FIGURE 1

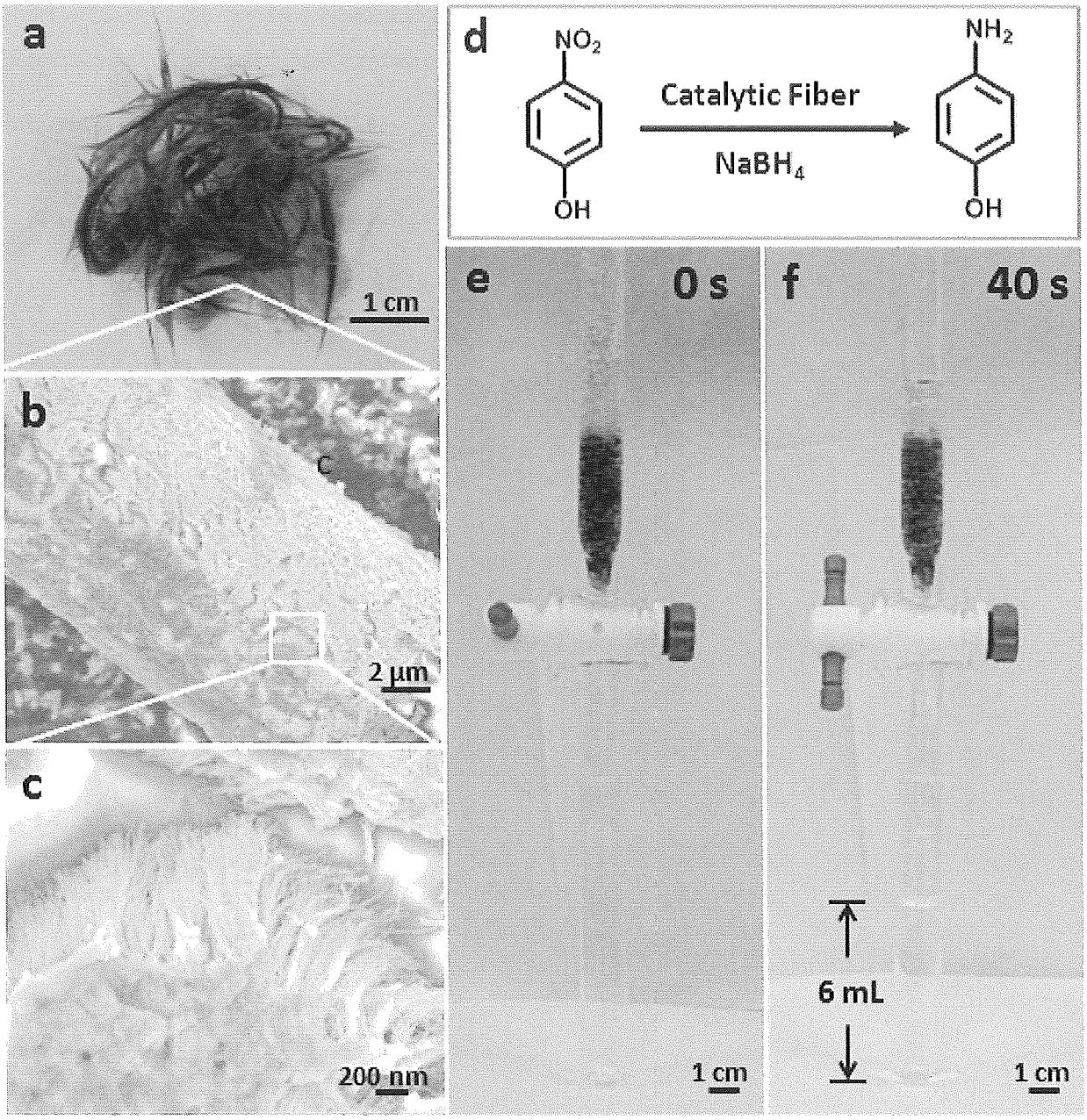

a
1 cm
b
2 μm
c
200 nm
d
NO2
OH
Catalytic Fiber
NaBH4
NH2
OH
e
0 s
1 cm
f
40 s
6 mL
1 cm

FIGURE 2

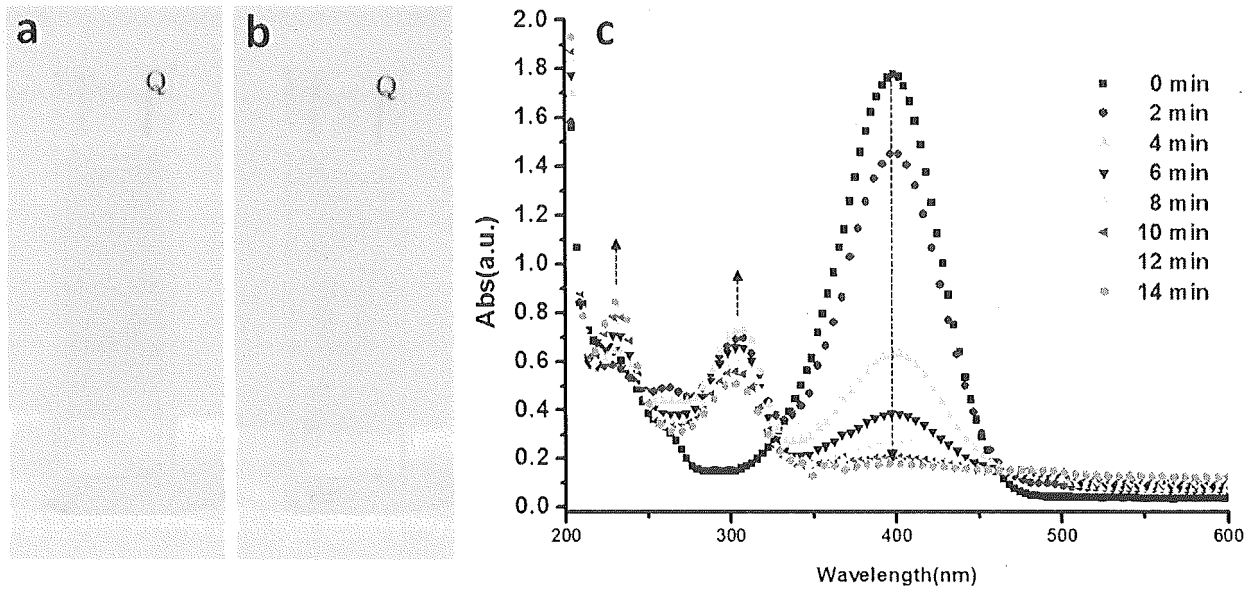

a
Q
b
Q
c
Abs(a.u.)
Wavelength(nm)
0 min
2 min
4 min
6 min
8 min
10 min
12 min
14 min

FIGURE 3

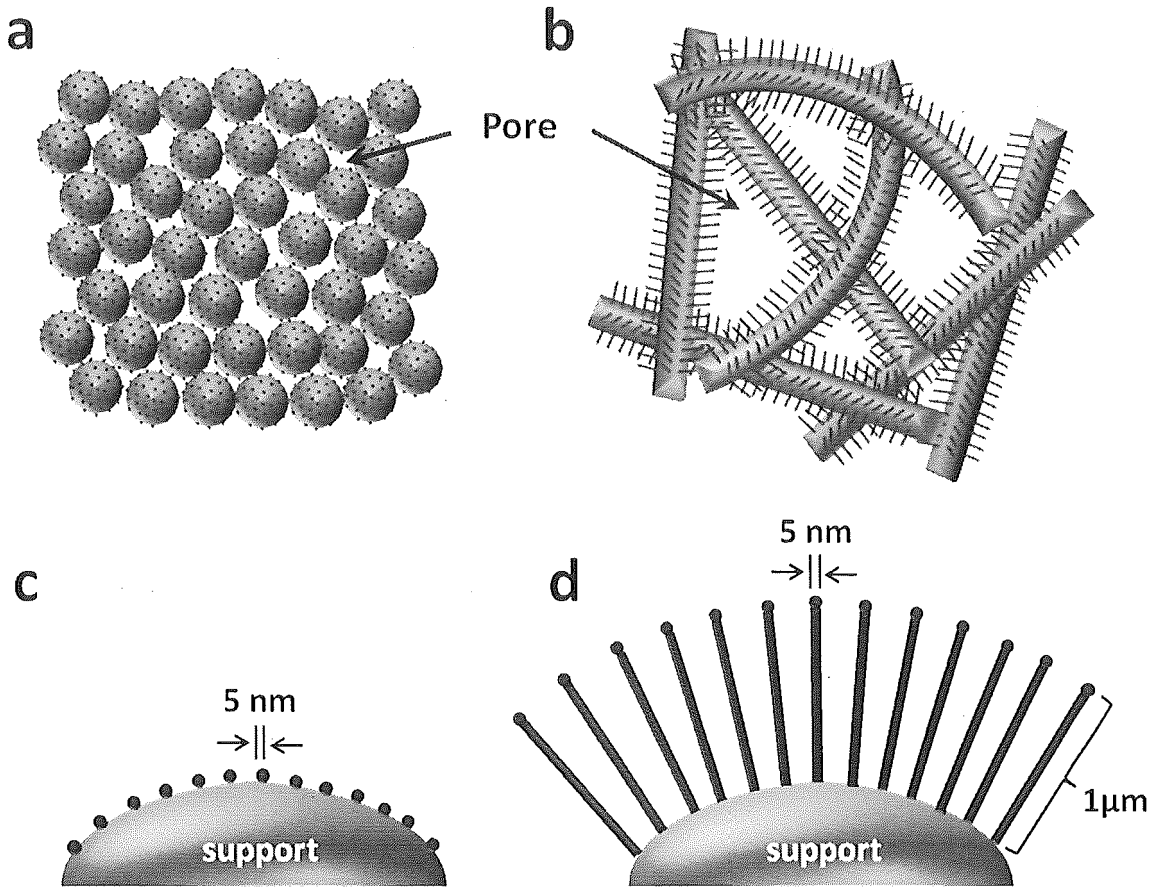


FIGURE 4

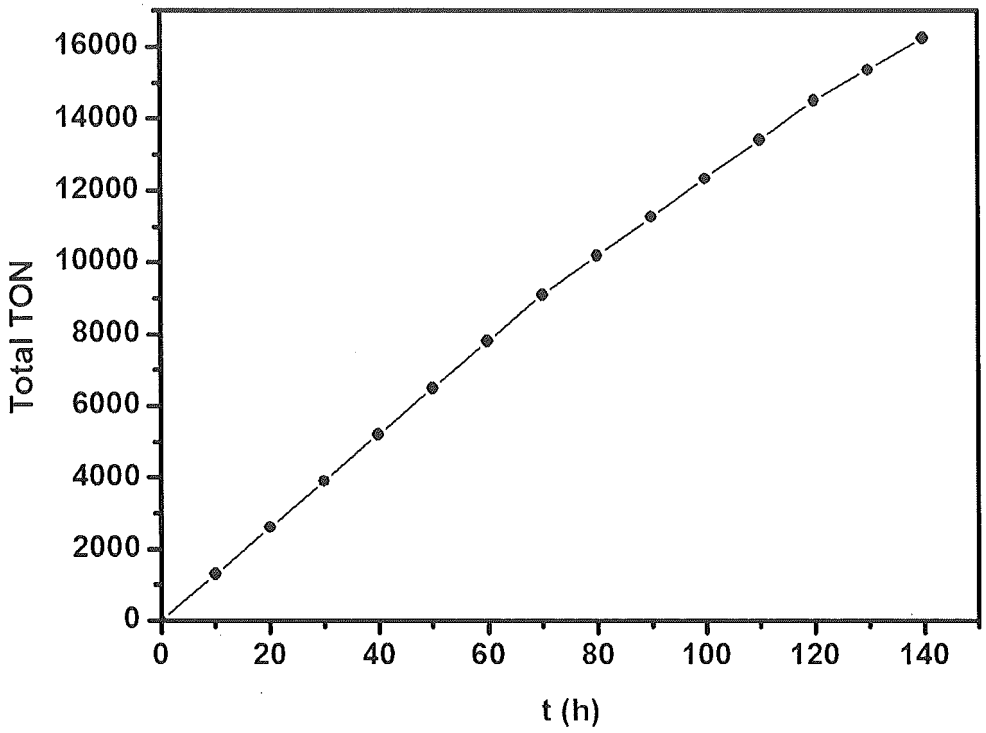

Total TON
16000
14000
12000
10000
8000
6000
4000
2000
0
0
20
40
60
80
100
120
140
t (h)

FIGURE 5

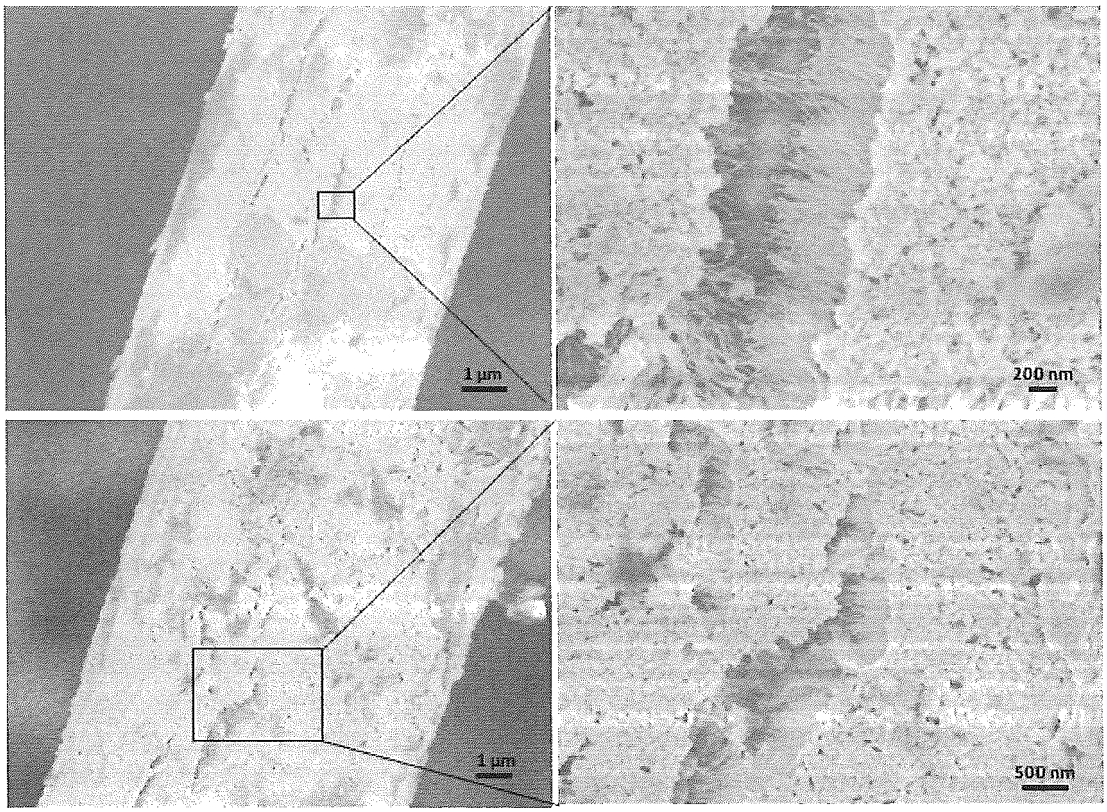


FIGURE 6

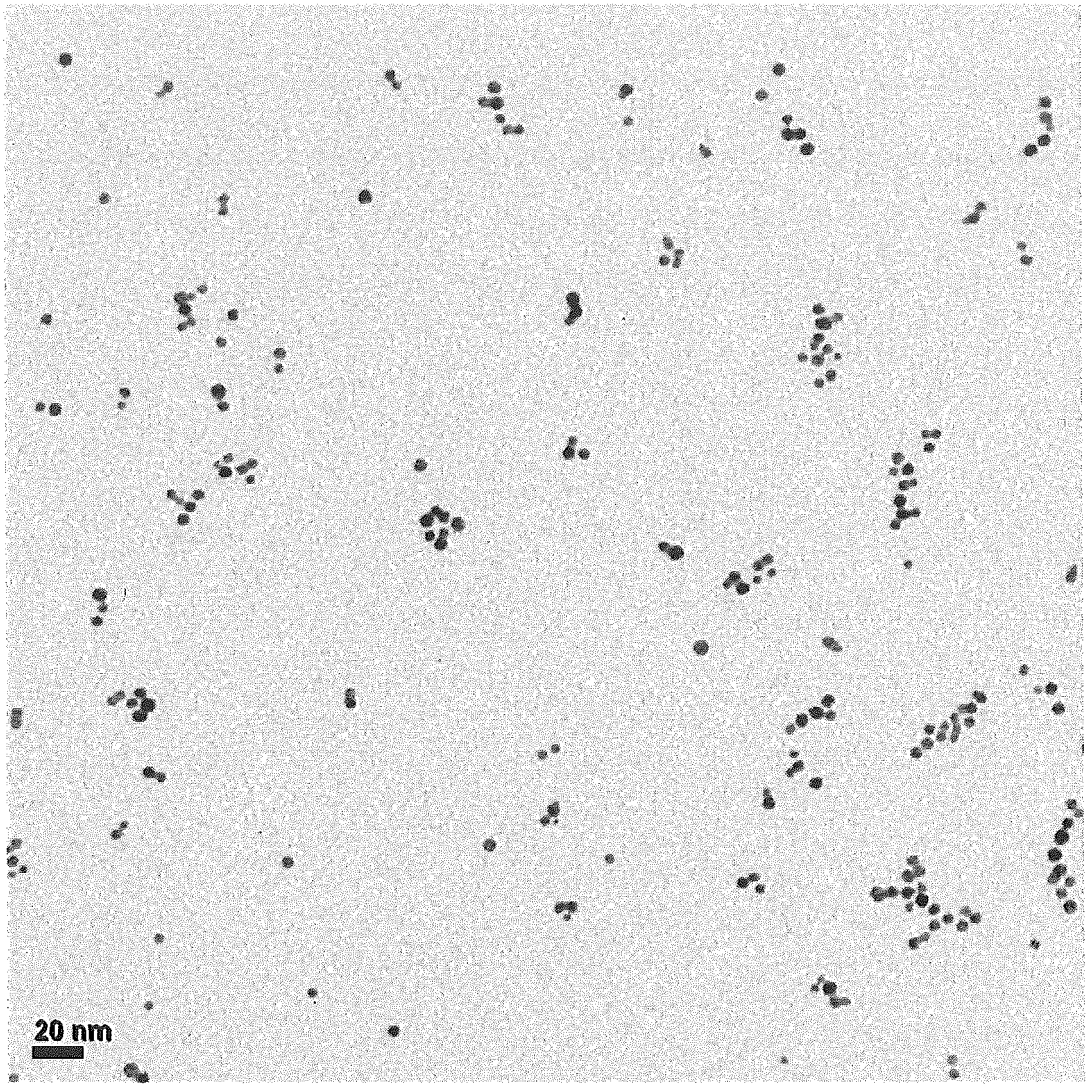


FIGURE 7

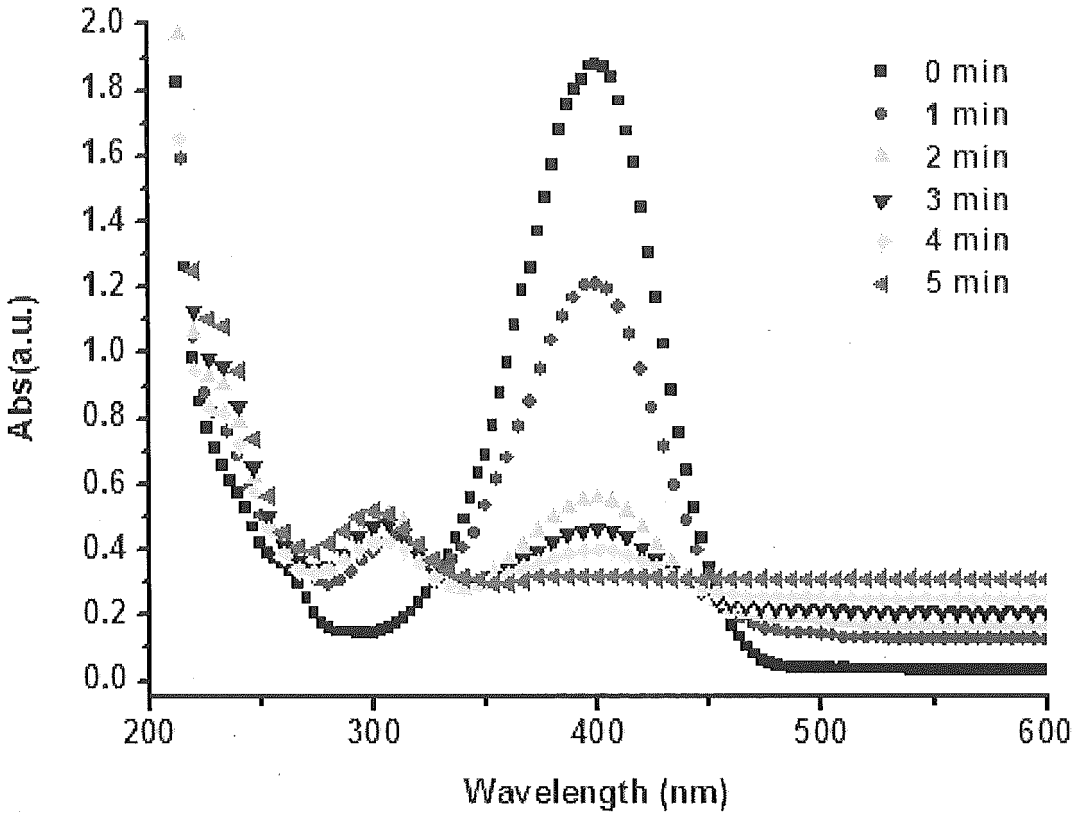

2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Abs(a.u.)
200
300
400
500
600
Wavelength (nm)
0 min
1 min
2 min
3 min
4 min
5 min

FIGURE 8

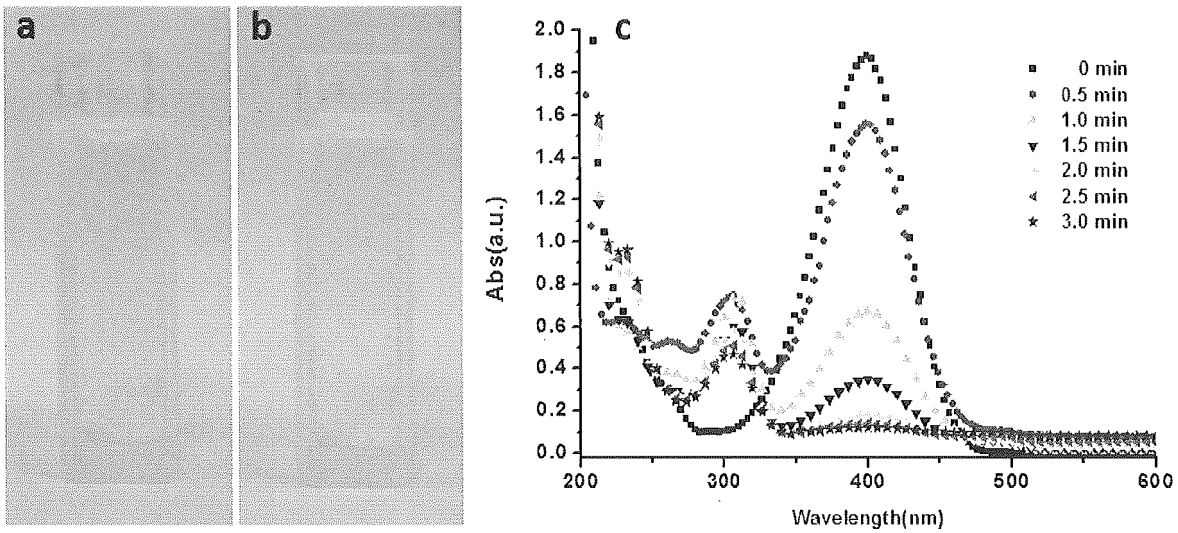

a
b
c
Abs(a.u.)
Wavelength(nm)
0 min
0.5 min
1.0 min
1.5 min
2.0 min
2.5 min
3.0 min
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
200
300
400
500
600

FIGURE 9

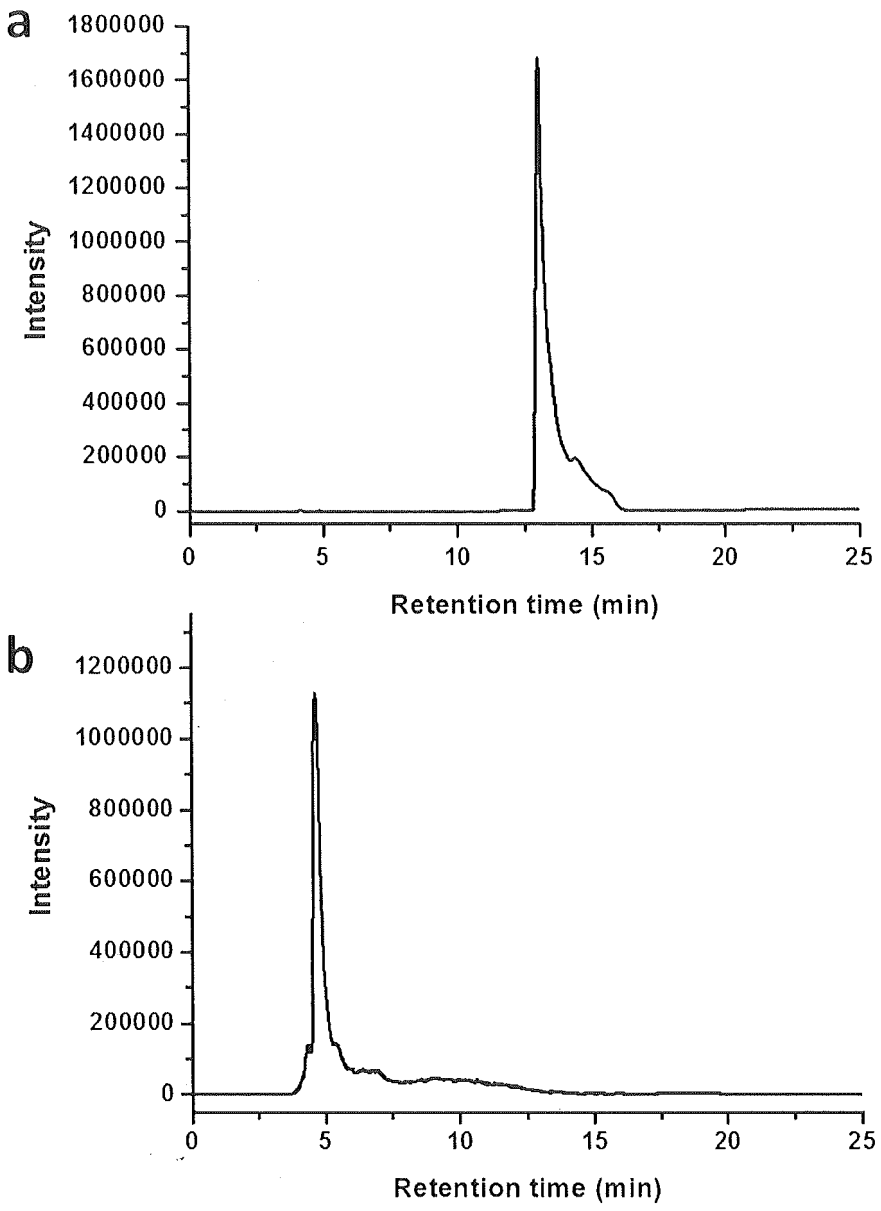

a
1800000
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
Intensity
0
5
10
15
20
25
Retention time (min)
b
1200000
1000000
800000
600000
400000
200000
0
Intensity
0
5
10
15
20
25
Retention time (min)

FIGURE 10

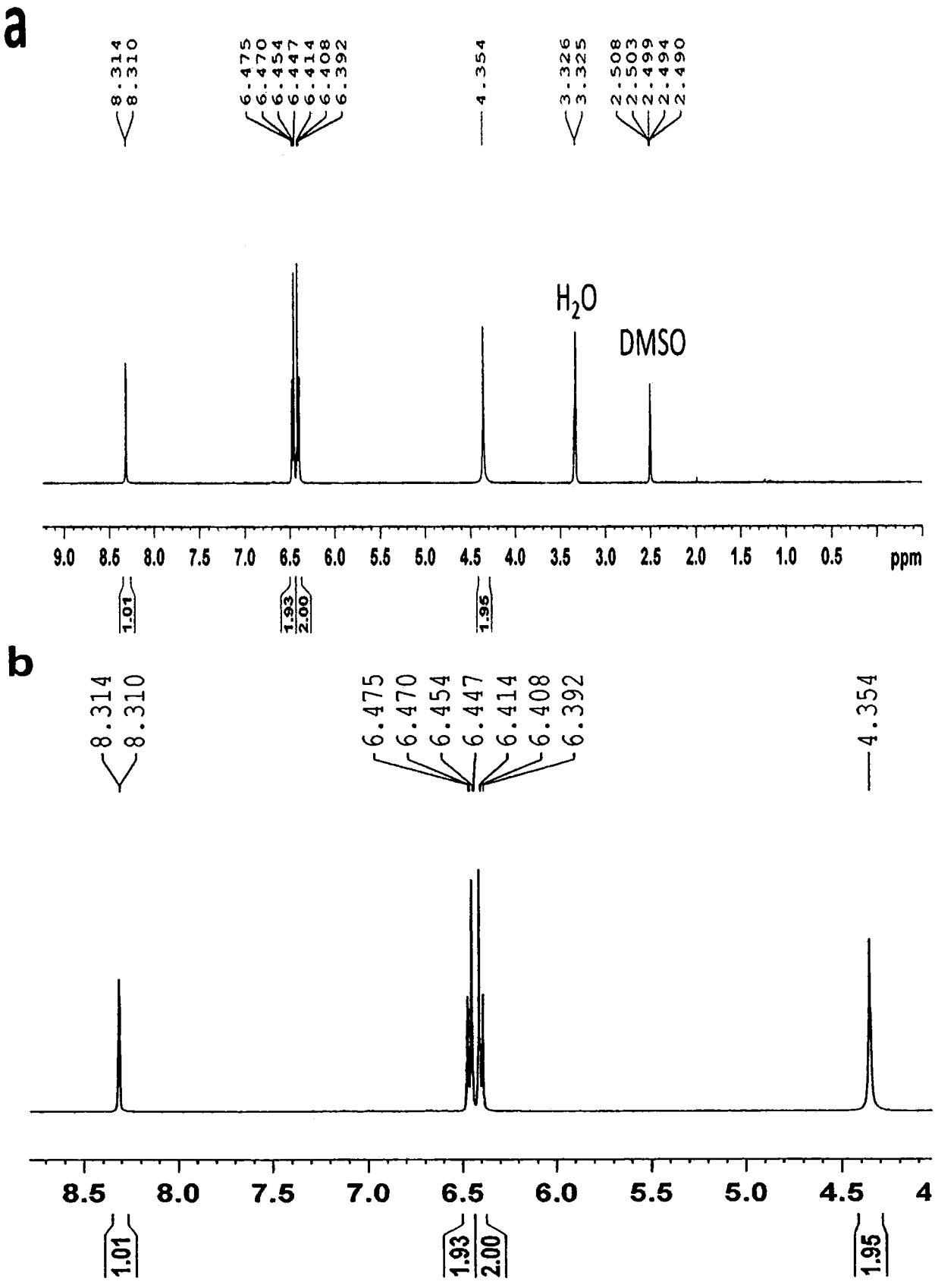

a
8.314
8.310
6.475
6.470
6.454
6.447
6.414
6.408
6.392
4.354
3.326
3.325
2.508
2.503
2.499
2.494
2.490
H2O
DMSO
9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 ppm
1.01
1.93
2.00
1.95
b
8.314
8.310
6.475
6.470
6.454
6.447
6.414
6.408
6.392
4.354
8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4
1.01
1.93
2.00
1.95

FIGURE 11

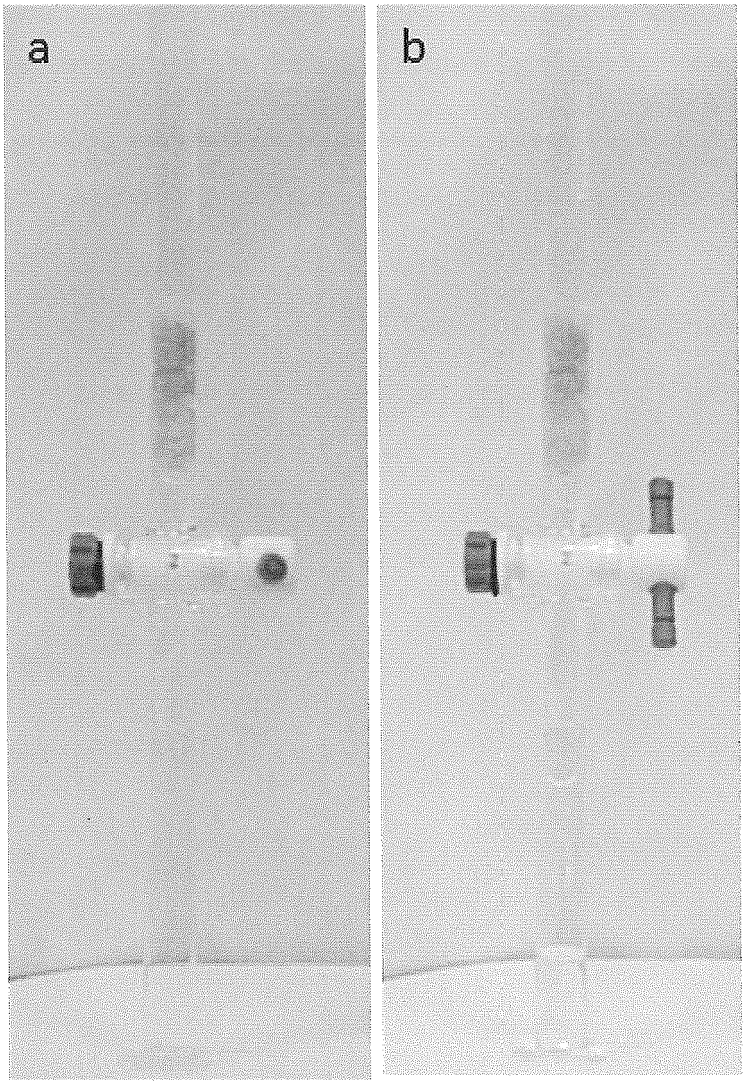


FIGURE 12

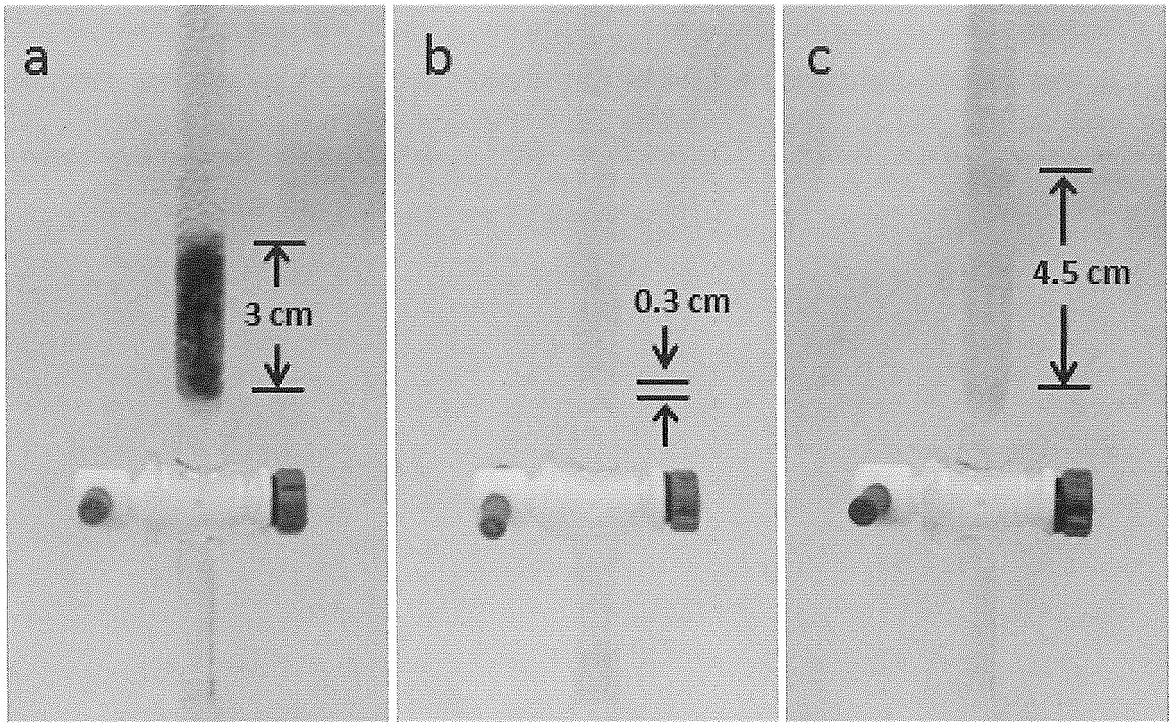


FIGURE 13

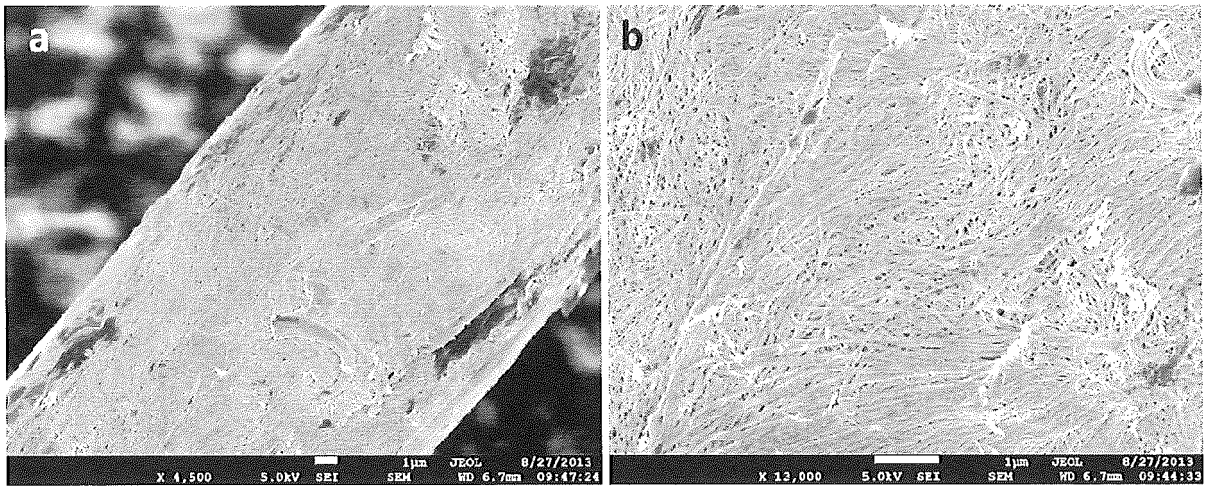

a
X 1,500 5.0kV SEI 1μm JEOL SEM 8/27/2013 WD 6.7mm 09:47:24
b
X 13,000 5.0kV SEI 1μm JEOL SEM 8/27/2013 WD 6.7mm 09:44:33

FIGURE 14

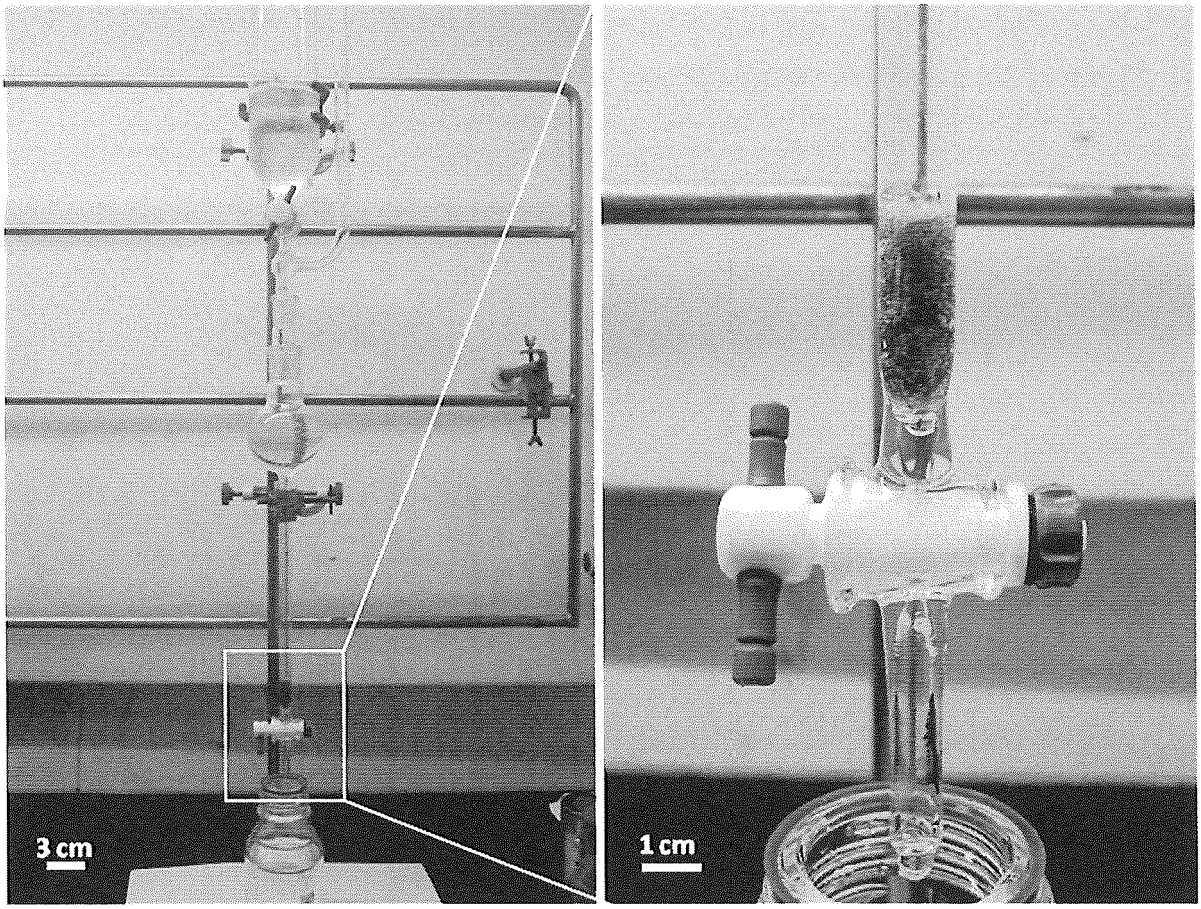


FIGURE 15

