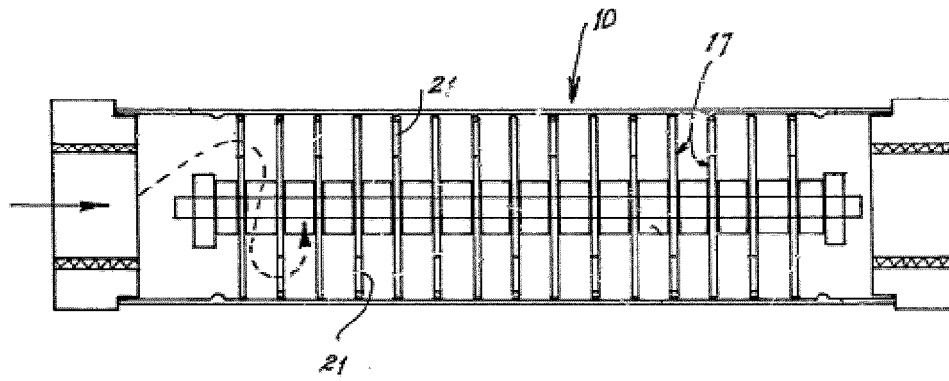


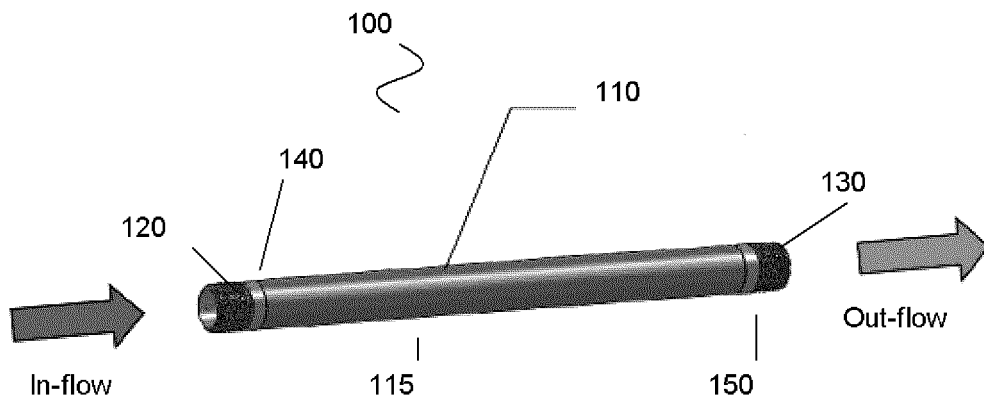


FIG. 3

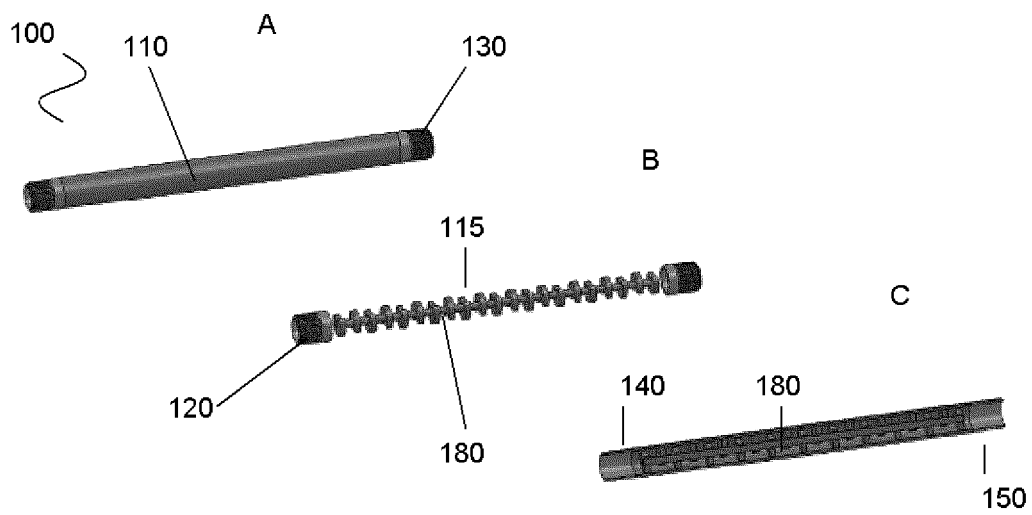


FIG. 4

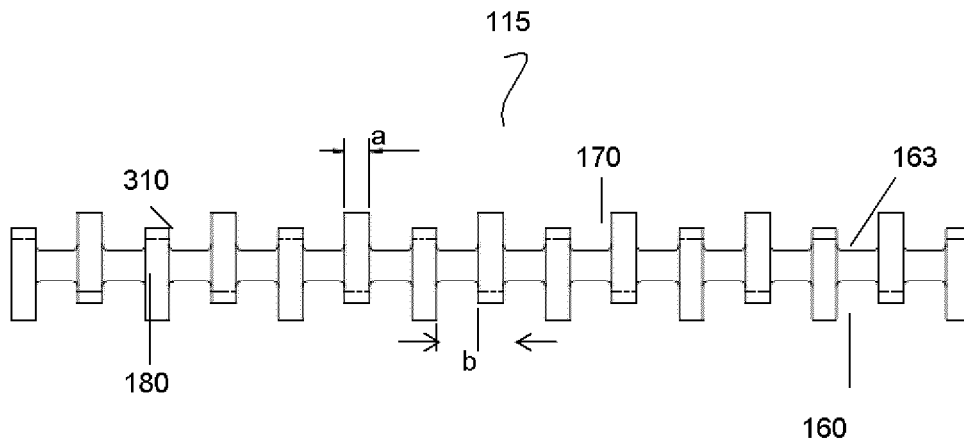


FIG. 5

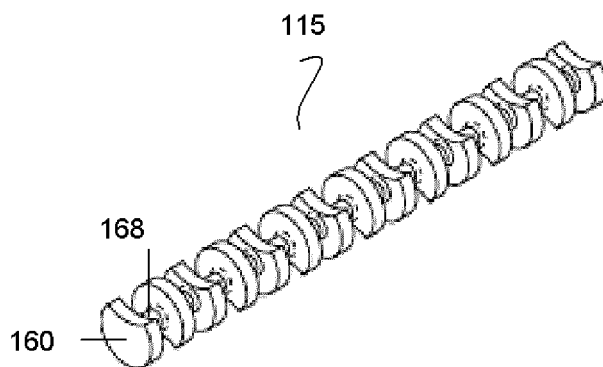


FIG. 6

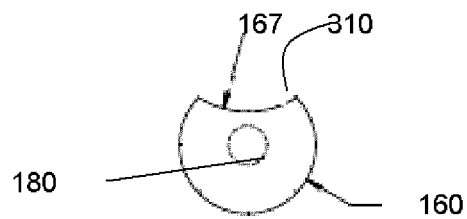


FIG. 7

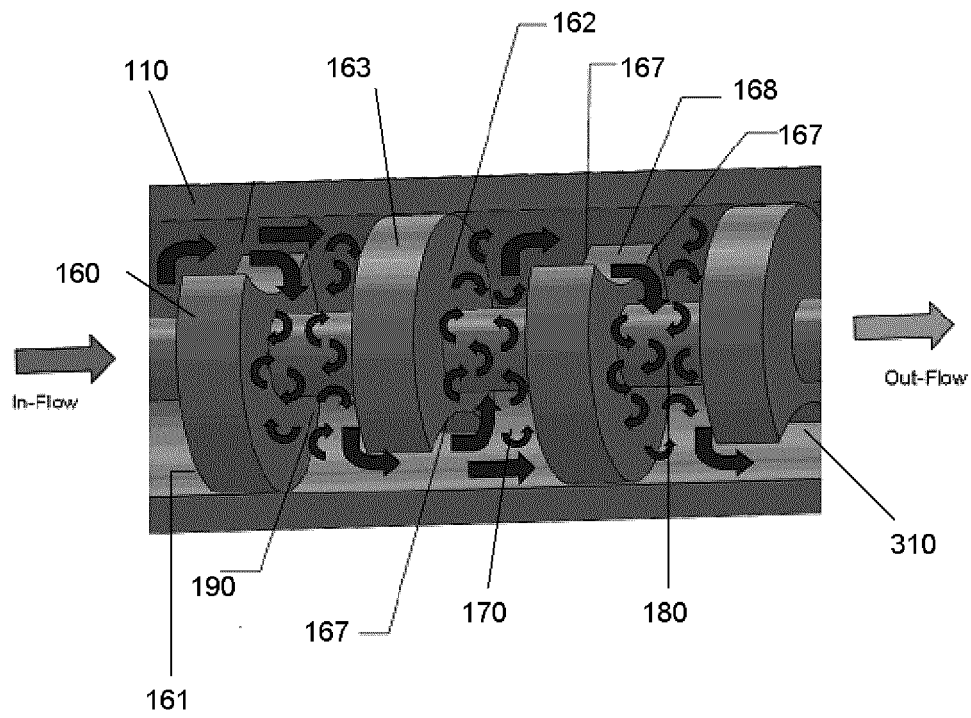


FIG. 8

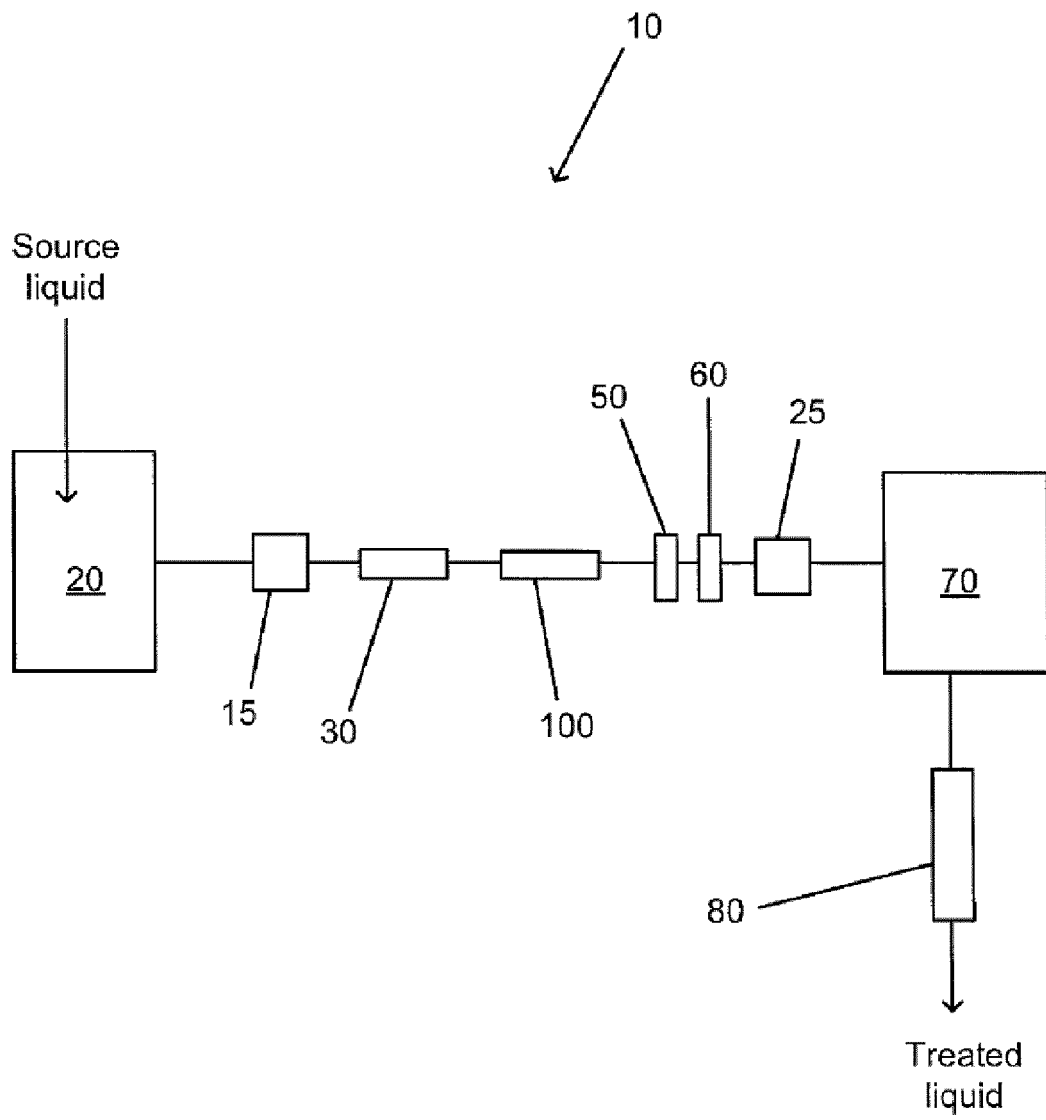


FIG. 9

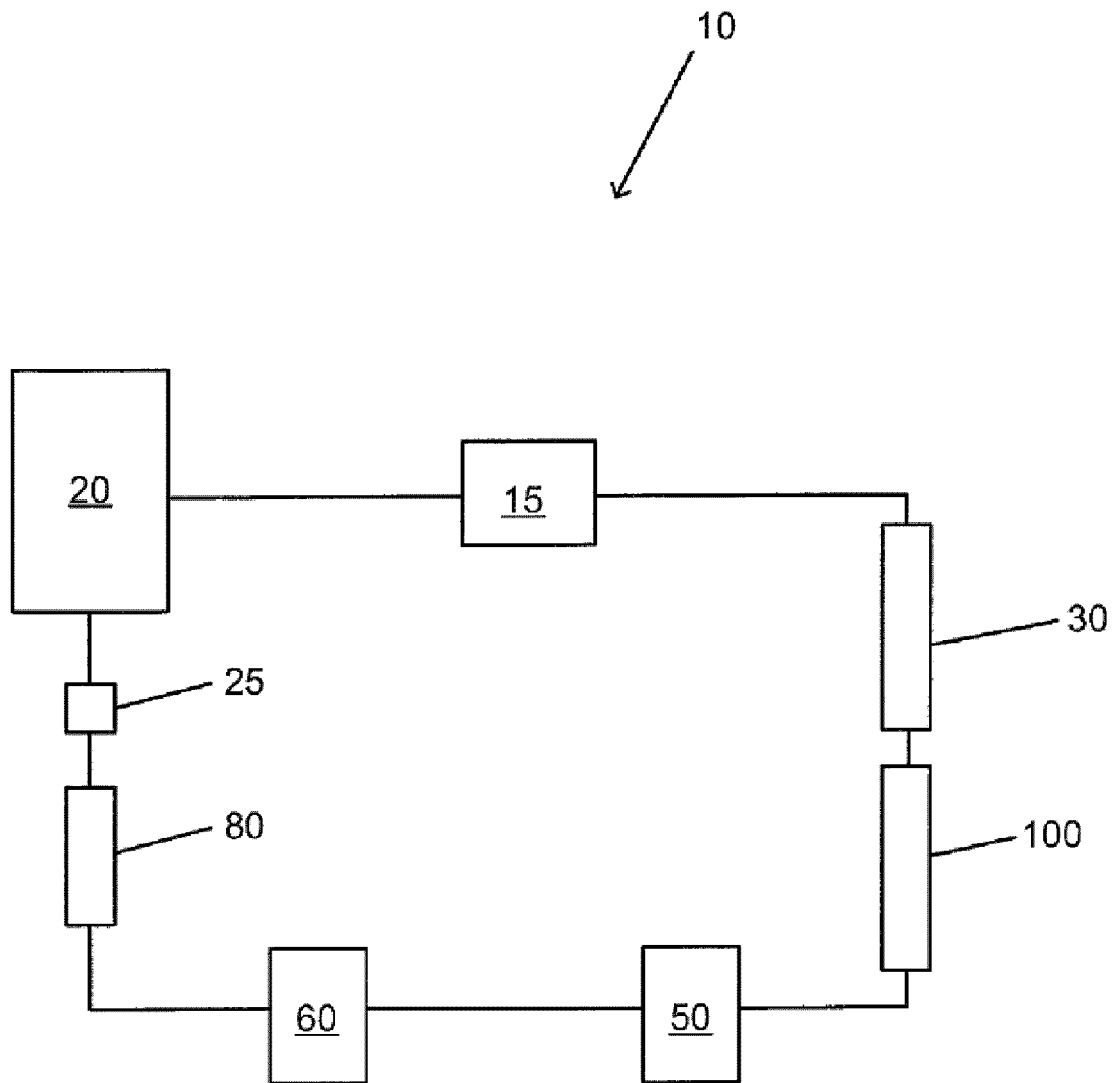
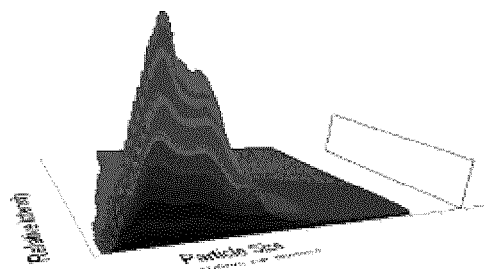
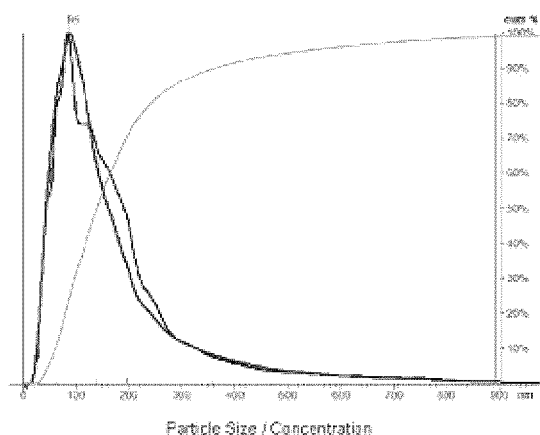


FIG. 10

Sample: Raw
 Date/Time of Capture: 5 March 2013 08:51
 Video File: RAW, Im12_405nm, CMOS, 10xobj, 90sec#2.avi analysis no: 002



Bin Centre (nm)	Concentration (E6 particles/ml)	Percentile Undersize (%)
10	0.012	0.008
30	3.105	2.018
50	10.366	8.732
70	16.011	18.102
80	16.017	30.770
110	14.624	40.177
130	14.083	48.297
150	12.560	57.432
170	11.350	64.782
190	9.891	71.186
210	7.489	76.036
230	5.418	79.547
250	4.474	82.445
270	3.289	84.574
290	2.586	86.248
310	2.279	87.725
330	1.931	88.976
350	1.695	90.008
370	1.377	90.900
390	1.210	91.684
410	1.056	92.368
430	0.918	92.963
450	0.795	93.477
470	0.706	93.934
490	0.655	94.356
510	0.619	94.758
530	0.591	95.135
550	0.541	95.486
570	0.506	95.813
590	0.478	96.123
610	0.458	96.420
630	0.441	96.705
650	0.422	96.978
670	0.398	97.236
690	0.374	97.478

Bin Centre (nm)	Concentration (E6 particles/ml)	Percentile Undersize (%)
710	0.352	97.706
730	0.333	97.922
750	0.314	98.125
770	0.291	98.314
790	0.263	98.484
810	0.231	98.633
830	0.198	98.761
850	0.168	98.870
870	0.142	98.961
890	0.121	99.040
910	0.105	99.106
930	0.093	99.168
950	0.084	99.223
970	0.077	99.272
990	0.070	99.318
1000-2000	1.054	100.000

Results

Mean: 190 nm
 Mode: 85 nm
 SD: 173 nm
 D10: 62 nm
 D50: 141 nm
 D90: 360 nm
 User Lines: 892 nm, 892 nm
 Concentration: 1.54 E6 particles/ml
 Completed Tracks: 4185

Measurement Conditions

Temperature: 19.80 °C
 Viscosity: 1.80 cP
 Frames Per Second: 25.00
 Measurement Time: 80 of 90 s
 Drift Velocity: 115 nm/s
 Camera Shutter: 25 ms

Analysis Conditions

Blur: Auto
 Detection Threshold: 3 Multi
 Min Track Length: Auto
 Min Expected Size: Auto

FIG. 11

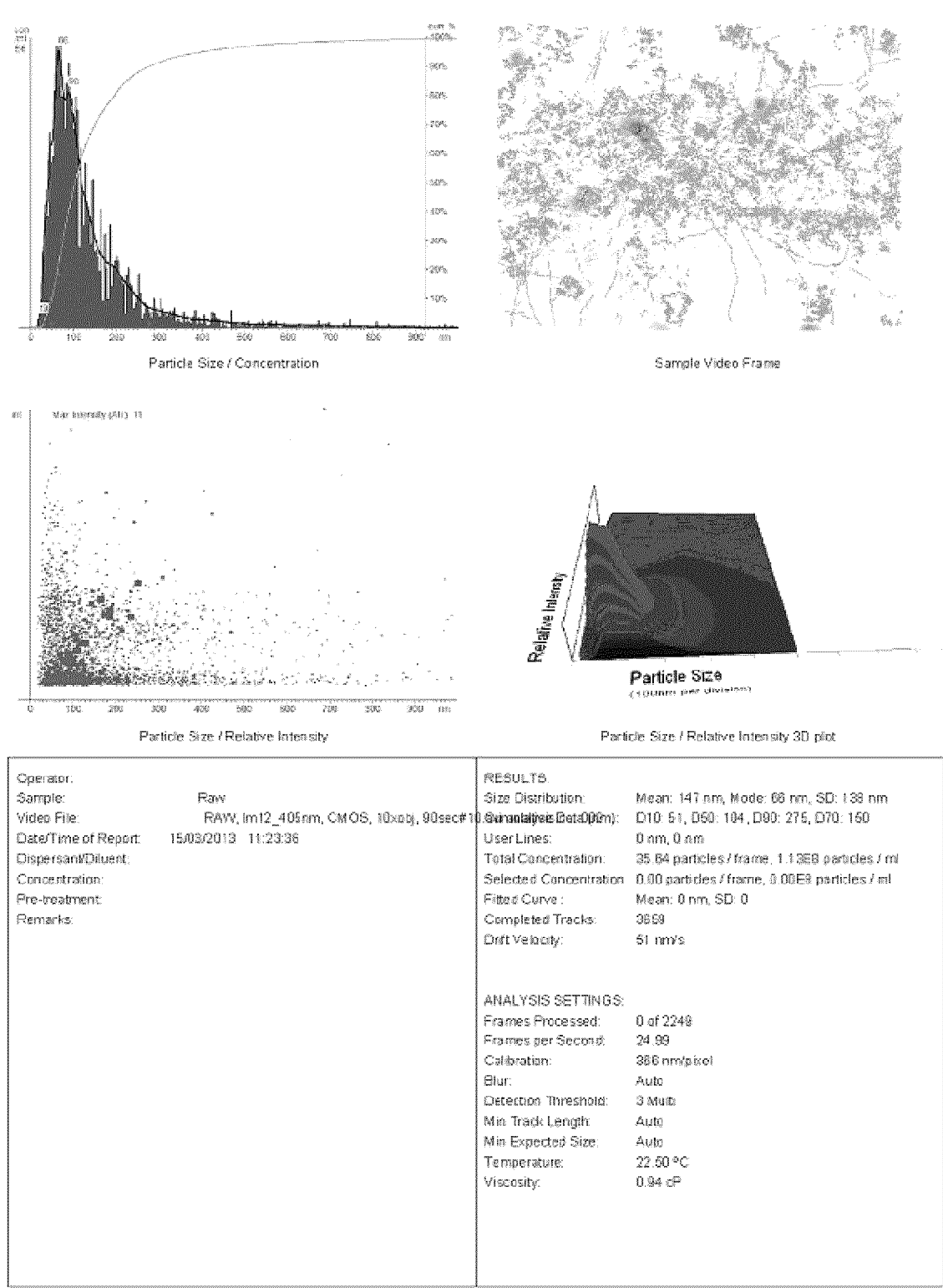
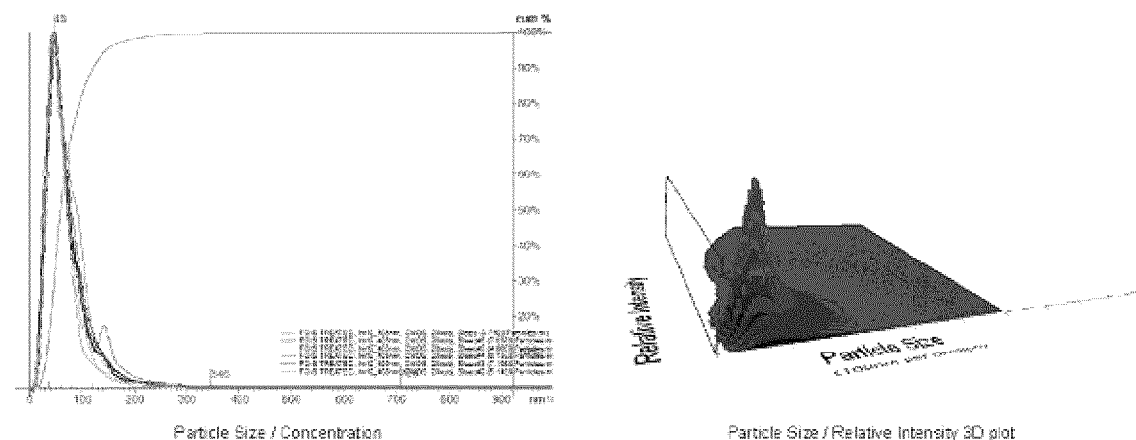


FIG. 12

Sample: Treated
 Date/Time of Capture: 5 March 2013 10:08
 Video File: TREATED, Im12_485nm, CMOS, 20xobj, 90sec#2.avi analysis no. 002



Bin Centre (nm)	Concentration (E6 particles/ml)	Percentile Undersize (%)
10	2.472	0.480
30	81.836	16.349
50	188.960	48.802
70	107.692	69.734
90	63.255	82.030
110	38.967	89.604
130	22.436	93.965
150	12.678	96.429
170	5.548	97.509
190	3.223	98.154
210	2.688	98.672
230	2.345	99.128
250	1.655	99.430
270	0.897	99.605
290	0.436	99.689
310	0.294	99.747
330	0.334	99.812
350	0.357	99.881
370	0.270	99.934
390	0.125	99.959
410	0.034	99.964
430	0.005	99.965
450	0.000	99.966
470	0.000	99.968
490	0.000	99.968
510	0.000	99.968
530	0.000	99.968
550	0.000	99.968
570	0.000	99.968
590	0.001	99.968
610	0.003	99.967
630	0.008	99.968
650	0.014	99.971
670	0.021	99.975
690	0.029	99.980

Bin Centre (nm)	Concentration (E6 particles/ml)	Percentile Undersize (%)
710	0.030	99.986
730	0.027	99.991
750	0.020	99.995
770	0.013	99.998
790	0.007	99.999
810	0.003	100.000
830	0.001	100.000
850	0.000	100.000
870	0.000	100.000
890	0.000	100.000
910	0.000	100.000
930	0.000	100.000
950	0.000	100.000
970	0.000	100.000
990	0.000	100.000
1000-2000	0.000	100.000

Results

Mean: 72 nm
 Mode: 48 nm
 SD: 42 nm
 D10: 36 nm
 D50: 60 nm
 D90: 121 nm
 User Lines: 0 nm, 0 nm
 Concentration: 5.14 E6 particles/ml
 Completed Tracks: 4248

Measurement Conditions

Temperature: 23.60 °C
 Viscosity: 0.92 cP
 Frames Per Second: 25.00
 Measurement Time: 90 of 90 s
 Drift Velocity: 132 nm/s
 Camera Shutter: 30 ms

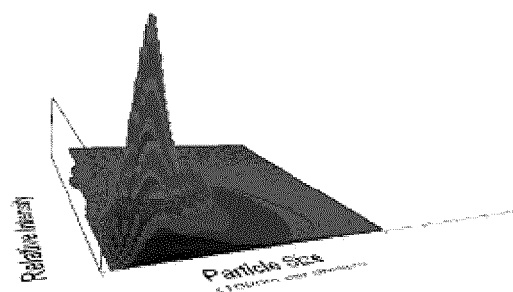
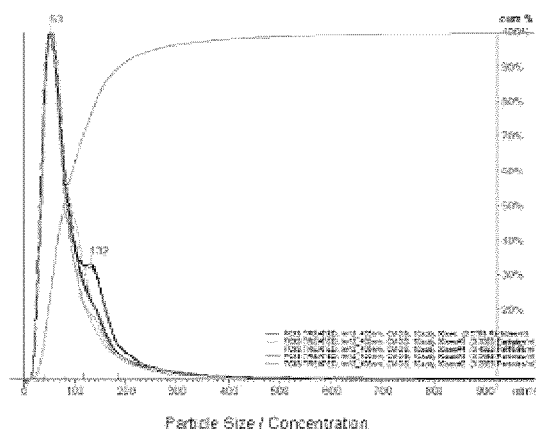
Analysis Conditions

Blur: Auto
 Detection Threshold: 5 Multi
 Min Track Length: Auto
 Min Expected Size: Auto

FIG. 13

10/13

Sample: Treated
 Date/Time of Capture: 5 March 2013 09:57
 Video File: TREATED_Im13_405nm_CMOS_10xobj_90sec.avi analysis no: 003



Bin Centre (nm)	Concentration (E6 particles/ml)	Percentile Undersize (%)
10	0.330	0.091
30	29.244	6.175
50	61.600	30.731
70	69.014	49.808
90	43.664	61.878
110	31.565	70.604
130	29.159	76.664
150	23.643	85.256
170	14.320	89.213
190	8.443	91.547
210	6.101	93.233
230	4.109	94.389
250	3.047	95.212
270	2.545	95.915
290	2.005	96.469
310	1.503	96.894
330	1.196	97.215
350	1.032	97.500
370	0.901	97.750
390	0.792	97.969
410	0.715	98.166
430	0.652	98.347
450	0.595	98.508
470	0.512	98.650
490	0.447	98.773
510	0.407	98.896
530	0.383	98.992
550	0.359	99.091
570	0.322	99.180
590	0.281	99.257
610	0.244	99.325
630	0.220	99.396
650	0.205	99.442
670	0.194	99.496
690	0.182	99.546

Bin Centre (nm)	Concentration (E6 particles/ml)	Percentile Undersize (%)
710	0.167	99.592
730	0.149	99.633
750	0.132	99.670
770	0.118	99.703
790	0.109	99.732
810	0.101	99.760
830	0.094	99.786
850	0.087	99.810
870	0.077	99.831
890	0.065	99.849
910	0.052	99.864
930	0.041	99.875
950	0.032	99.884
970	0.027	99.892
990	0.023	99.899
1000-2000	0.369	100.000

Results

Mean: 108 nm
 Mode: 53 nm
 SD: 97 nm
 D10: 41 nm
 D50: 60 nm
 D90: 185 nm
 User Lines: 0 nm, 0 nm
 Concentration: 3.62 E6 particles/ml
 Completed Tracks: 11895

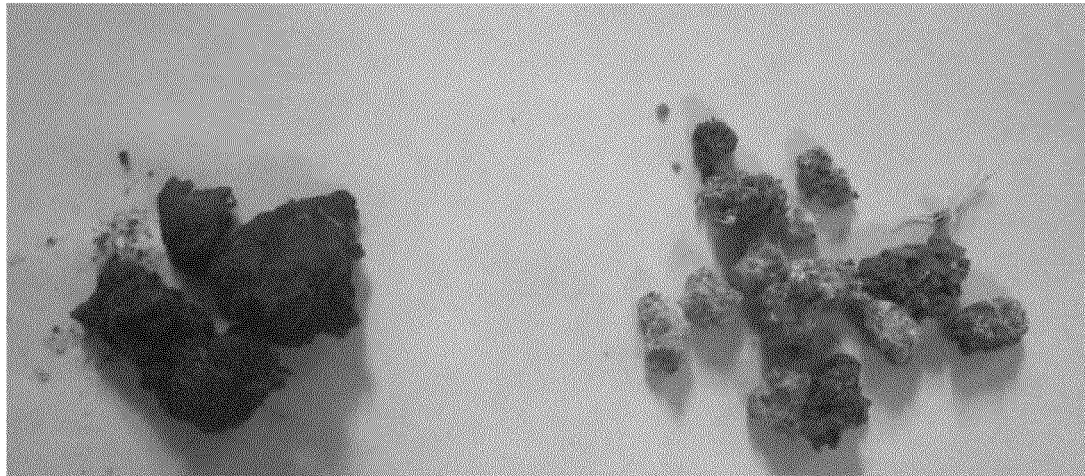
Measurement Conditions

Temperature: 23.10 °C
 Viscosity: 0.93 cP
 Frames Per Second: 24.81
 Measurement Time: 0 of 90 s
 Drift Velocity: 262 nm/s
 Camera Shutter: 30 ms

Analysis Conditions

Blur: Auto
 Detection Threshold: 4 Mult
 Min Track Length: Auto
 Min Expected Size: Auto

FIG. 14



Control Water

Nanobubble-treated Water

FIG. 15

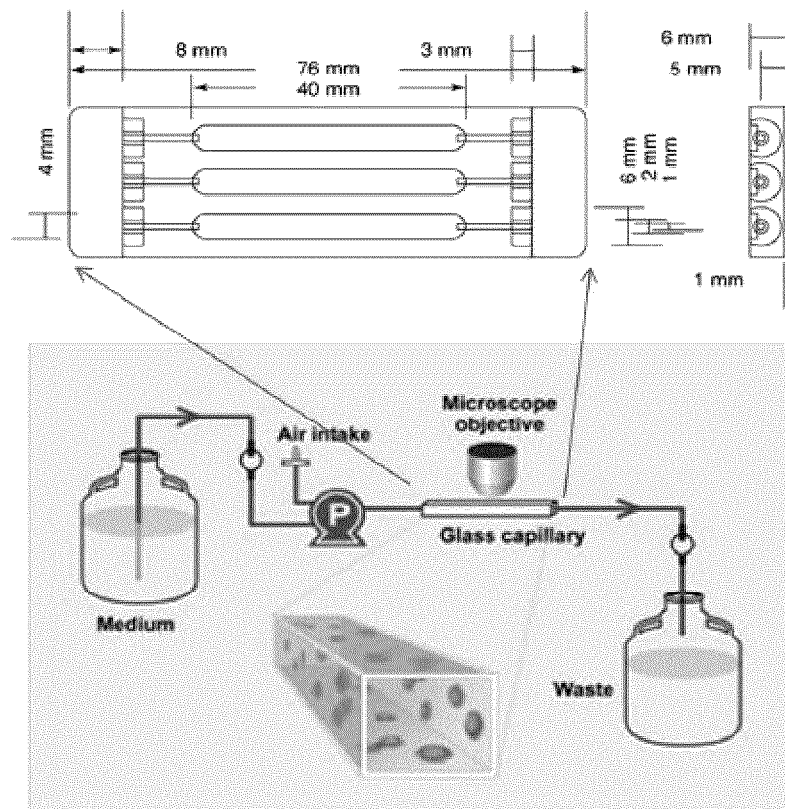


FIG. 16

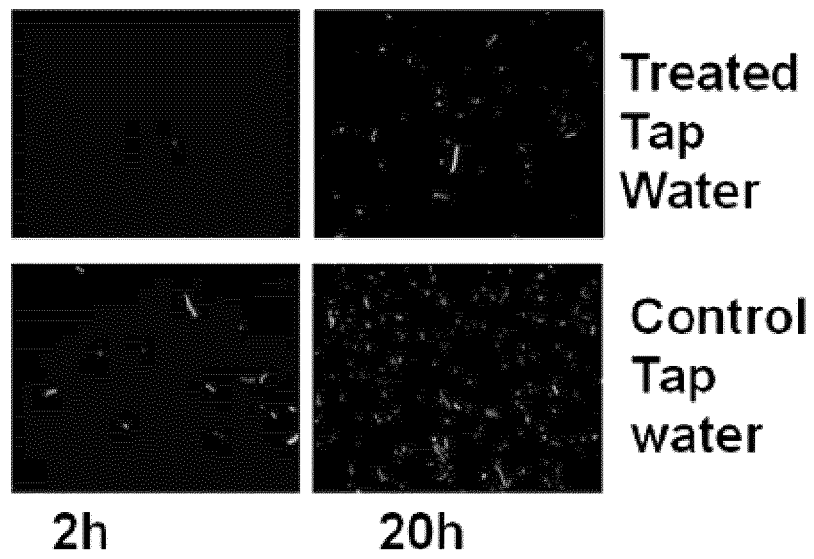


FIG. 17

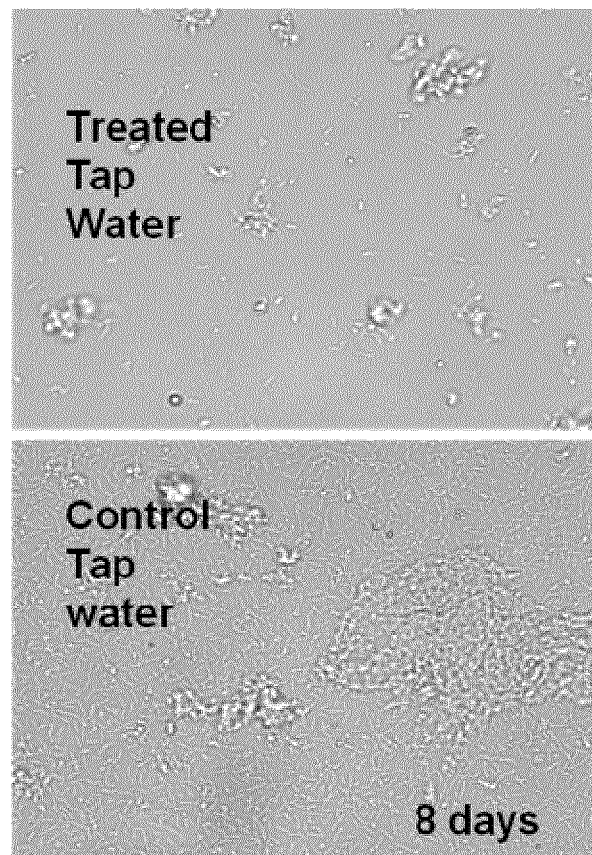


FIG. 18

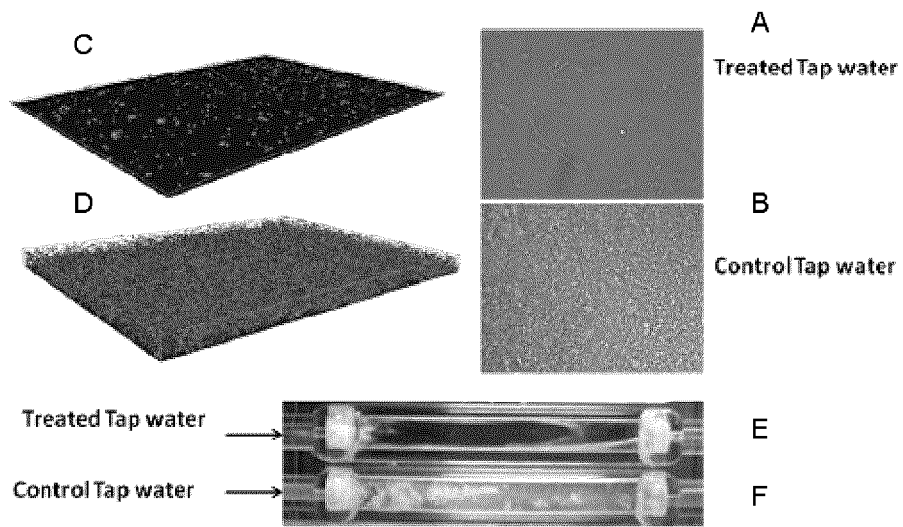


FIG. 19