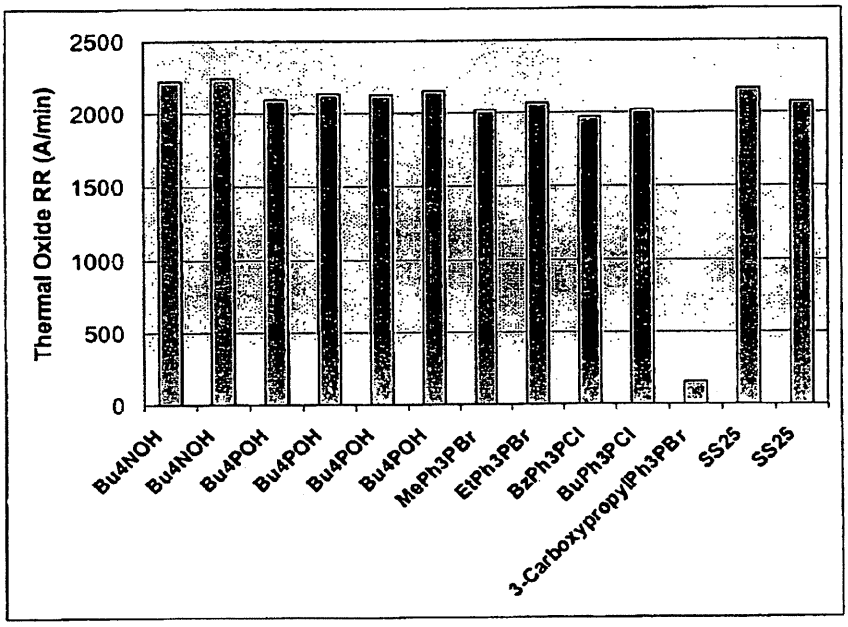

Thermal Oxide RR (A/min)
2500
2000
1500
1000
500
0
Bu4NOH
Bu4NOH
Bu4POH
Bu4POH
Bu4POH
Bu4POH
MePh3PBr
EtPh3PBr
BzPh3PCl
BuPh3PCl
3-CarboxypropylPh3PBr
SS25
SS25

FIG. 1

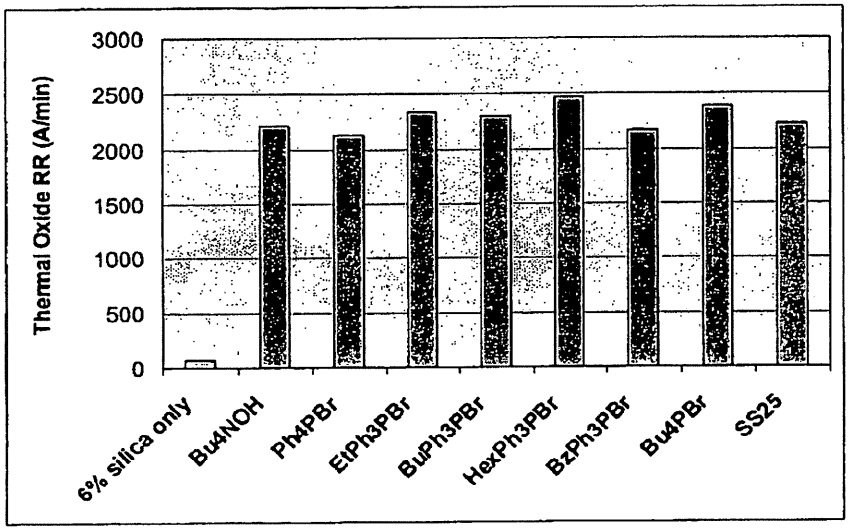

Thermal Oxide RR (A/min)
3000
2500
2000
1500
1000
500
0
6% silica only
Bu4NOH
Ph4PBr
EtPh3PBr
BuPh3PBr
HexPh3PBr
BzPh3PBr
Bu4PBr
SS25

FIG. 2

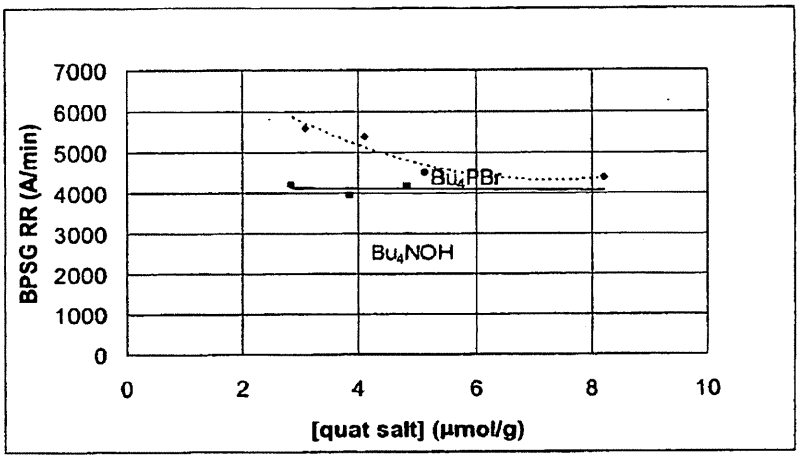

7000
6000
5000
4000
3000
2000
1000
0
BPSG RR (A/min)
0
2
4
6
8
10
[quat salt] (µmol/g)
Bu4PBr
Bu4NOH

FIG. 3

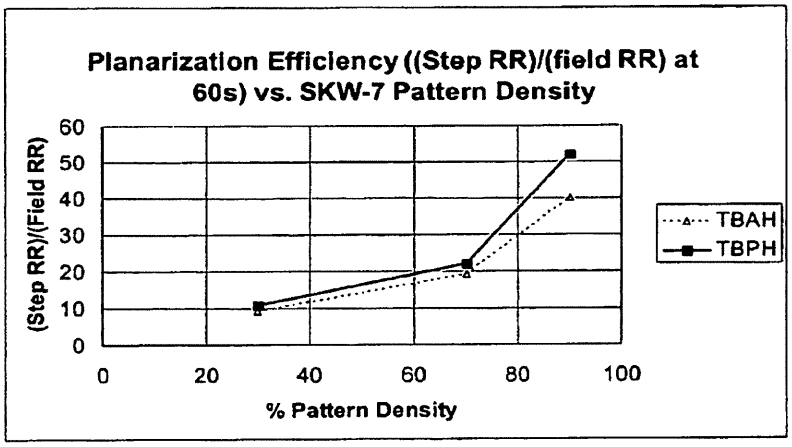

Planarization Efficiency ((Step RR)/(field RR) at 60s) vs. SKW-7 Pattern Density
60
50
40
30
20
10
0
(Step RR)/(Field RR)
0
20
40
60
80
100
% Pattern Density
TBAH
TBPH

FIG. 4

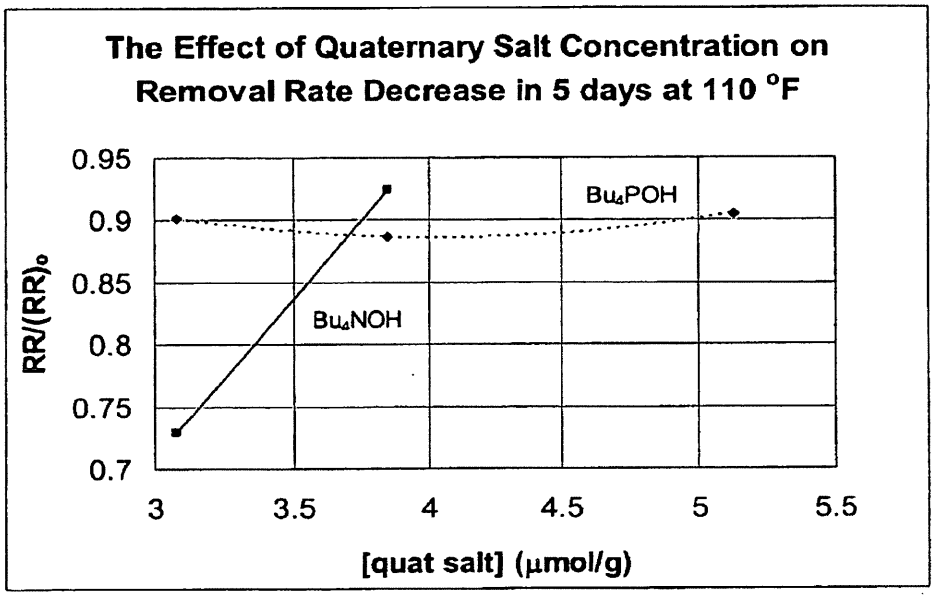

The Effect of Quaternary Salt Concentration on
Removal Rate Decrease in 5 days at 110 °F
RR/(RR)o
0.95
0.9
0.85
0.8
0.75
0.7
3
3.5
4
4.5
5
5.5
Bu4POH
Bu4NOH
[quat salt] (μmol/g)

FIG. 5

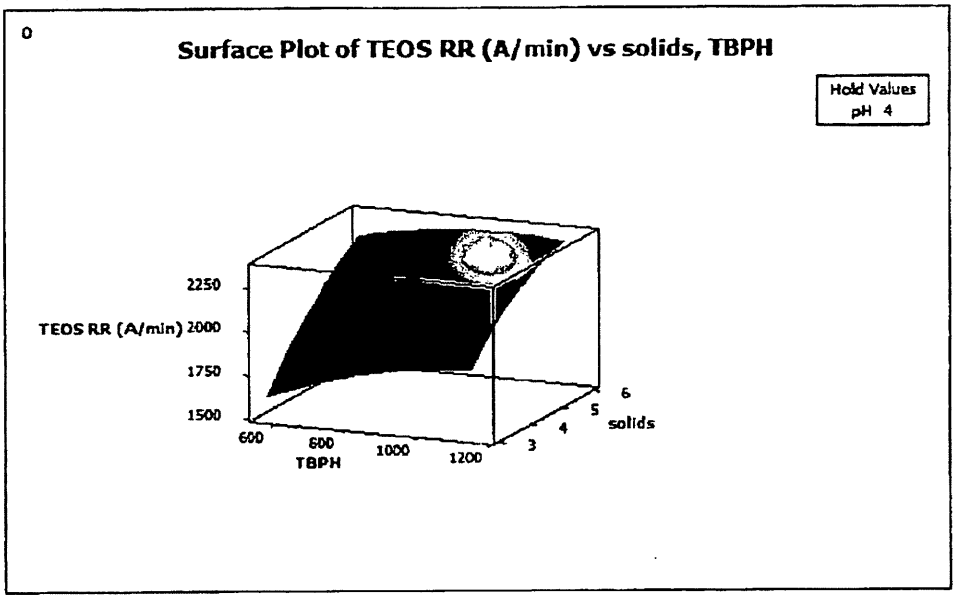

0
Surface Plot of TEOS RR (A/min) vs solids, TBPH
Hold Values
pH 4
TEOS RR (A/min)
2250
2000
1750
1500
600
800
1000
1200
TBPH
3
4
5
6
solids

FIG. 6

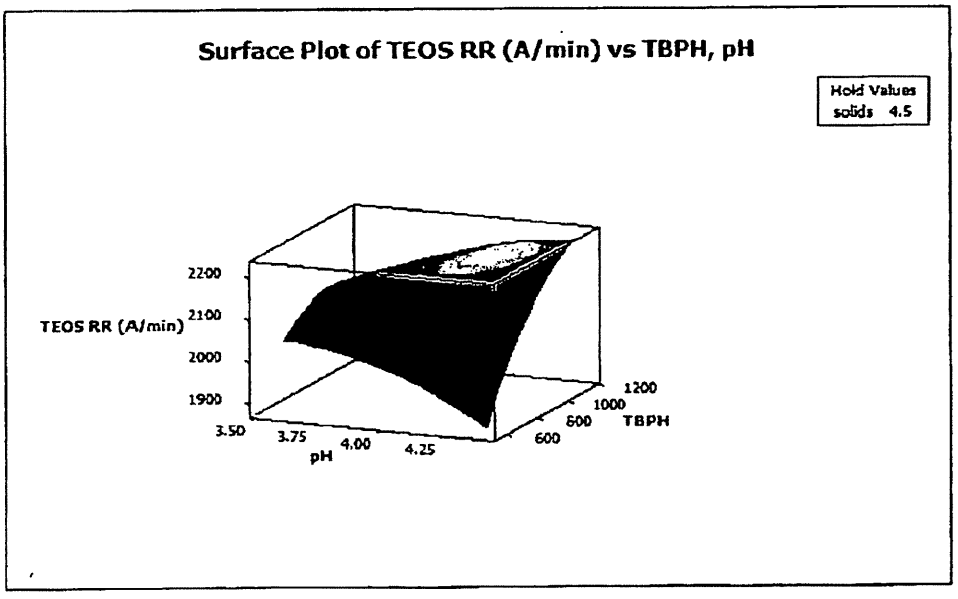

Surface Plot of TEOS RR (A/min) vs TBPH, pH
Hold Values
solids 4.5
TEOS RR (A/min)
2200
2100
2000
1900
3.50
3.75
4.00
4.25
pH
600
800
1000
1200
TBPH

FIG. 7