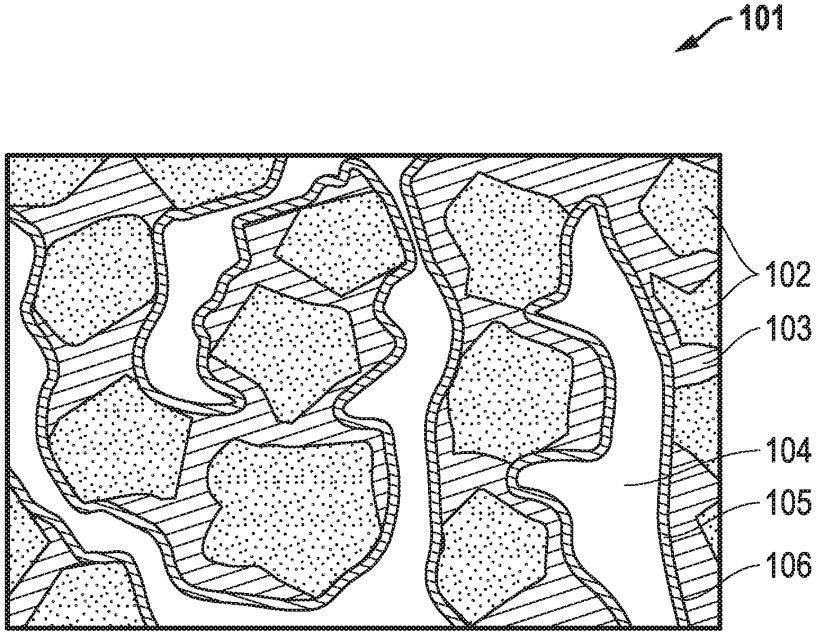
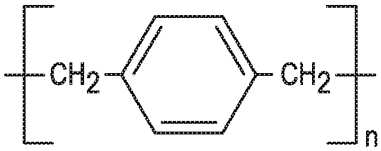
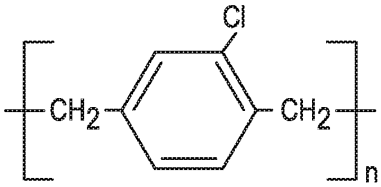


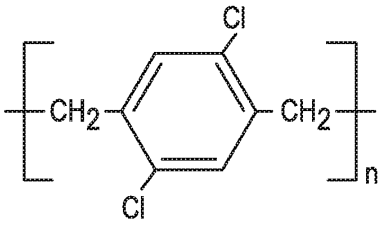
FIG. 1



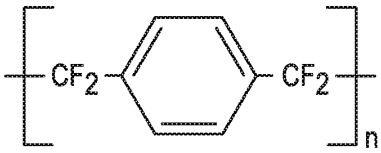
Parylene N



Parylene C



Parylene D



Parylene HT

FIG. 2

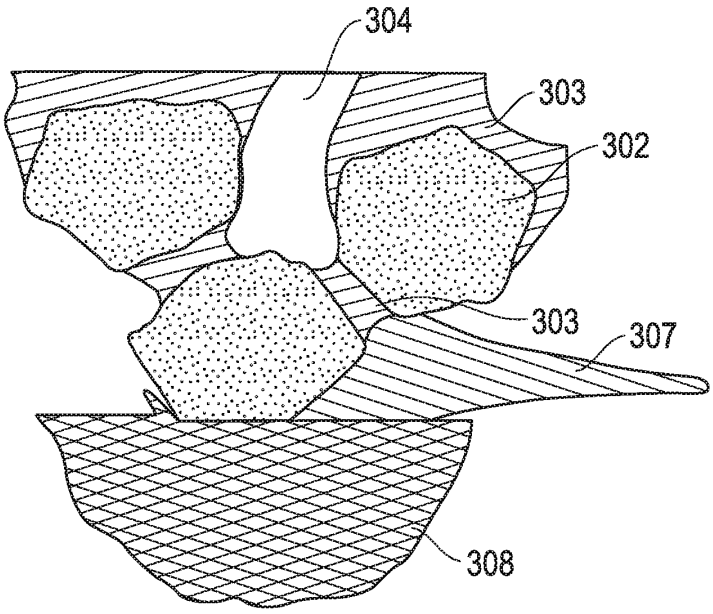


FIG. 3A

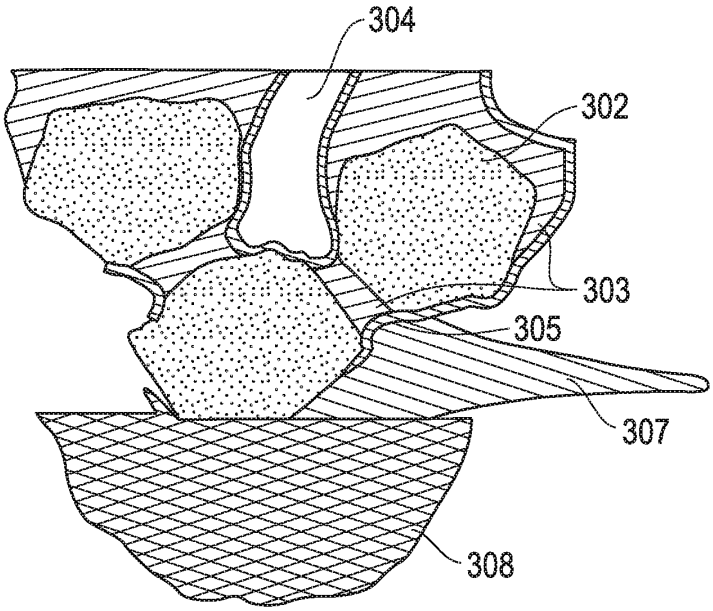


FIG. 3B

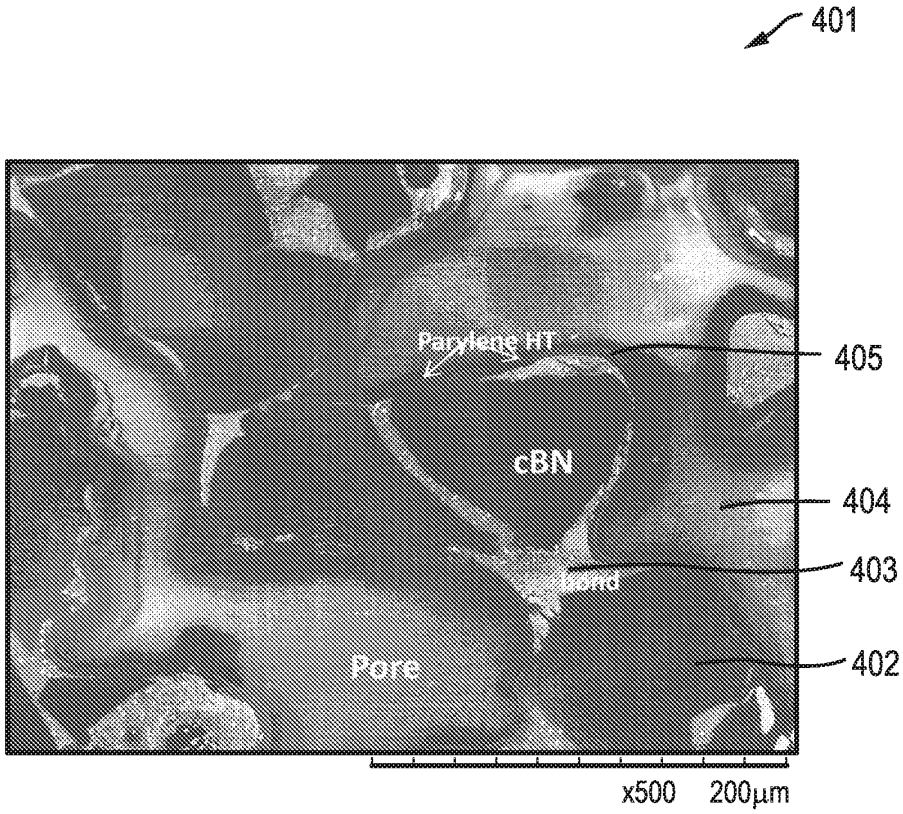


FIG. 4

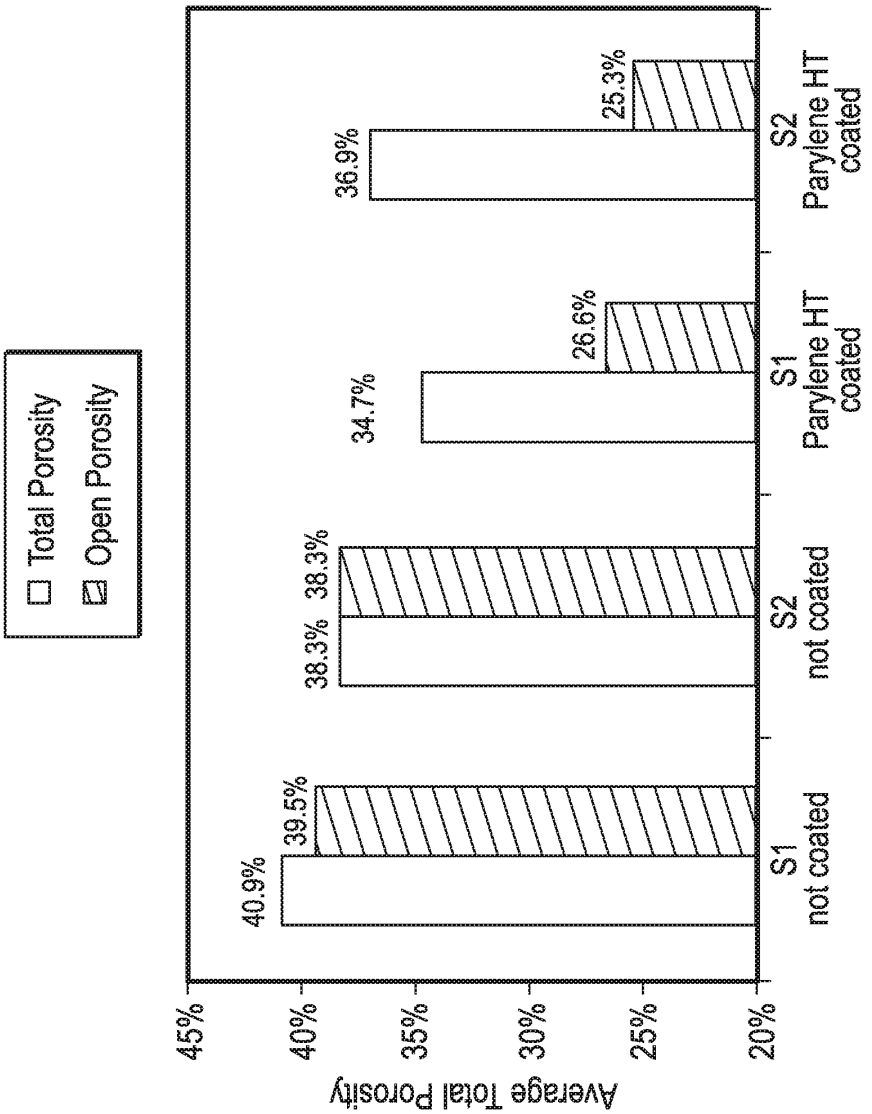

Total Porosity
Open Porosity
Average Total Porosity
45%
40%
35%
30%
25%
20%
40.9%
39.5%
38.3%
38.3%
34.7%
26.6%
36.9%
25.3%
S1 not coated
S2 not coated
S1 Parylene HT coated
S2 Parylene HT coated

FIG. 5

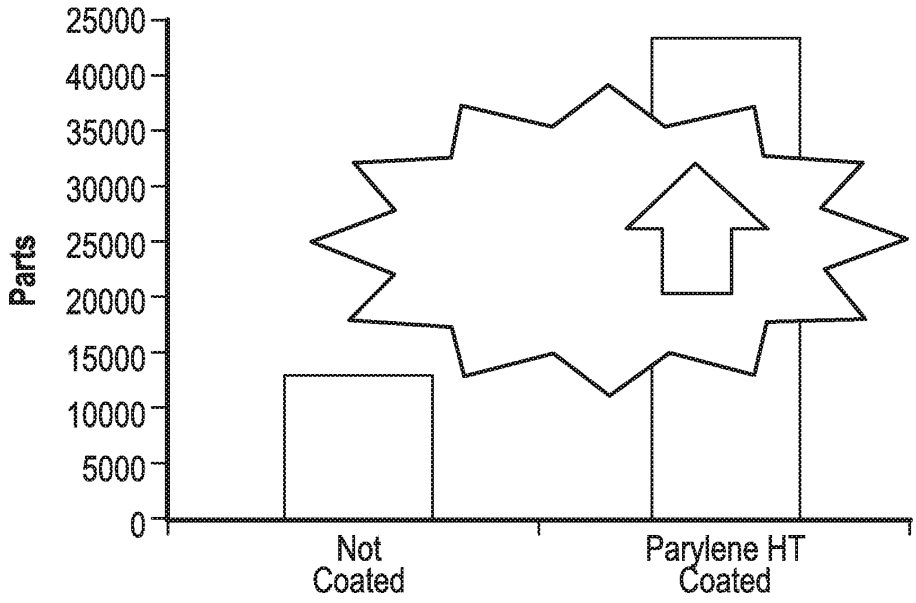

25000
40000
35000
30000
25000
20000
15000
10000
5000
0
Parts
Not Coated
Parylene HT Coated

FIG. 6

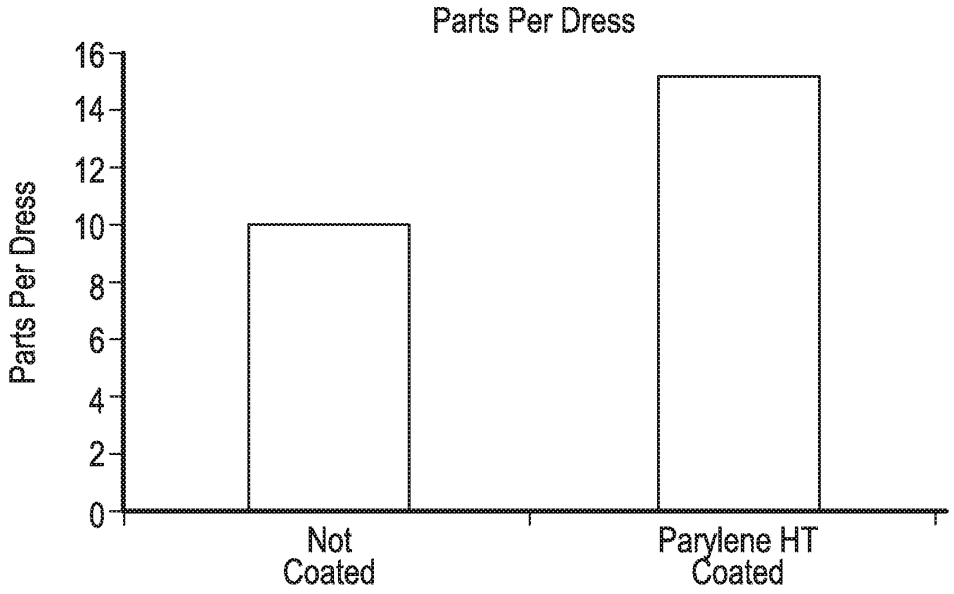

Parts Per Dress
Parts Per Dress
16
14
12
10
8
6
4
2
0
Not Coated
Parylene HT Coated

FIG. 7

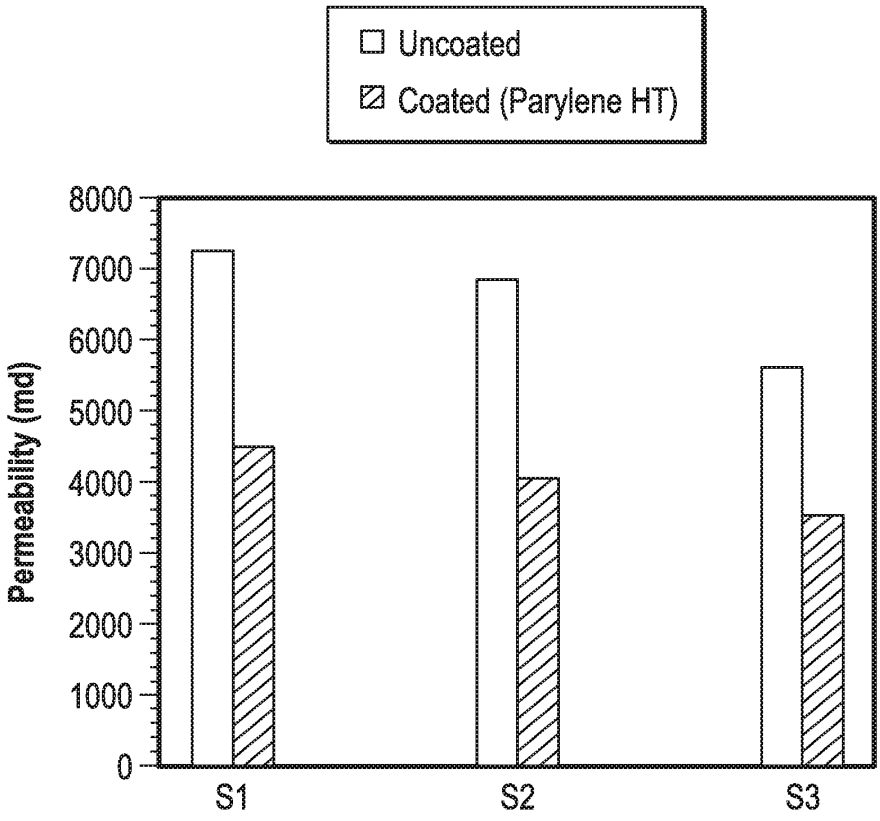

Uncoated
Coated (Parylene HT)
Permeability (md)
8000
7000
6000
5000
4000
3000
2000
1000
0
S1
S2
S3

FIG. 8

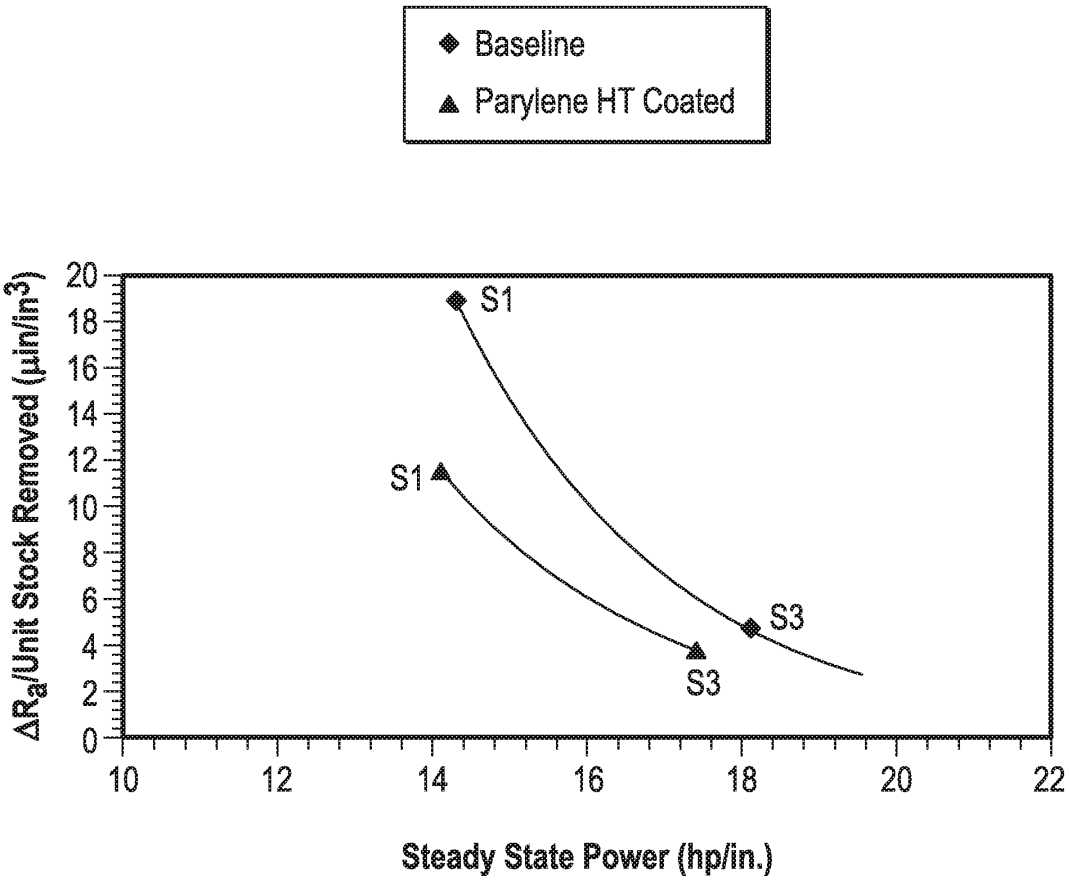

Baseline
Parylene HT Coated
ΔR_a/Unit Stock Removed (µin/in^3)
20
18
16
14
12
10
8
6
4
2
0
10
12
14
16
18
20
22
S1
S1
S3
S3
Steady State Power (hp/in.)

FIG. 9

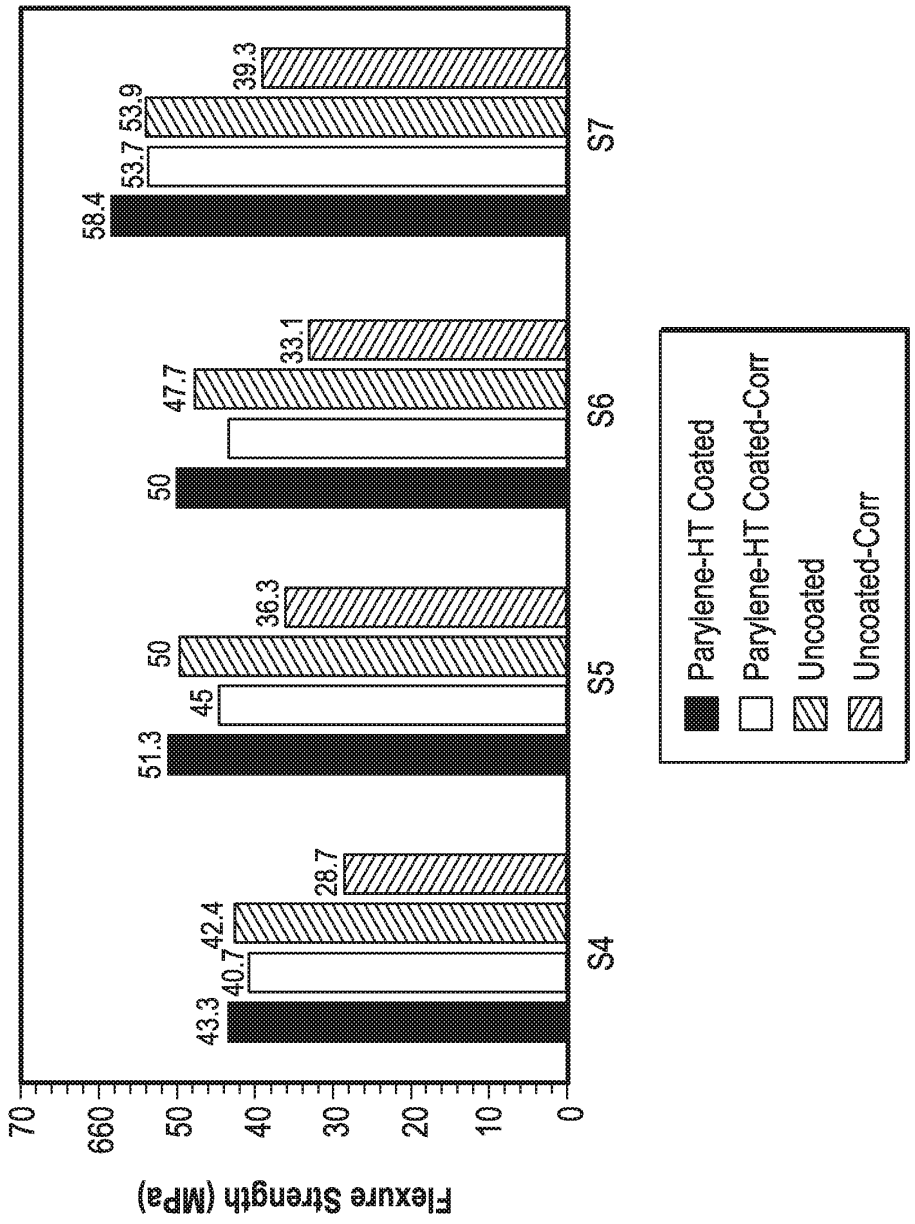

Flexure Strength (MPa)
70
660
50
40
30
20
10
0
S4
S5
S6
S7
43.3
40.7
42.4
28.7
51.3
45
50
36.3
50
47.7
33.1
58.4
53.7
53.9
39.3
Parylene-HT Coated
Parylene-HT Coated-Corr
Uncoated
Uncoated-Corr

FIG. 10

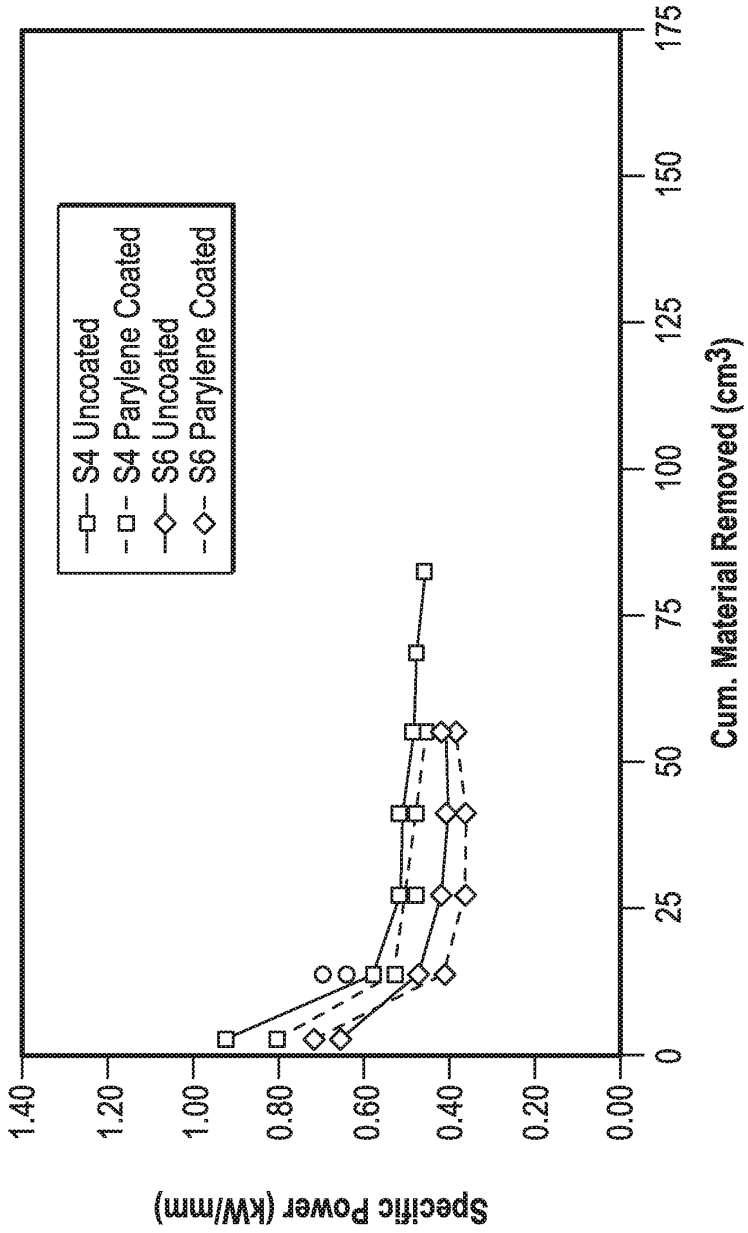

S4 Uncoated
S4 Parylene Coated
S6 Uncoated
S6 Parylene Coated
Specific Power (kW/mm)
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
Cum. Material Removed (cm3)
0
25
50
75
100
125
150
175

FIG. 11