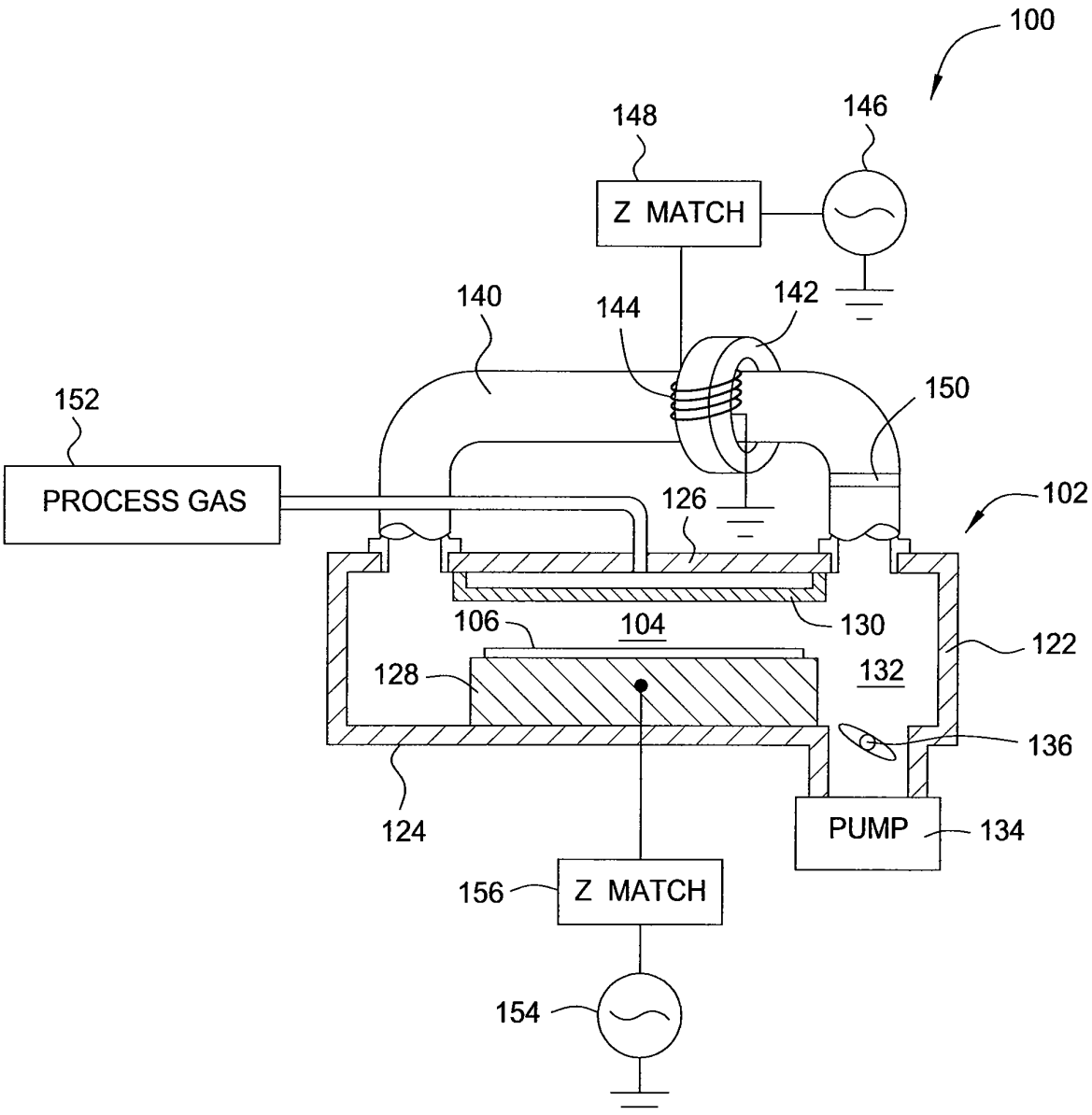

100
148
146
Z MATCH
140
144
142
152
150
PROCESS GAS
126
102
106
104
130
122
128
132
136
124
PUMP
134
156
Z MATCH
154

FIG. 1A

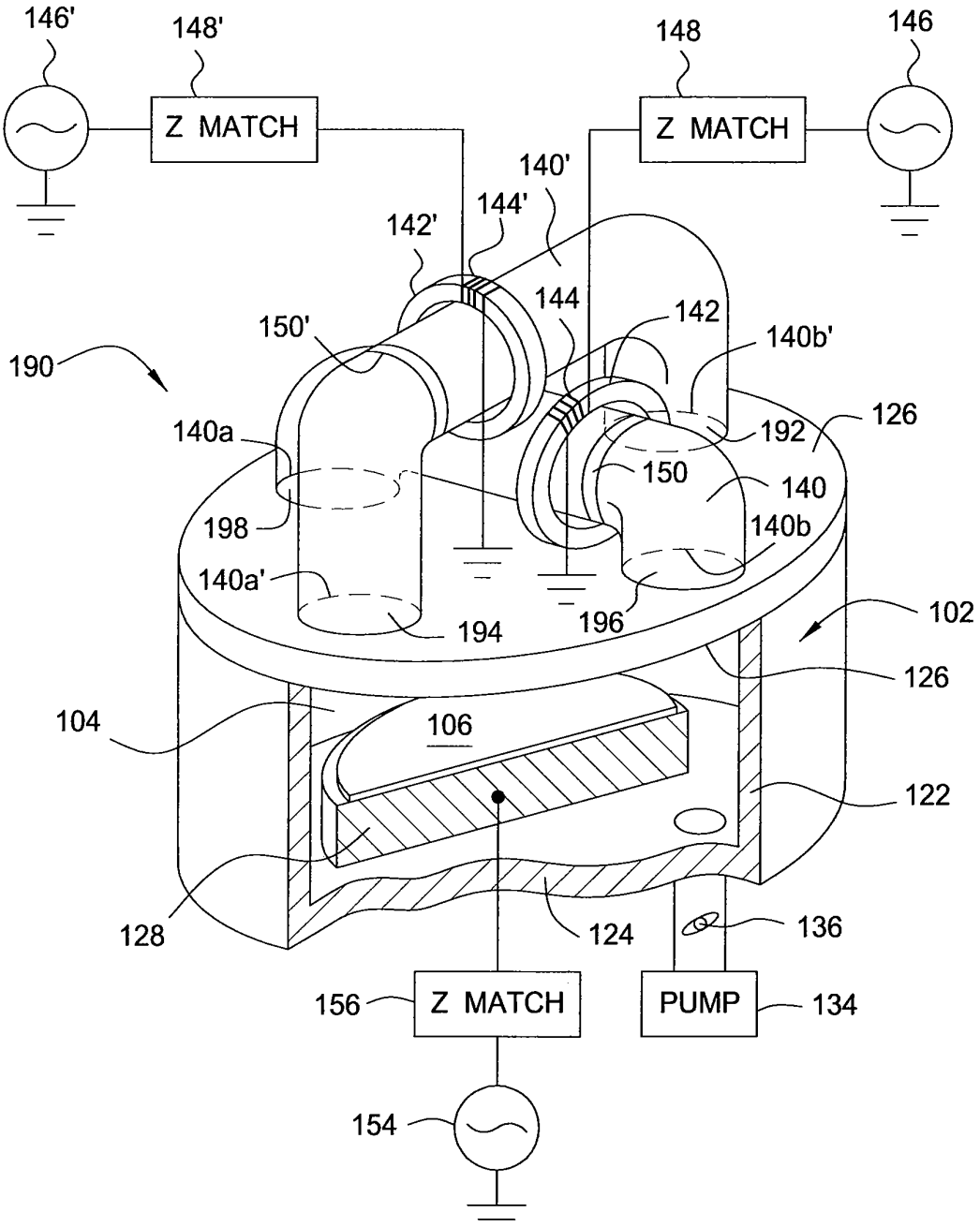

146'
148'
Z MATCH
148
Z MATCH
146
140'
144'
142'
144
142
150'
140b'
190
126
192
140a
150
140
198
140b
140a'
194
196
102
126
104
106
122
128
124
136
156
Z MATCH
PUMP
134
154

FIG. 1B

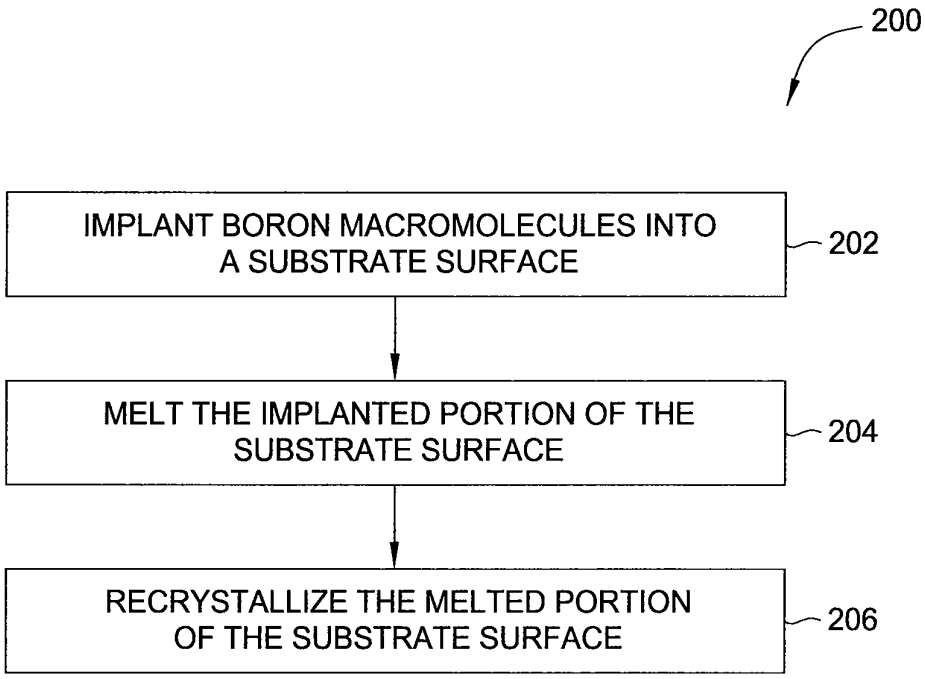

200
IMPLANT BORON MACROMOLECULES INTO A SUBSTRATE SURFACE
202
MELT THE IMPLANTED PORTION OF THE SUBSTRATE SURFACE
204
RECRYSTALLIZE THE MELTED PORTION OF THE SUBSTRATE SURFACE
206

FIG. 2

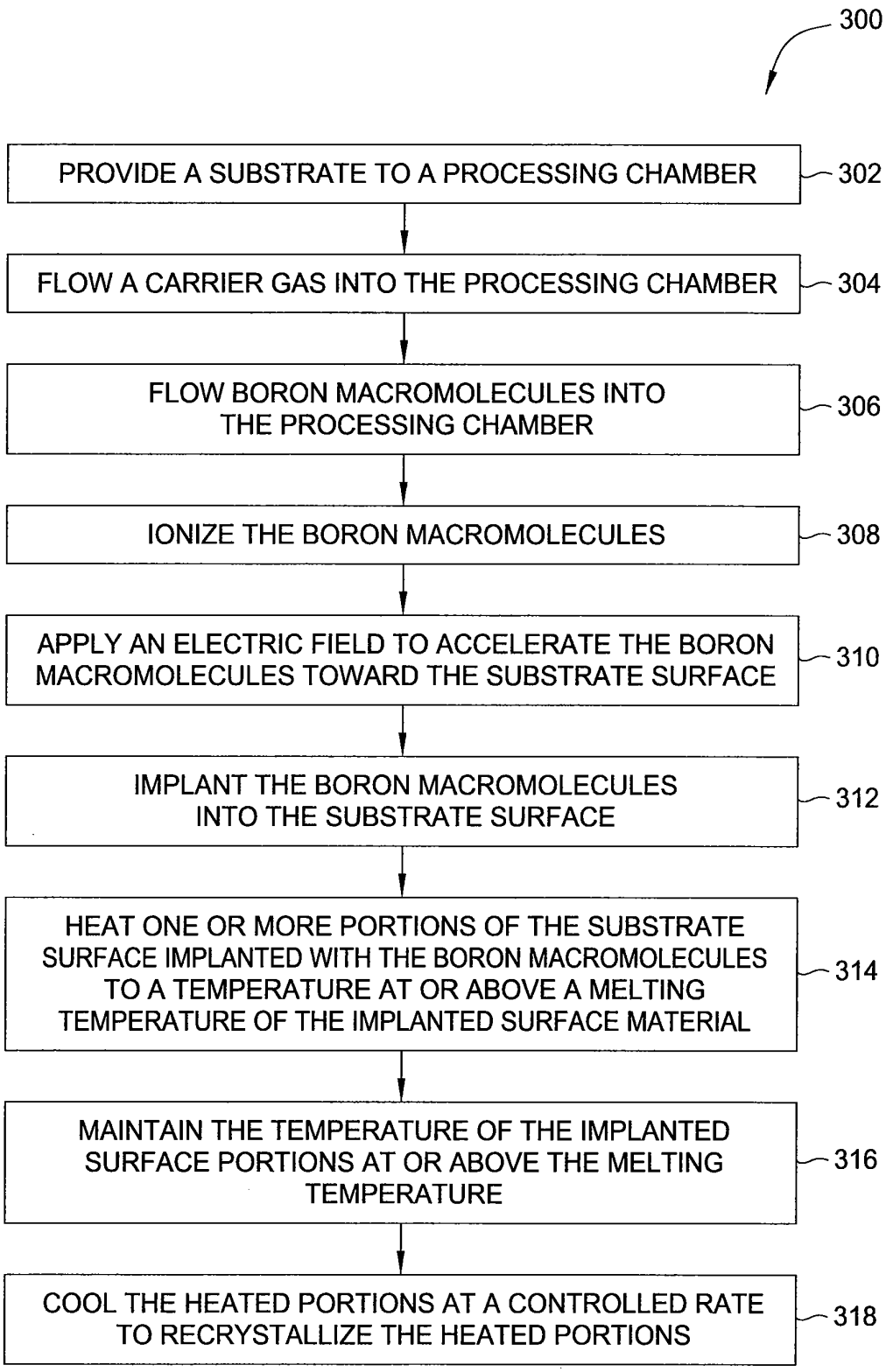

300
PROVIDE A SUBSTRATE TO A PROCESSING CHAMBER
302
FLOW A CARRIER GAS INTO THE PROCESSING CHAMBER
304
FLOW BORON MACROMOLECULES INTO THE PROCESSING CHAMBER
306
IONIZE THE BORON MACROMOLECULES
308
APPLY AN ELECTRIC FIELD TO ACCELERATE THE BORON MACROMOLECULES TOWARD THE SUBSTRATE SURFACE
310
IMPLANT THE BORON MACROMOLECULES INTO THE SUBSTRATE SURFACE
312
HEAT ONE OR MORE PORTIONS OF THE SUBSTRATE SURFACE IMPLANTED WITH THE BORON MACROMOLECULES TO A TEMPERATURE AT OR ABOVE A MELTING TEMPERATURE OF THE IMPLANTED SURFACE MATERIAL
314
MAINTAIN THE TEMPERATURE OF THE IMPLANTED SURFACE PORTIONS AT OR ABOVE THE MELTING TEMPERATURE
316
COOL THE HEATED PORTIONS AT A CONTROLLED RATE TO RECRYSTALLIZE THE HEATED PORTIONS
318

FIG. 3

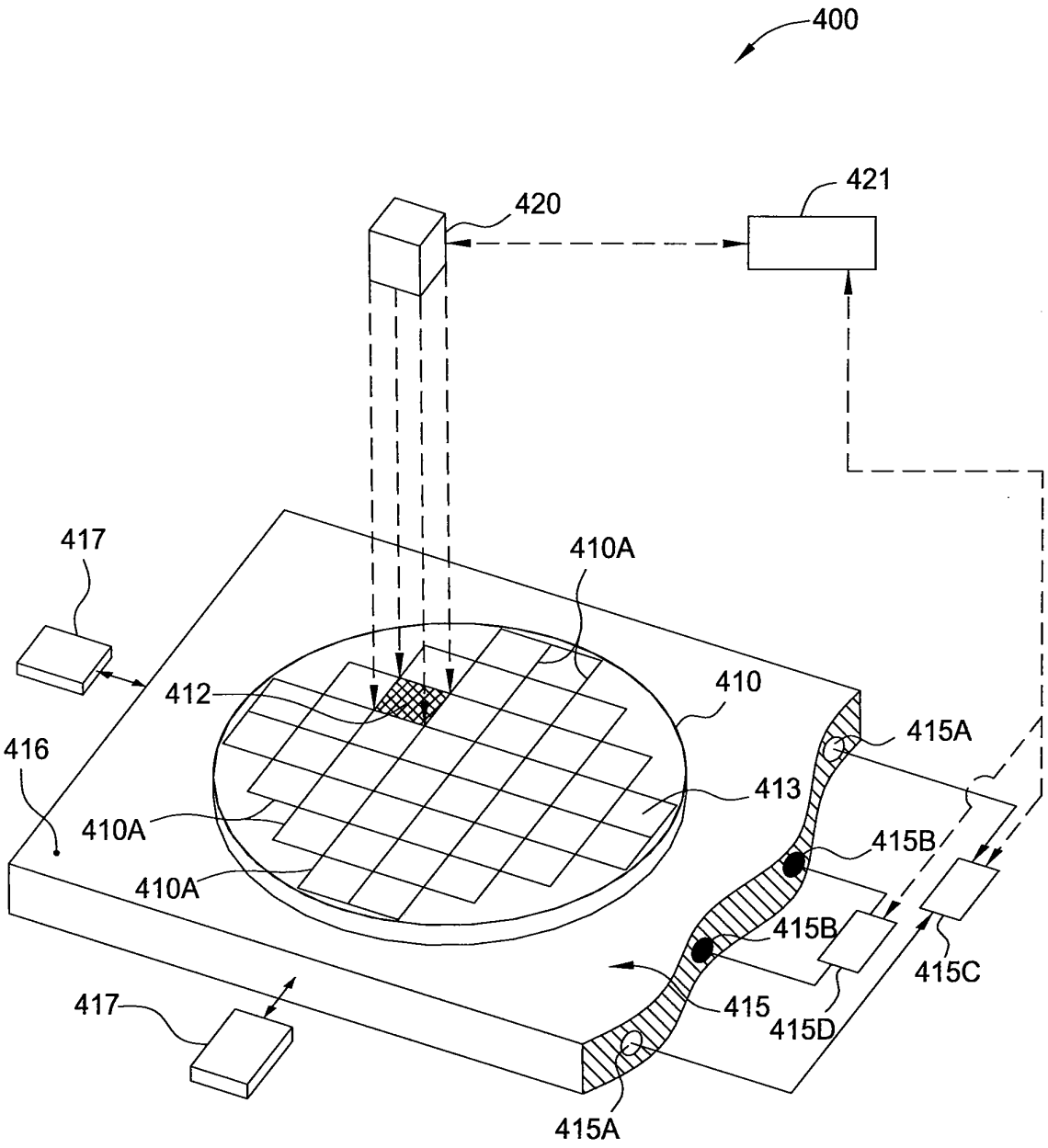

400
421
420
417
410A
412
410
415A
416
413
410A
415B
410A
415B
415C
417
415
415D
415A

FIG. 4

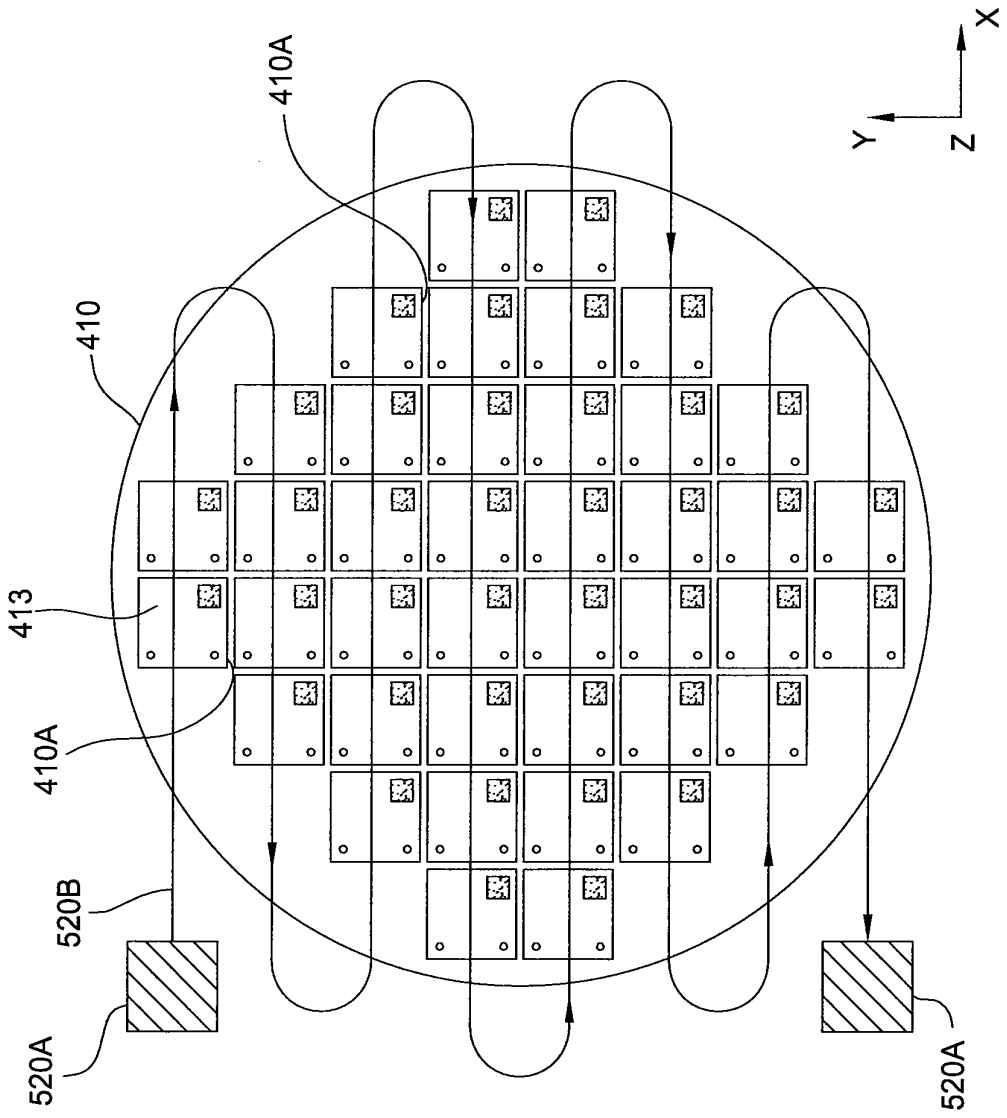


FIG. 5

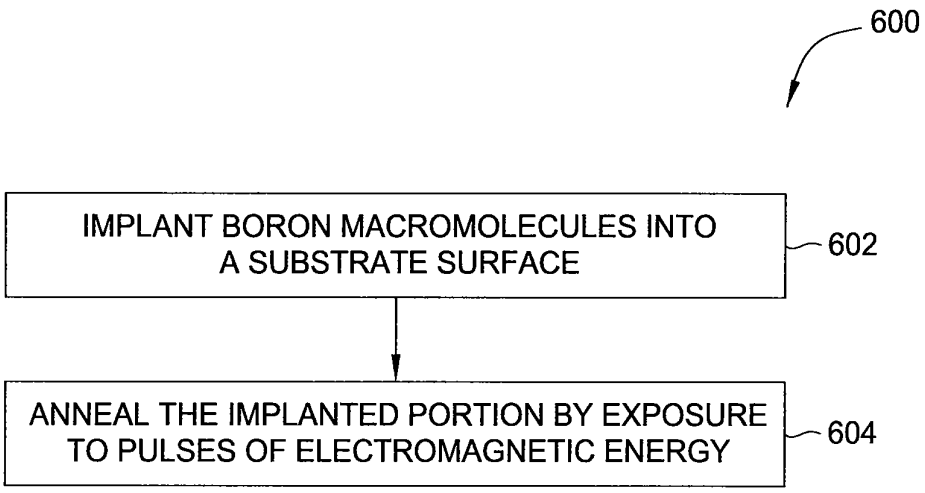

600
IMPLANT BORON MACROMOLECULES INTO A SUBSTRATE SURFACE
602
ANNEAL THE IMPLANTED PORTION BY EXPOSURE TO PULSES OF ELECTROMAGNETIC ENERGY
604

FIG. 6