408
406
410
404
400
402
y
x

FIG. 4

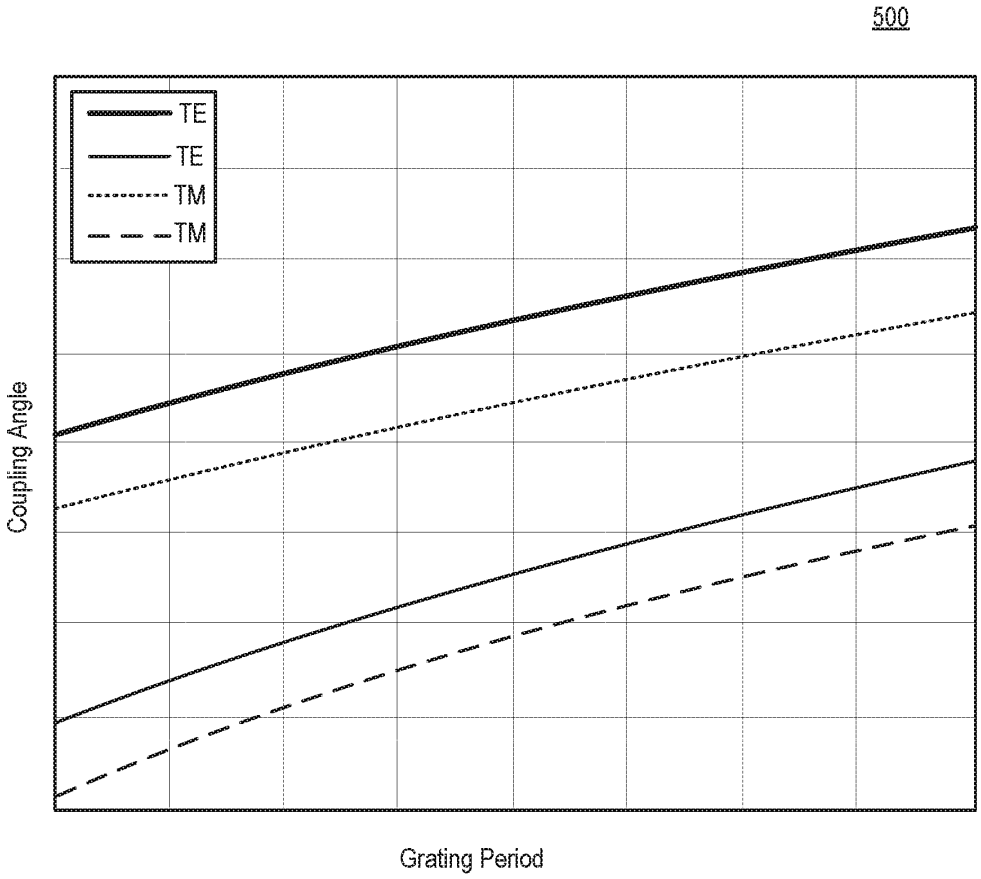

FIG. 5

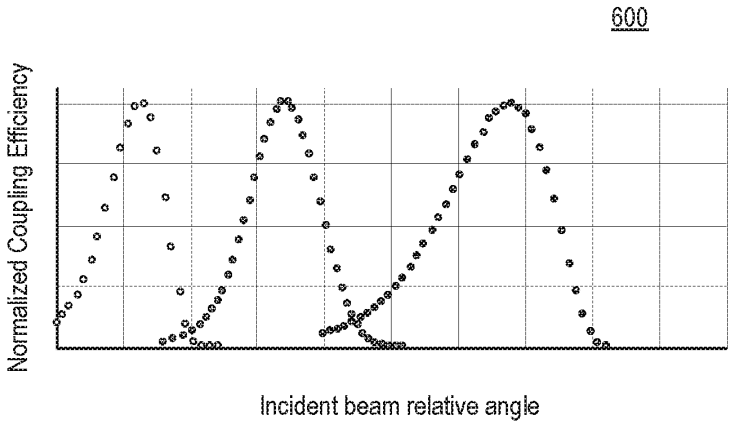
600
Normalized Coupling Efficiency
Incident beam relative angle

FIG. 6

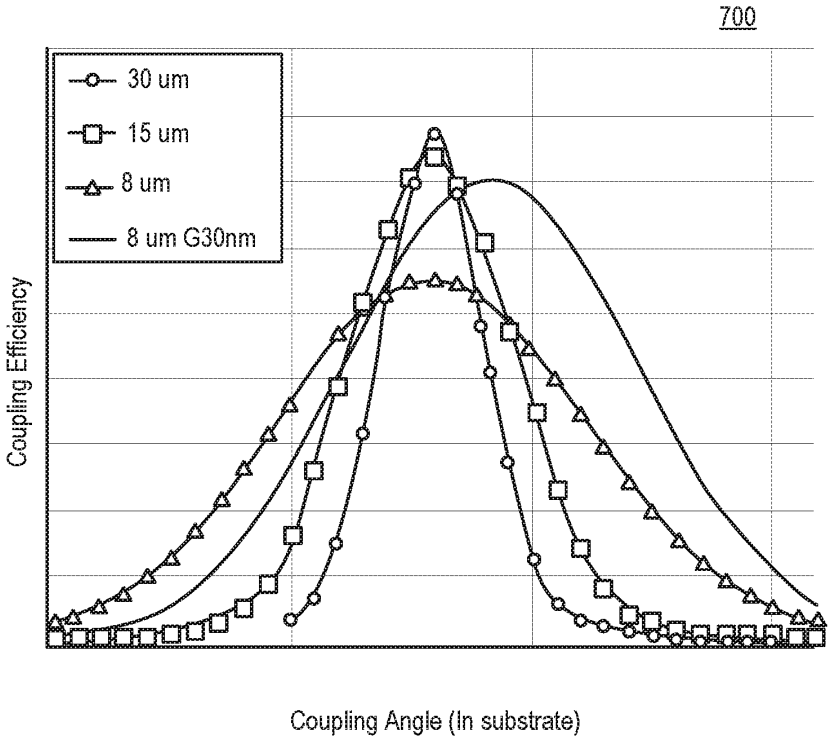
700
30 um
15 um
8 um
8 um G30nm
Coupling Efficiency
Coupling Angle (In substrate)

FIG. 7

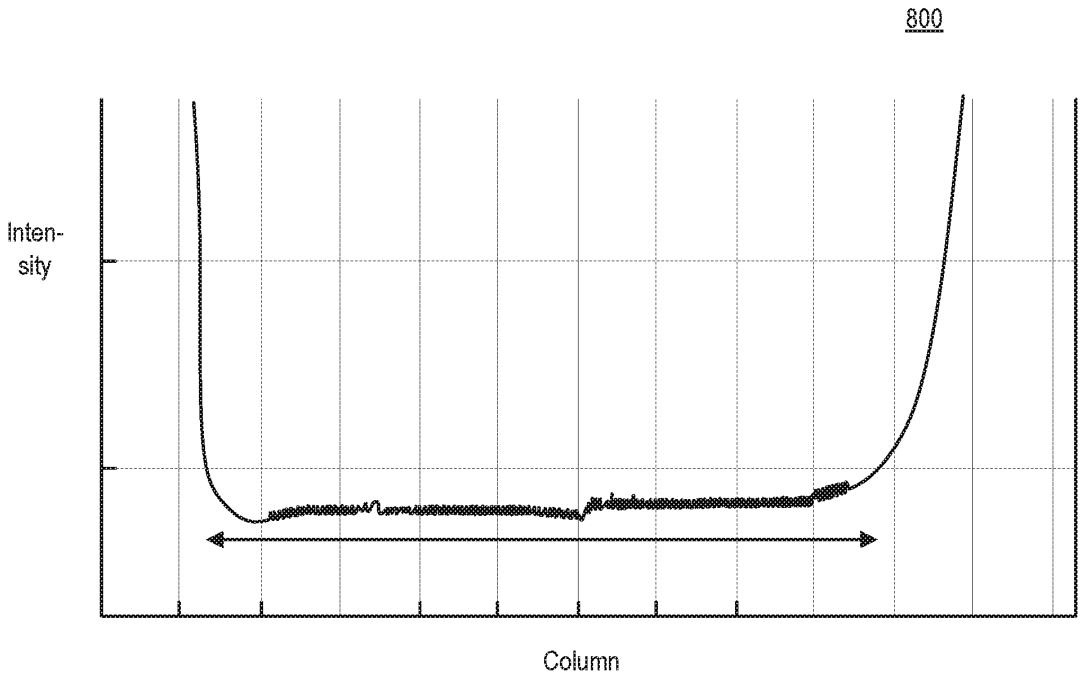

FIG. 8

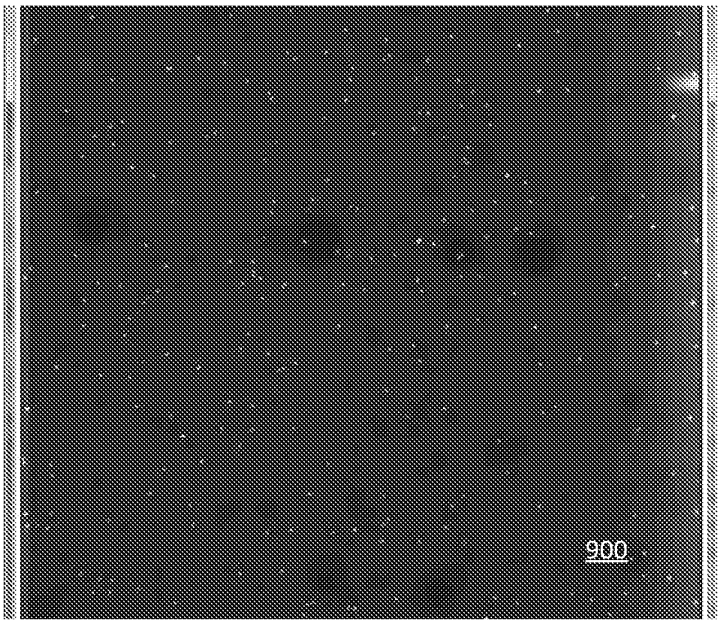

FIG. 9

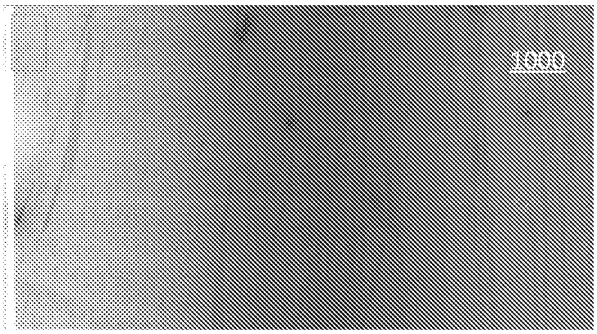

FIG. 10

FIG. 11

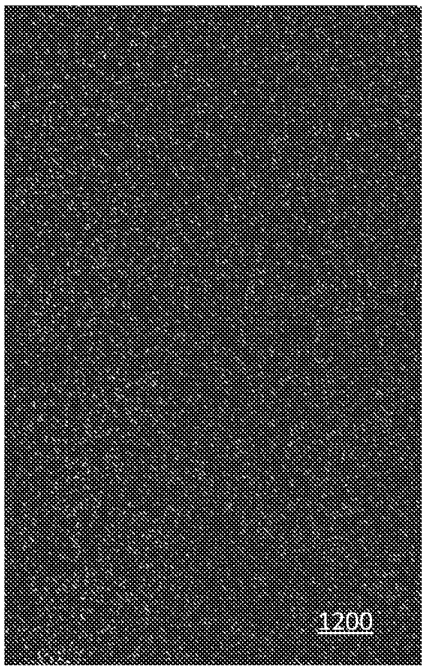

FIG. 12

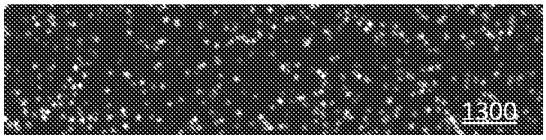

FIG. 13

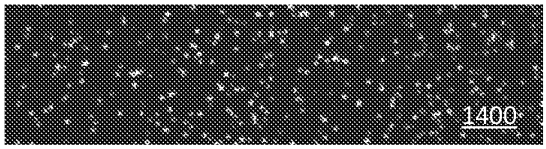

FIG. 14

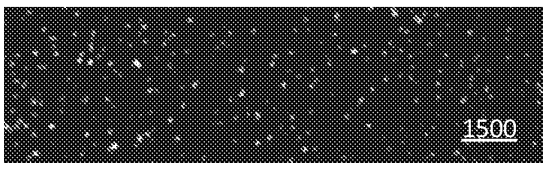

FIG. 15

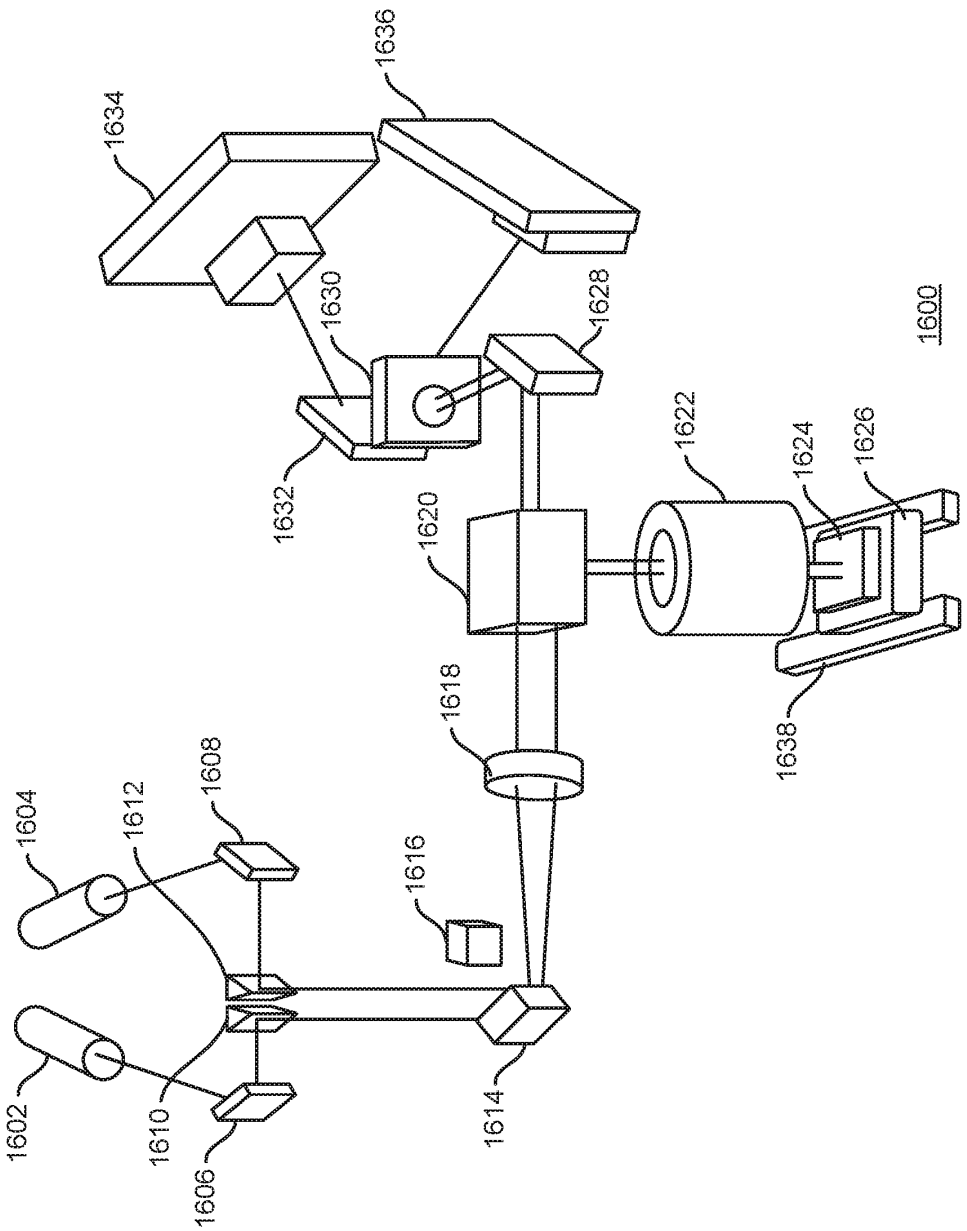
1600
1602
1604
1606
1608
1610
1612
1614
1616
1618
1620
1622
1624
1626
1628
1630
1632
1634
1636
1638

FIG. 16

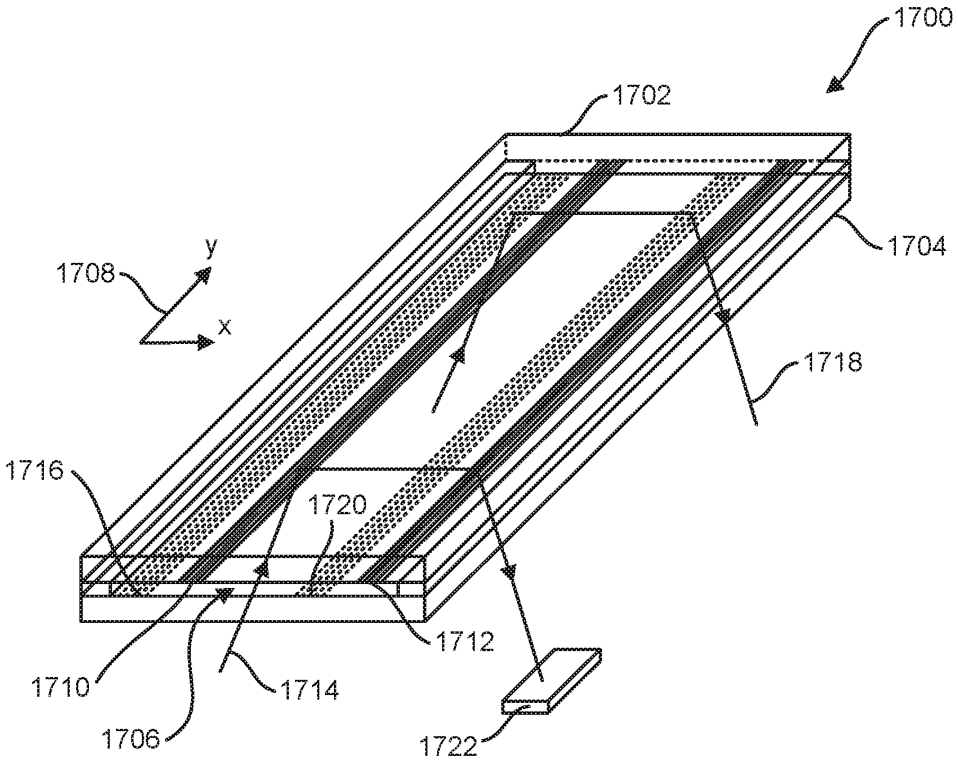
1700
1702
1704
1708
y
x
1718
1716
1720
1712
1710
1714
1706
1722

FIG. 17

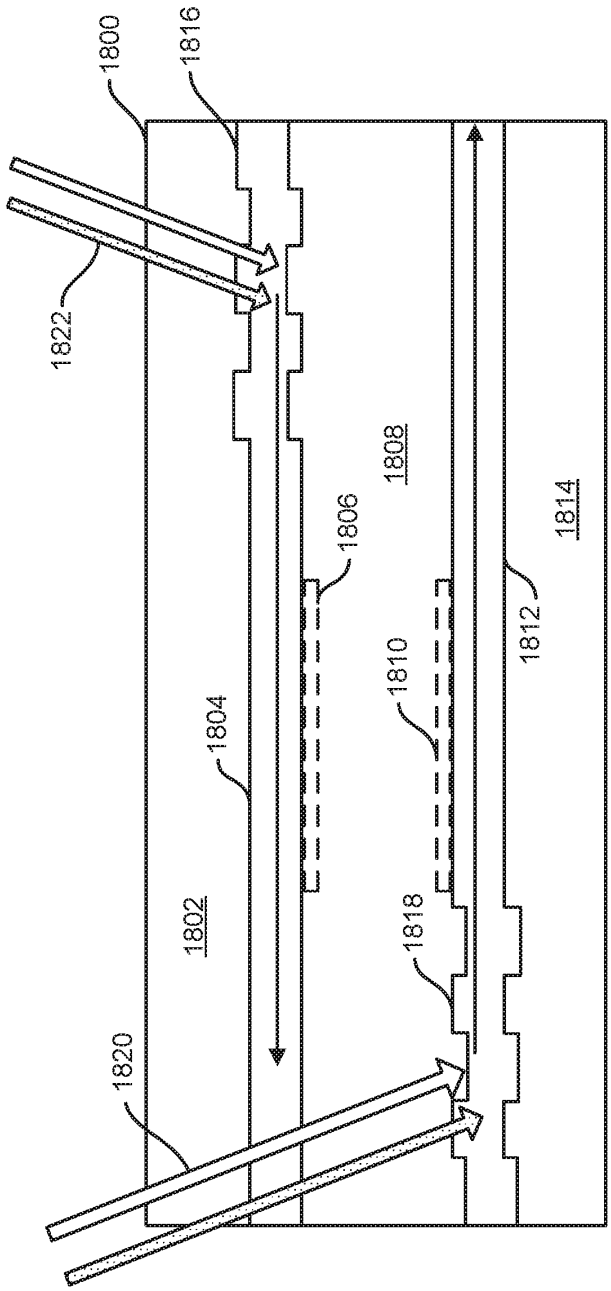

FIG. 18

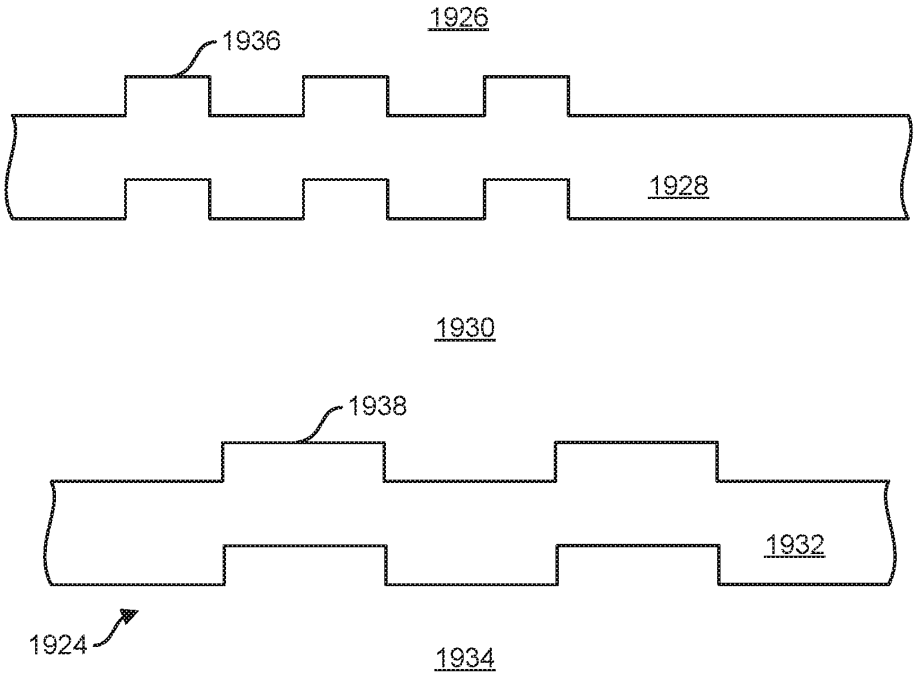

FIG. 19

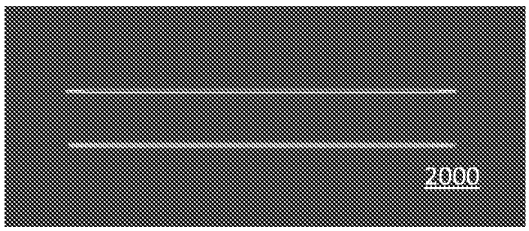

FIG. 20

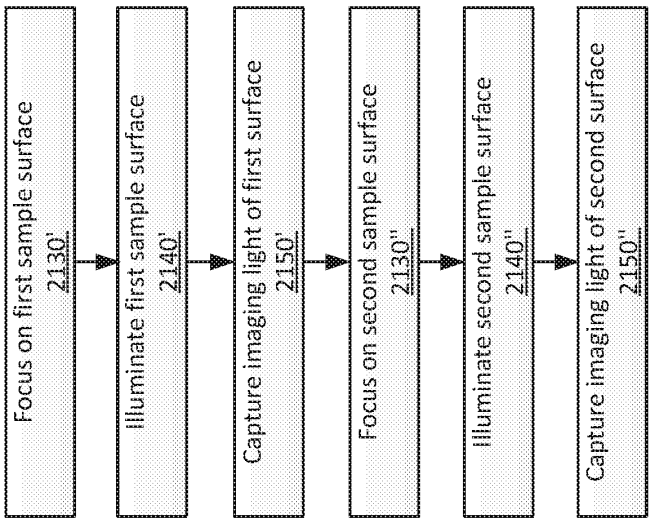

FIG. 21B

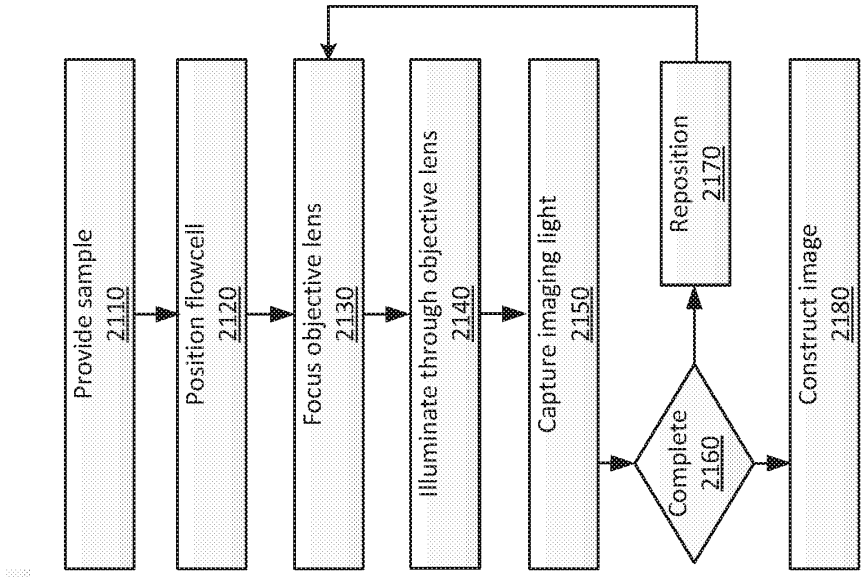

FIG. 21A

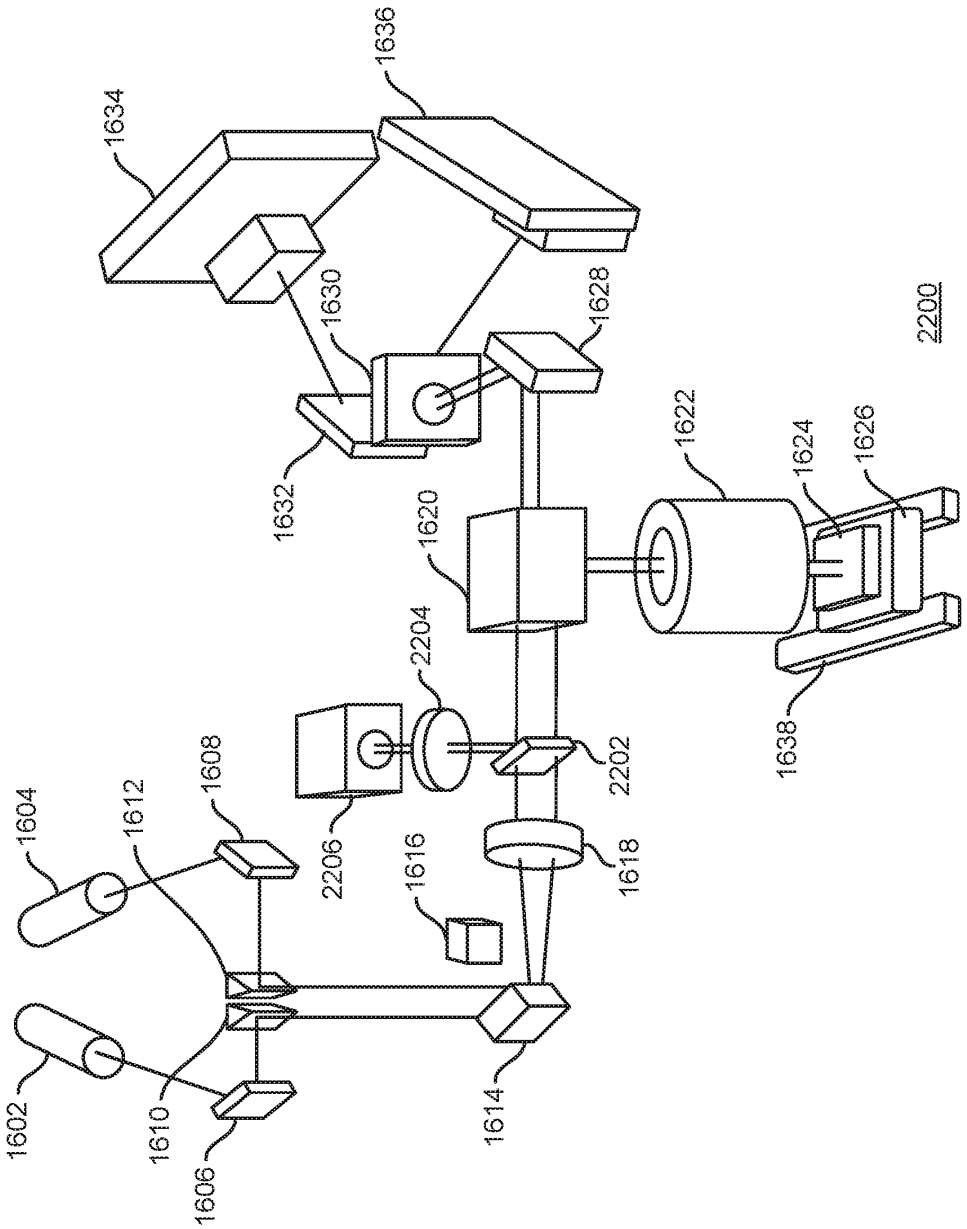
1636
1634
1630
1628
2200
1632
1622
1624
1626
1620
2204
1638
2202
1608
1604
1612
2206
1616
1618
1602
1610
1614
1606

FIG. 22

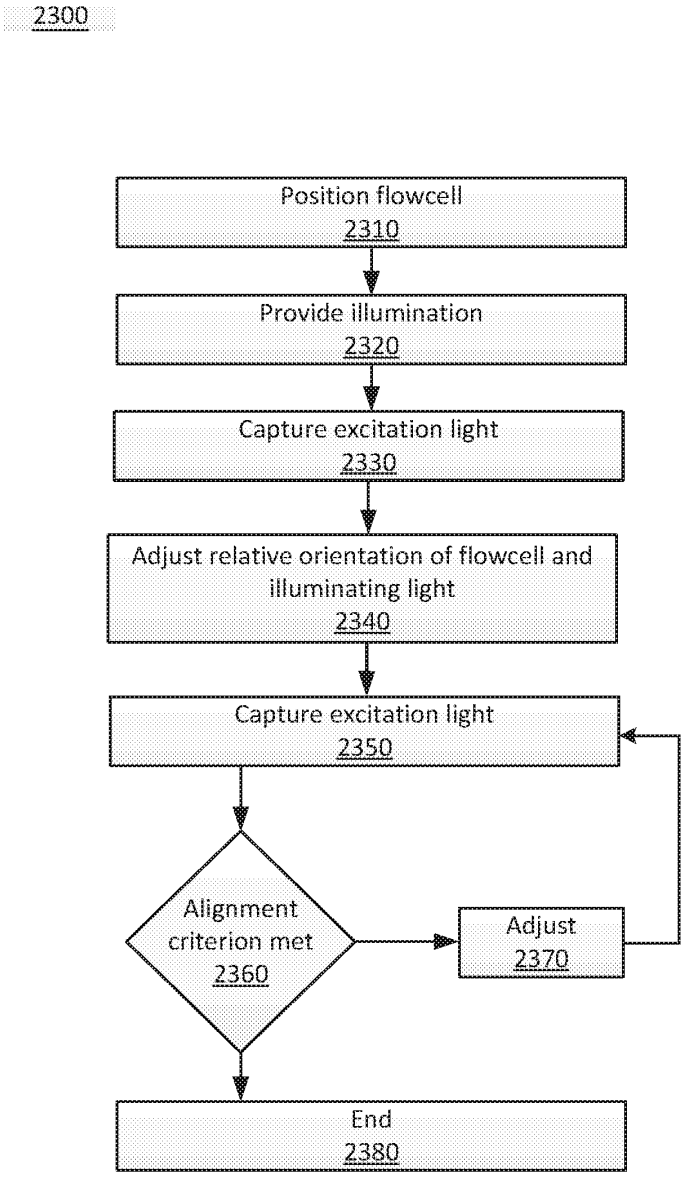
2300
Position flowcell
2310
Provide illumination
2320
Capture excitation light
2330
Adjust relative orientation of flowcell and illuminating light
2340
Capture excitation light
2350
Alignment criterion met
2360
Adjust
2370
End
2380

FIG. 23

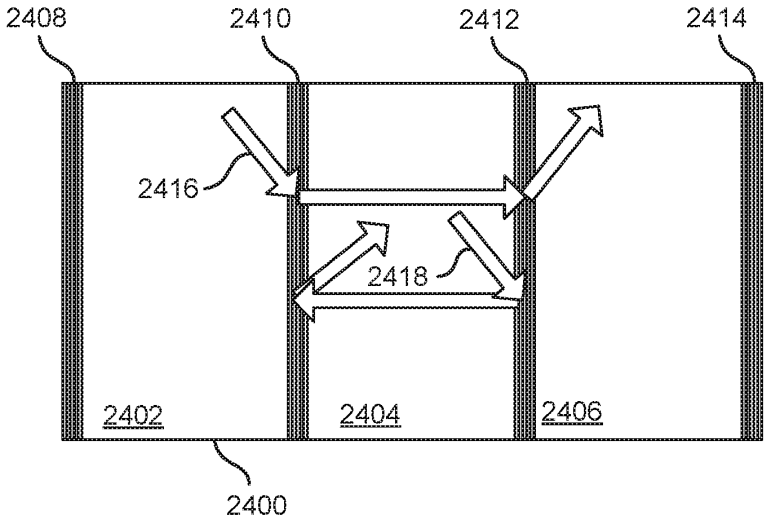

FIG. 24