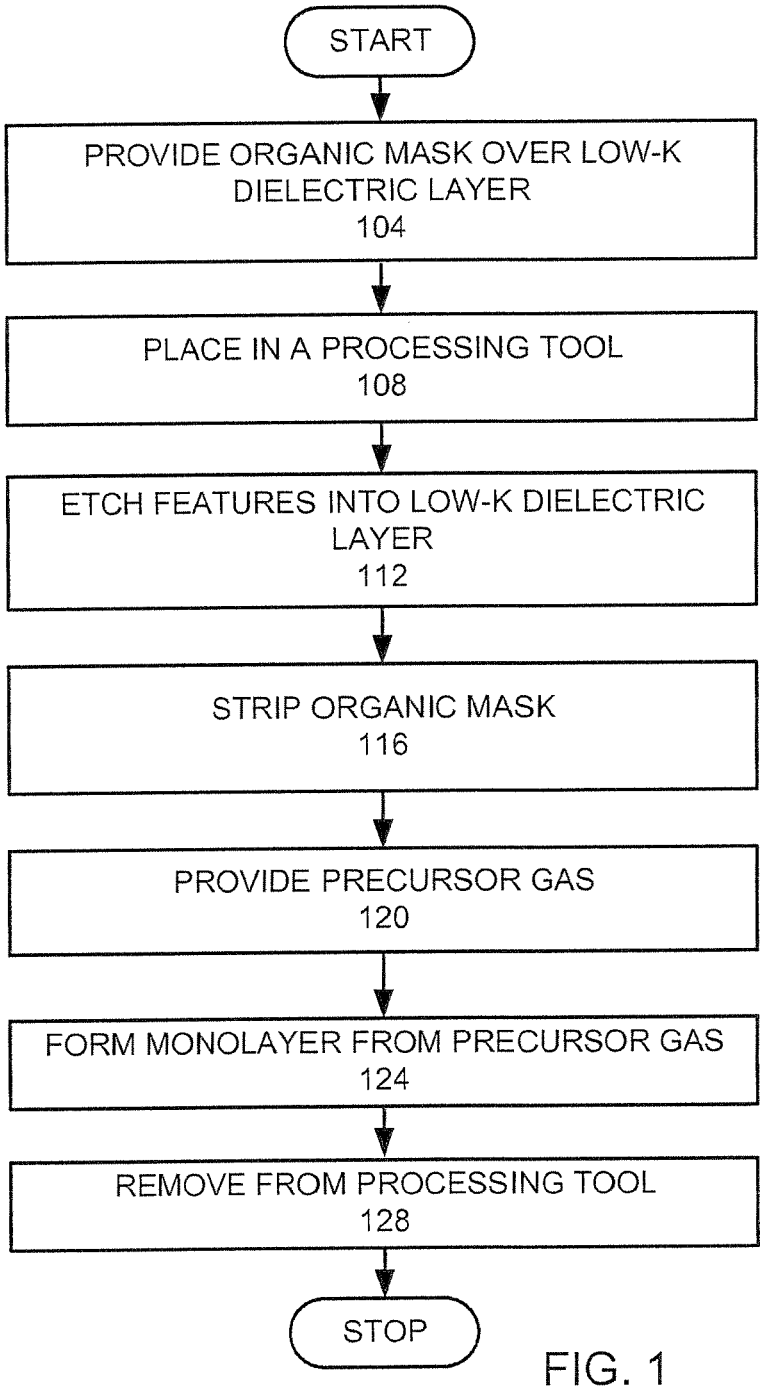

START
PROVIDE ORGANIC MASK OVER LOW-K DIELECTRIC LAYER
104
PLACE IN A PROCESSING TOOL
108
ETCH FEATURES INTO LOW-K DIELECTRIC LAYER
112
STRIP ORGANIC MASK
116
PROVIDE PRECURSOR GAS
120
FORM MONOLAYER FROM PRECURSOR GAS
124
REMOVE FROM PROCESSING TOOL
128
STOP

FIG. 1

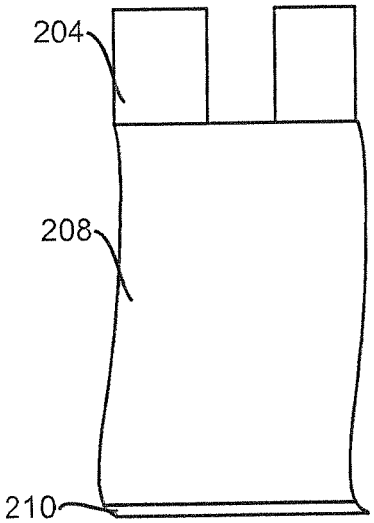


FIG. 2A

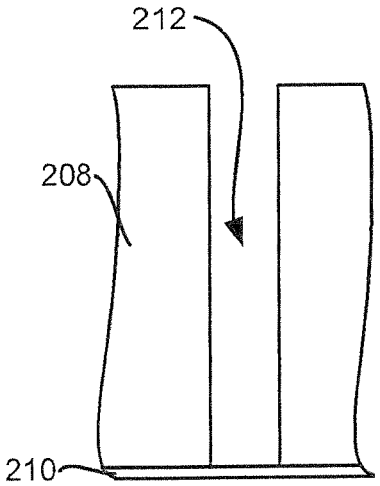


FIG. 2B

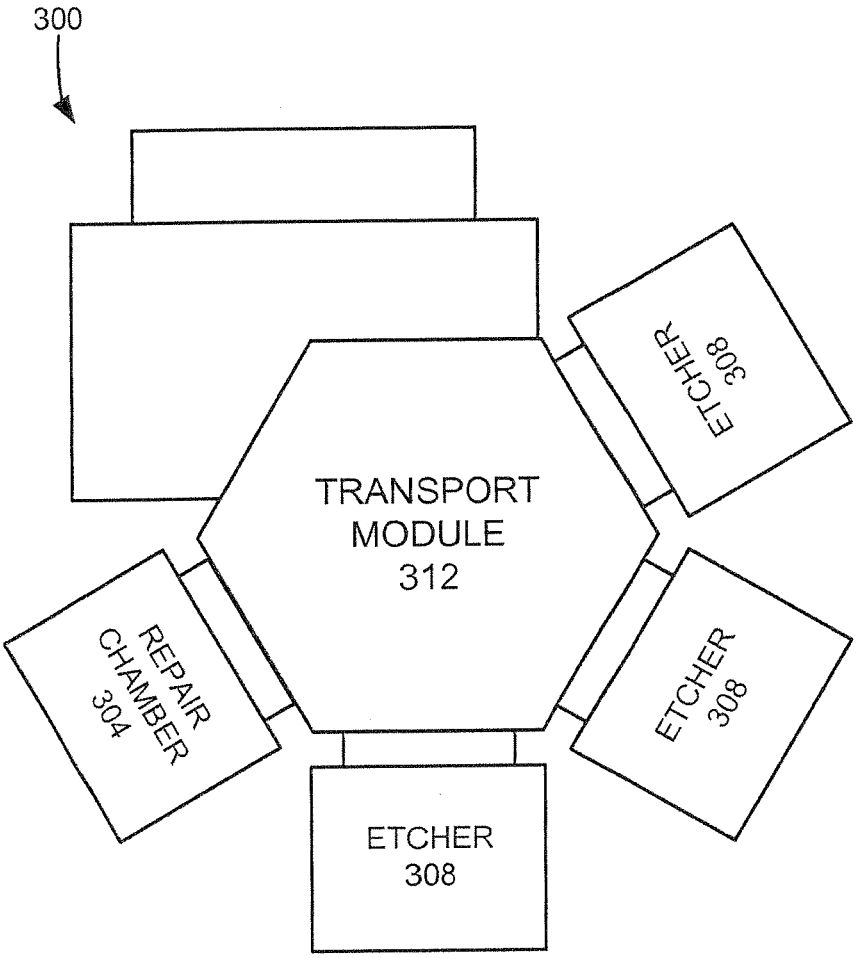

300
TRANSPORT MODULE 312
ETCHER 308
ETCHER 308
ETCHER 308
REPAIR CHAMBER 304

FIG. 3

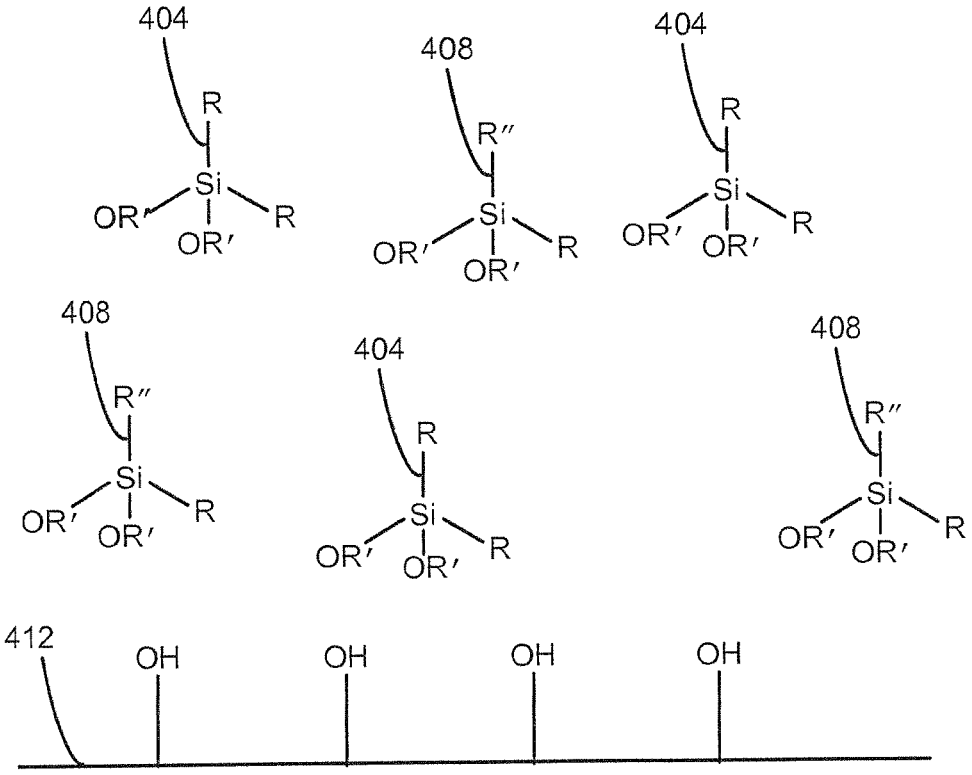

404
R
Si
OR′
OR′
R
408
R″
Si
OR′
OR′
R
404
R
Si
OR′
OR′
R
408
R″
Si
OR′
OR′
R
404
R
Si
OR′
OR′
R
408
R″
Si
OR′
OR′
R
412
OH
OH
OH
OH

FIG. 4A

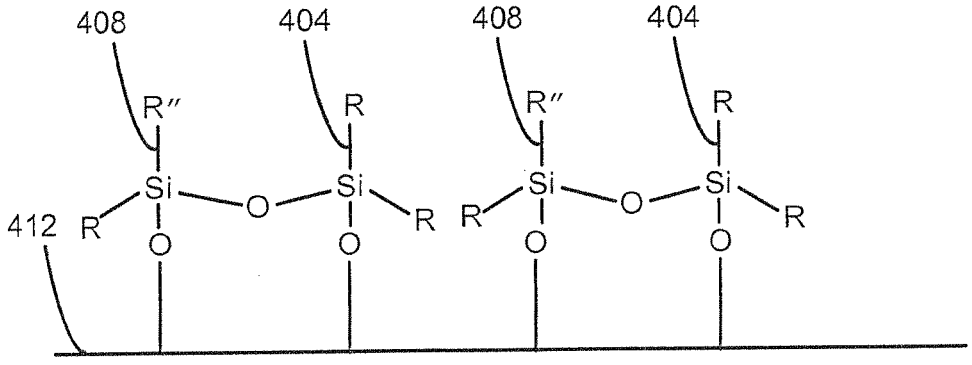

408
R″
Si
R
O
404
R
Si
O
R
408
R″
Si
R
O
404
R
Si
O
R
412

FIG. 4B

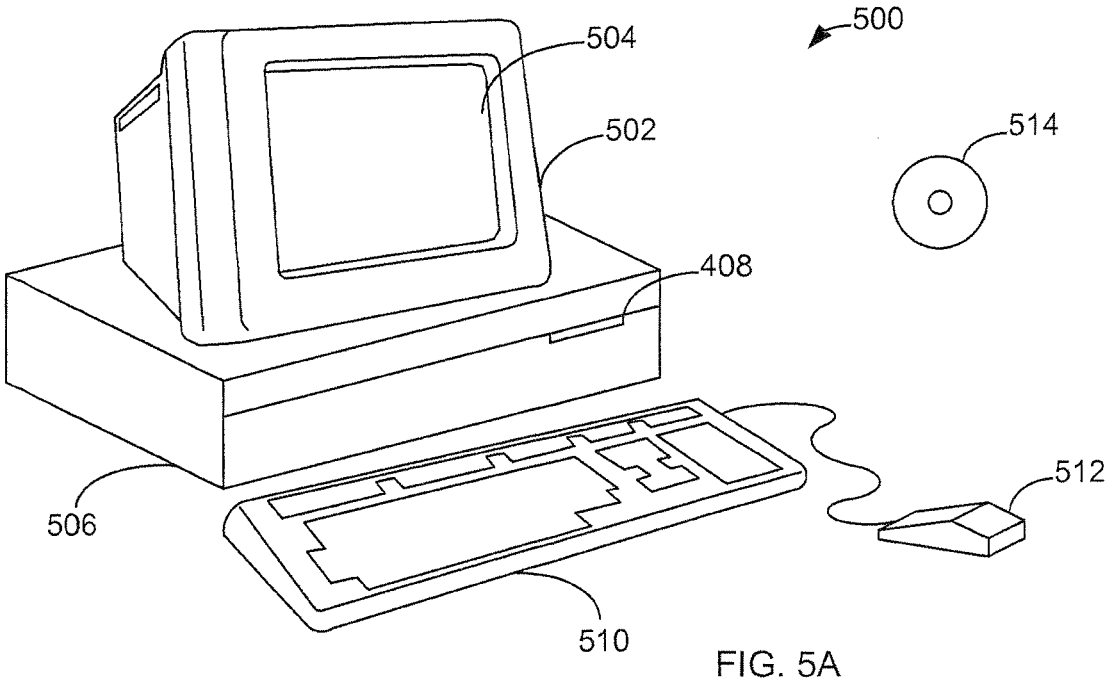

500
504
502
514
408
512
506
510

FIG. 5A

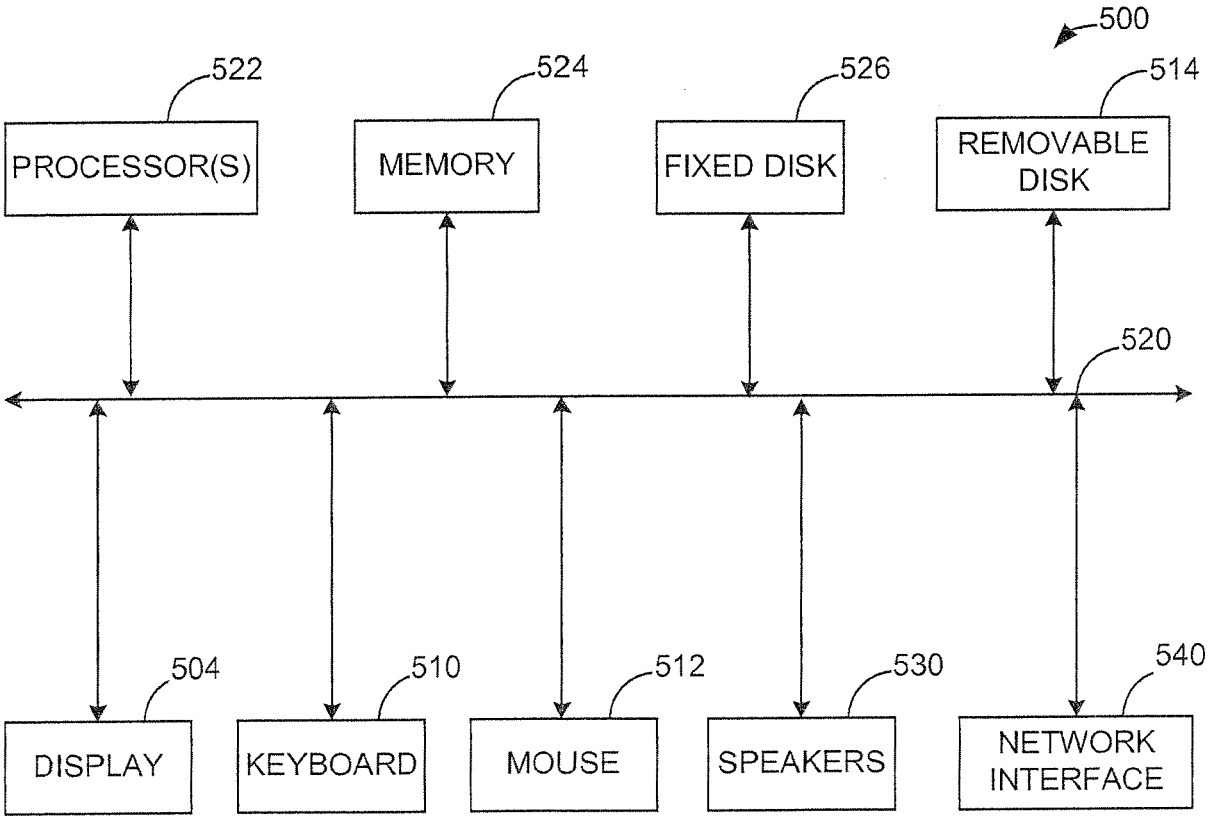

500
522
524
526
514
PROCESSOR(S)
MEMORY
FIXED DISK
REMOVABLE DISK
520
504
510
512
530
540
DISPLAY
KEYBOARD
MOUSE
SPEAKERS
NETWORK INTERFACE

FIG. 5B

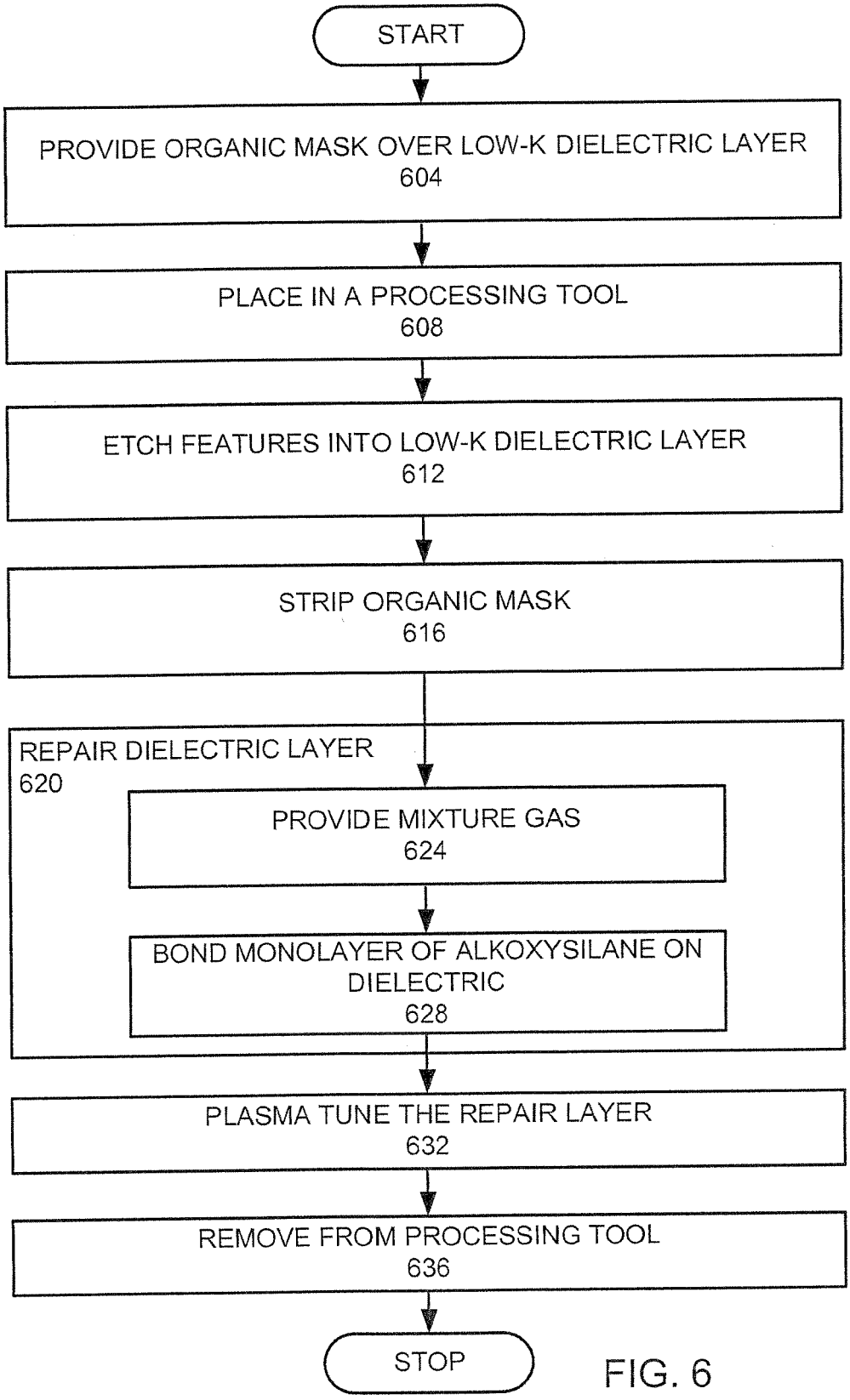

START
PROVIDE ORGANIC MASK OVER LOW-K DIELECTRIC LAYER
604
PLACE IN A PROCESSING TOOL
608
ETCH FEATURES INTO LOW-K DIELECTRIC LAYER
612
STRIP ORGANIC MASK
616
REPAIR DIELECTRIC LAYER
620
PROVIDE MIXTURE GAS
624
BOND MONOLAYER OF ALKOXYSILANE ON DIELECTRIC
628
PLASMA TUNE THE REPAIR LAYER
632
REMOVE FROM PROCESSING TOOL
636
STOP

FIG. 6

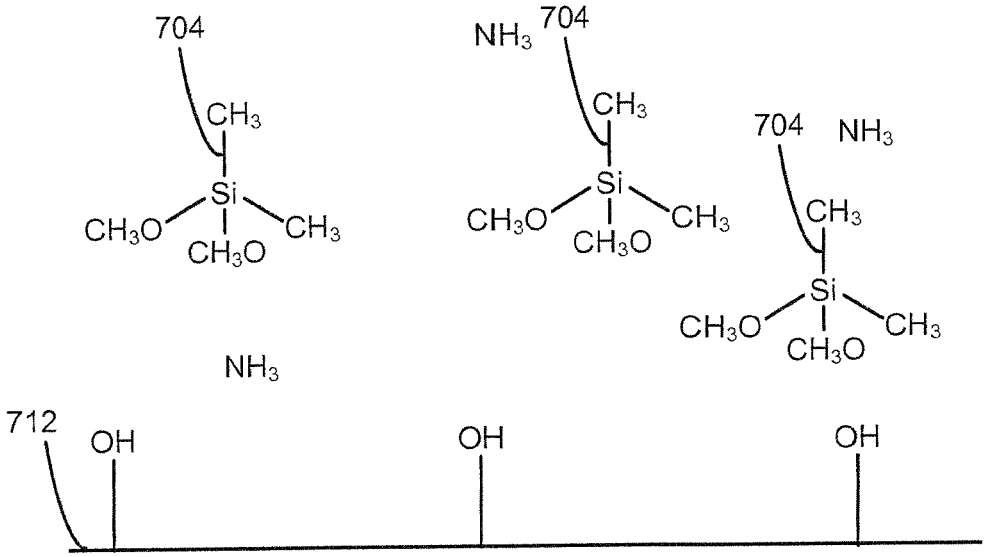


FIG. 7A

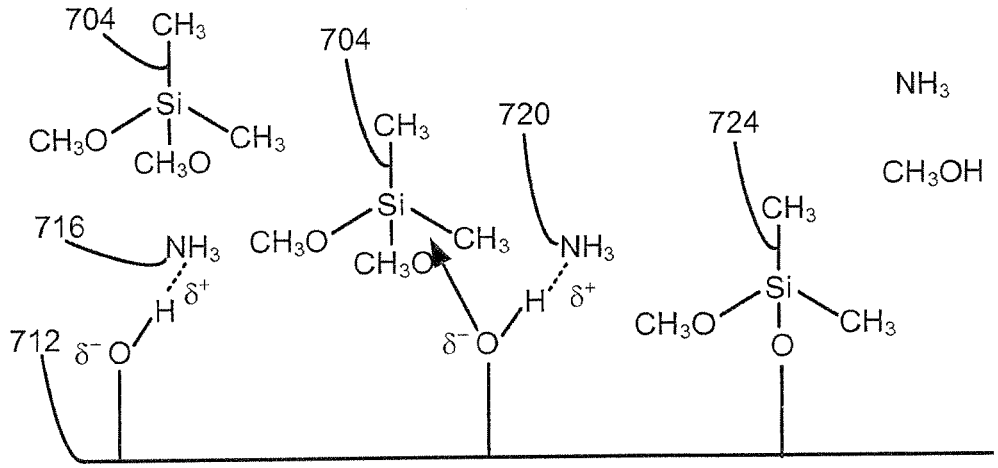


FIG. 7B

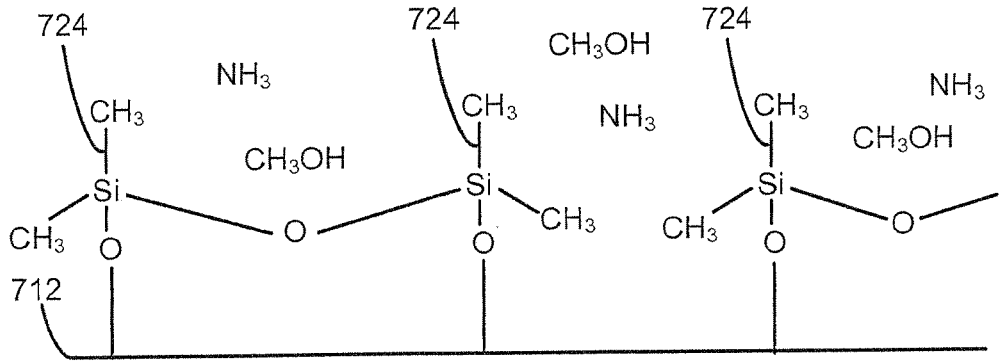


FIG. 7C

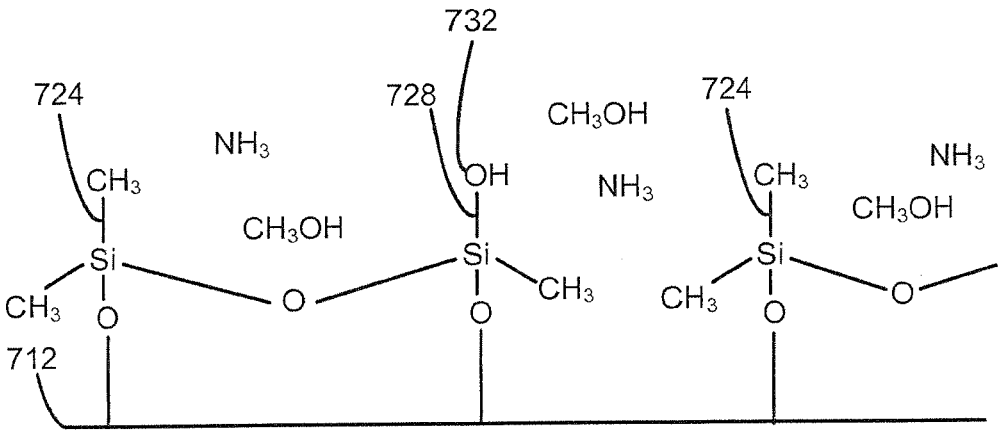

732
724
728
724
CH_3OH
NH_3
NH_3
CH_3
OH
CH_3
NH_3
CH_3OH
CH_3OH
Si
Si
Si
CH_3
CH_3
CH_3
O
O
O
O
712

FIG. 7D

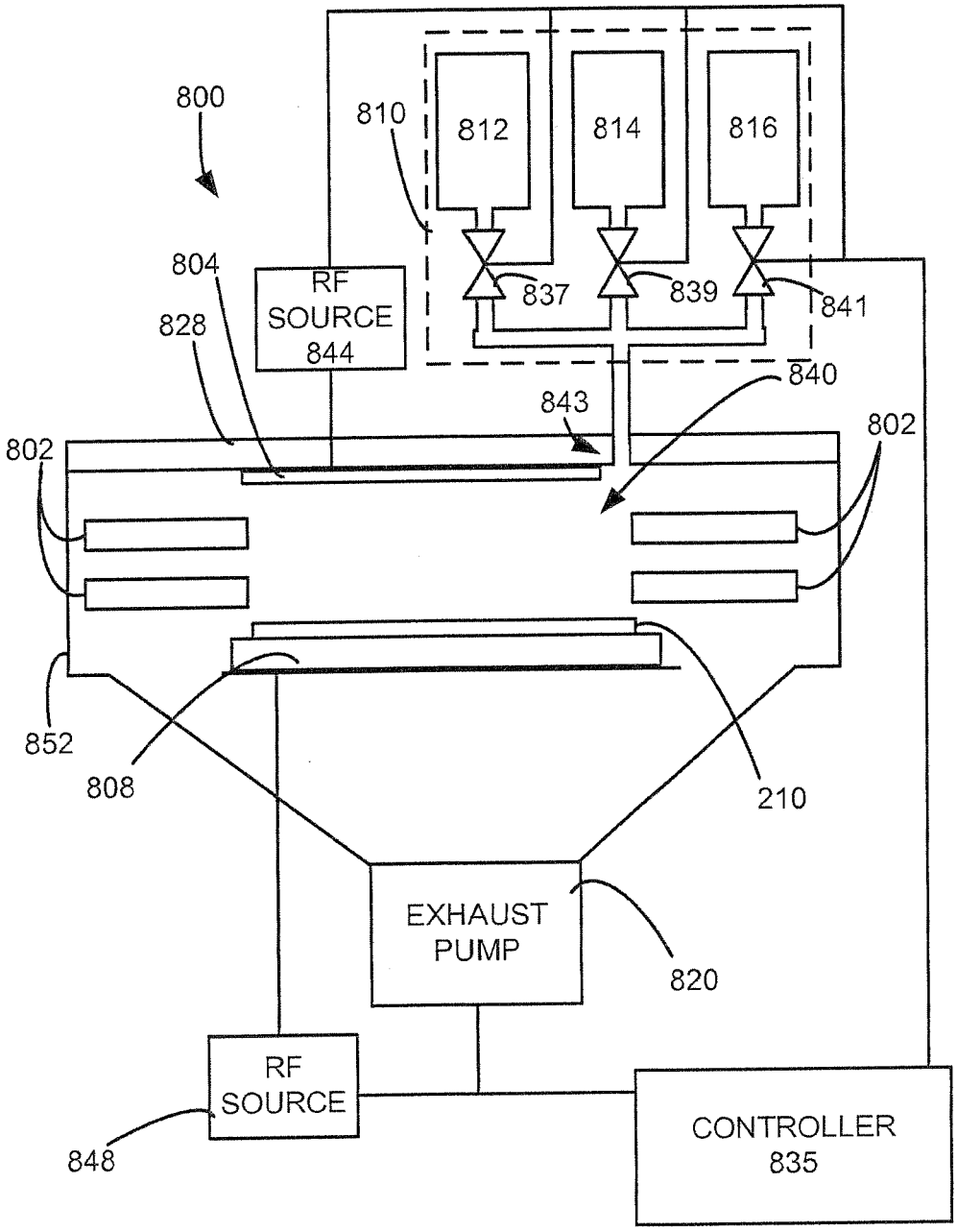

800
810
812
814
816
804
RF SOURCE 844
828
837
839
841
840
843
802
802
852
808
210
EXHAUST PUMP
820
RF SOURCE
848
CONTROLLER 835

FIG. 8