

FIG. 1

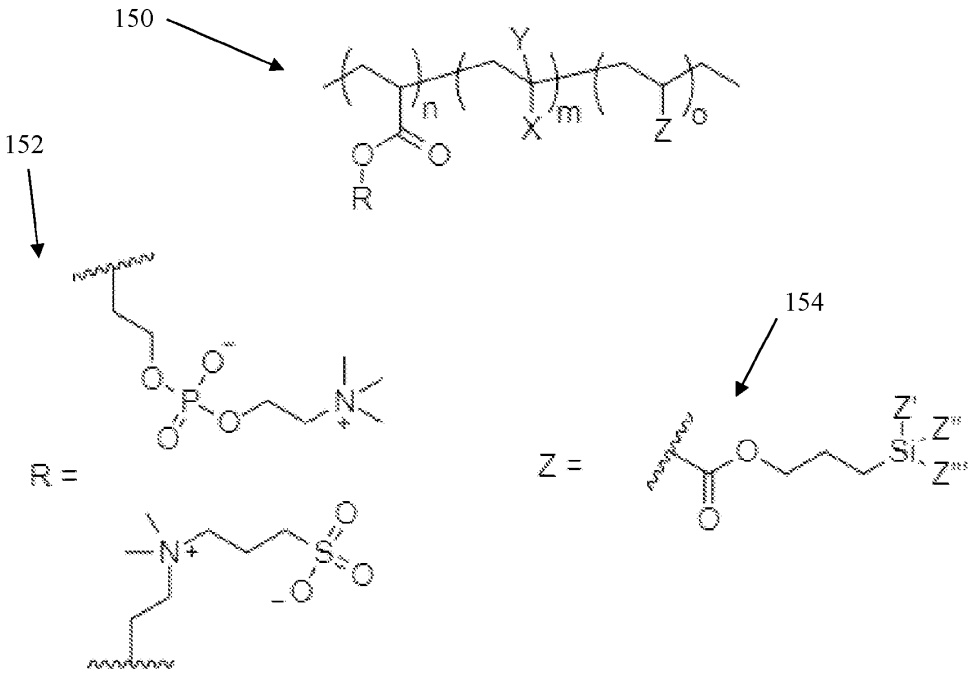


FIG. 2

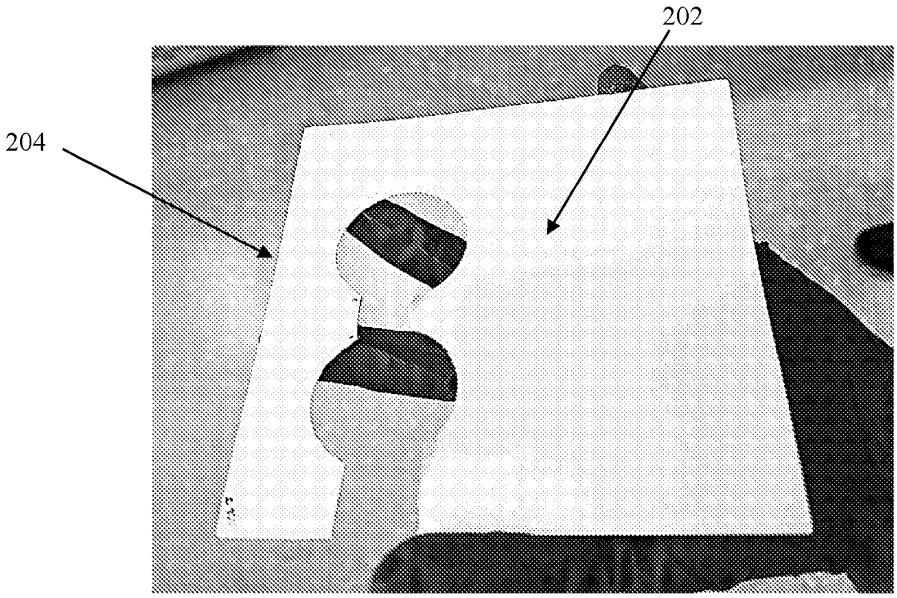


FIG. 3A

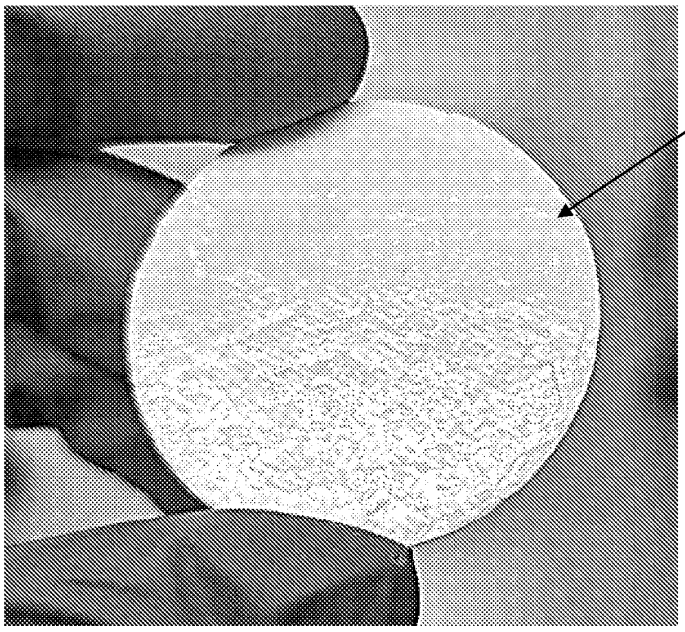


FIG. 3B

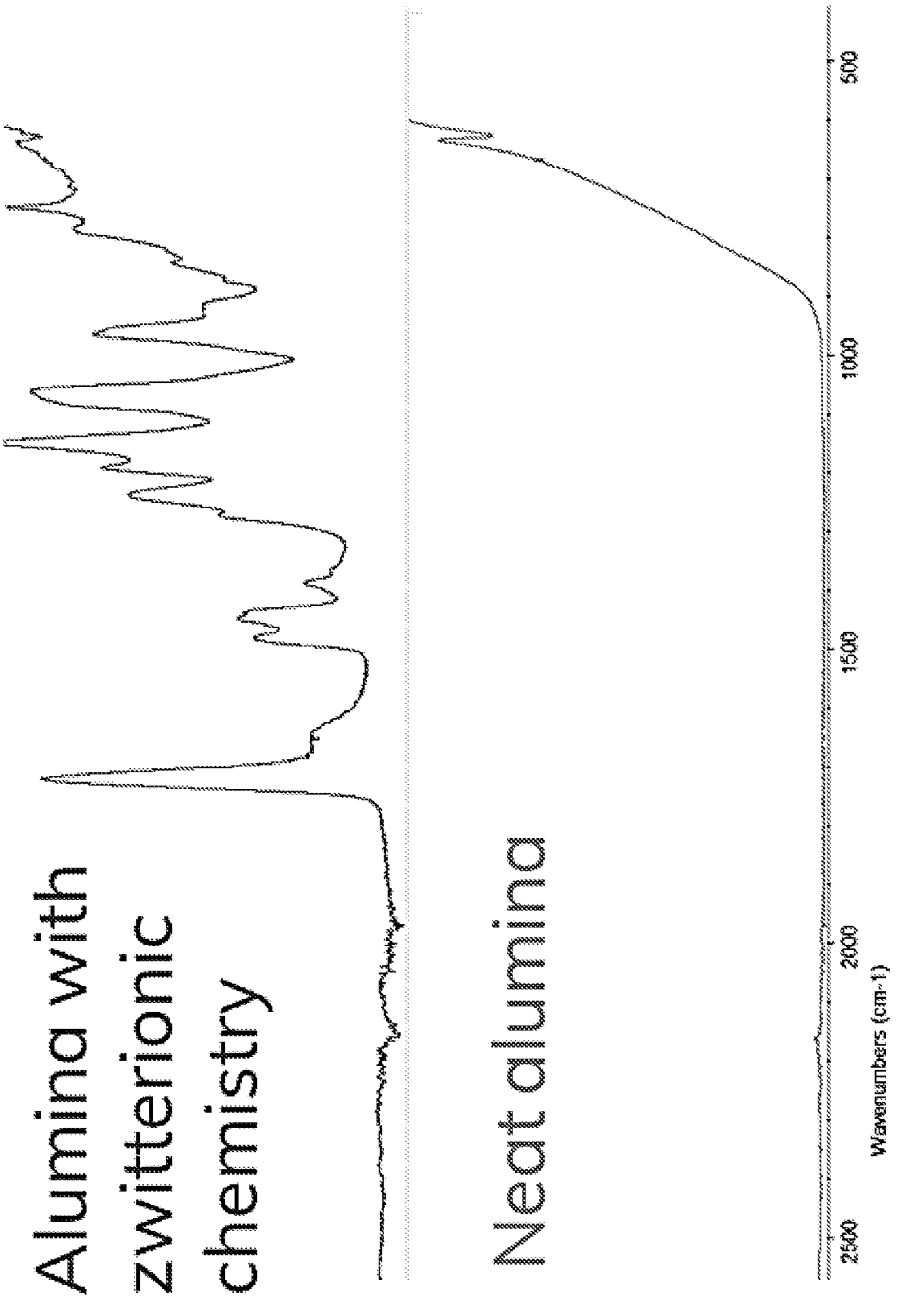

Alumina with zwitterionic chemistry
Neat alumina
2500
2000
1500
1000
500
Wavenumbers (cm-1)

FIG. 4

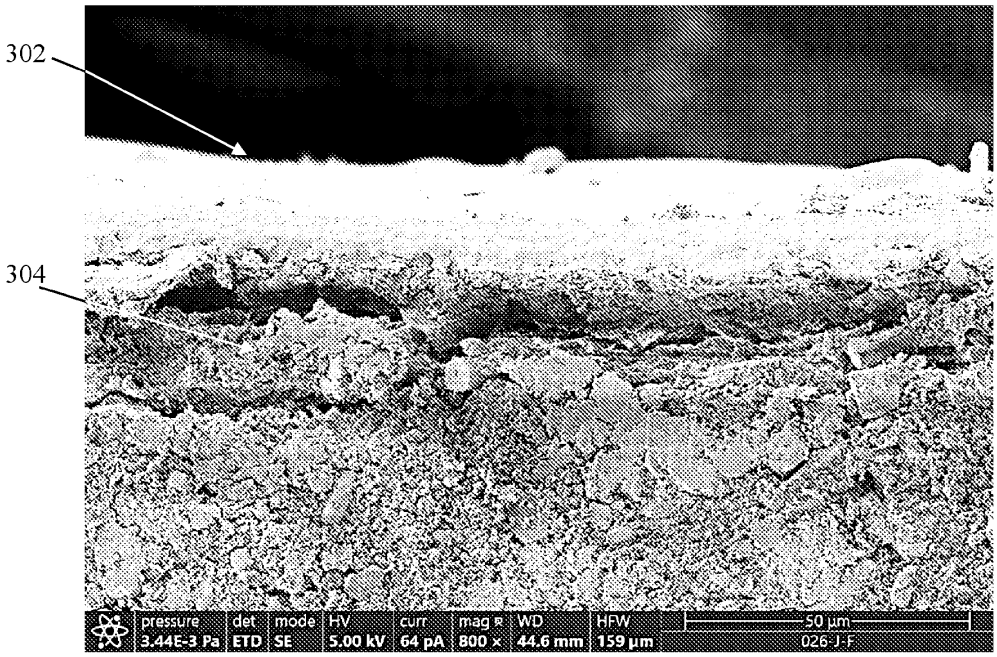

302
304
pressure det mode HV curr mag WD HFW 50 µm
3.44E-3 Pa ETD SE 5.00 kV 64 pA 800 x 44.6 mm 159 µm 026-J-F

FIG. 5A

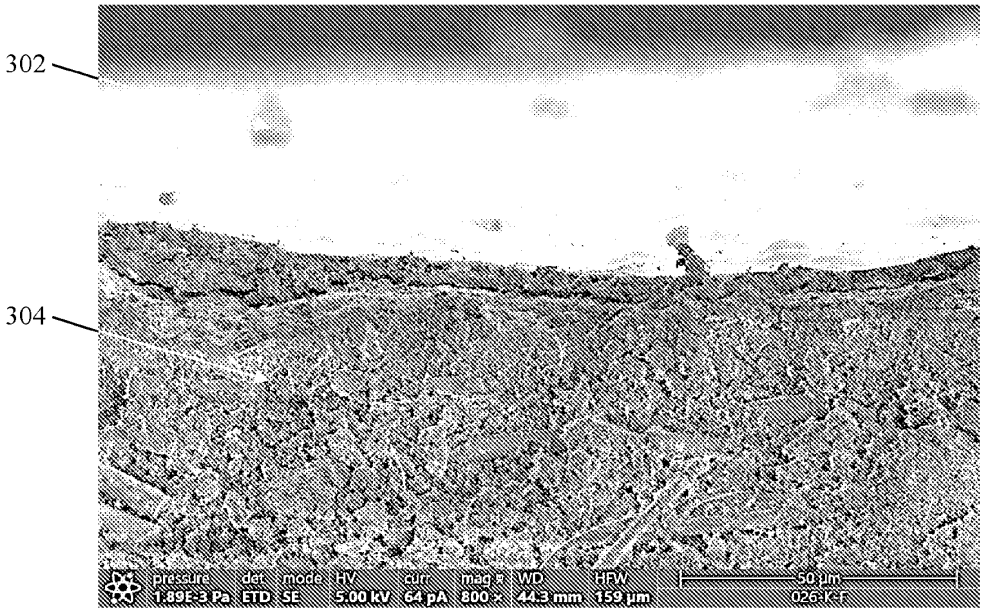

302
304
pressure det mode HV curr mag WD HFW 50 µm
1.89E-3 Pa ETD SE 5.00 kV 64 pA 800 x 44.3 mm 159 µm 026-T-F

FIG. 5B

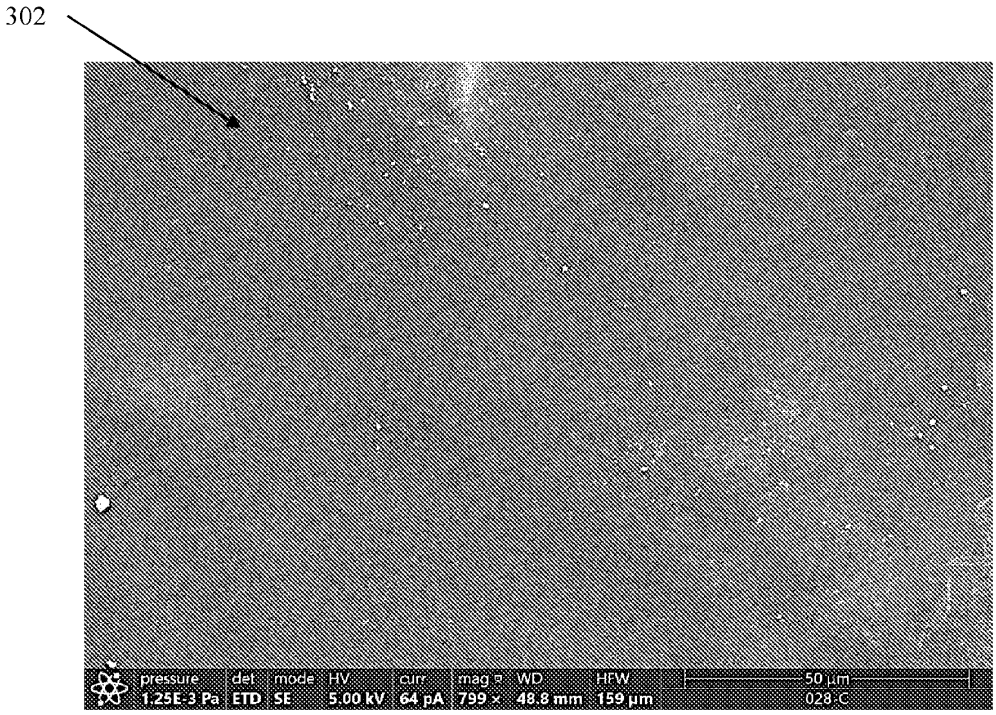

302
pressure
1.25E-3 Pa
det
ETD
mode
SE
HV
5.00 kV
curr
64 pA
mag
799 ×
WD
48.8 mm
HFW
159 µm
50 µm
028 C

FIG. 5C

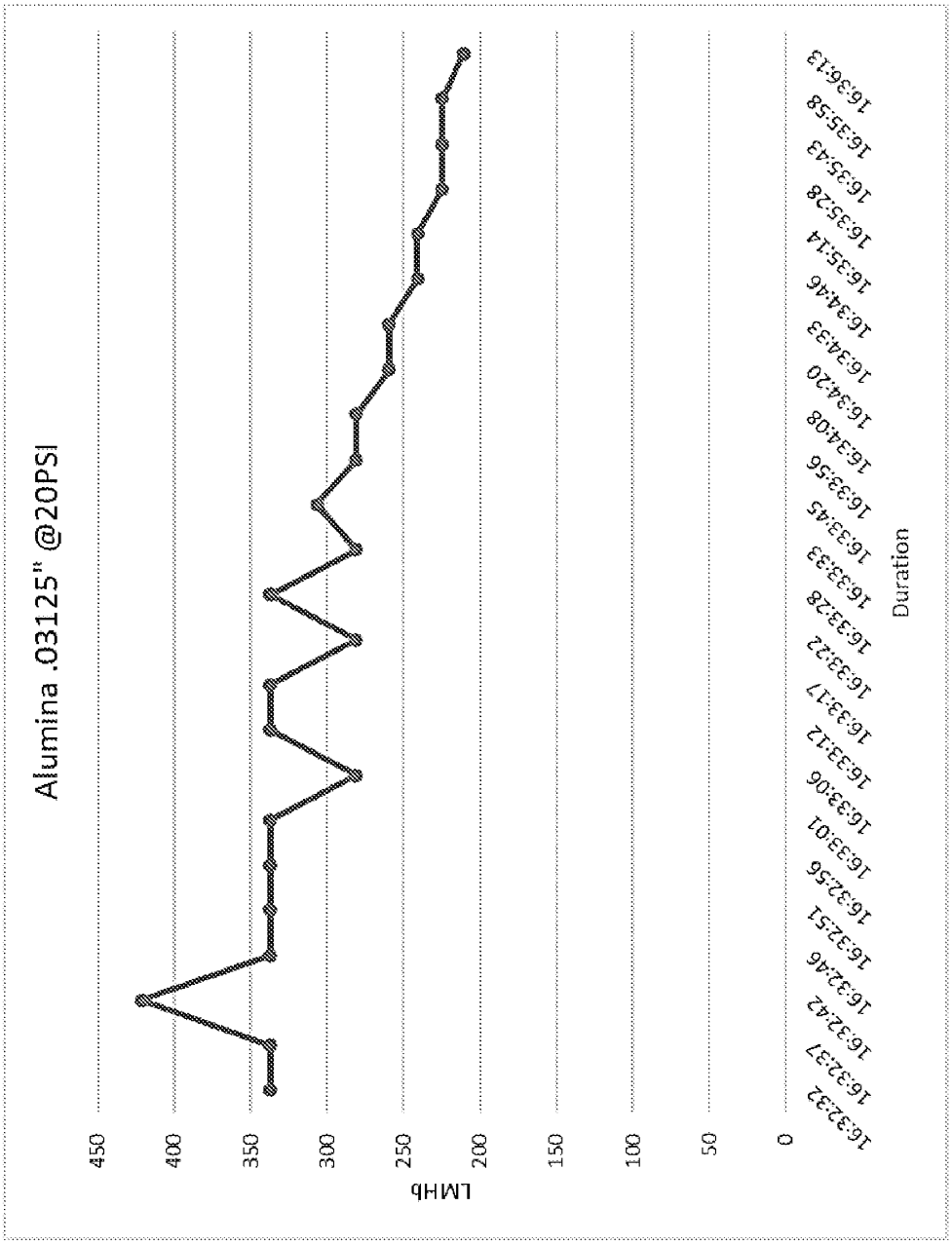

Alumina .03125" @20PSI
LMHb
450
400
350
300
250
200
150
100
50
0
Duration
16:32:32
16:32:37
16:32:42
16:32:46
16:32:51
16:32:56
16:33:01
16:33:06
16:33:12
16:33:17
16:33:22
16:33:28
16:33:33
16:33:45
16:33:56
16:34:08
16:34:20
16:34:33
16:34:46
16:35:14
16:35:28
16:35:43
16:35:58
16:36:13

FIG. 6