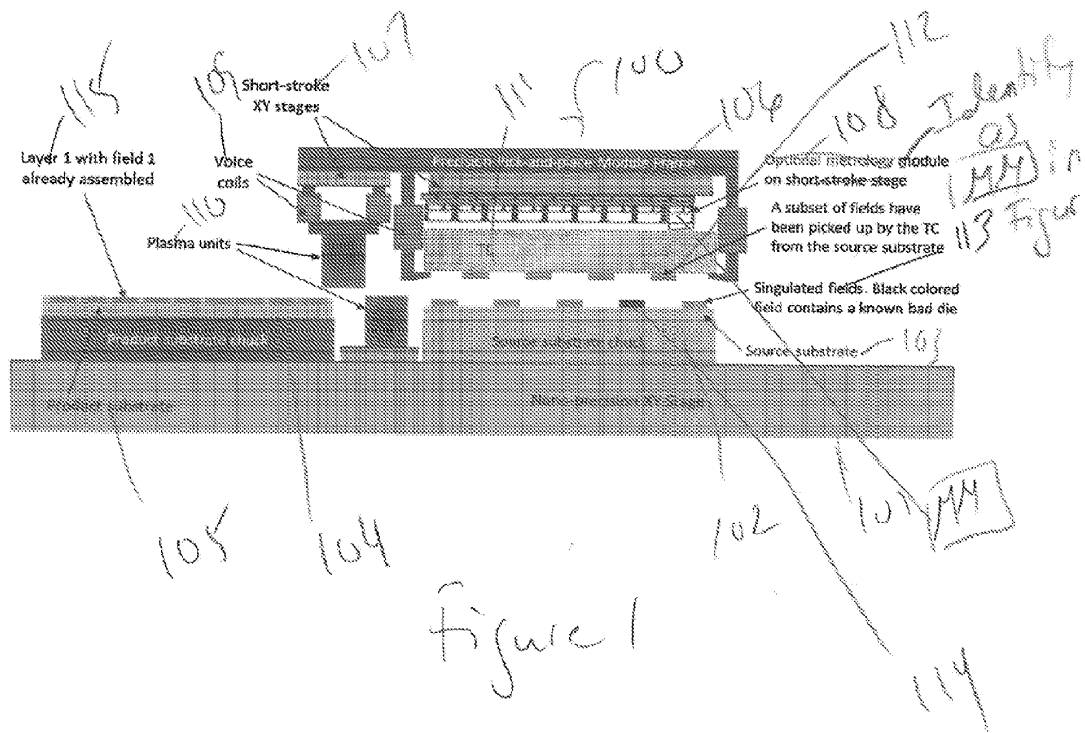
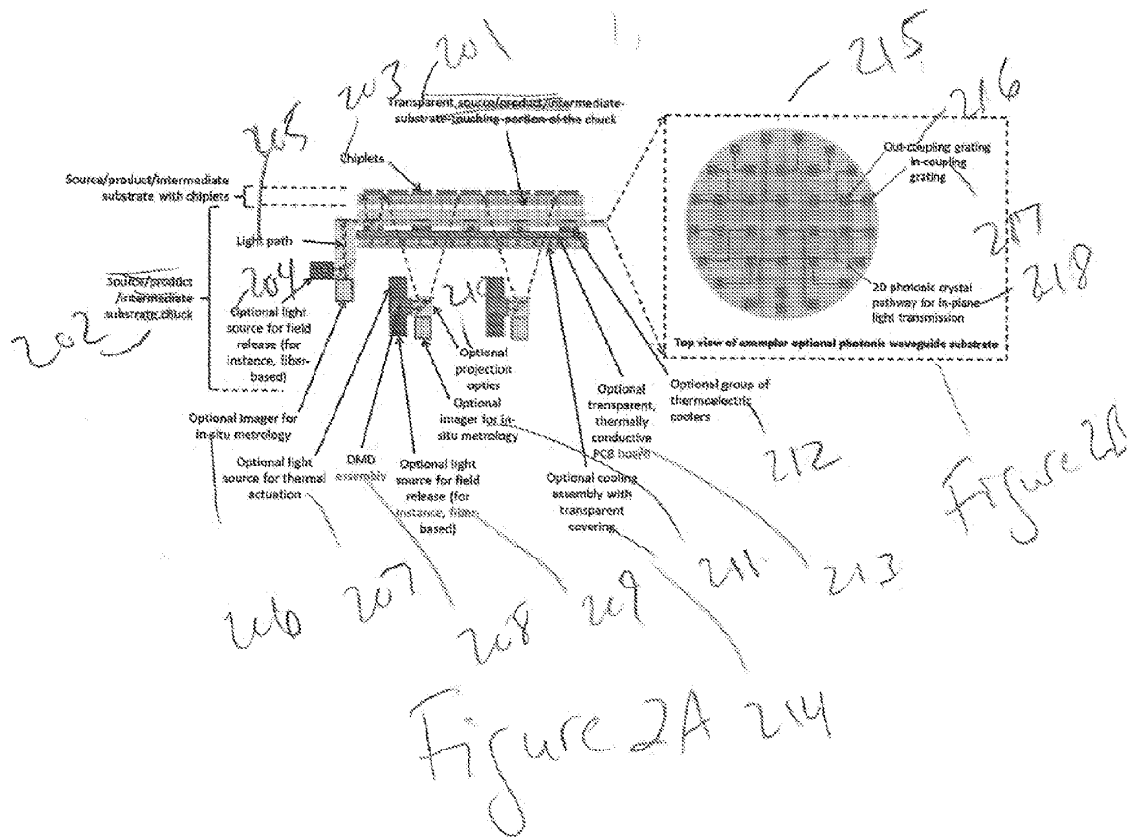






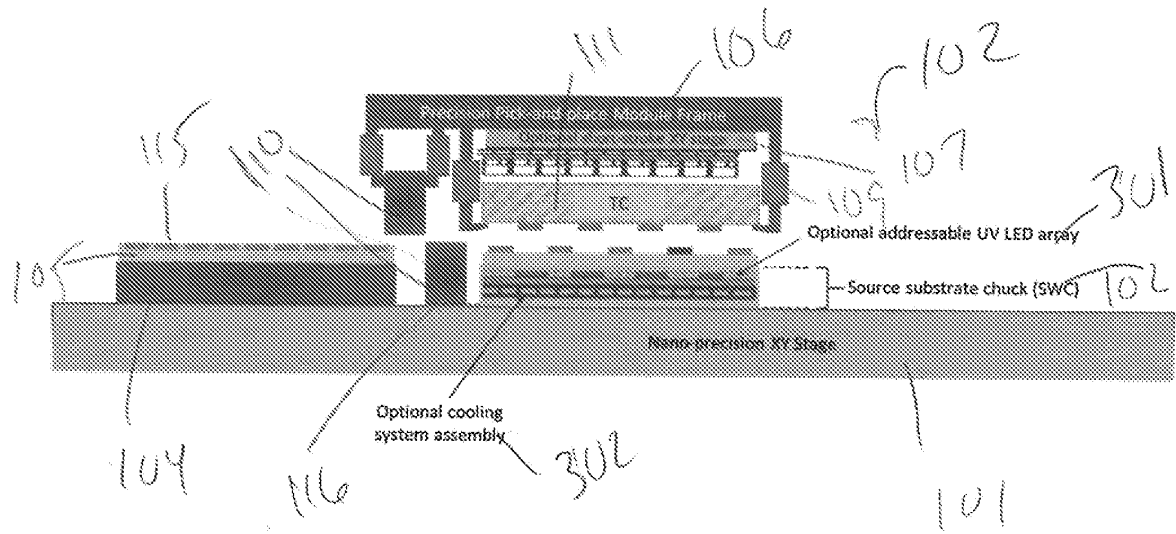
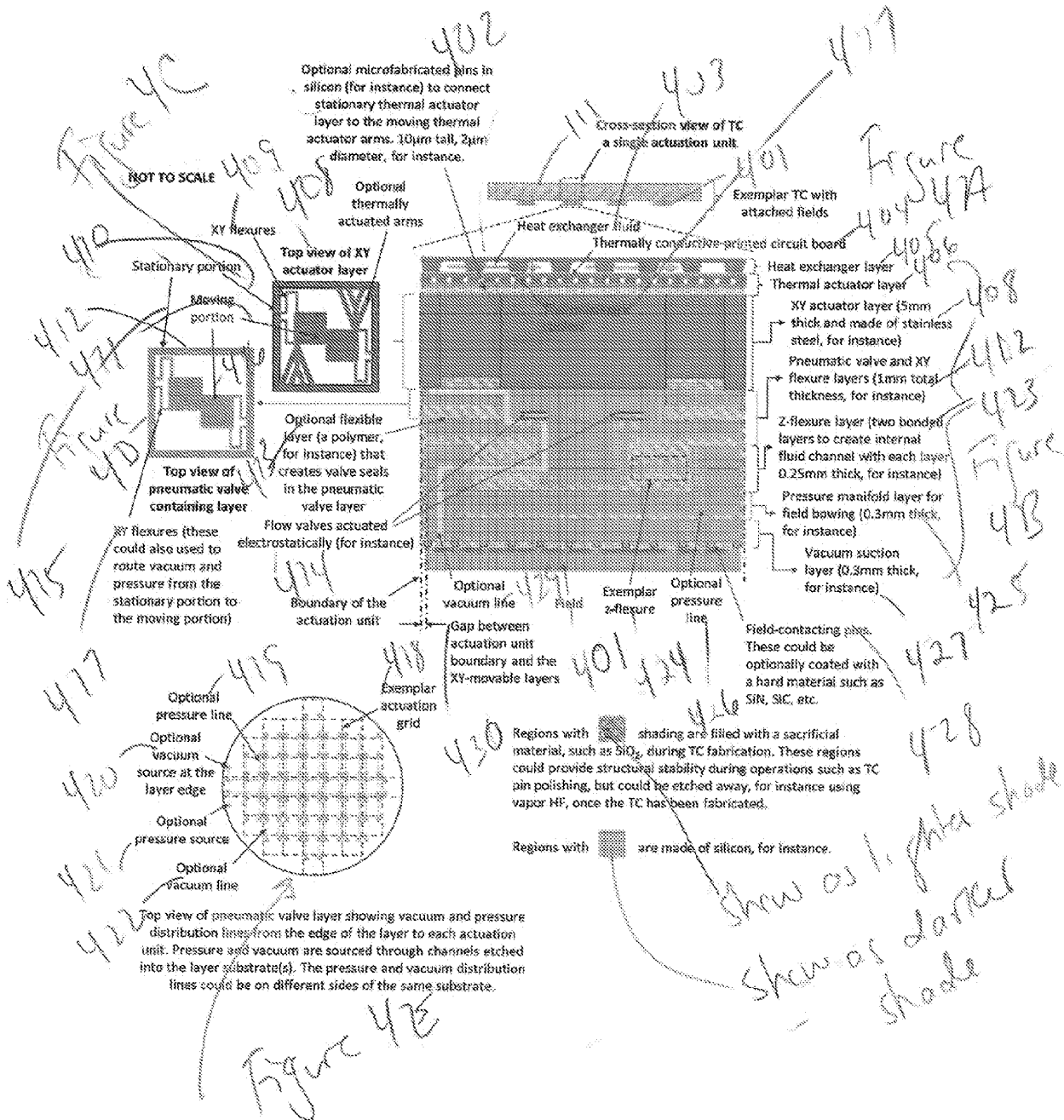


Figure 3



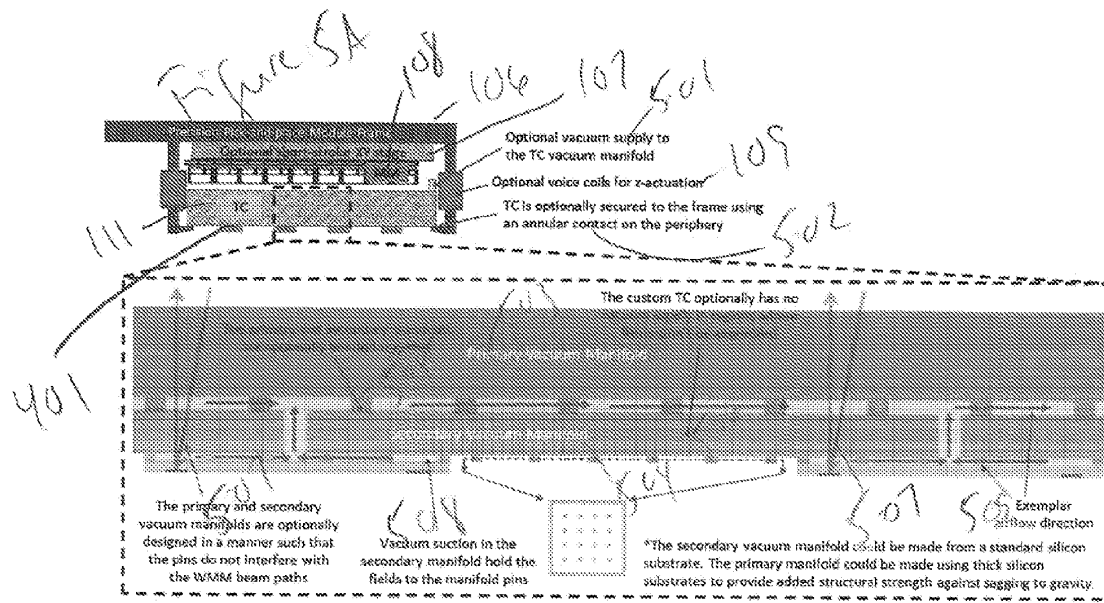
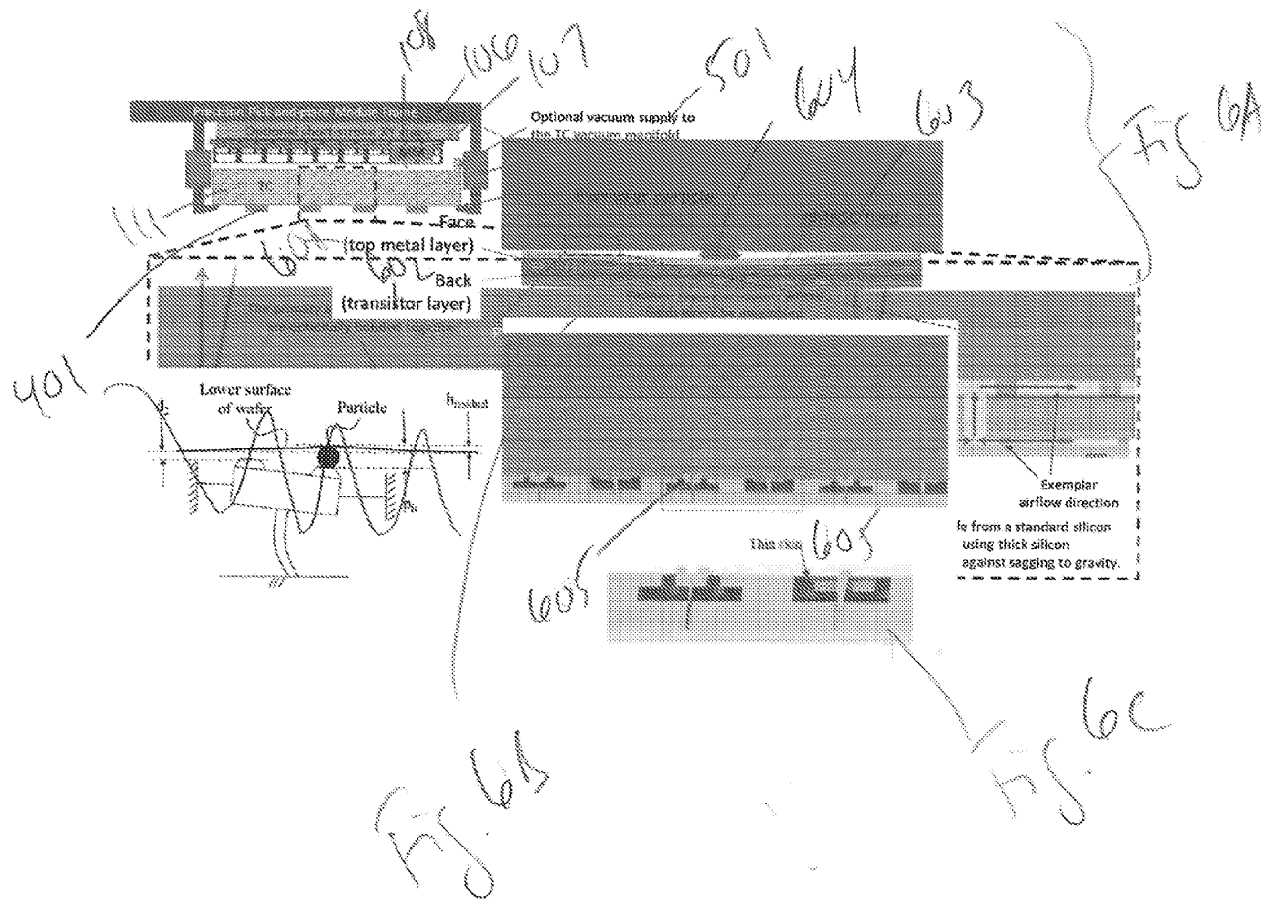
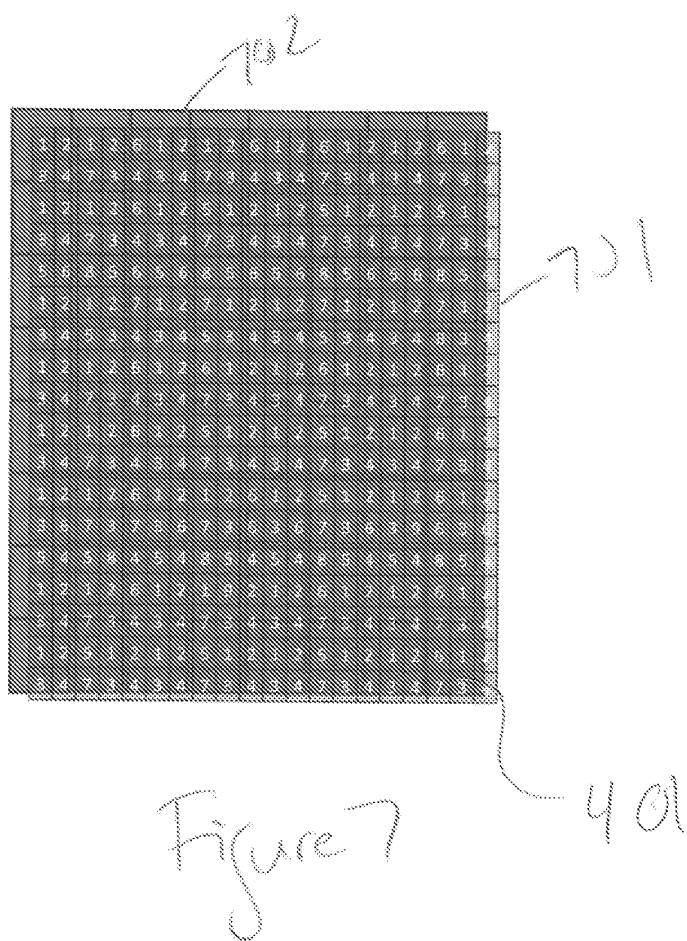


Figure 5B





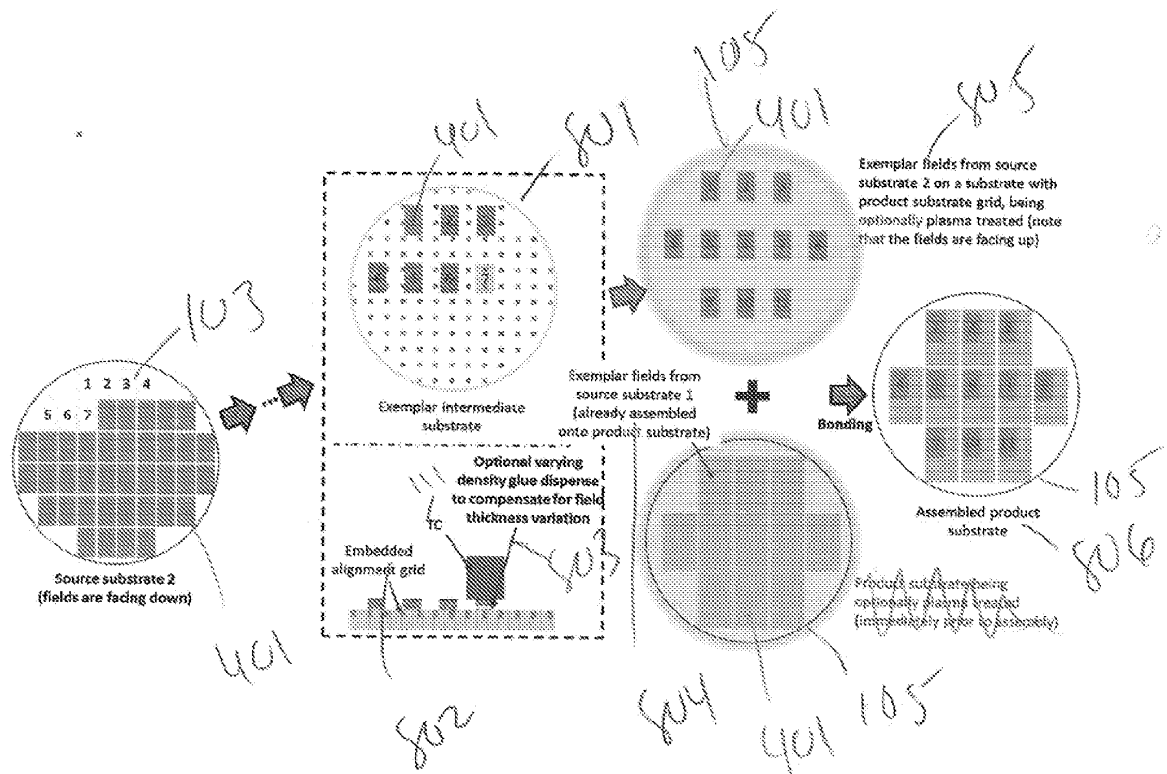


Figure 8

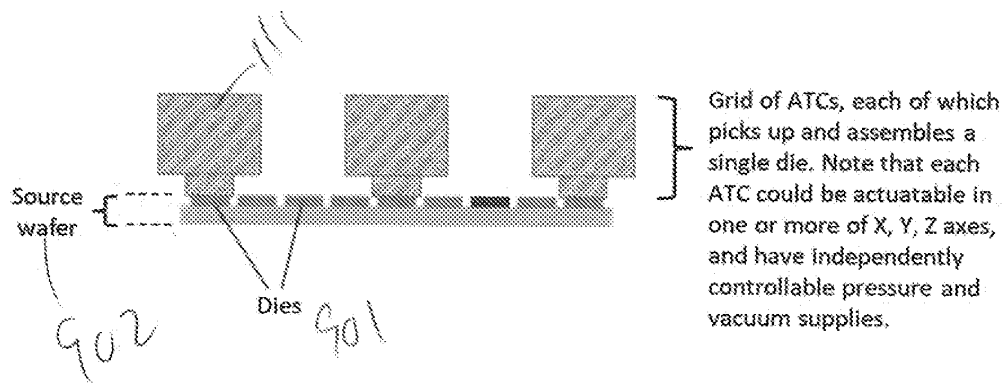
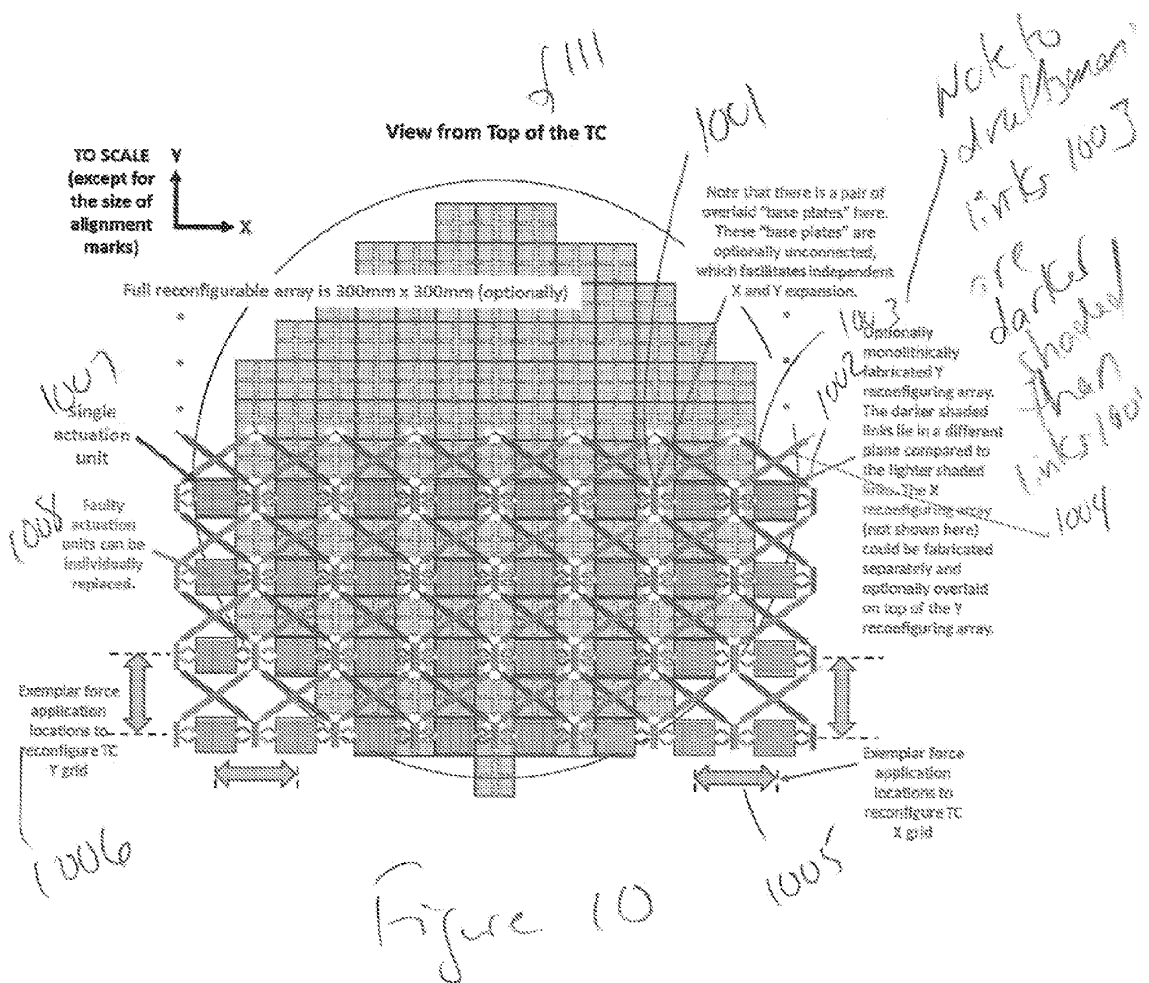


Figure 9



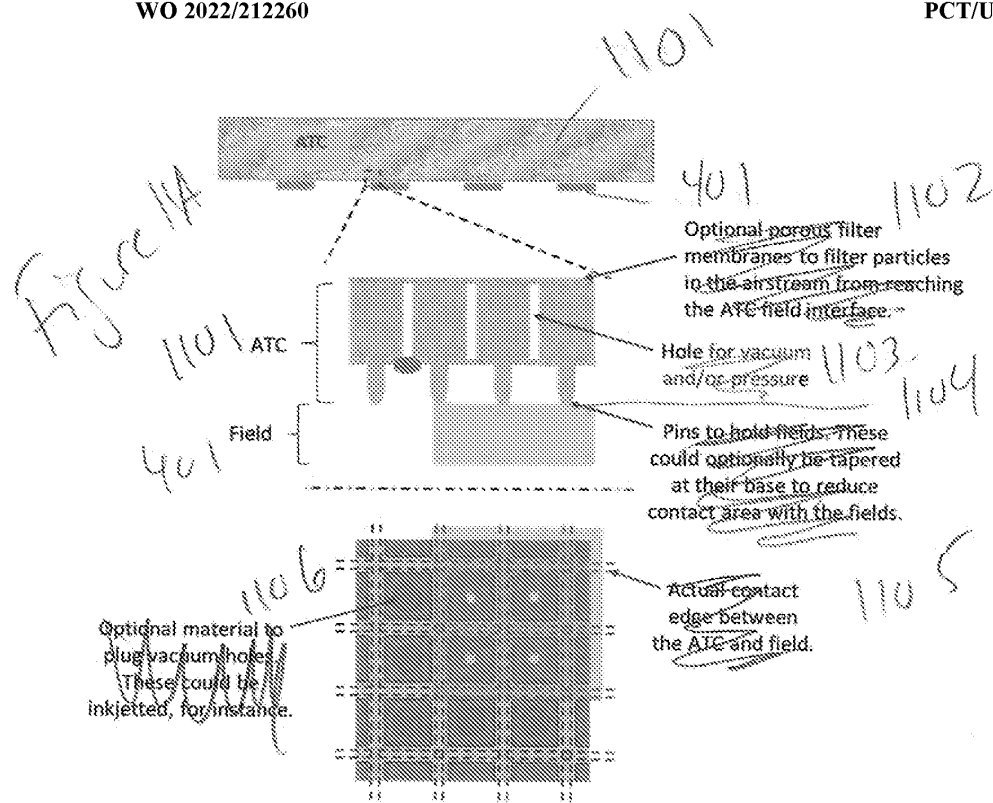
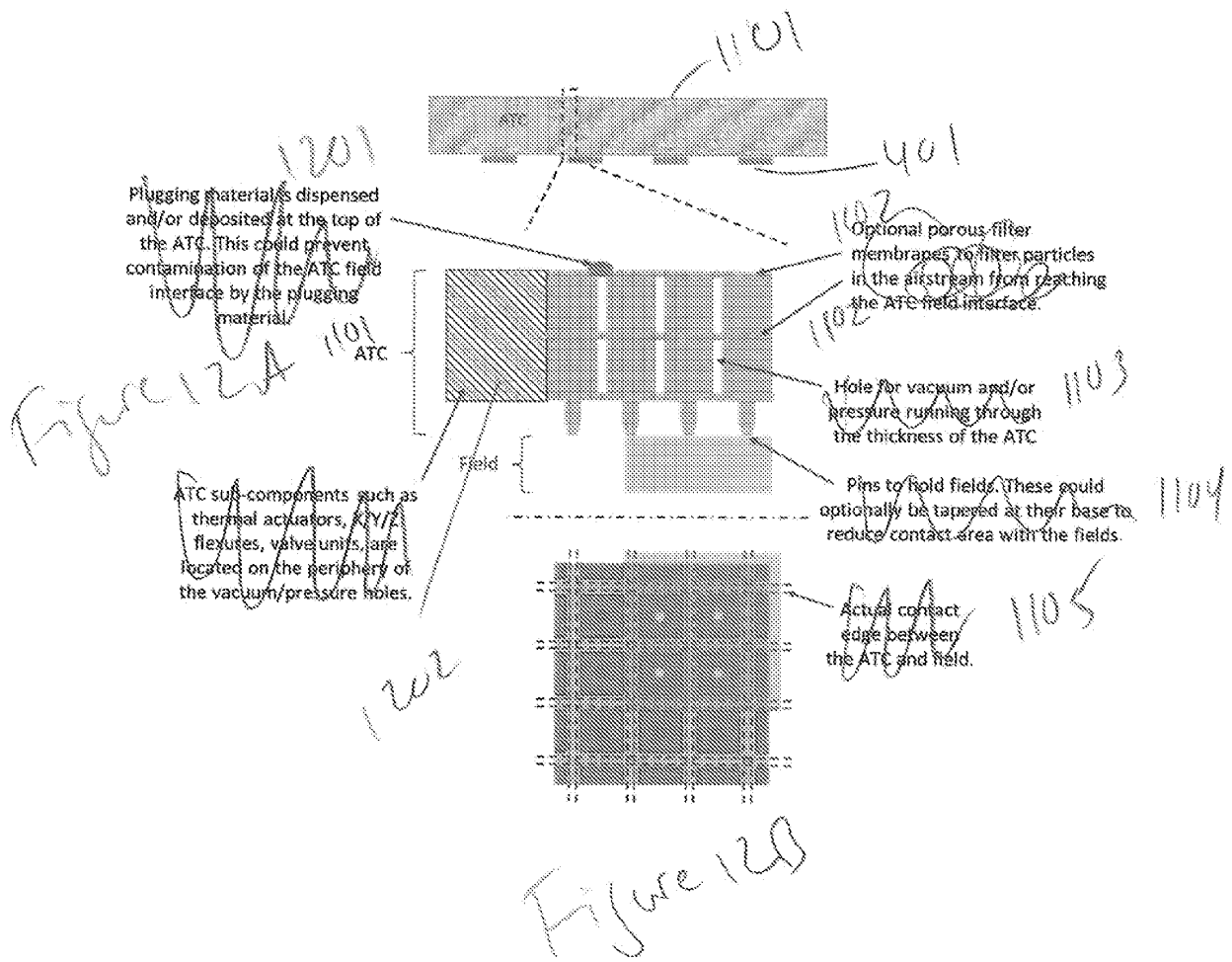
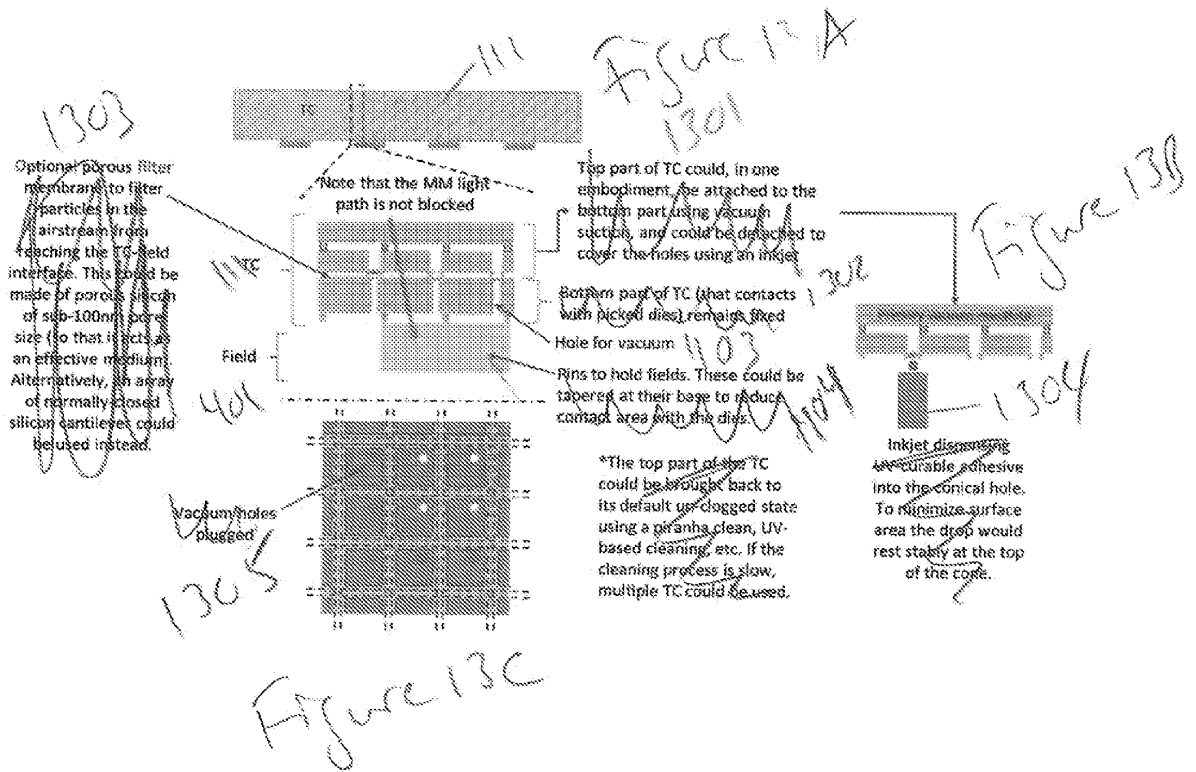


Figure 11B





- Image sensors could have a region of light insensitive region surrounding the light sensitive region.

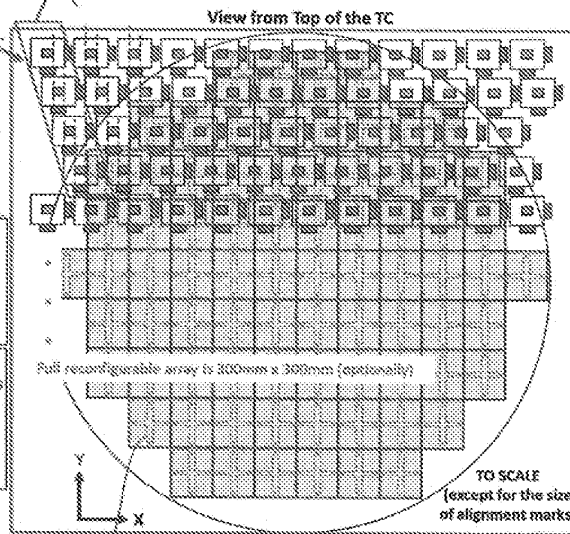
- The illustration on the right shows an exemplary scanning-based approach to acquire X and Y alignment data for all fields picked by the TC.

Exemplar single
scan area within
array of sensors.
Total has 200 scan
units in total

Exemplar single
"block" of sensors,
each has its own
light insensitive
region

Exemplar field
• 75mm (horizontal) x
30mm (vertical)
• Up to 8 (or 6) alignment marks
(4 for X, 4 for Y alignment)
Alignment marks in layer 0 or
half-helf (see next few slides).

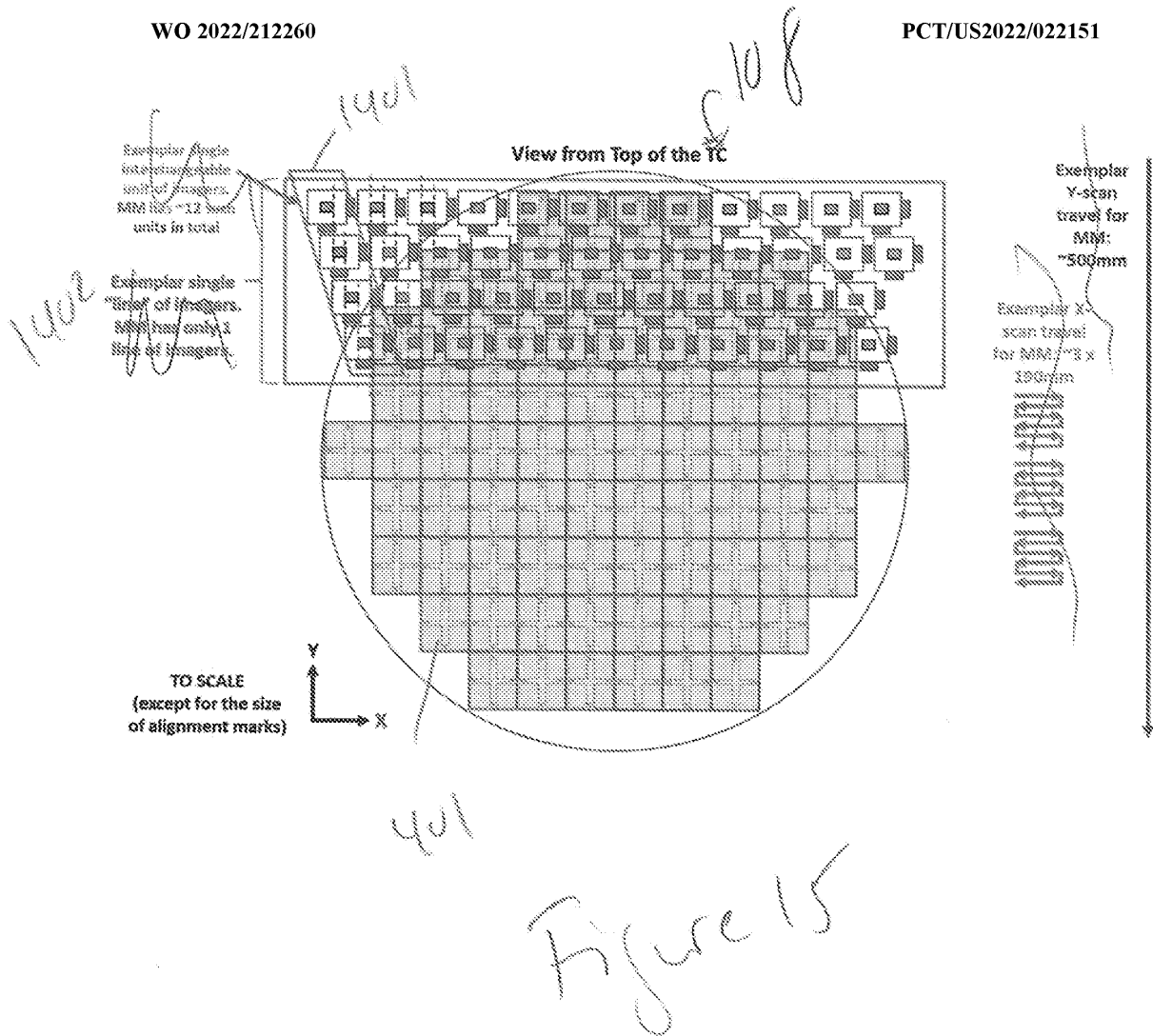
Light sensitive area
of LED-GO assemblies
Exemplar 5600 sensor
• Sony IMX576-8381-C
• 12960 (x 3032) 5.5um x 5um
cell size, 20mm x 16mm package
• 250 total sensors in 1000



Exemplar
Y-scan
travel for
MM: 300mm

Exemplar
X-scan
travel for
MM: 300mm

401 Figure 14



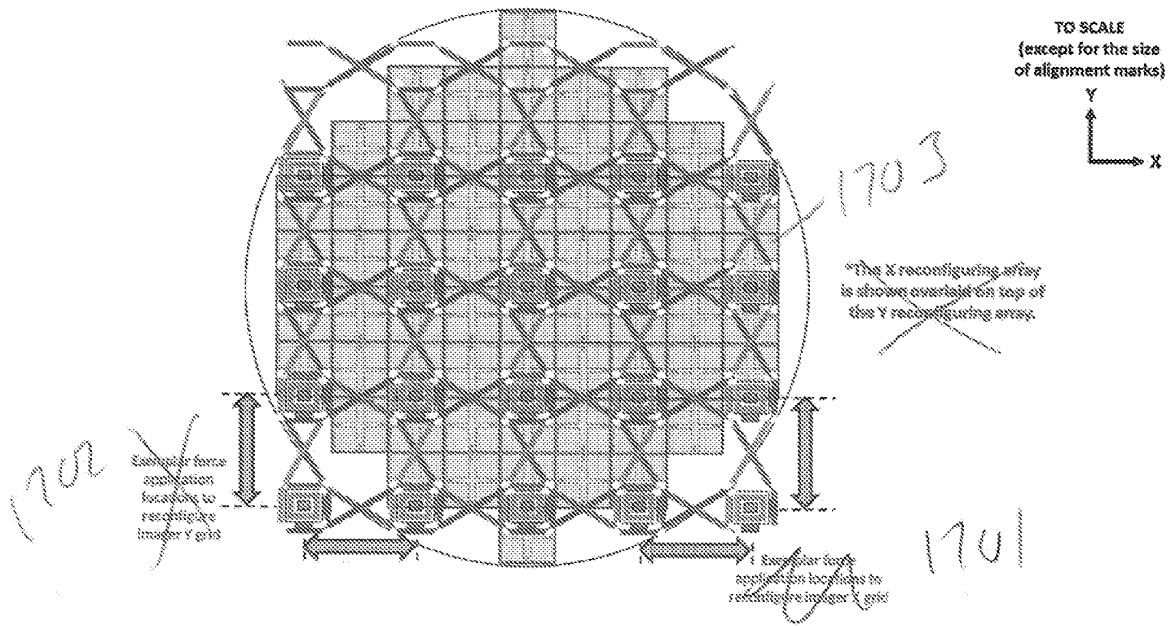
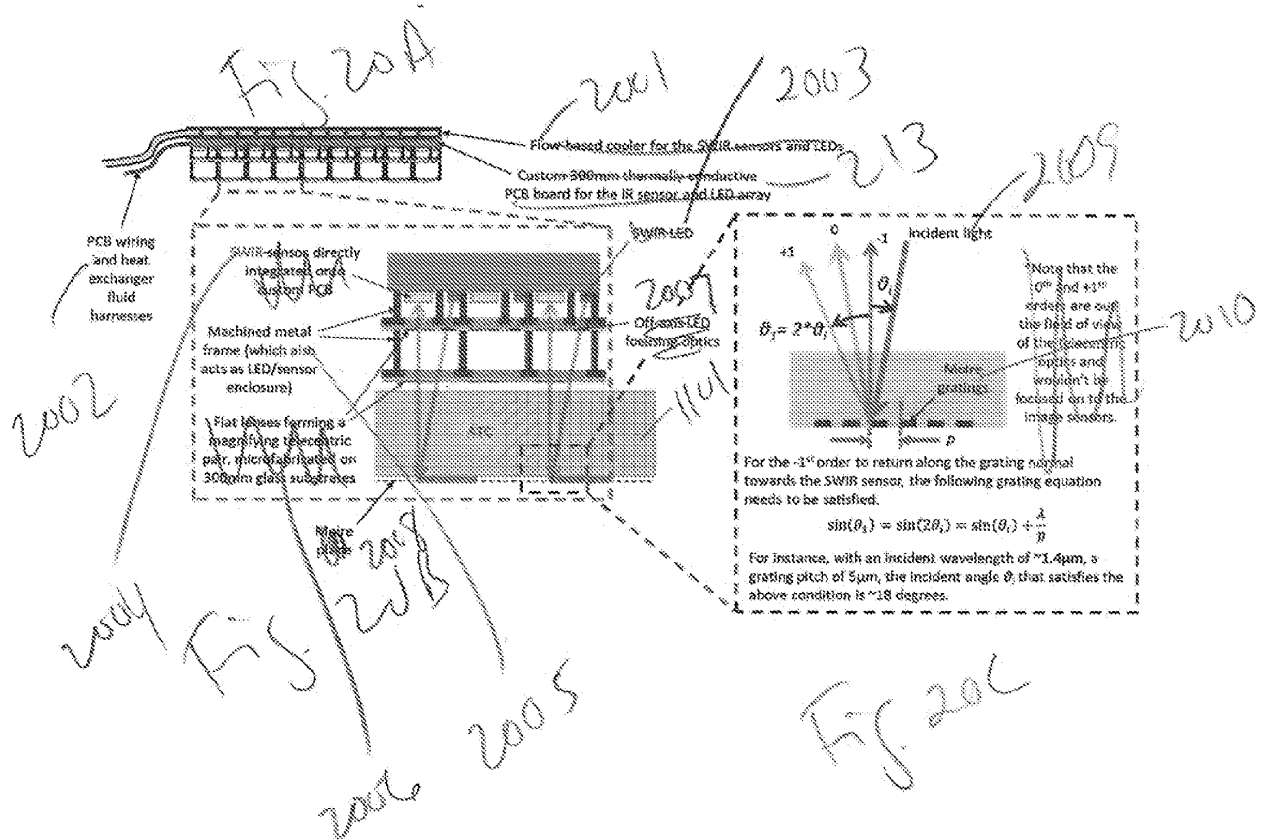
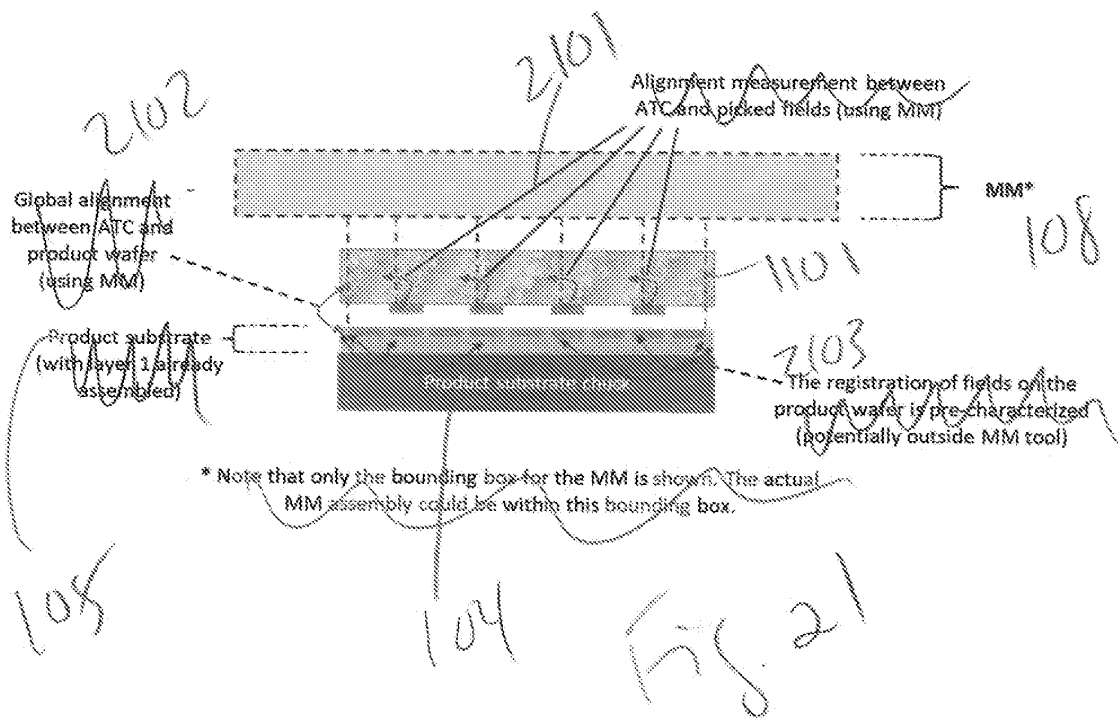


Figure 17





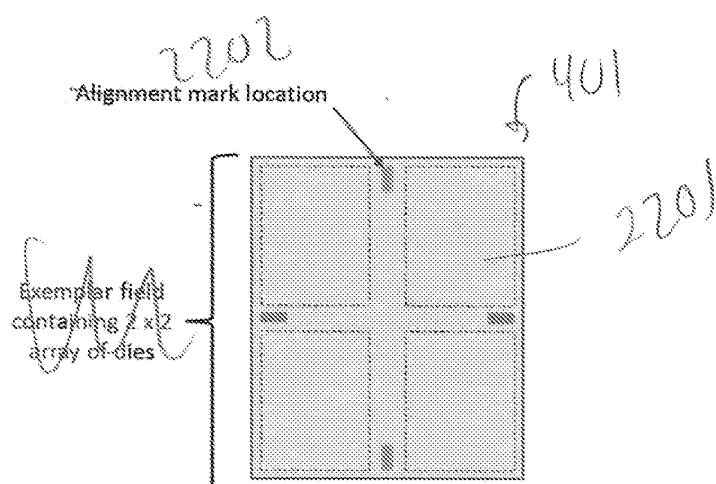
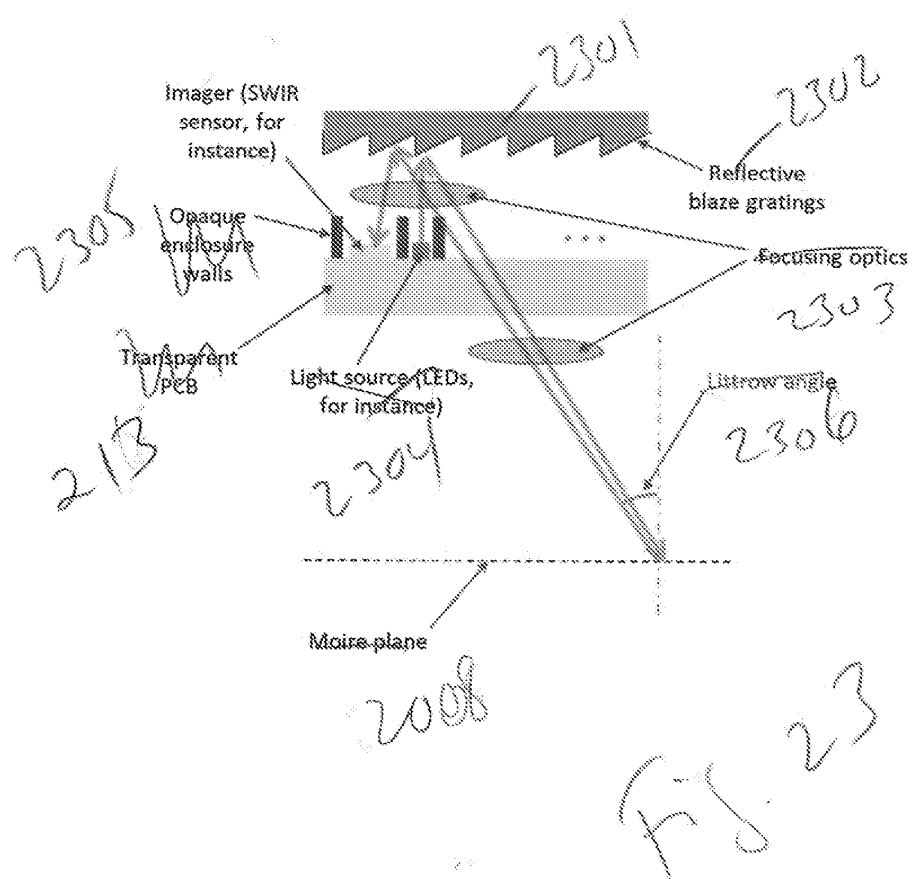
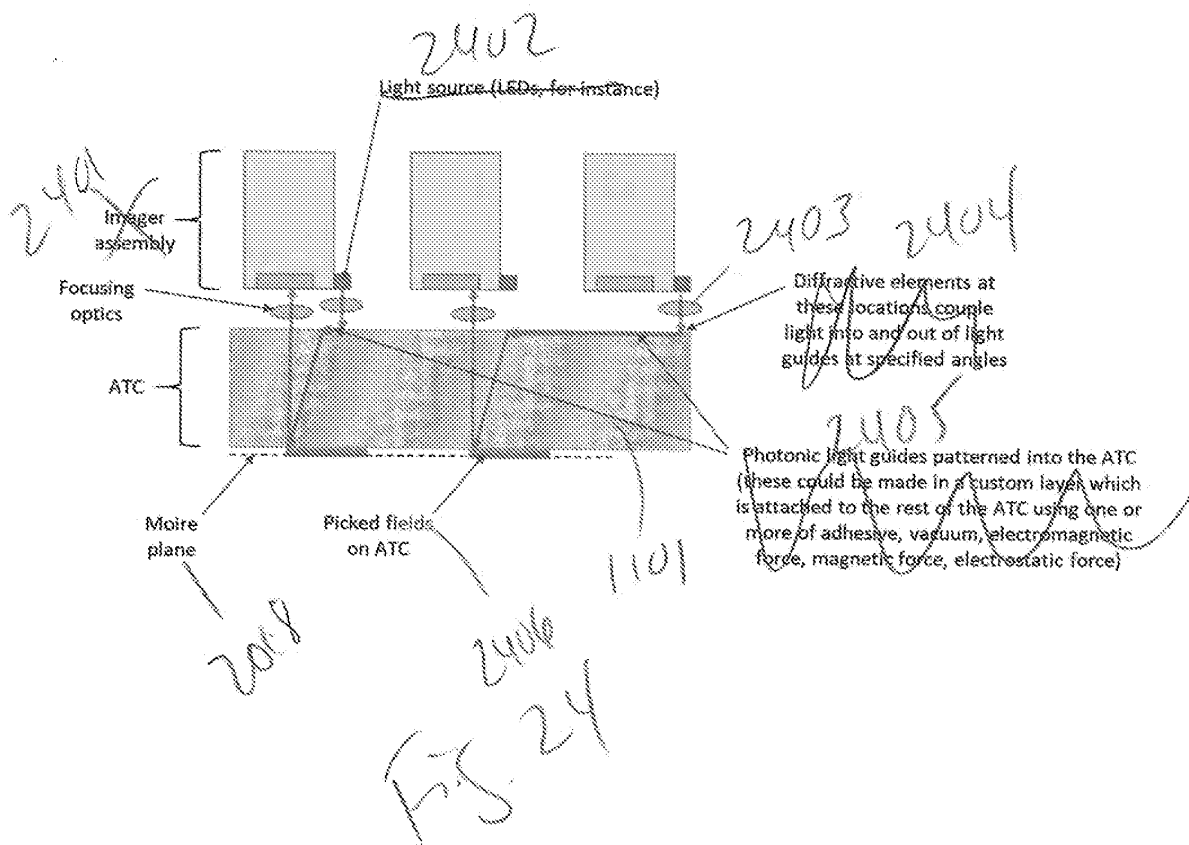
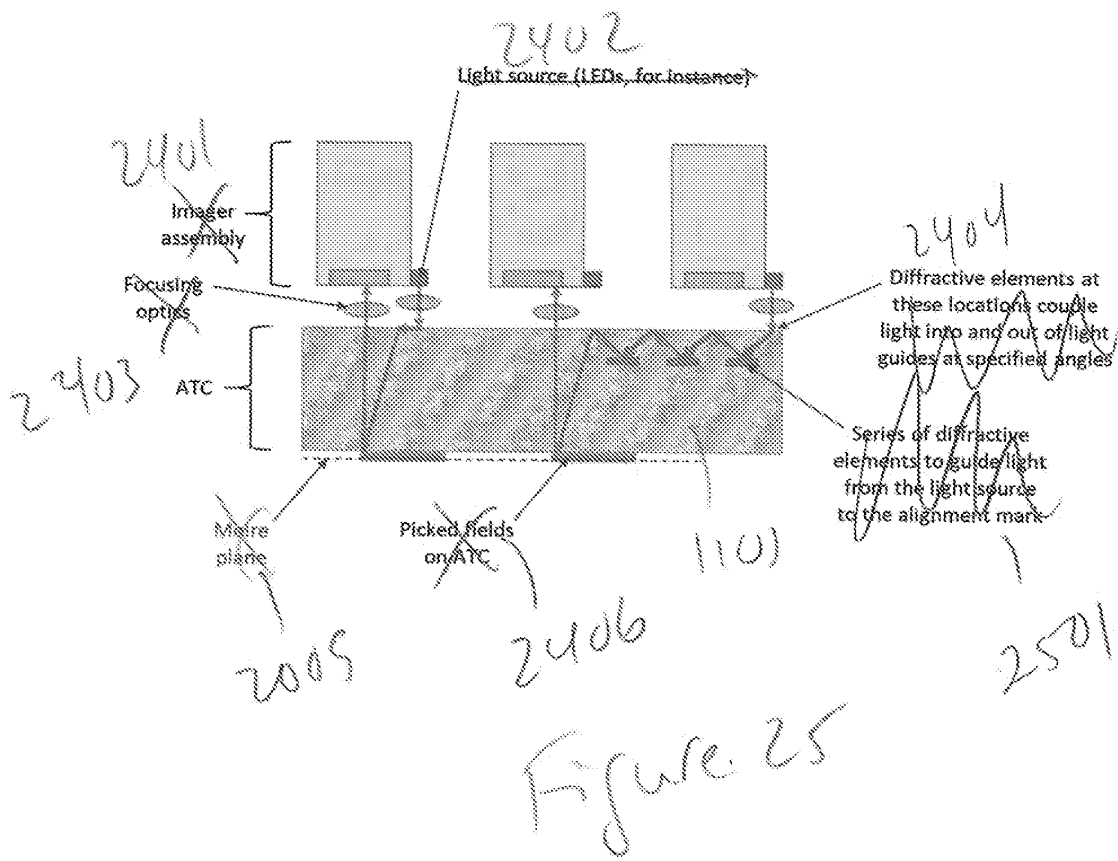
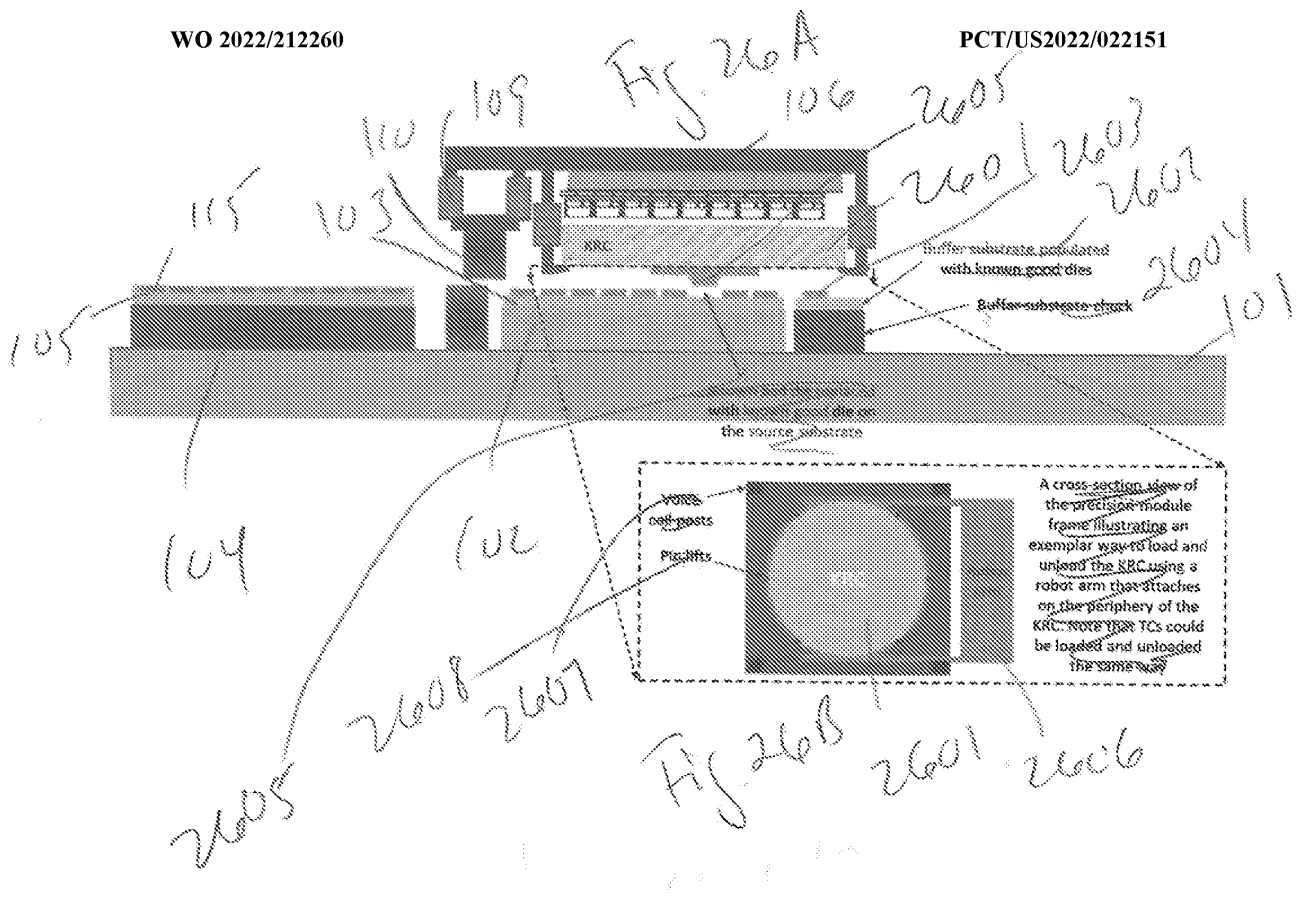


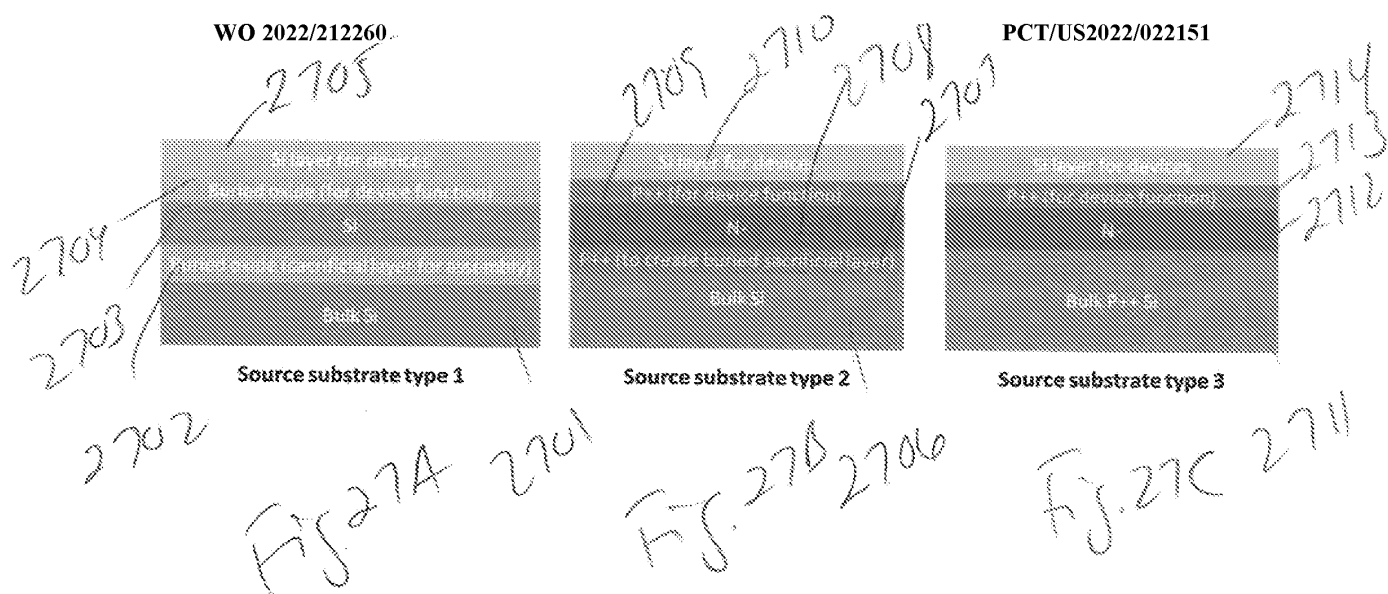
Fig. 22

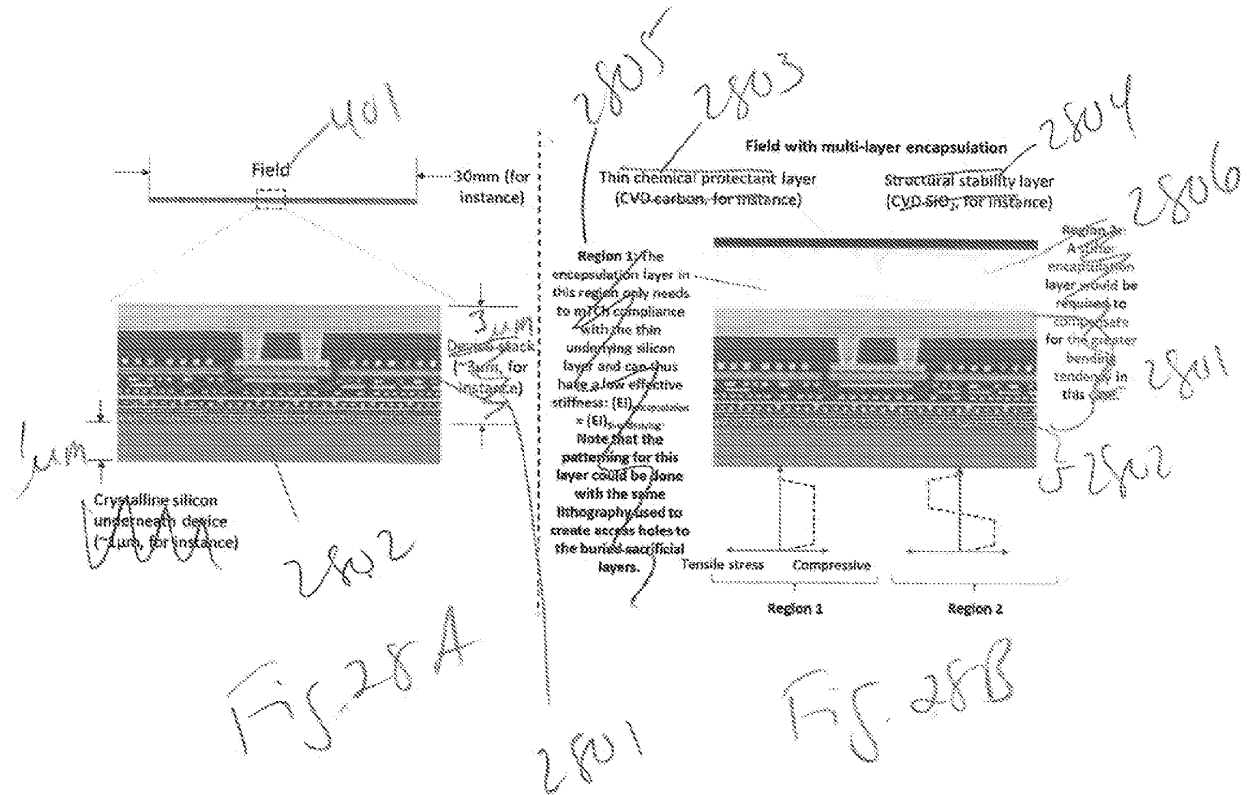


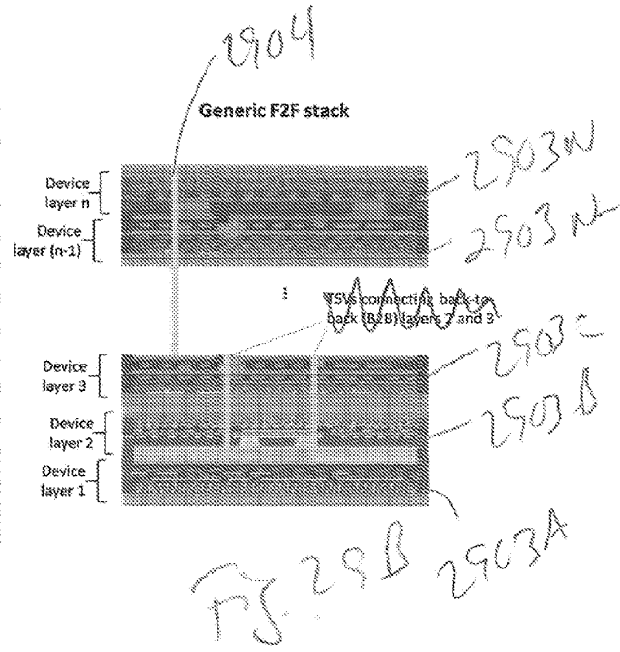
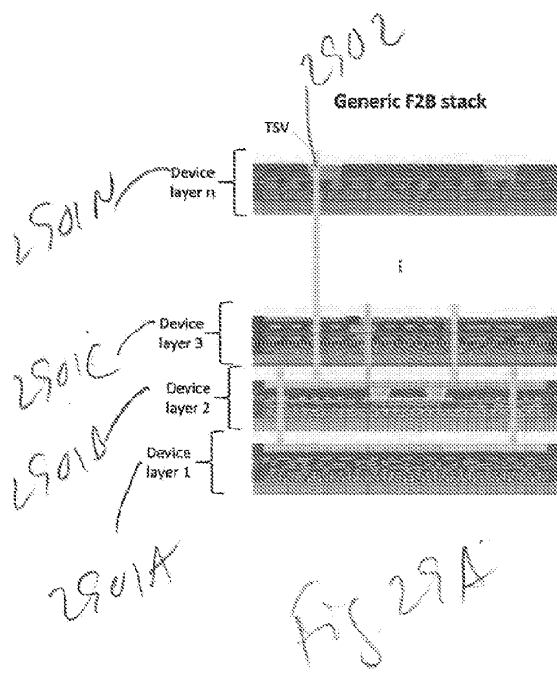












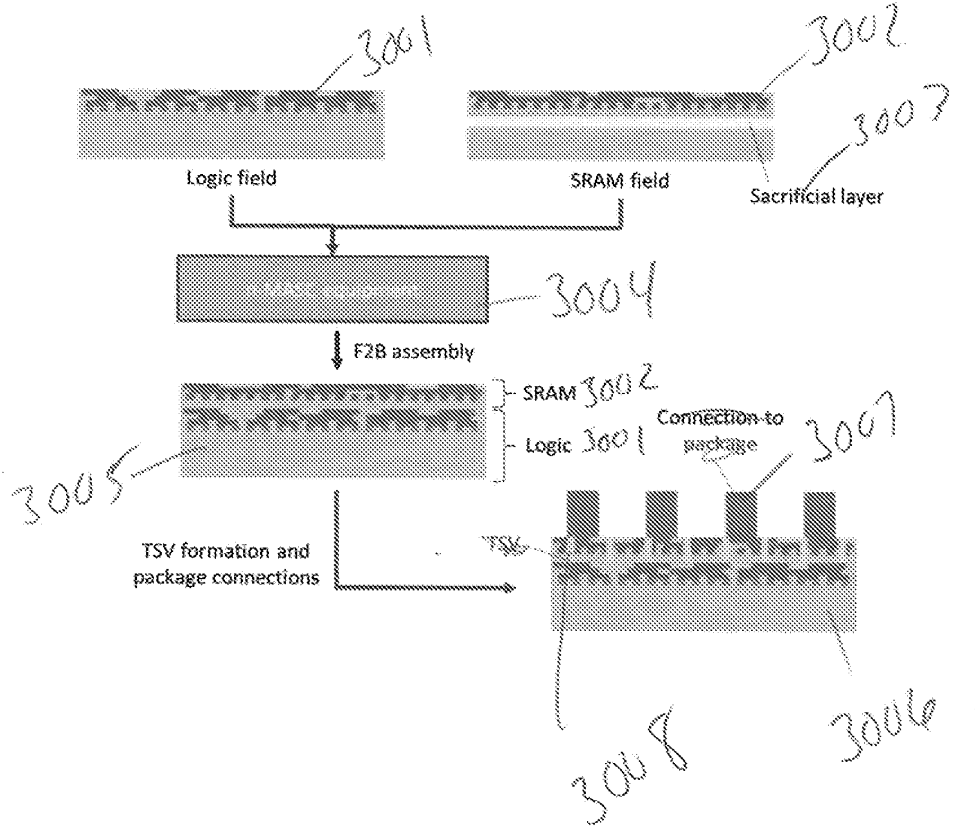


Figure 30

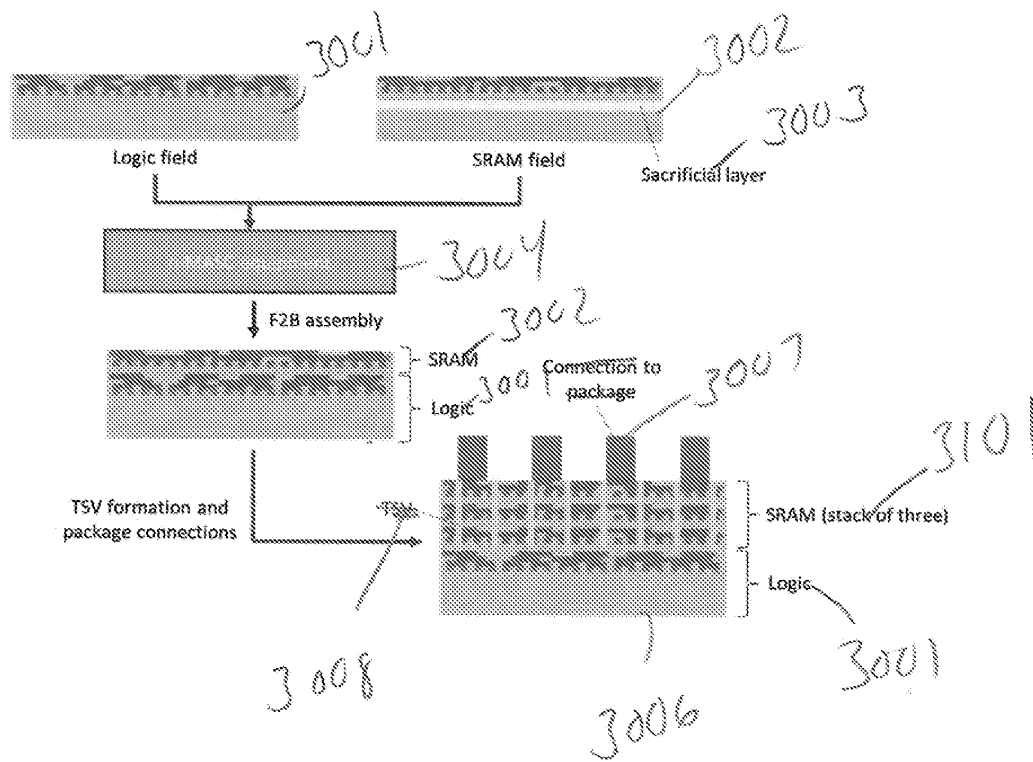


Figure 31

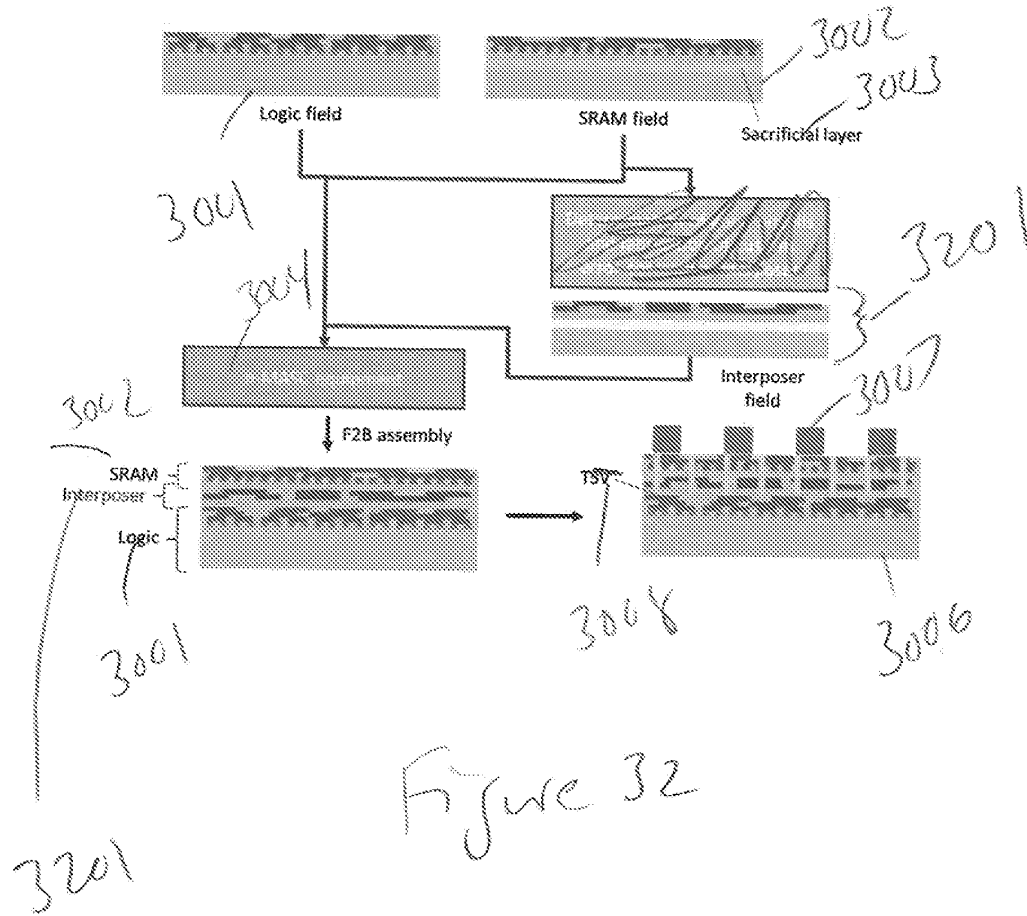


Figure 32

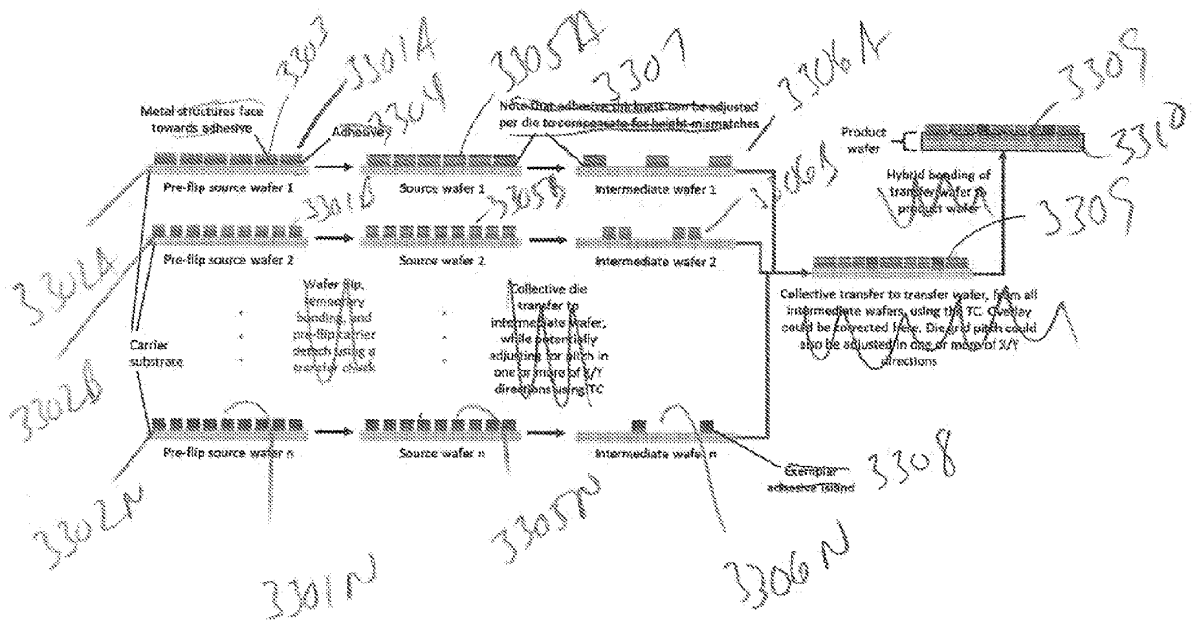


Figure 33

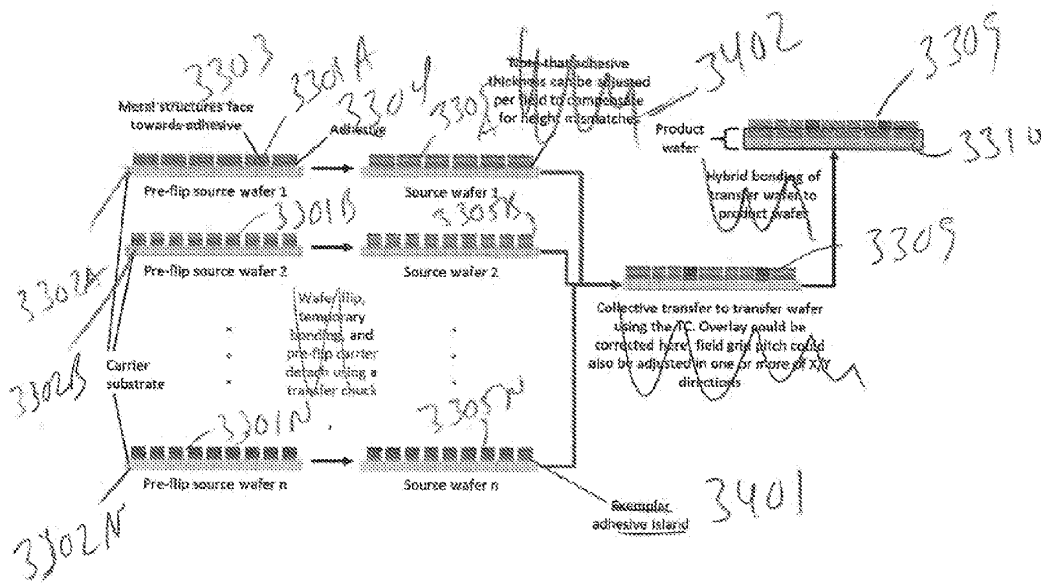
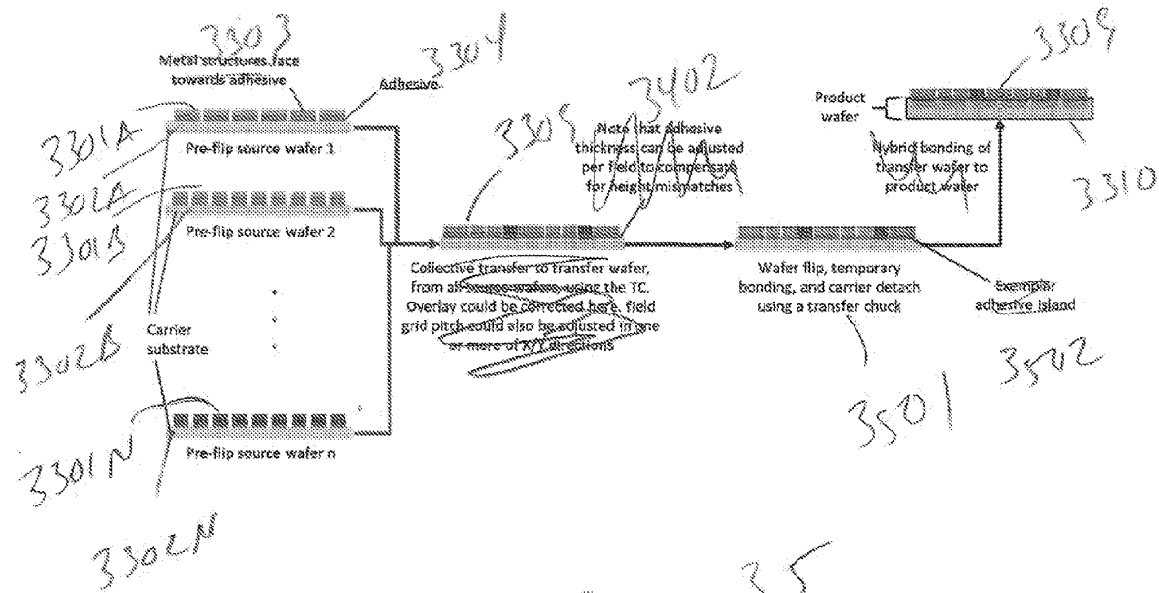
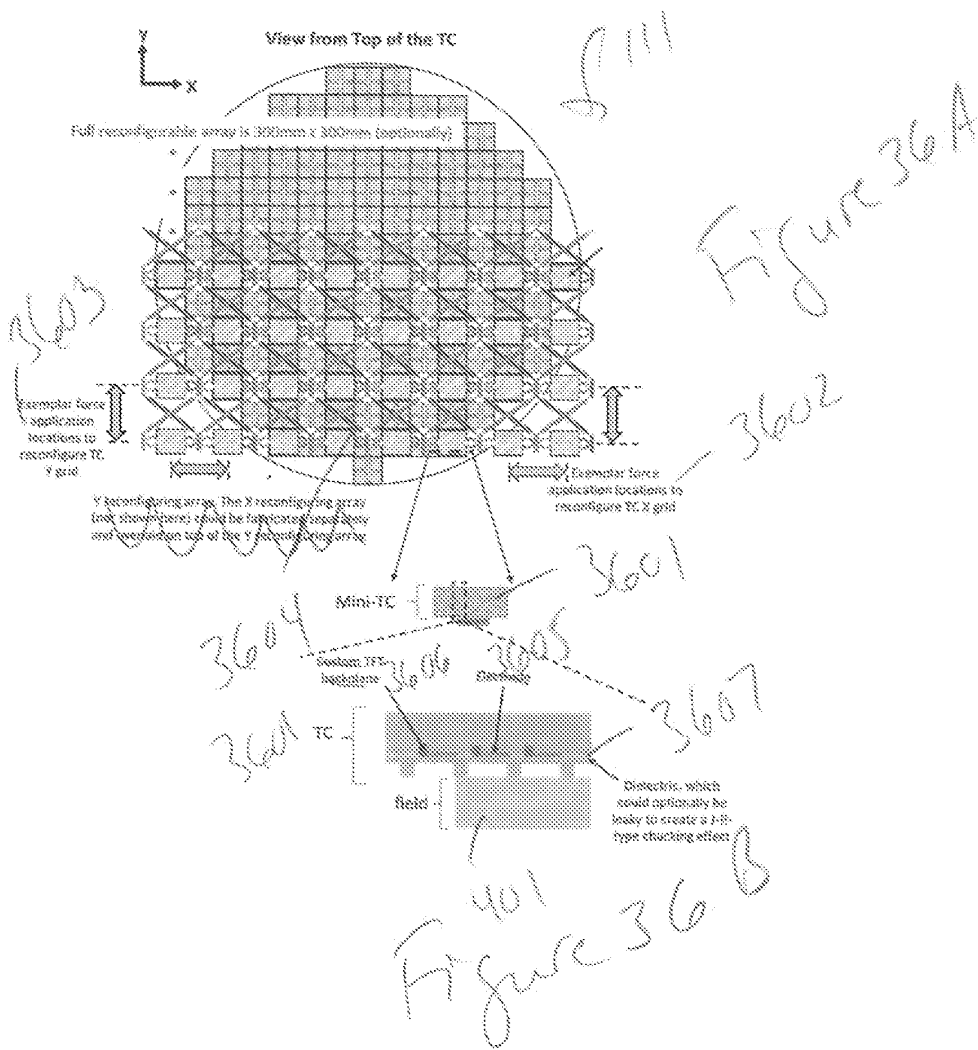
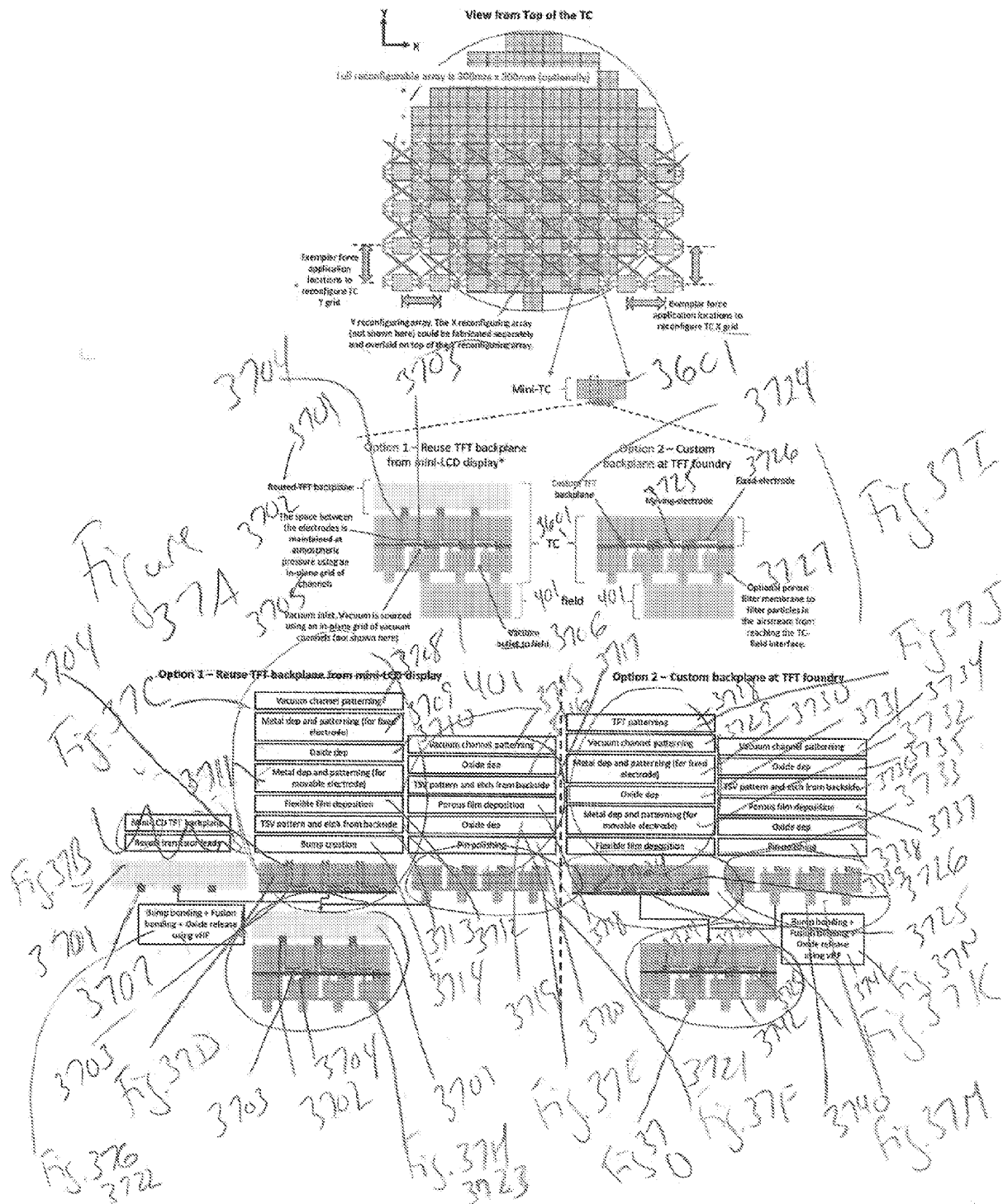
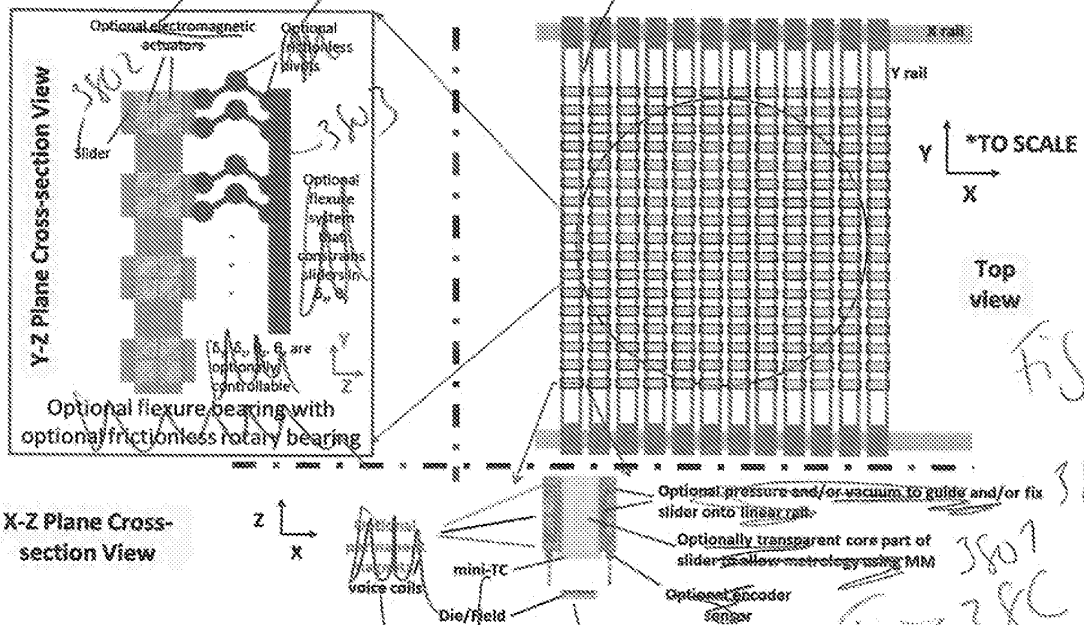


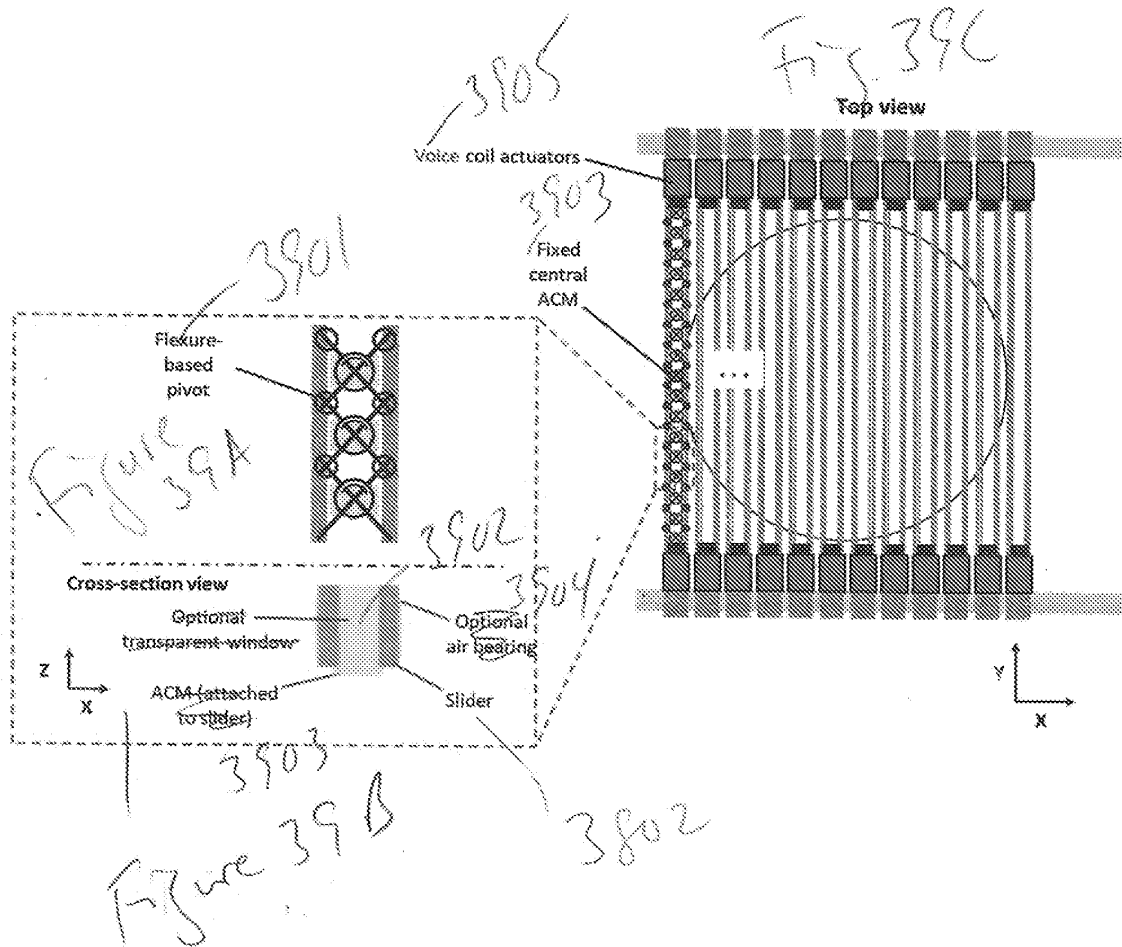
Figure 34

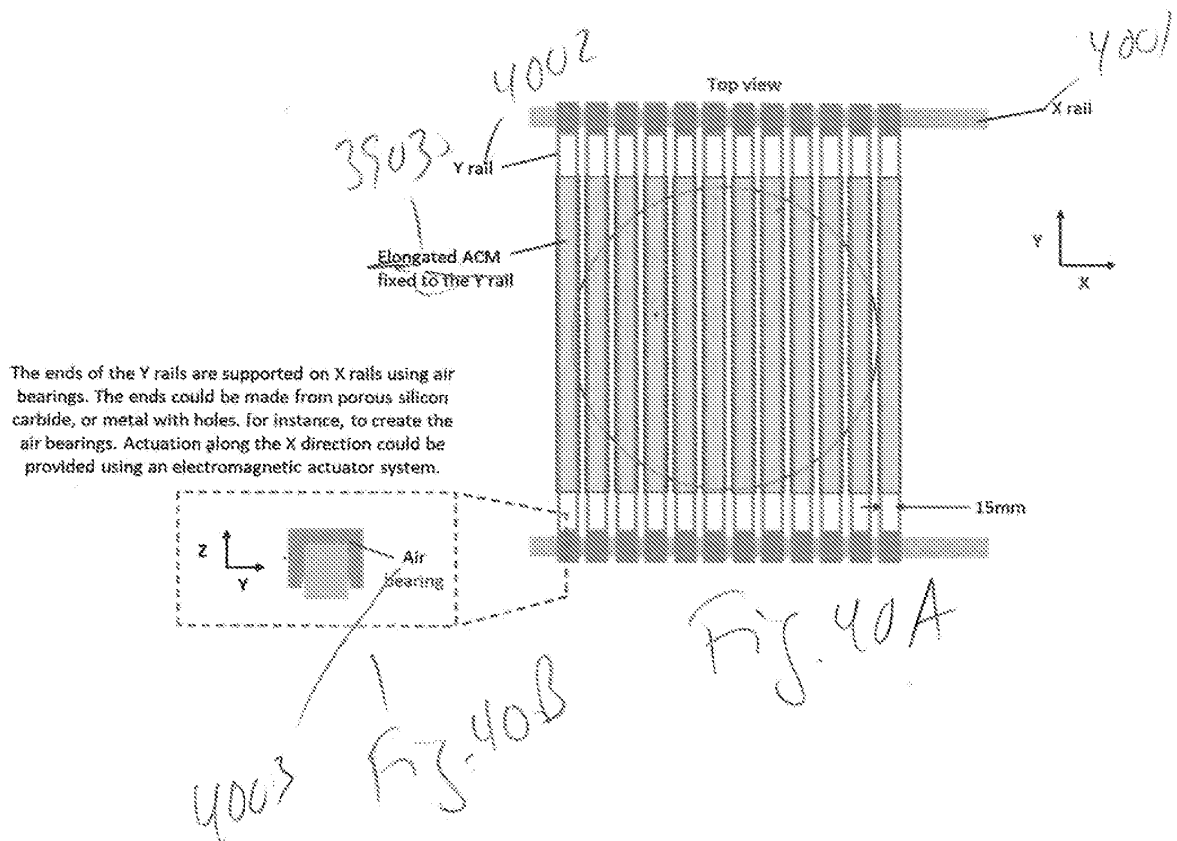












The ends of the Y rails are supported on X rails using air bearings. The ends could be made from porous silicon carbide, or metal with holes, for instance, to create the air bearings. Actuation along the X direction could be provided using an electromagnetic actuator system.

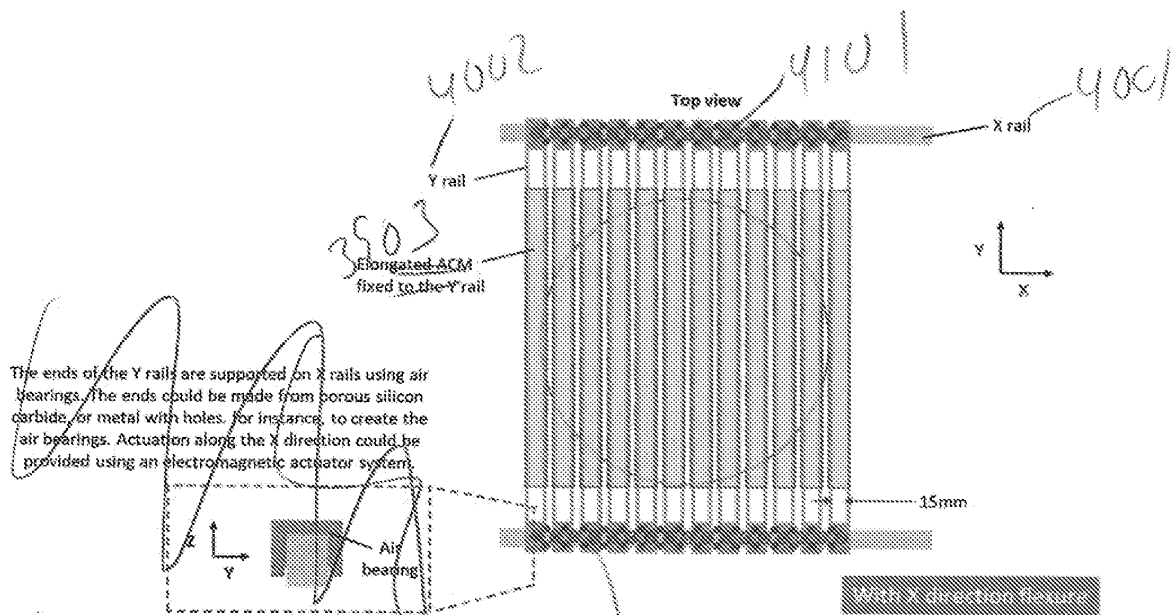
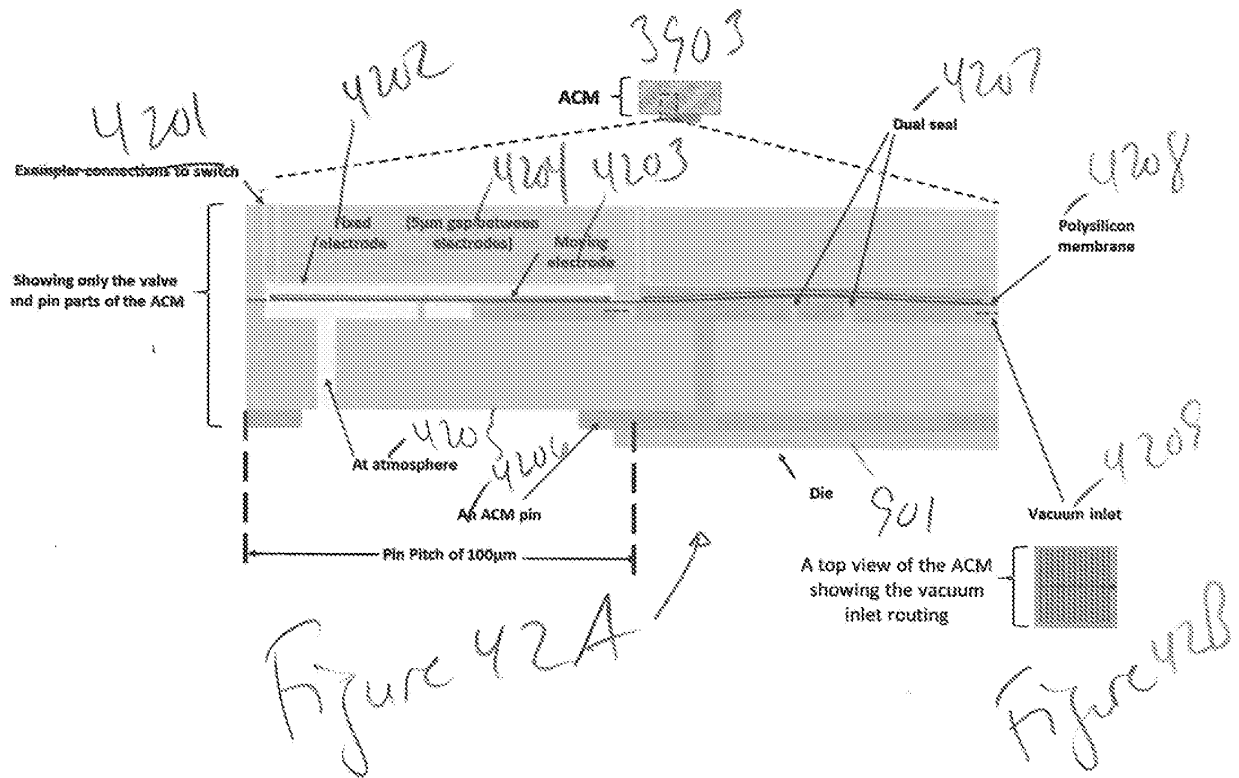
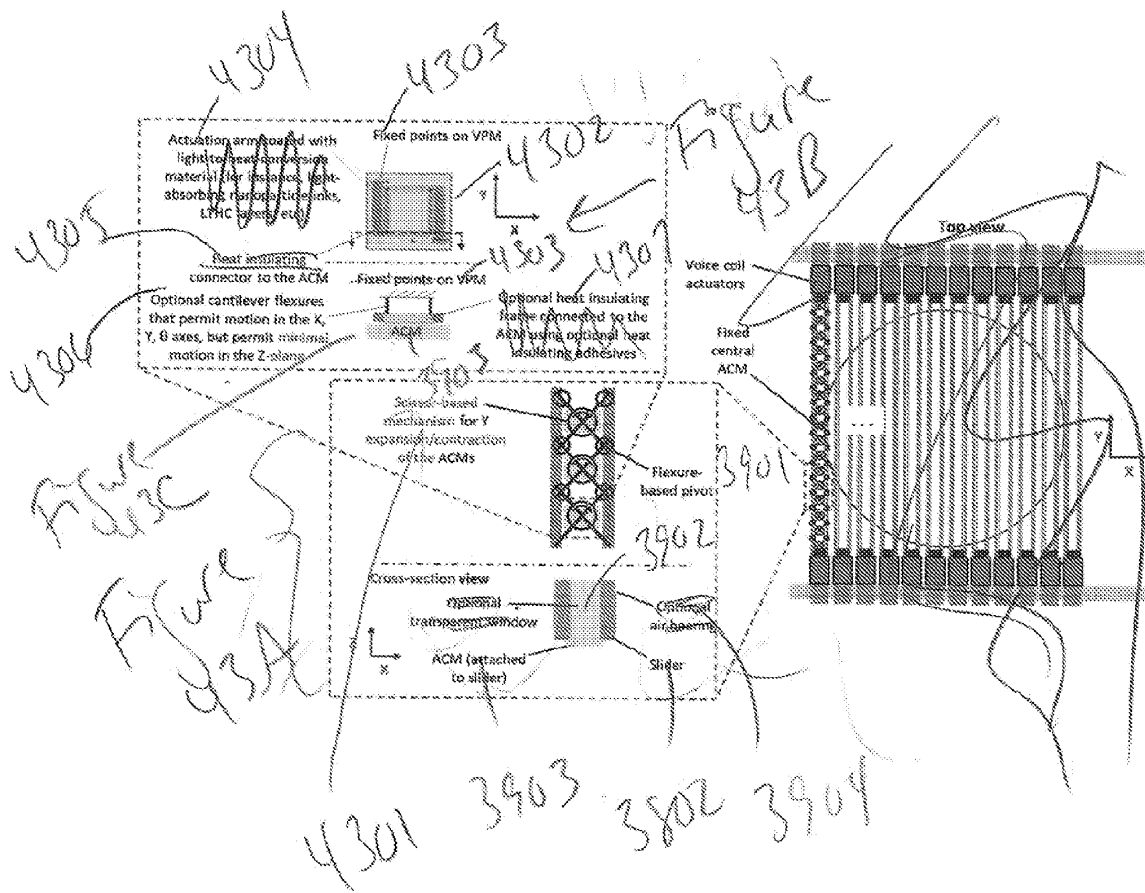
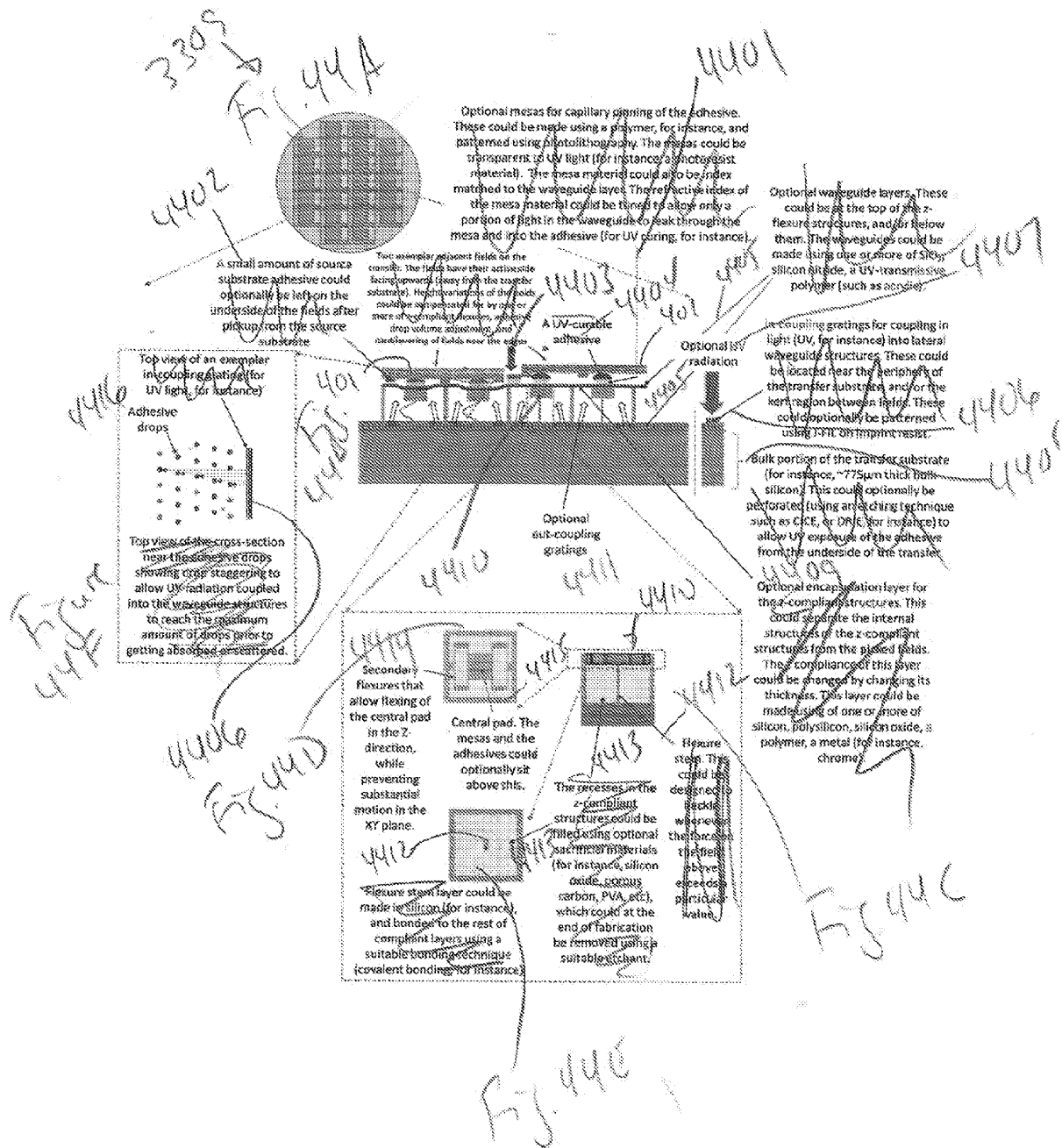
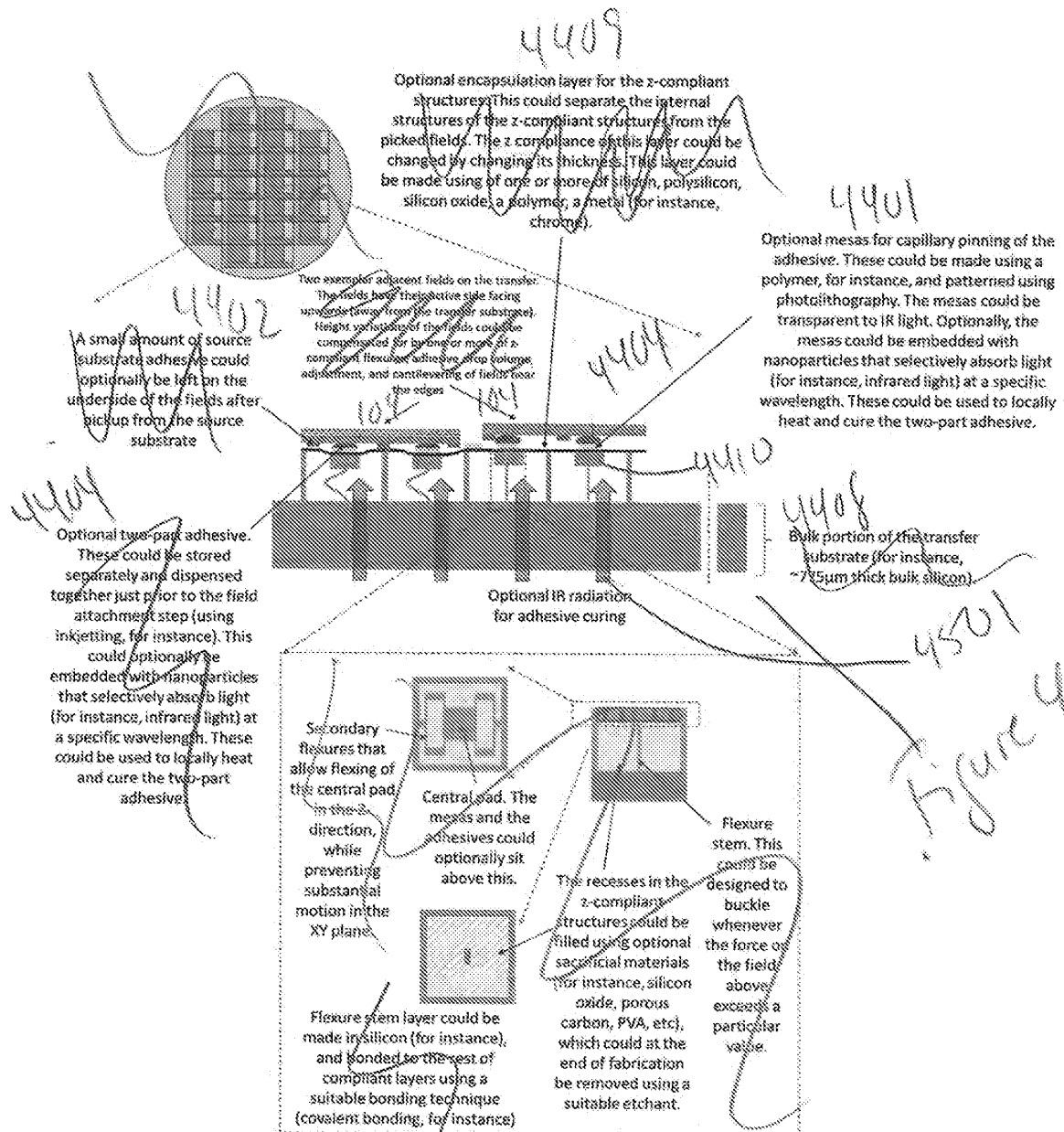


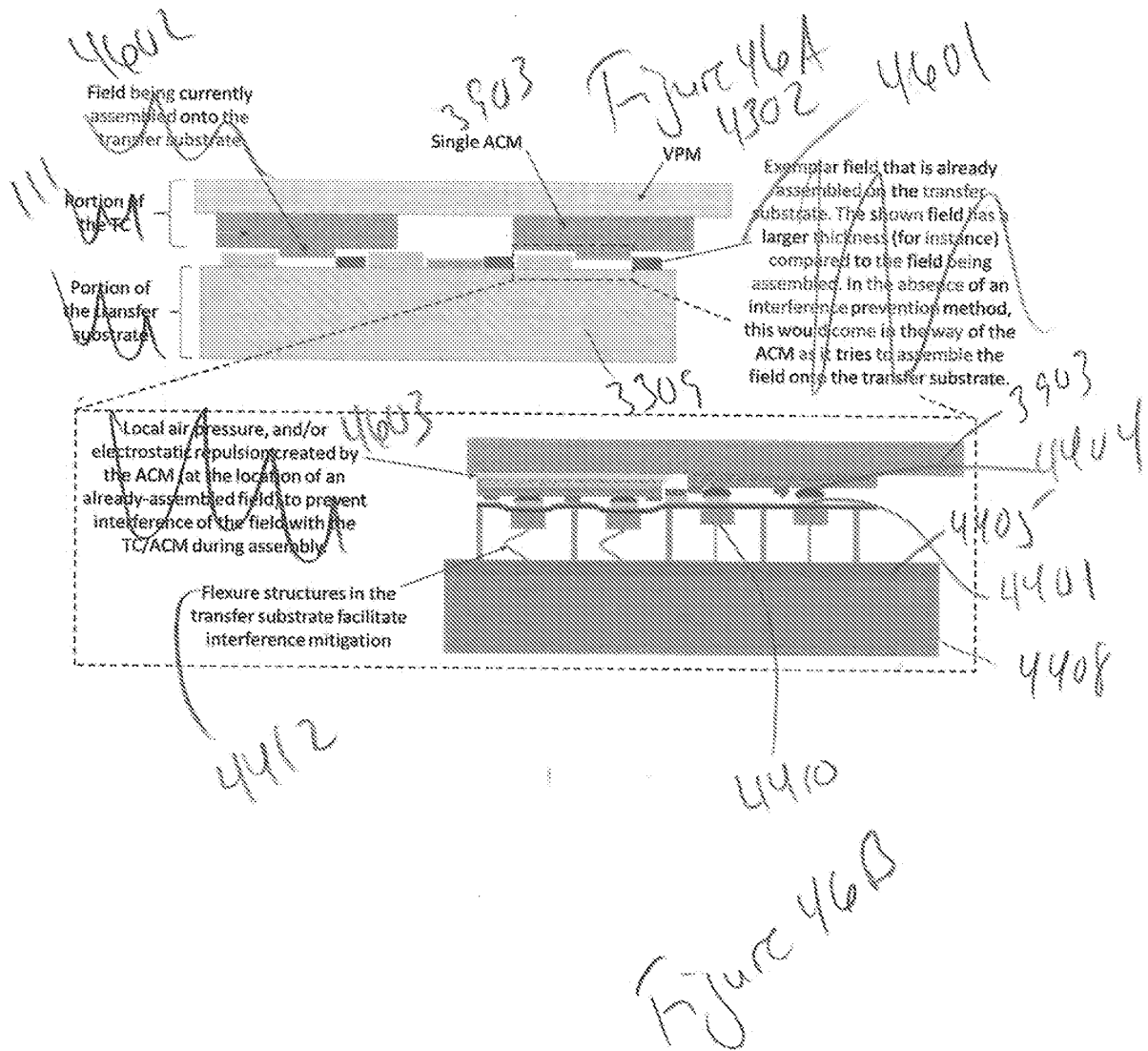
Figure 41

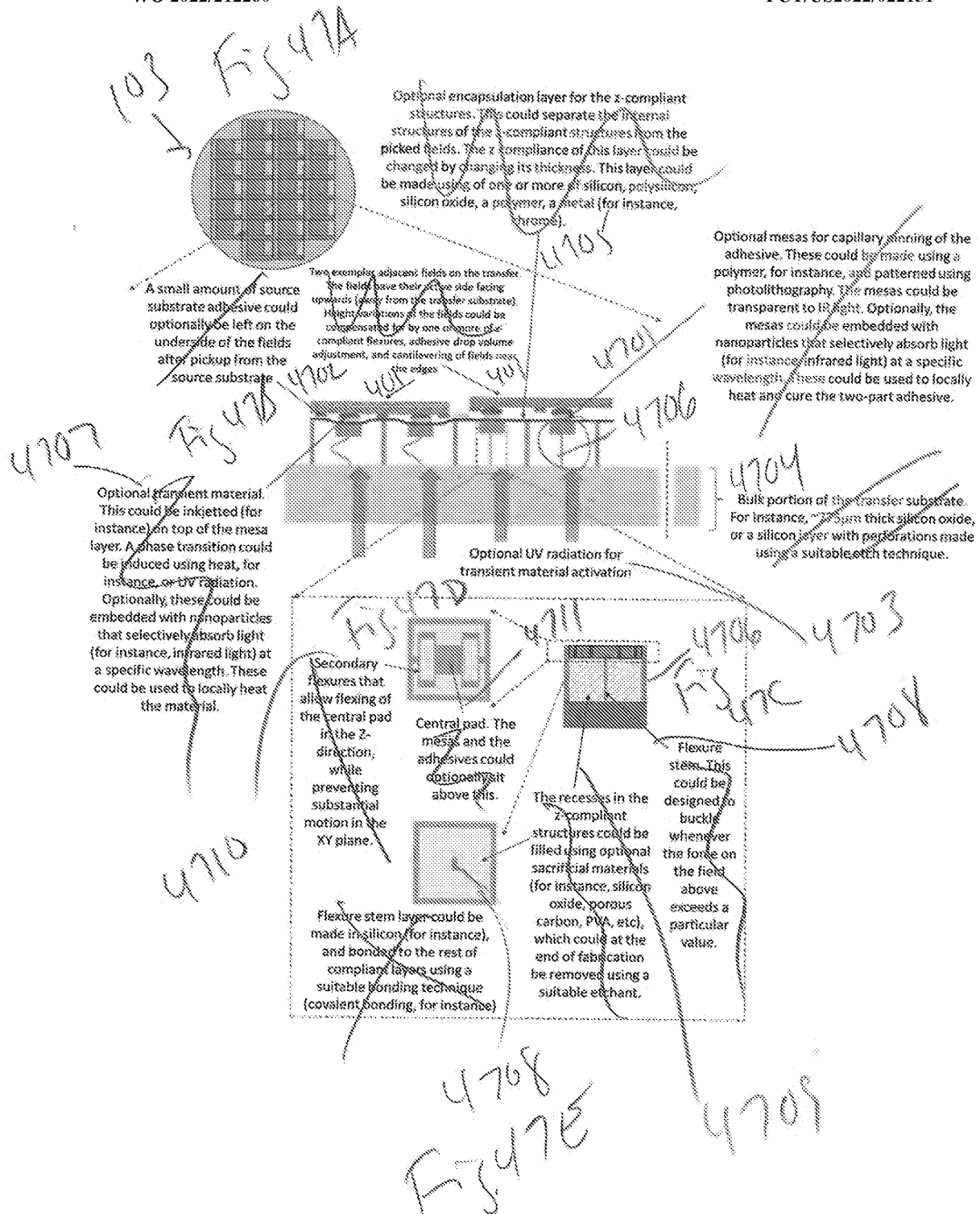












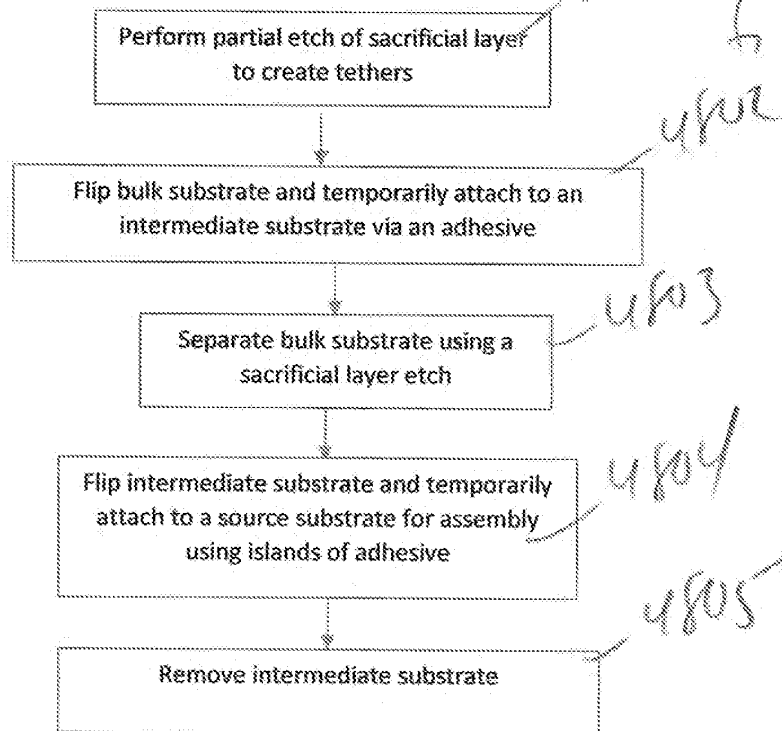
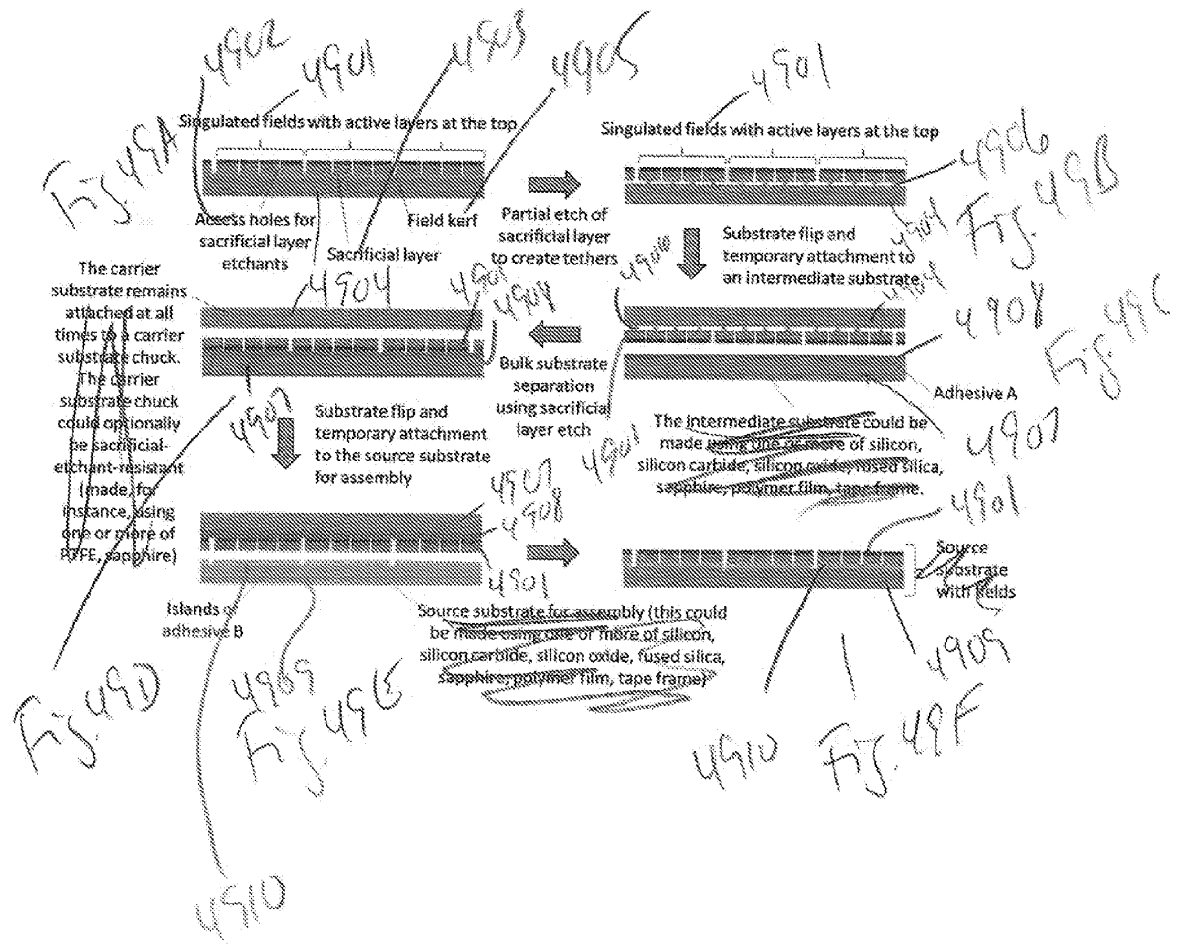
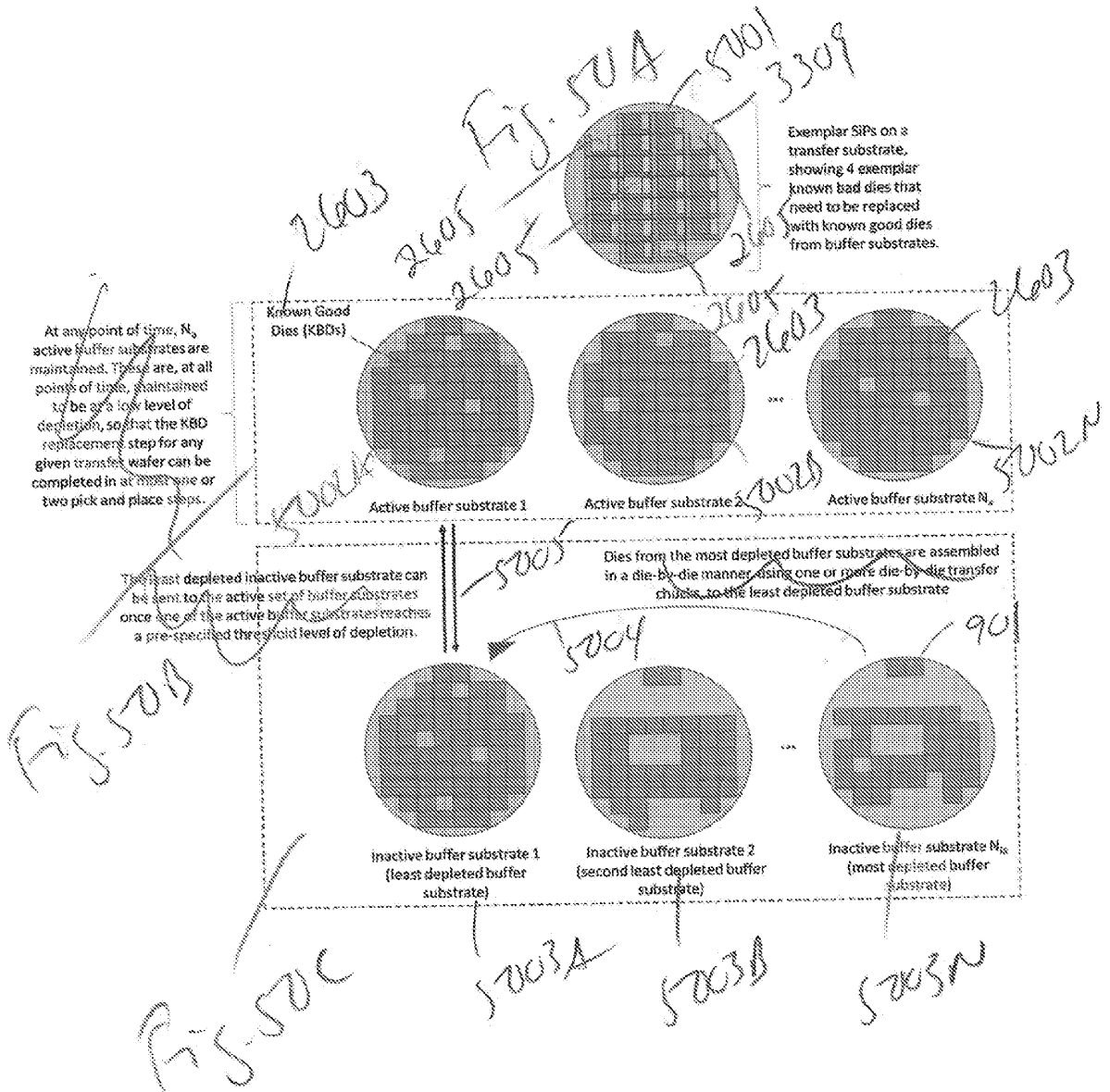
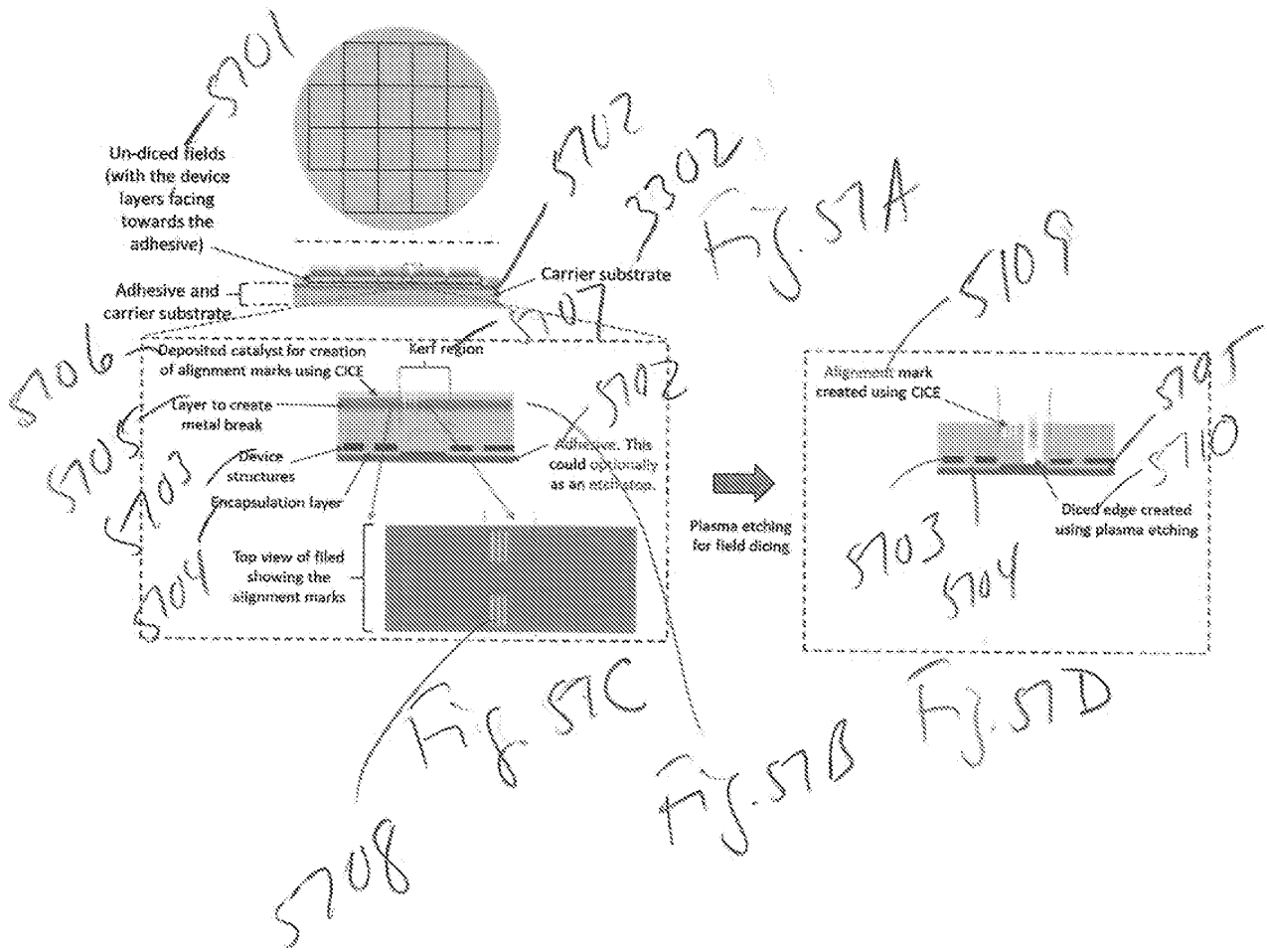
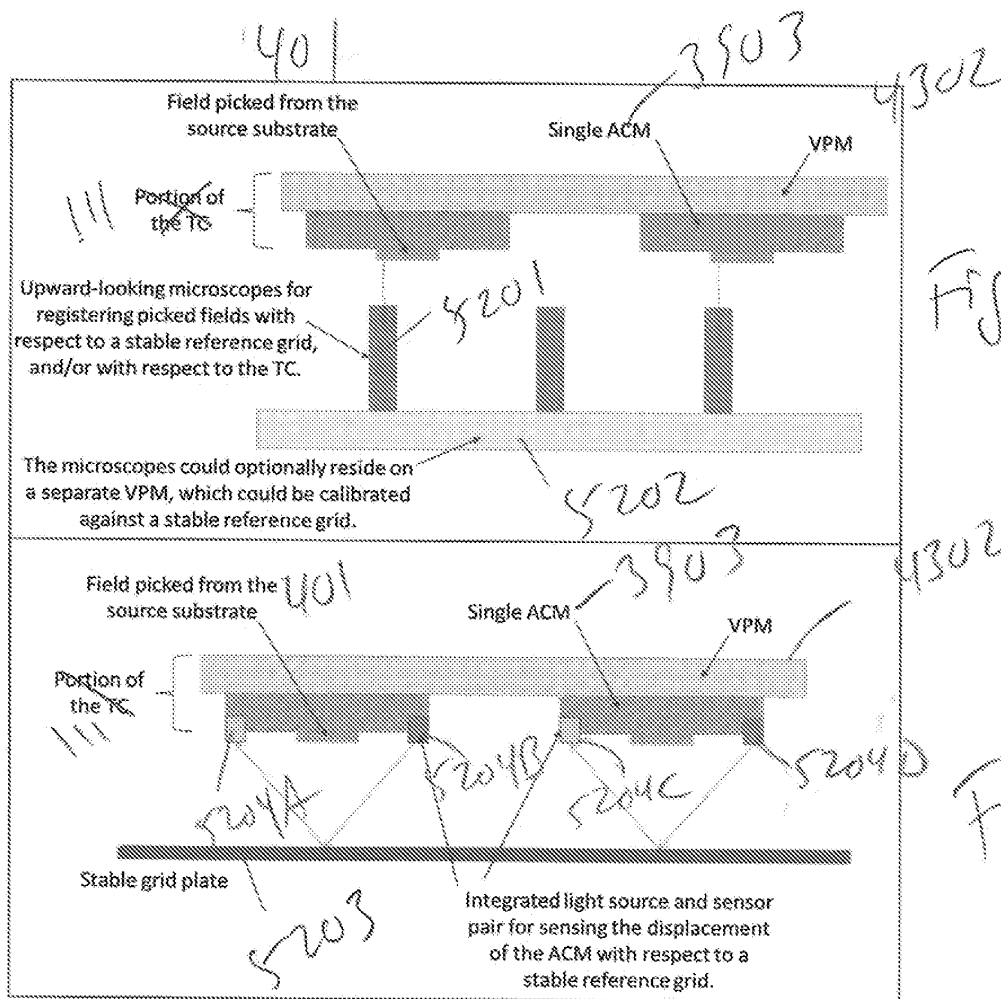


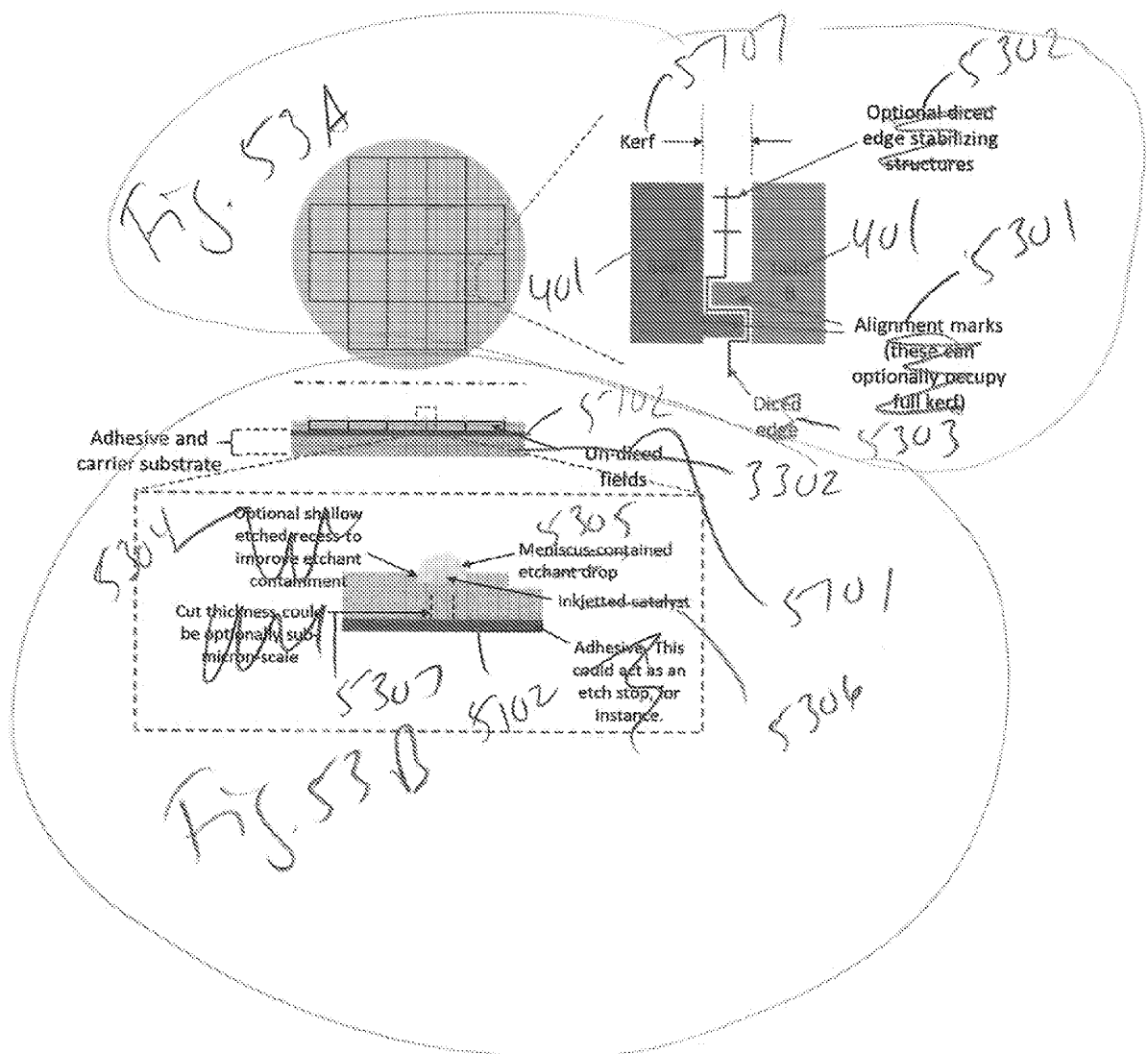
Figure 48

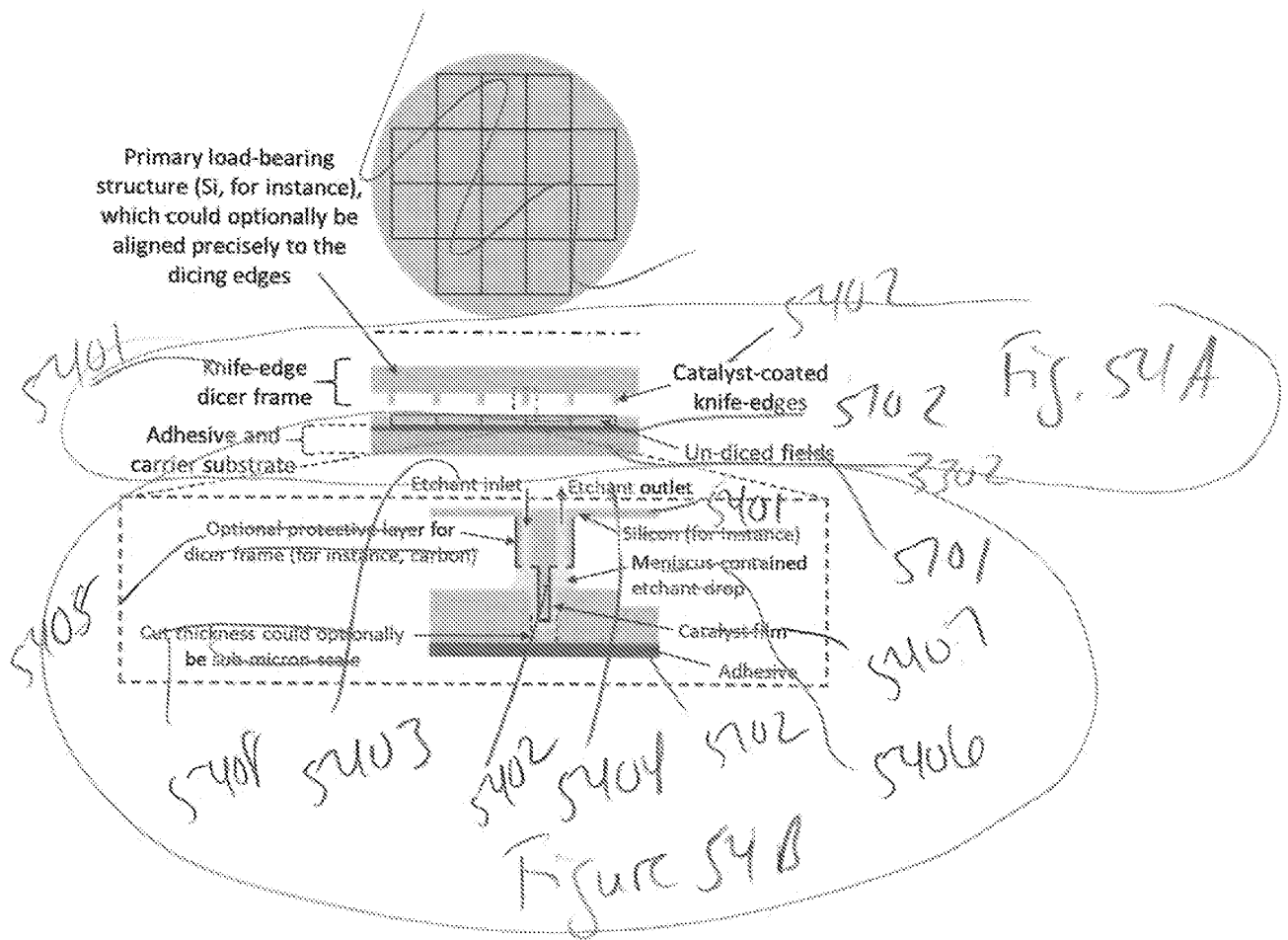


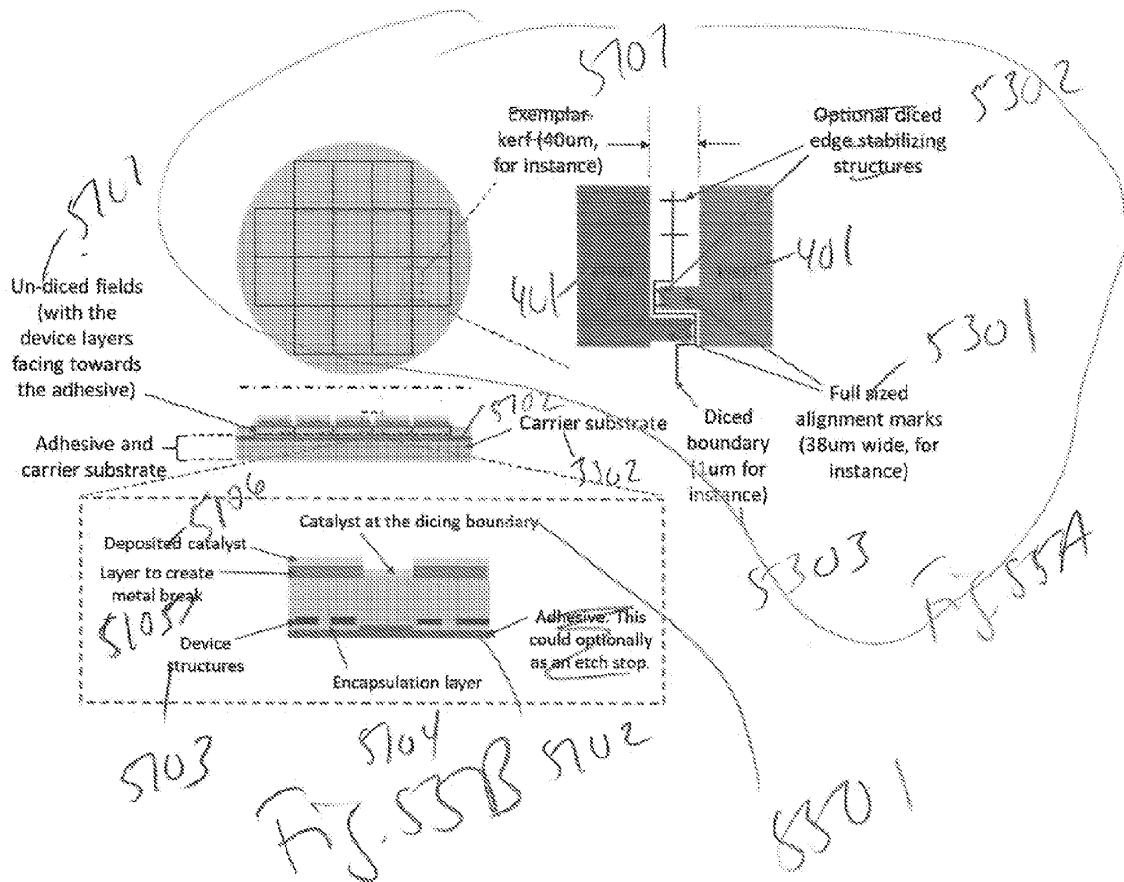


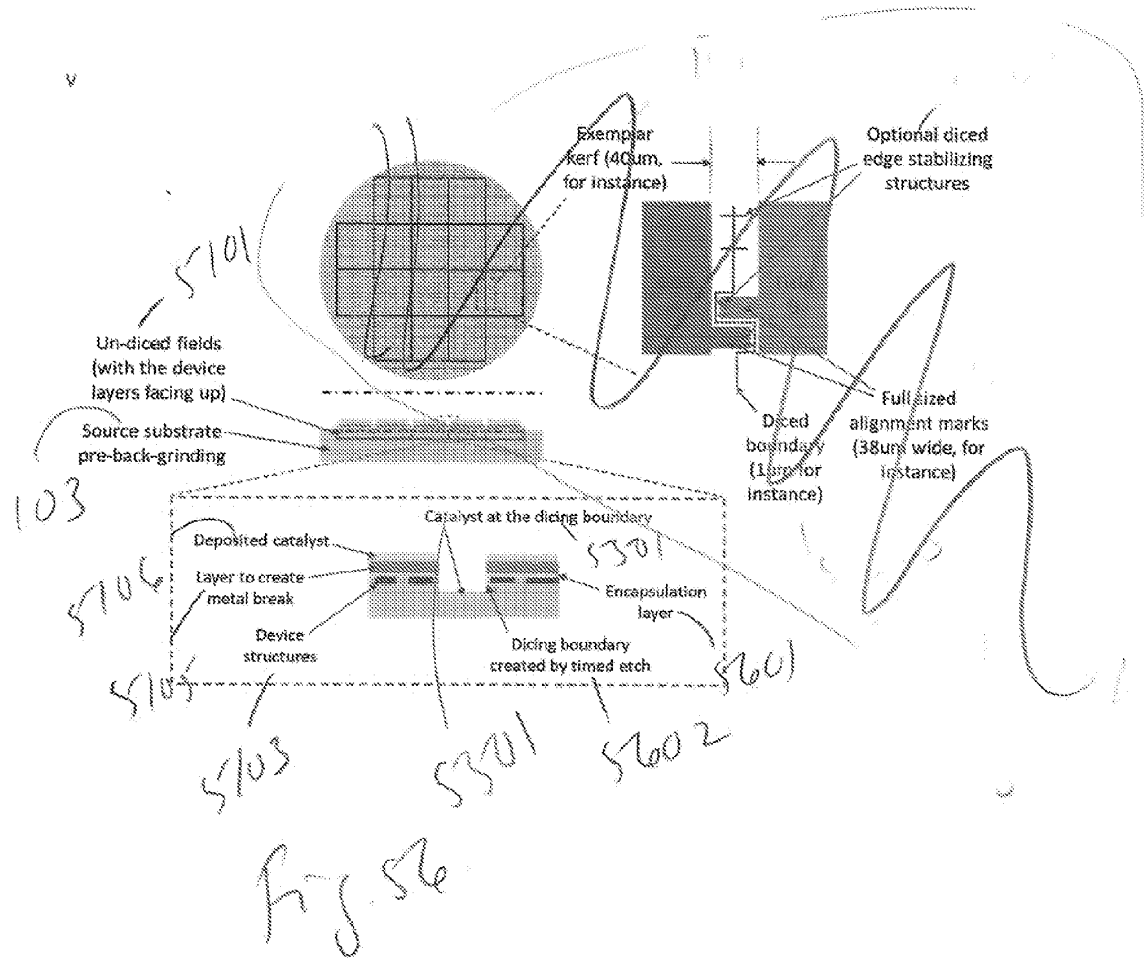












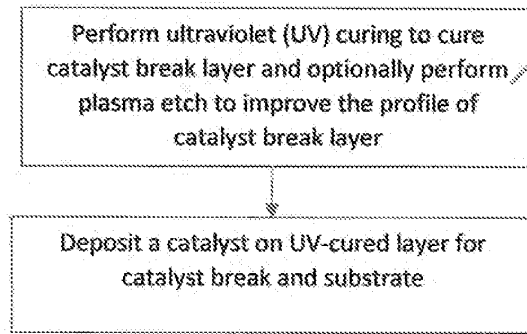
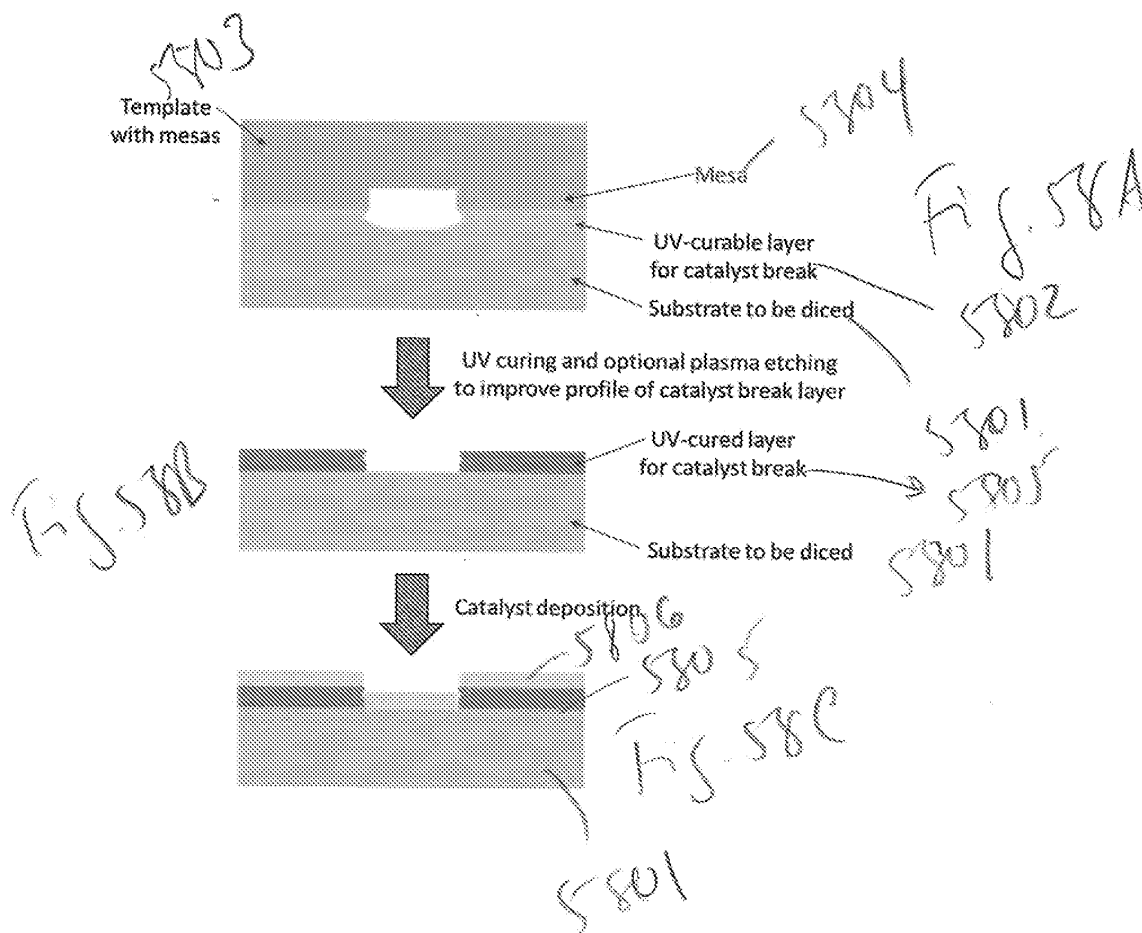


Figure 57



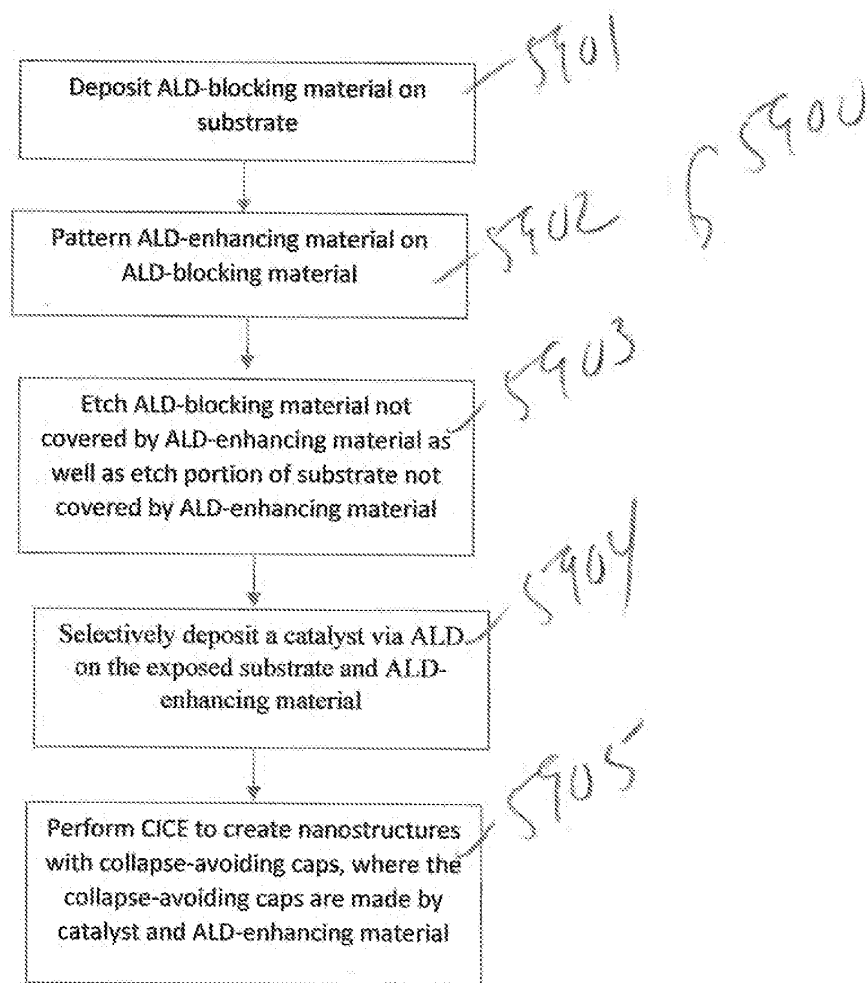
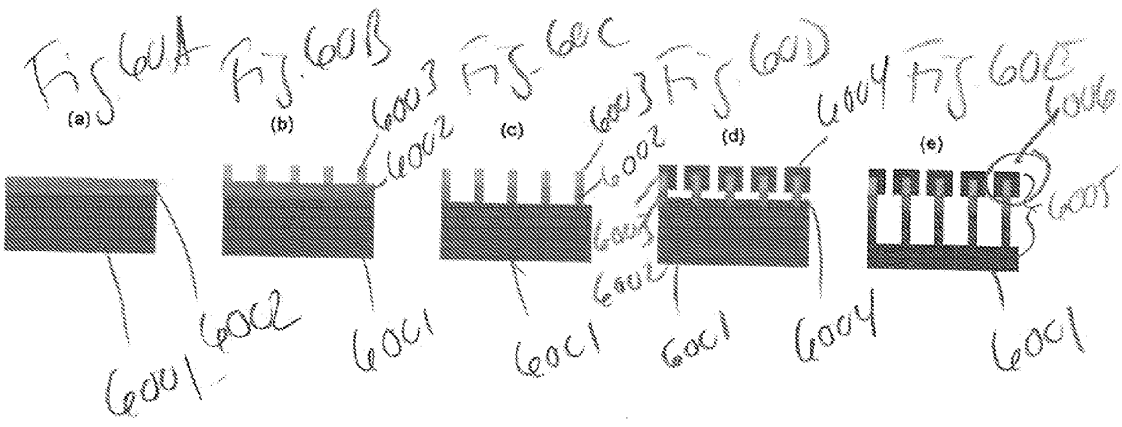


Figure 59



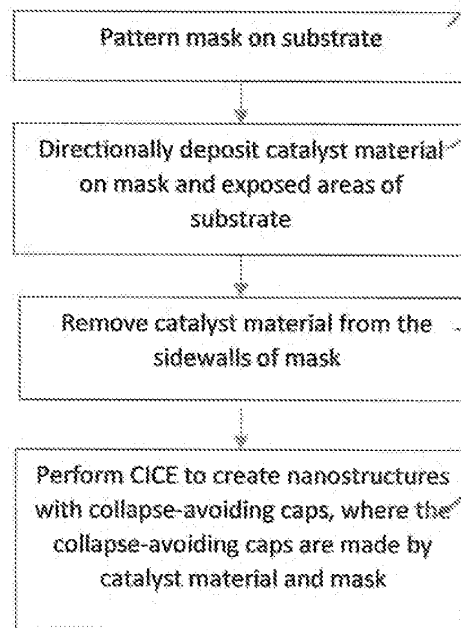
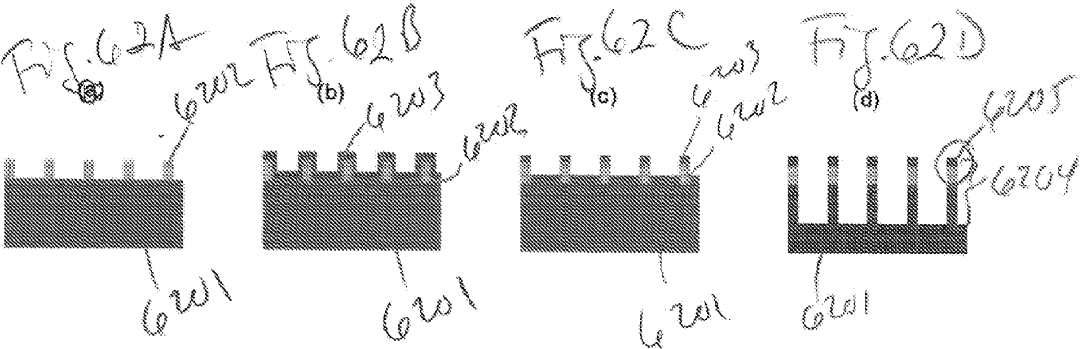
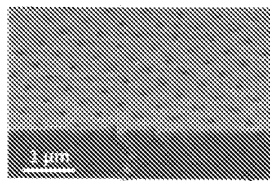


Figure 61





Isolated catalyst wandering

Top View

Cross-section View

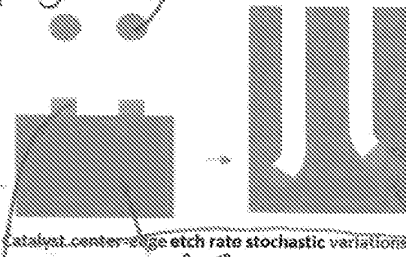


Figure 63B
6301

Fig 63D
6301

Fig 63A

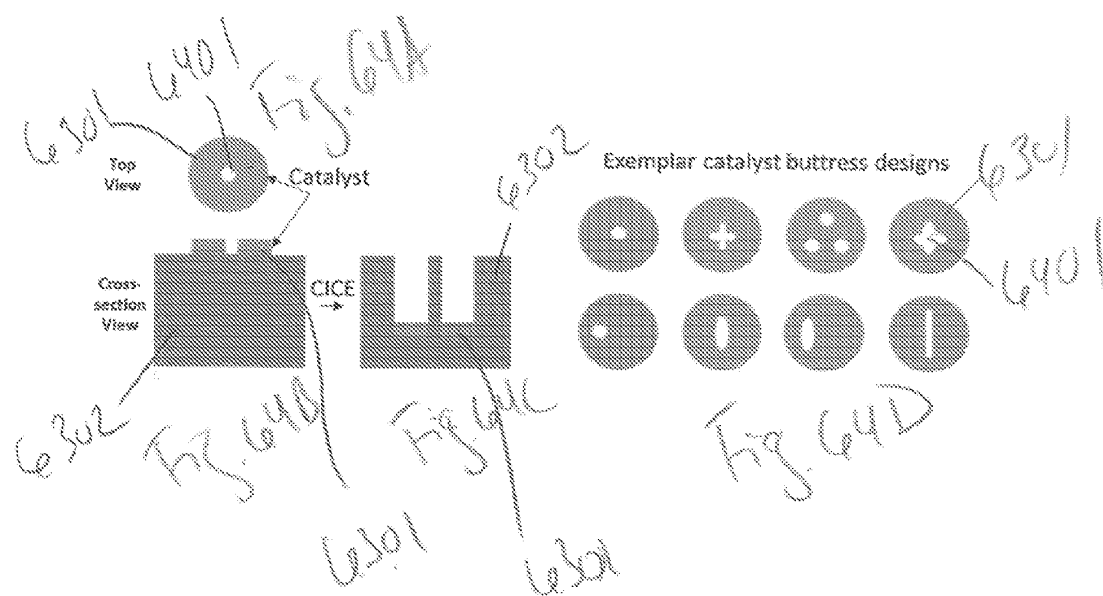
6301/6302

6301

Fig 63B

6302

Fig 63C



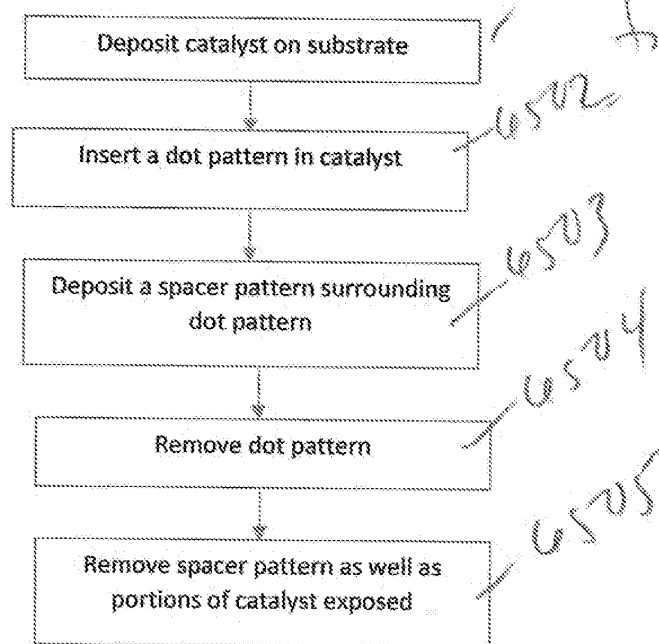
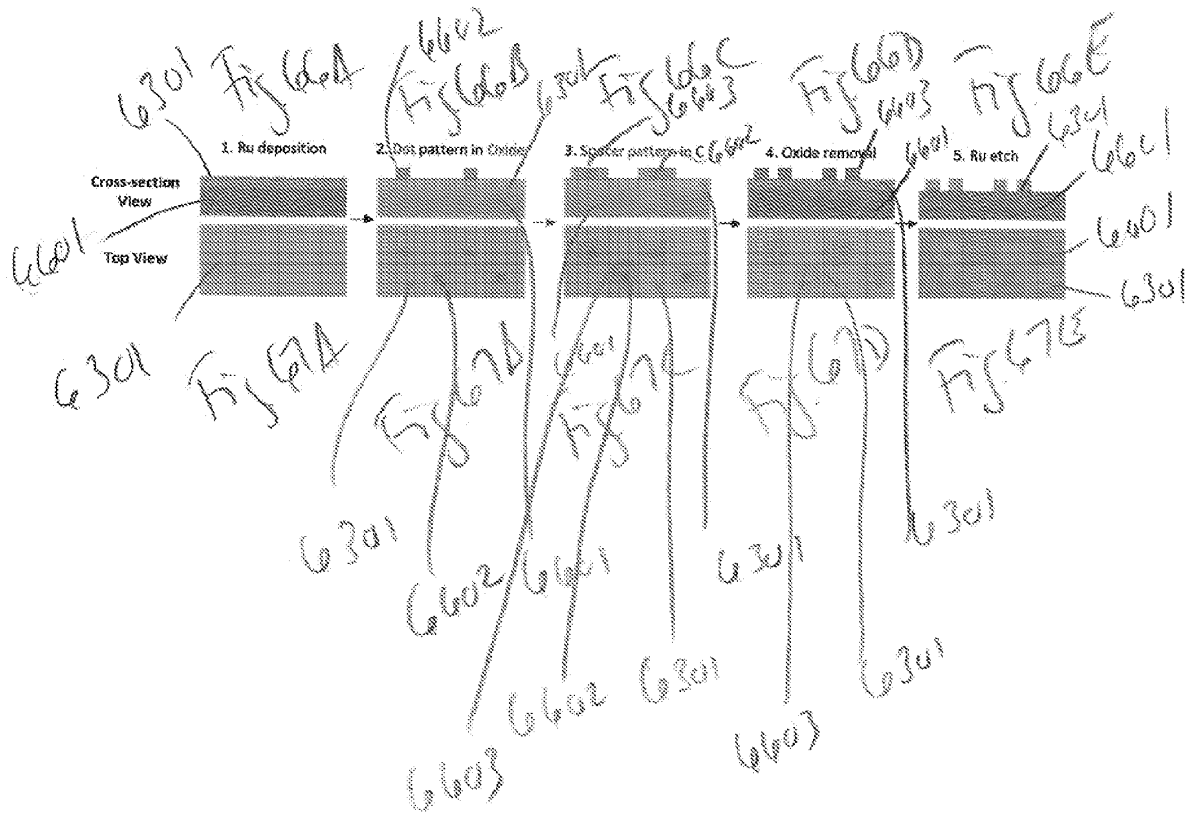
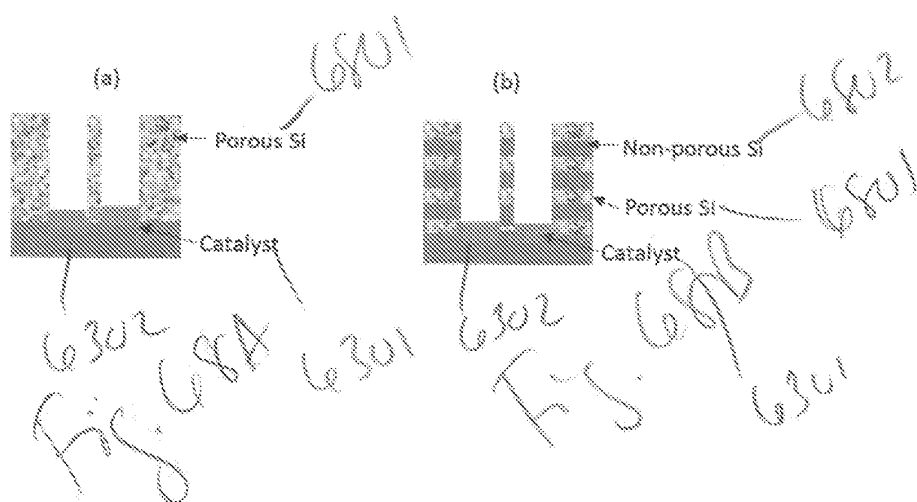
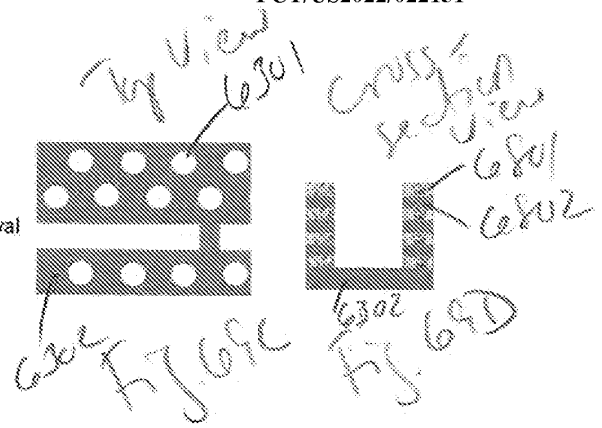
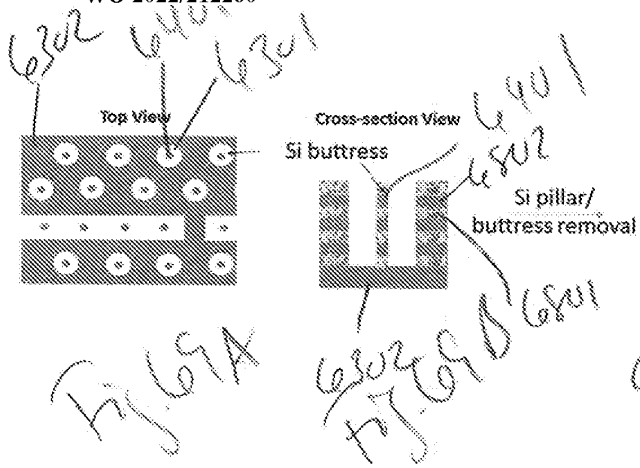
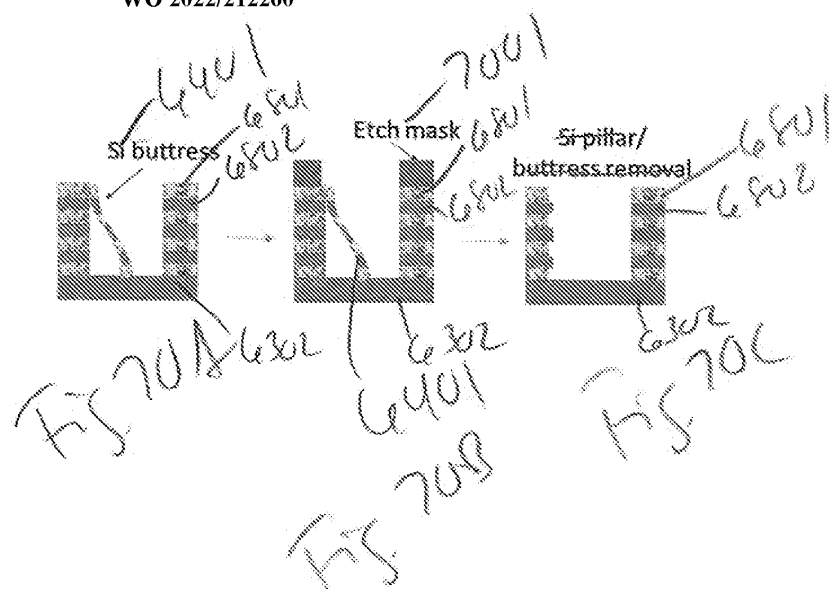


Figure 65









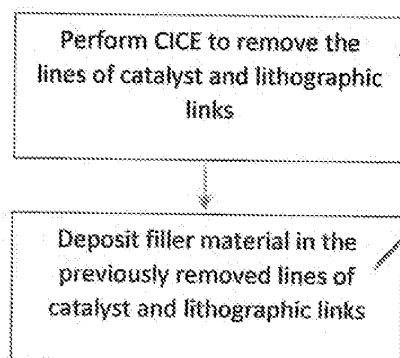
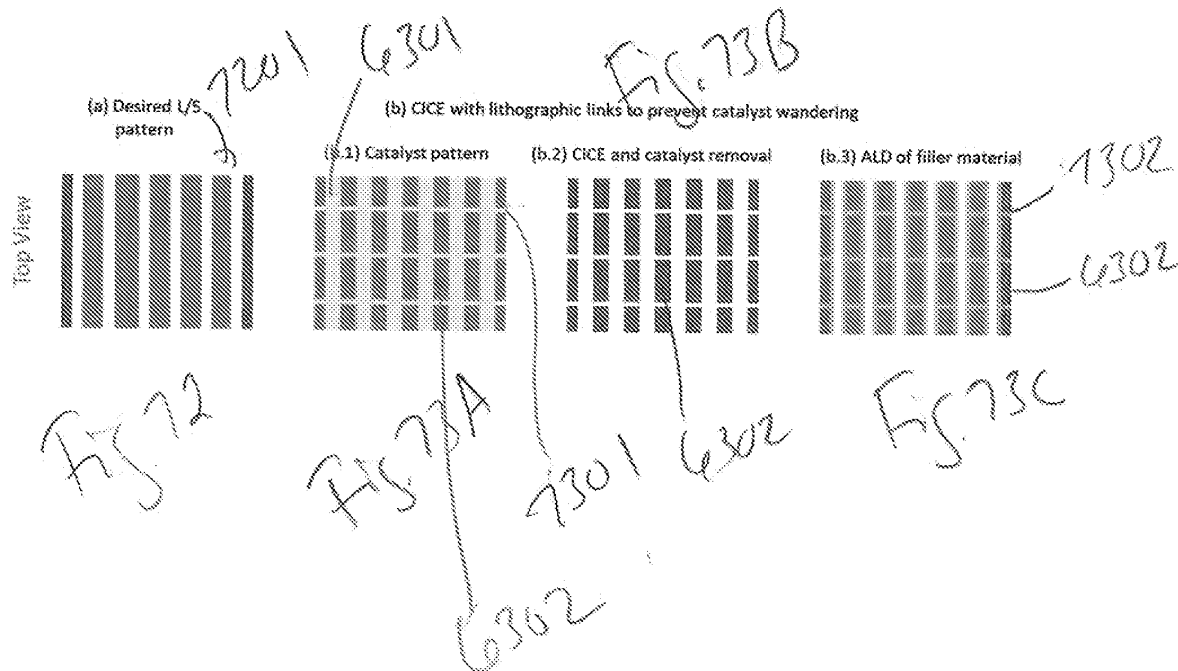


Figure 71



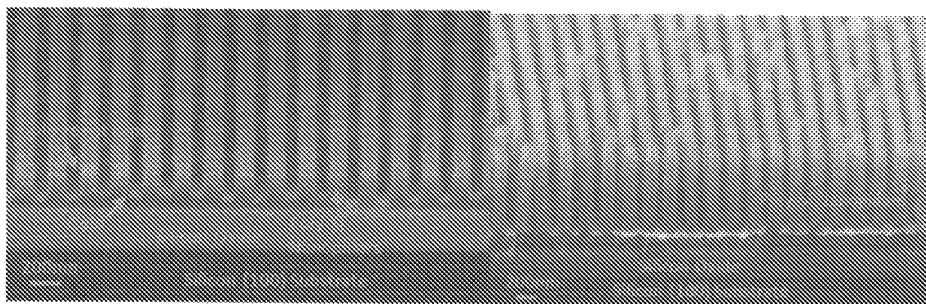


Fig. 74A

Fig. 74B

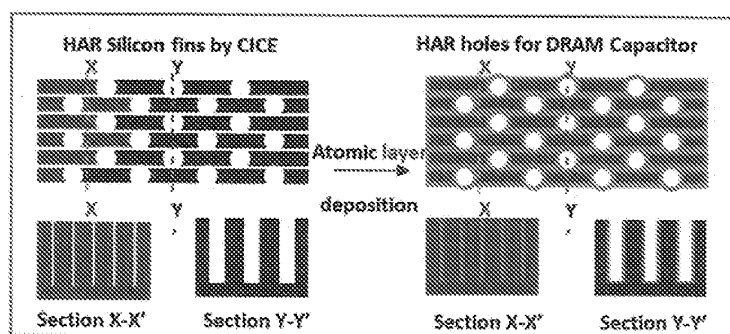


Figure 75

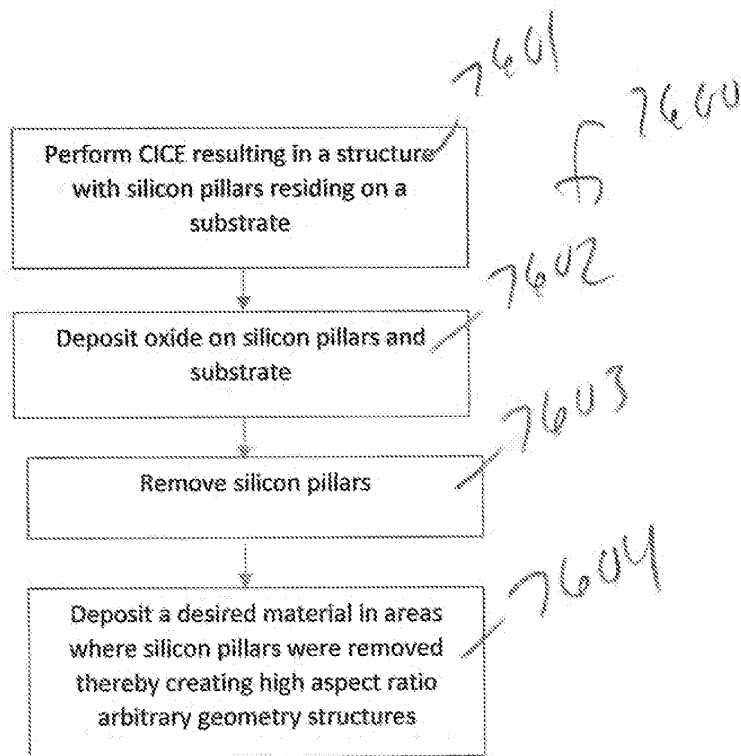
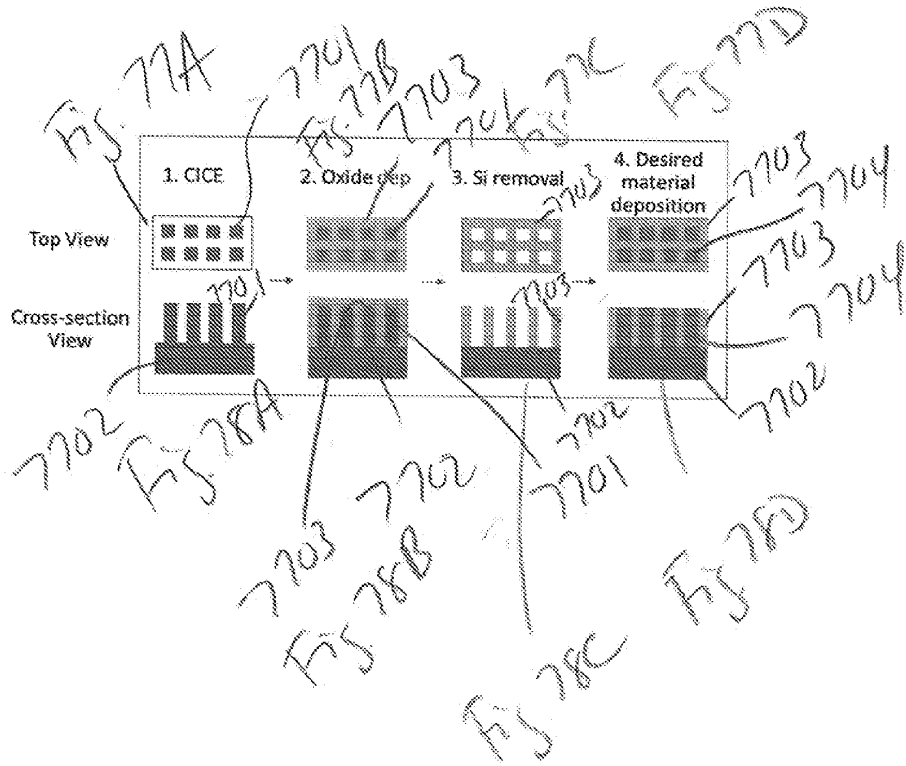


Figure 76



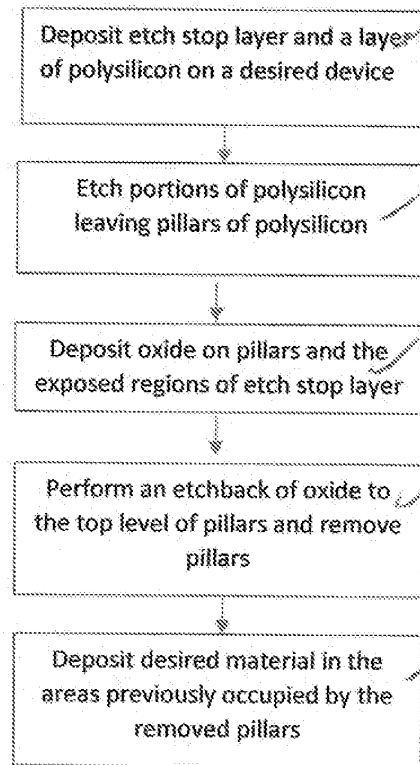
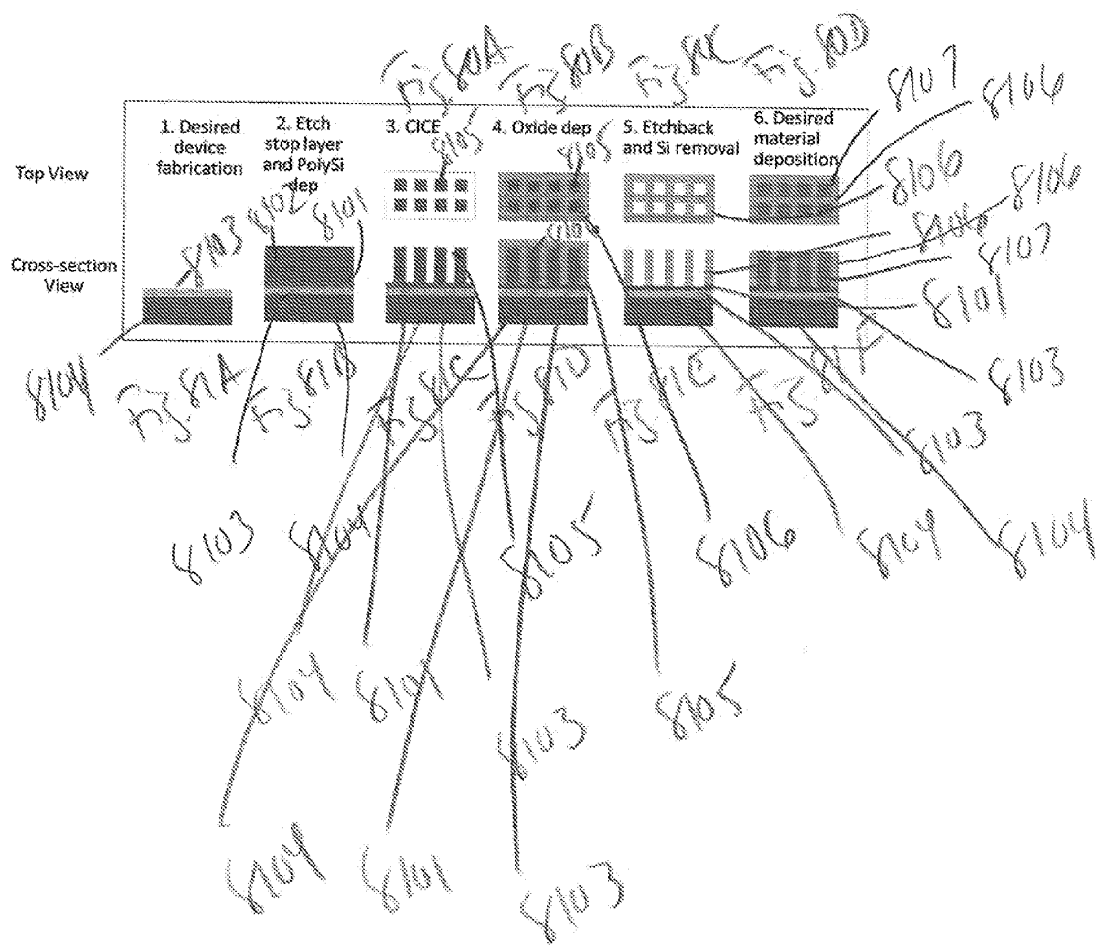


Figure 79



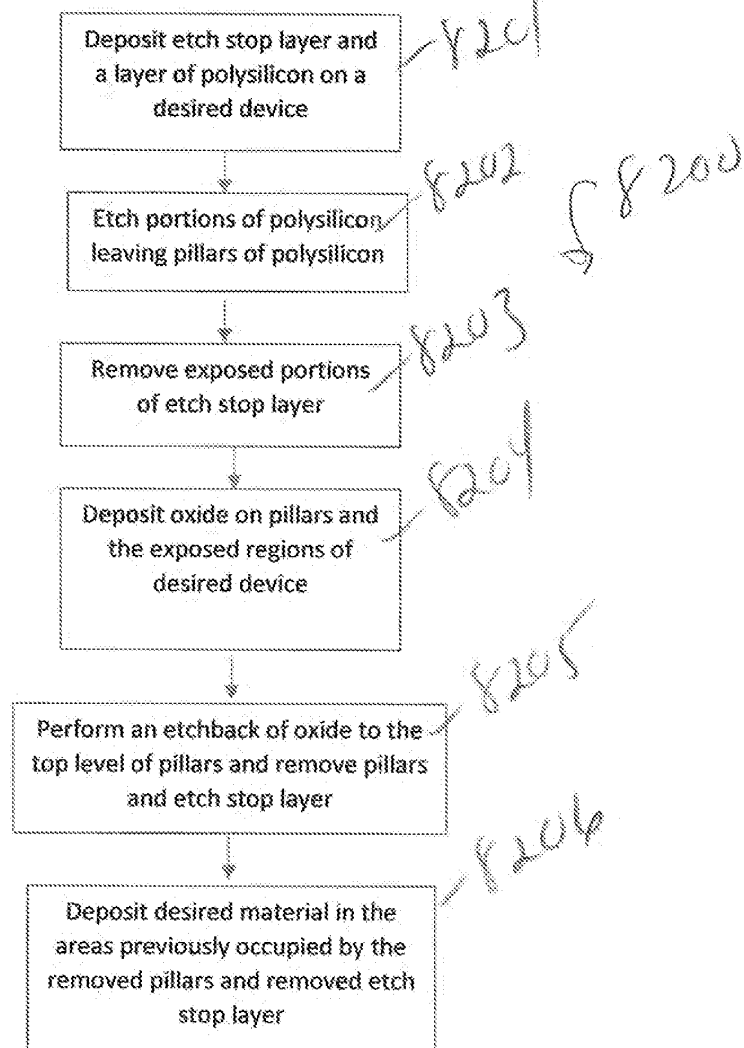
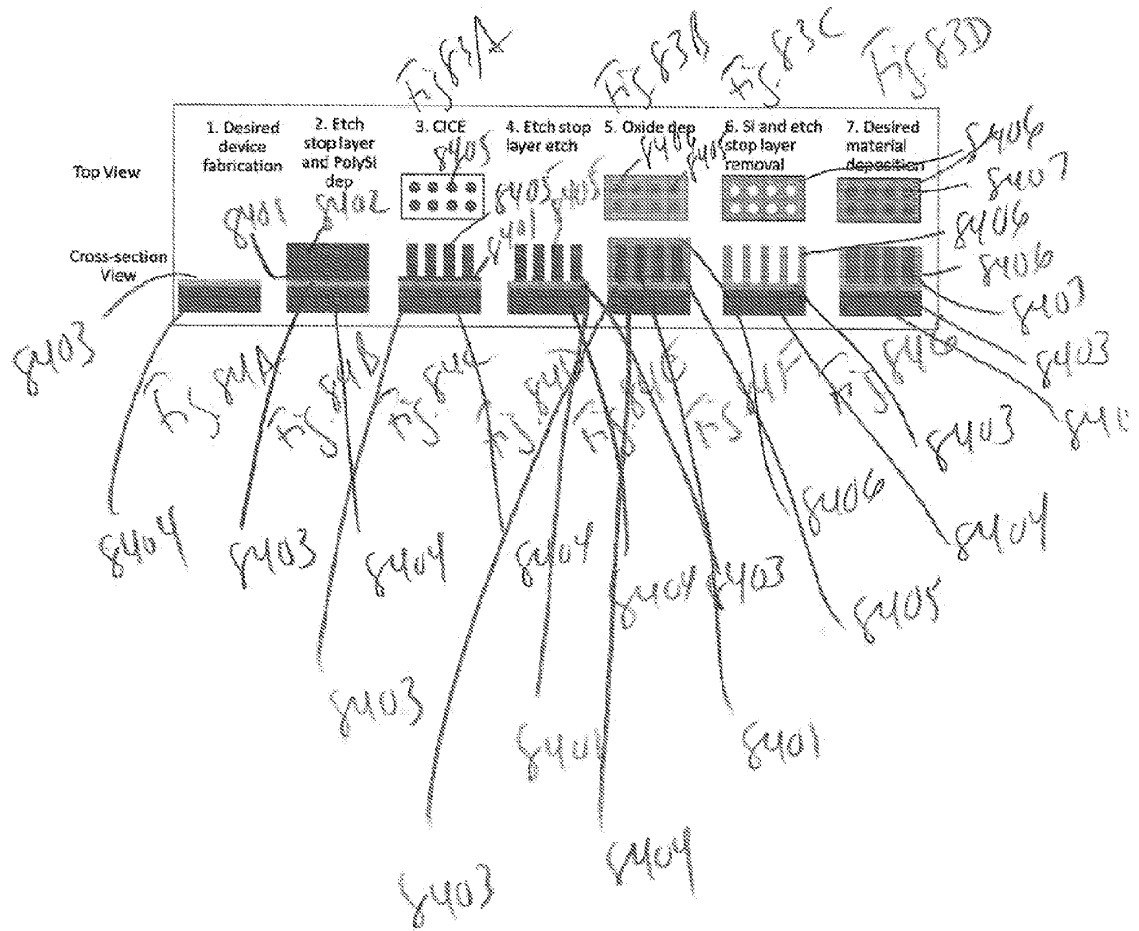
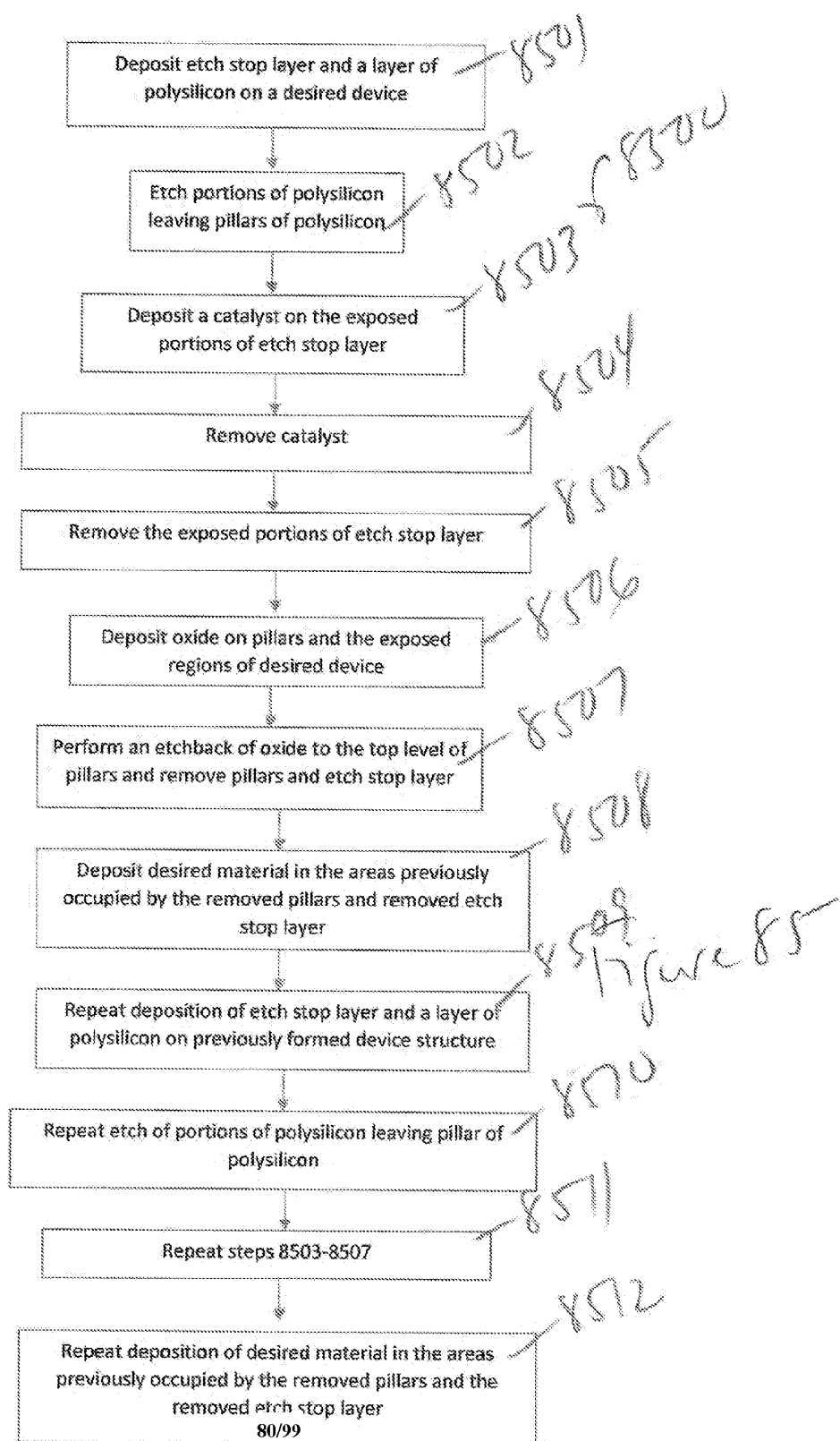
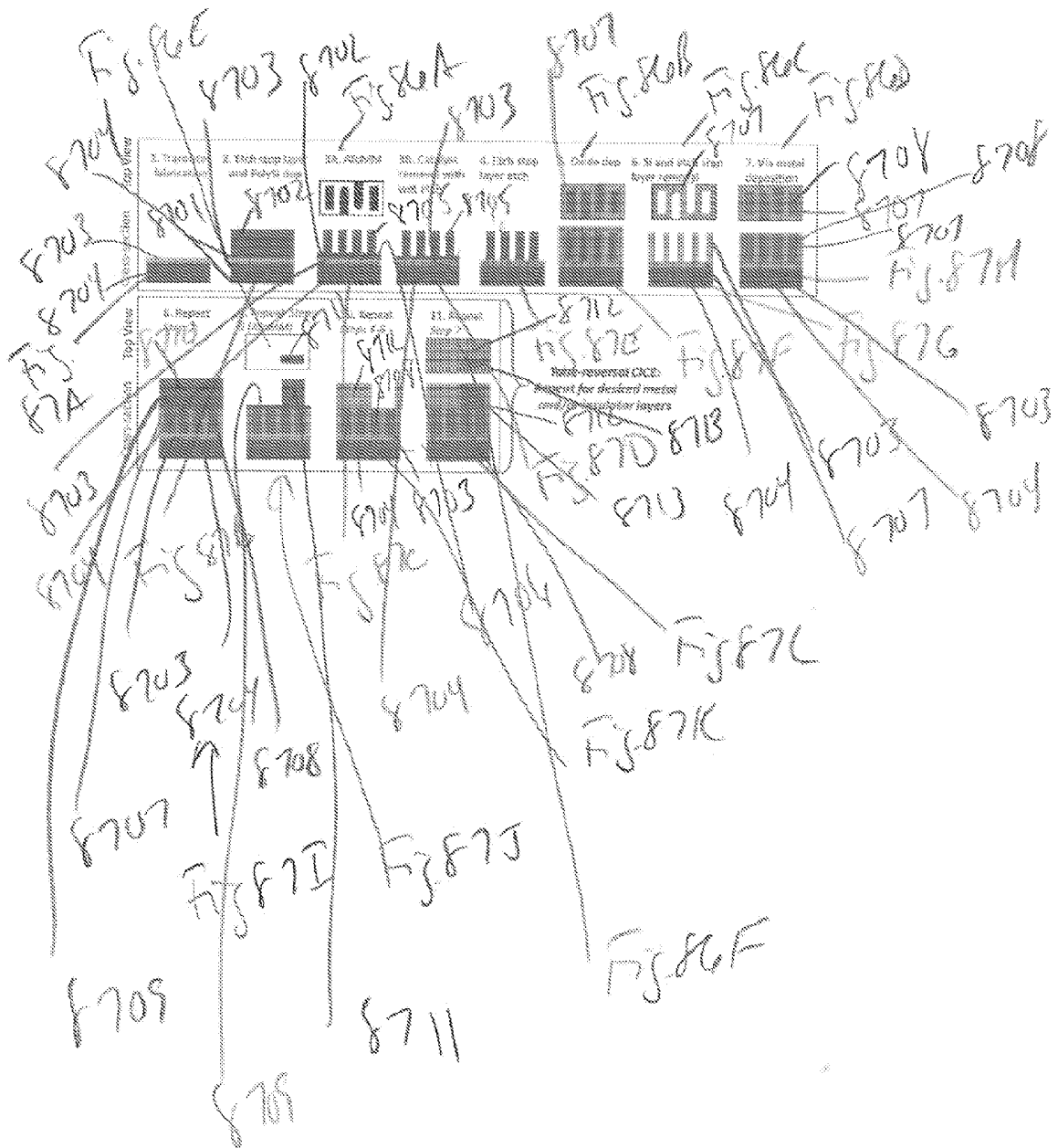


Figure 82







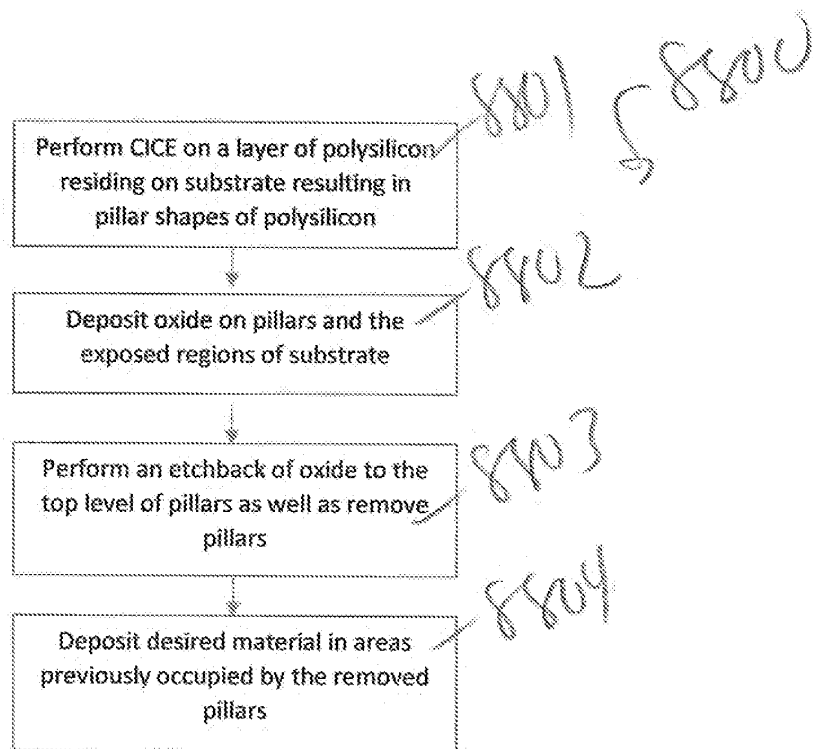
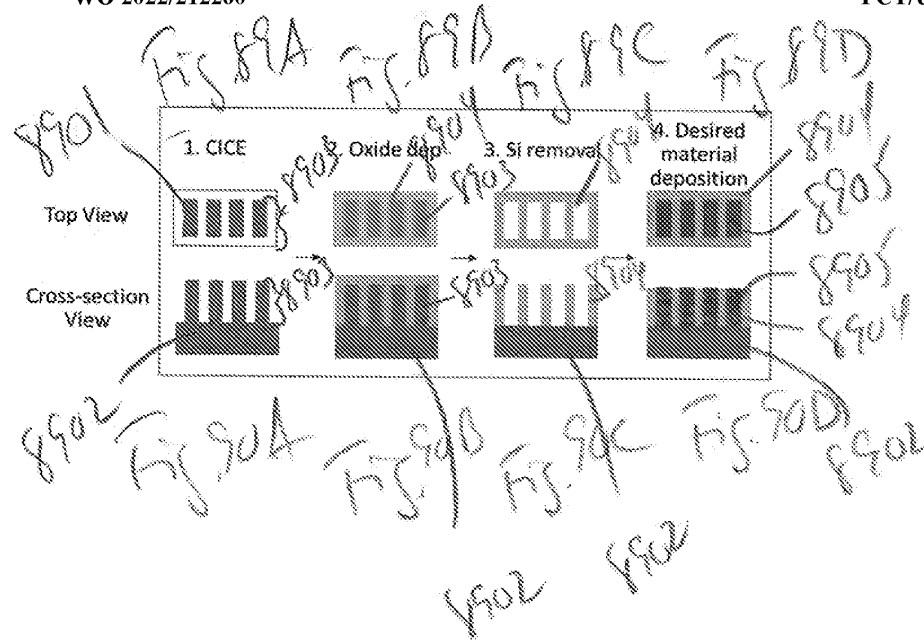


Figure 88



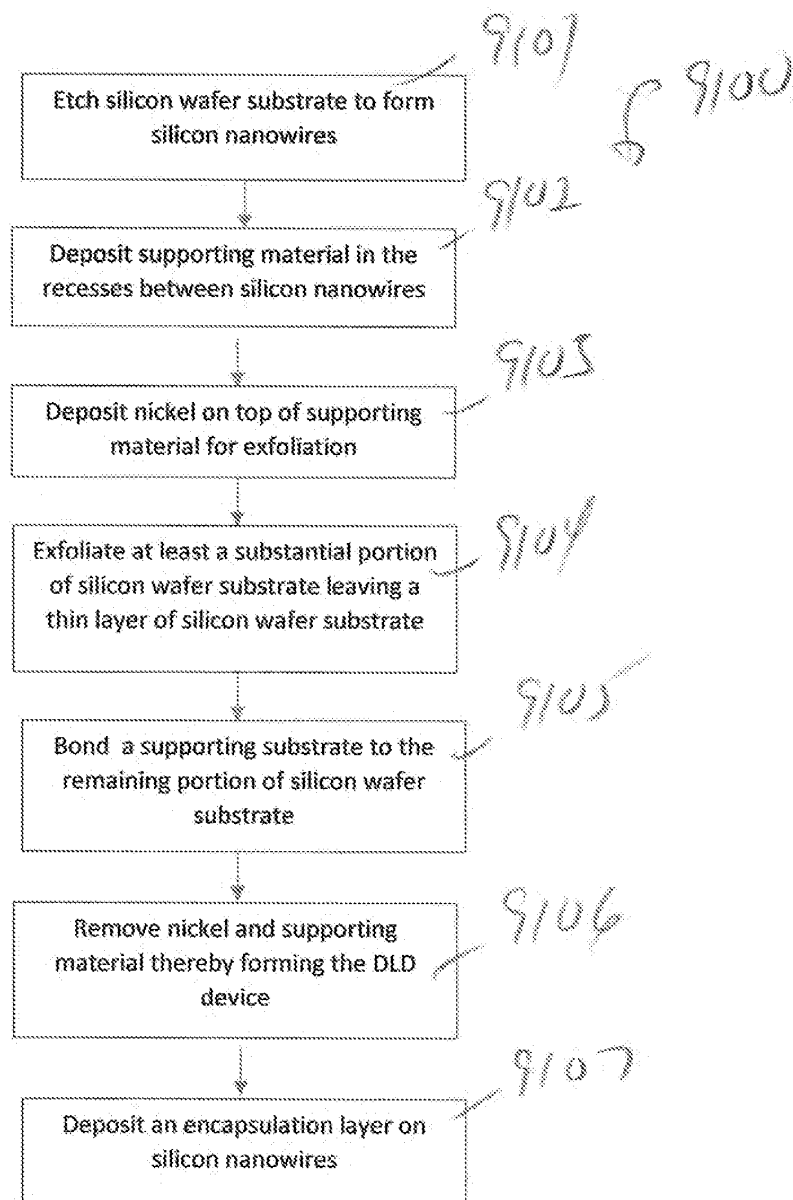
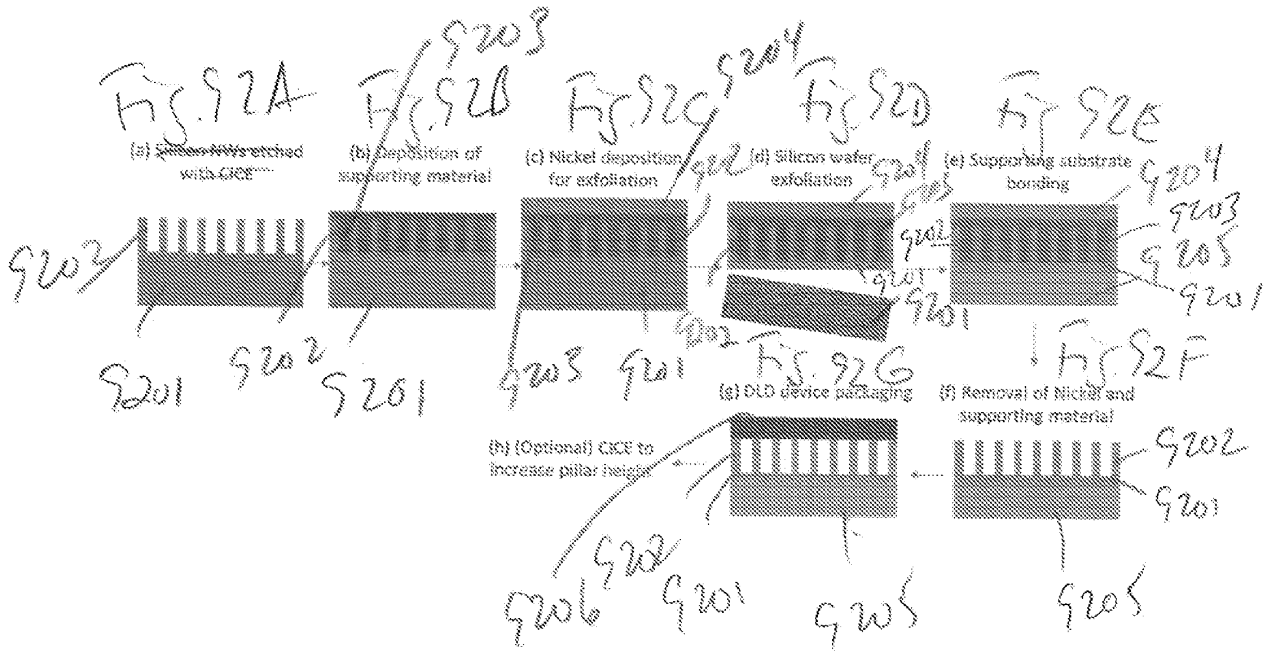


Figure 91



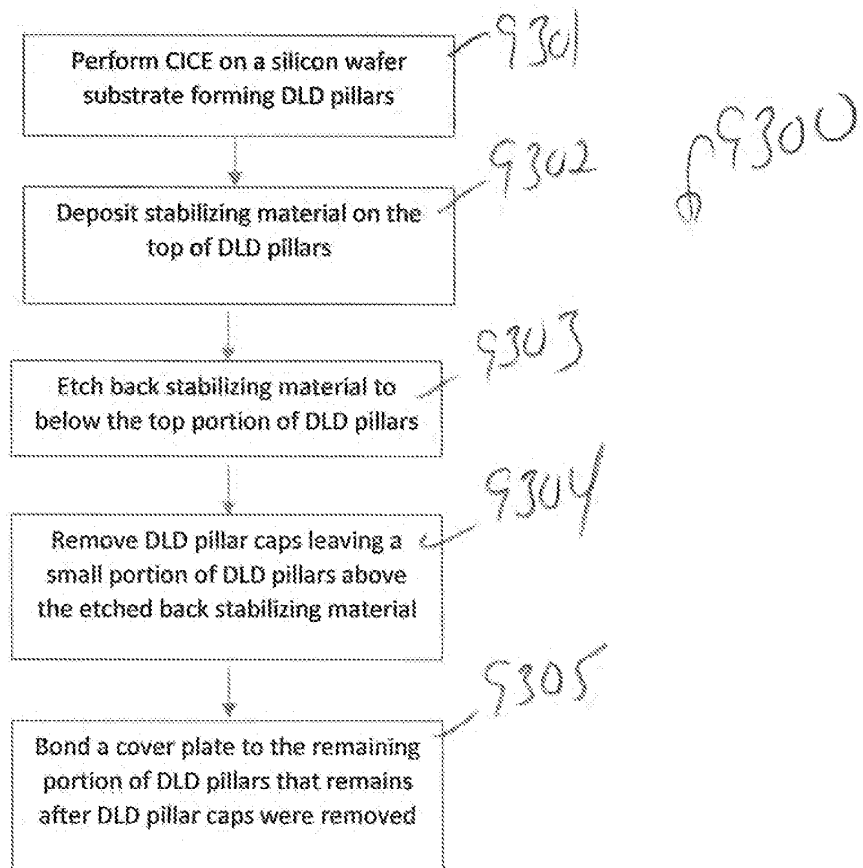
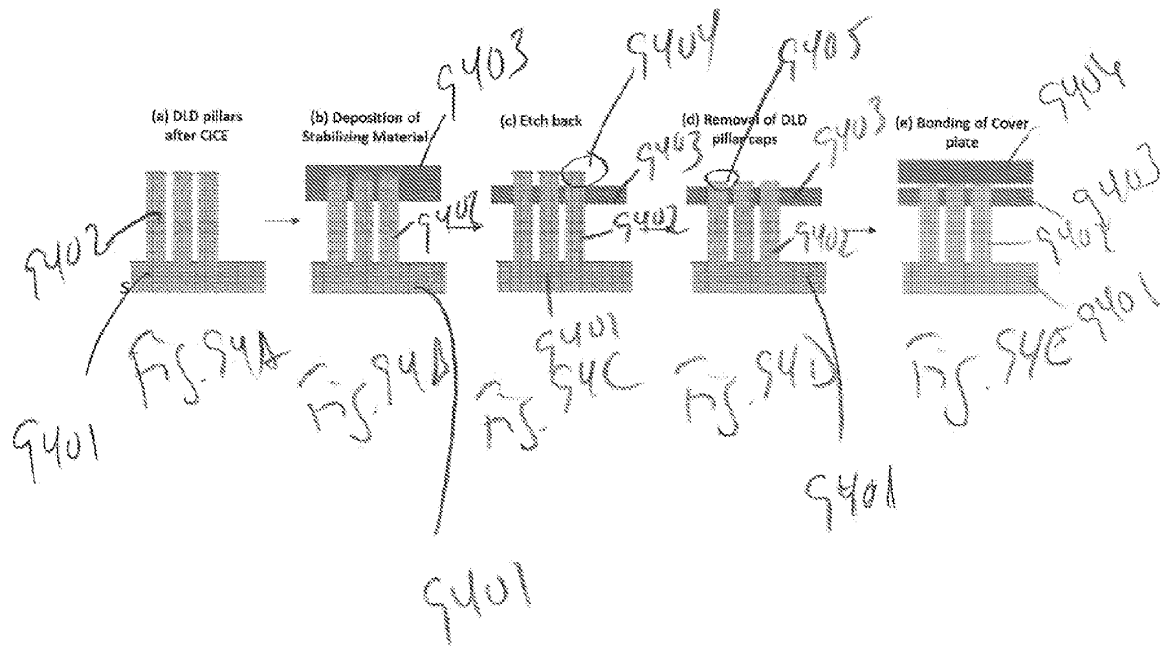


Figure 93



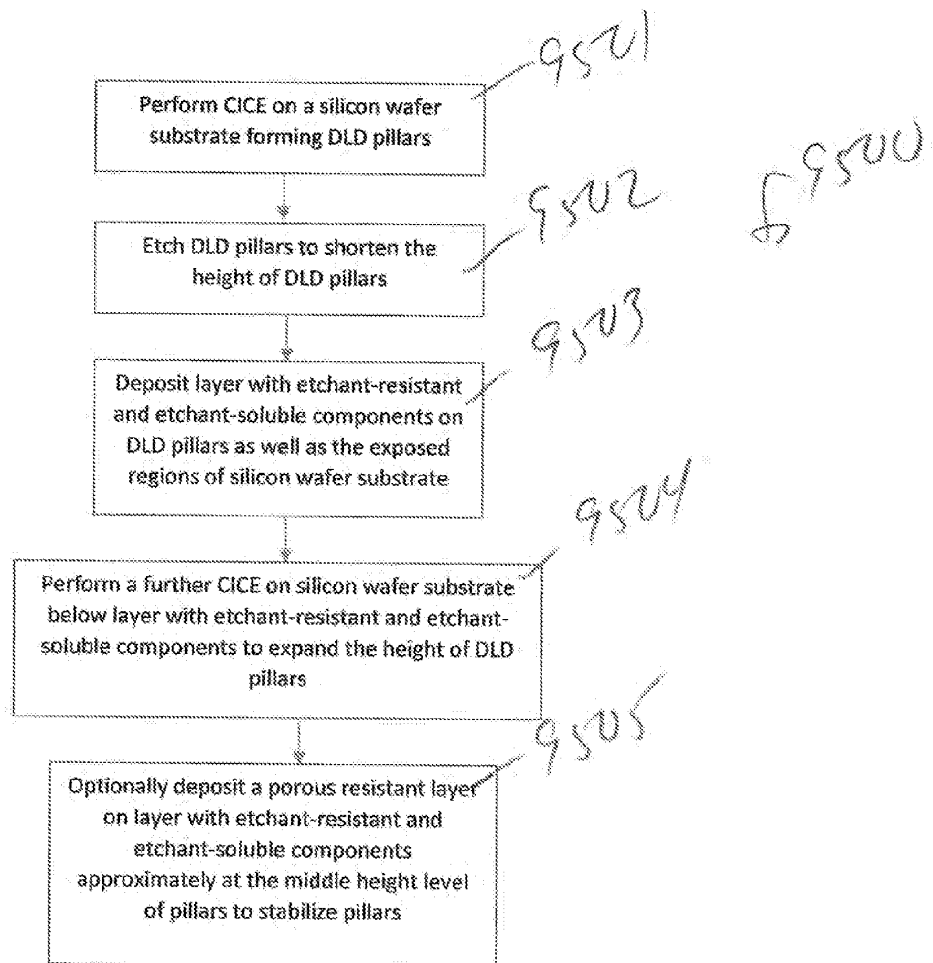
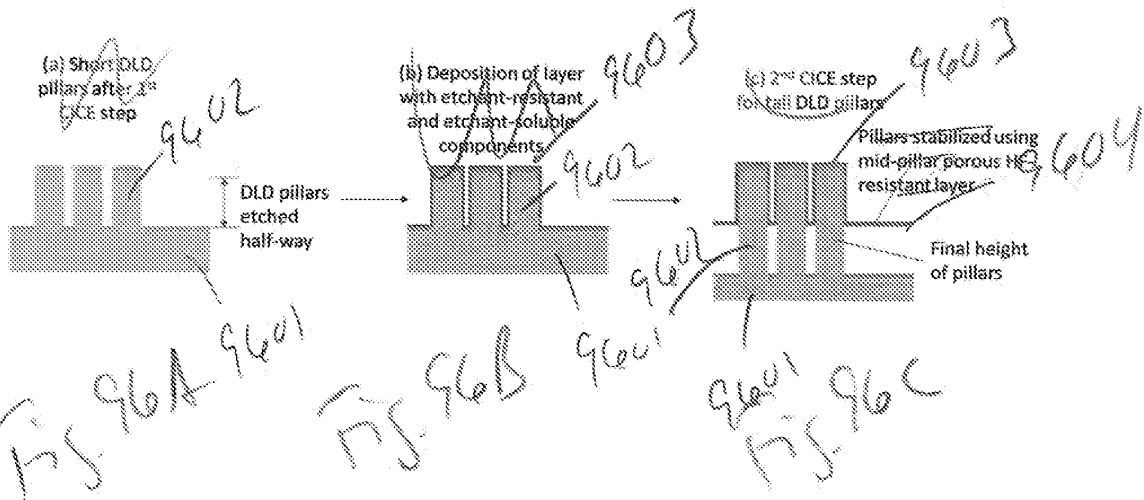


Figure 95



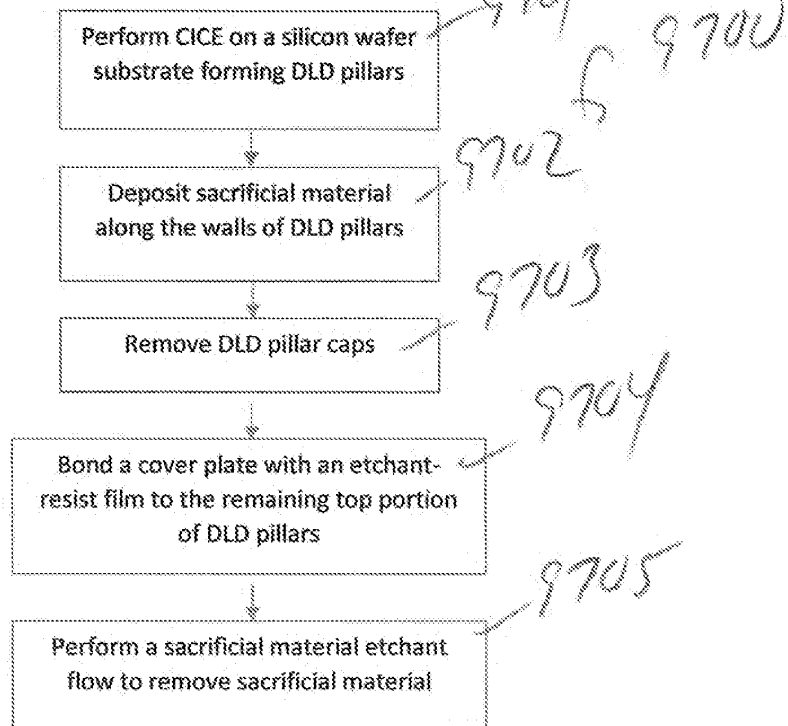
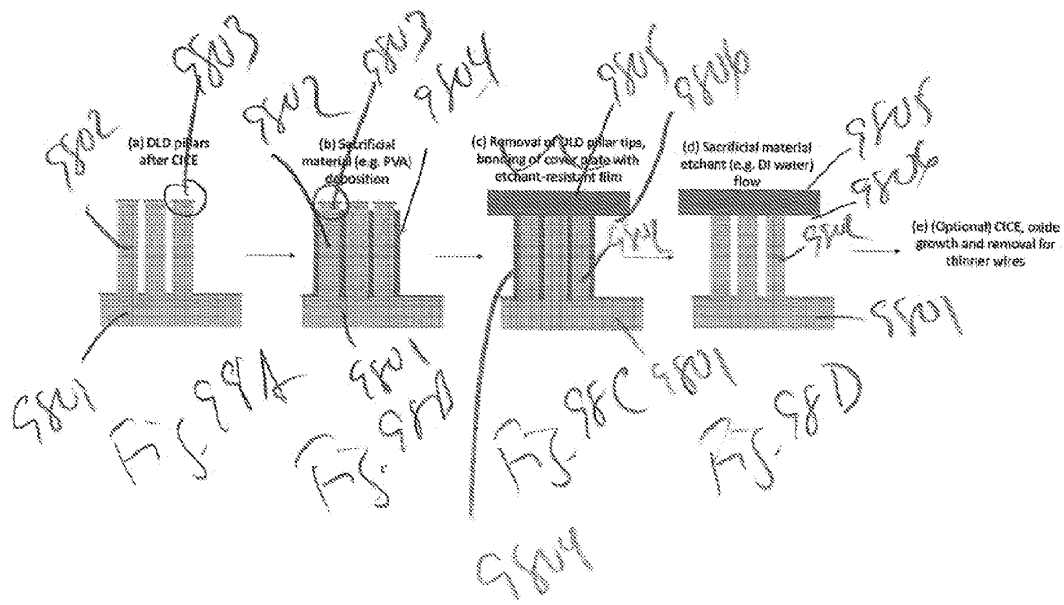


Figure 97



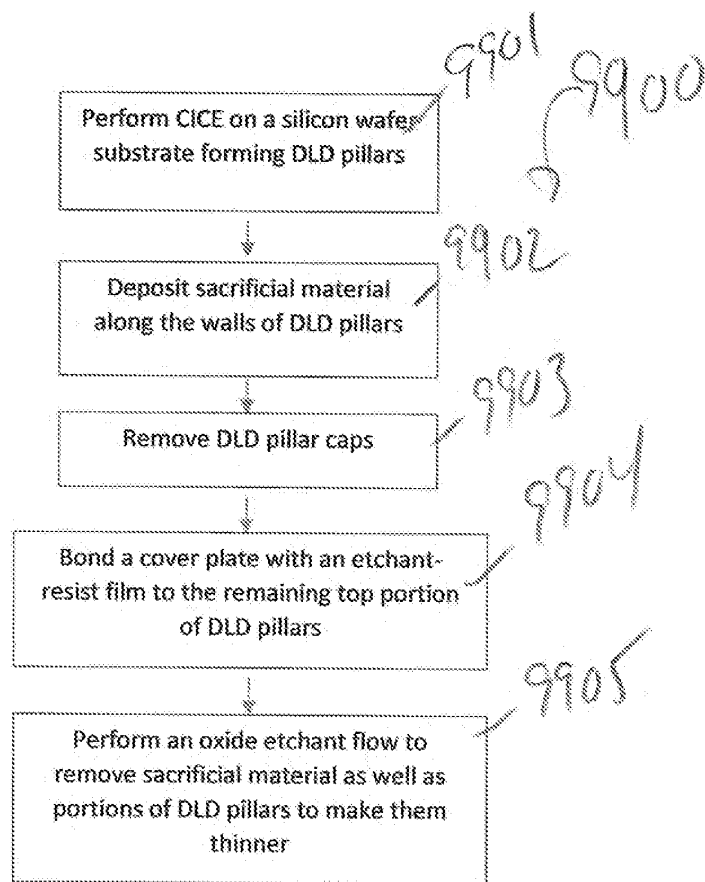
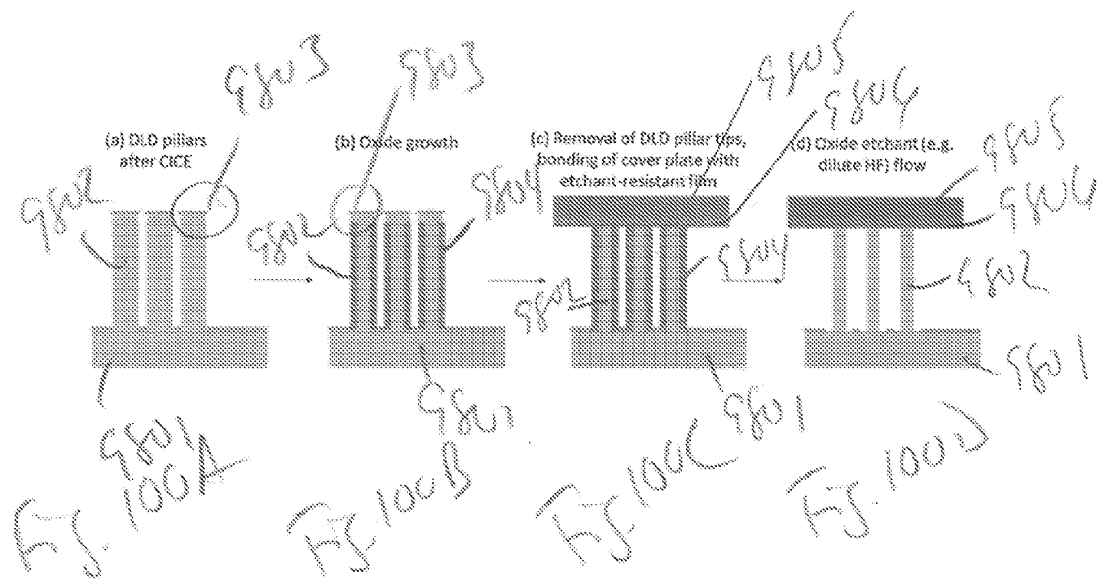


Figure 99



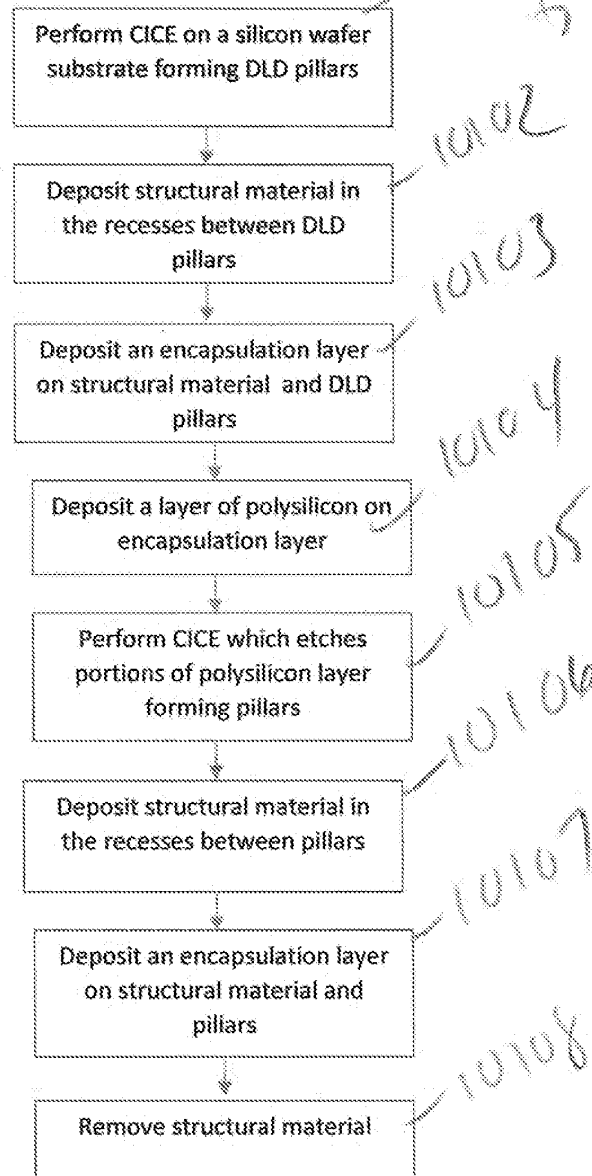
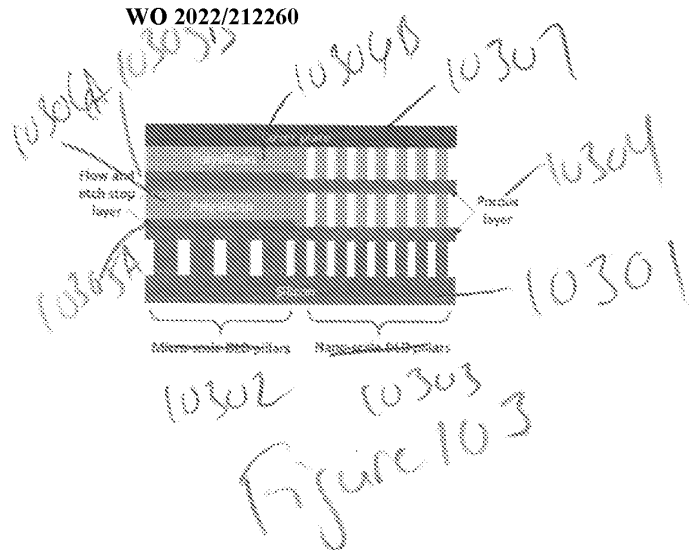


Figure 101



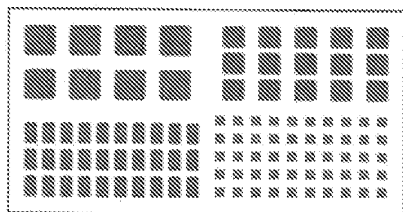


Figure 104

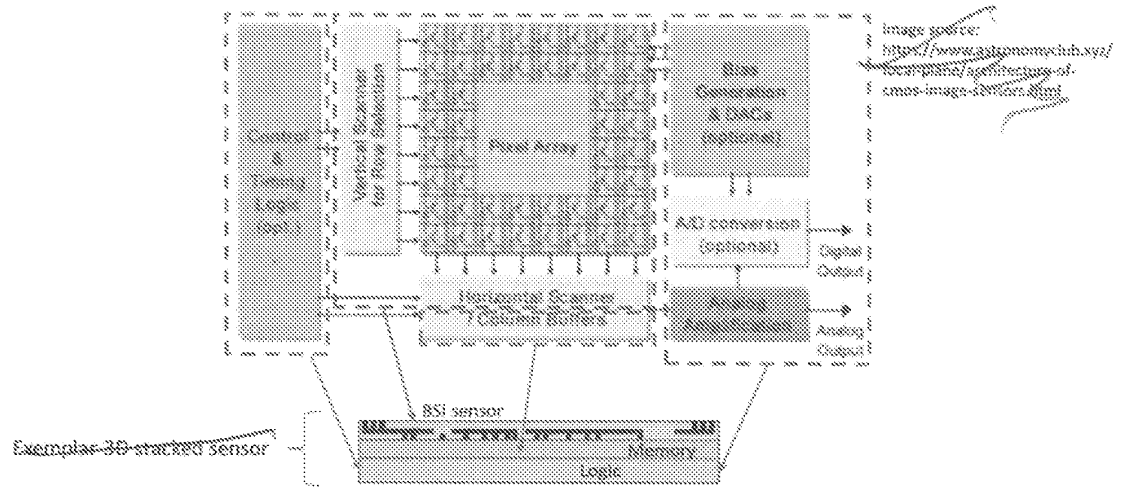


Figure 105

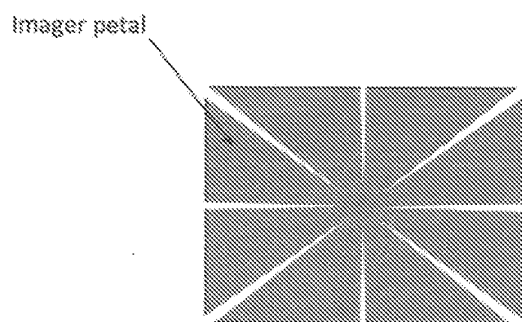


Figure 106