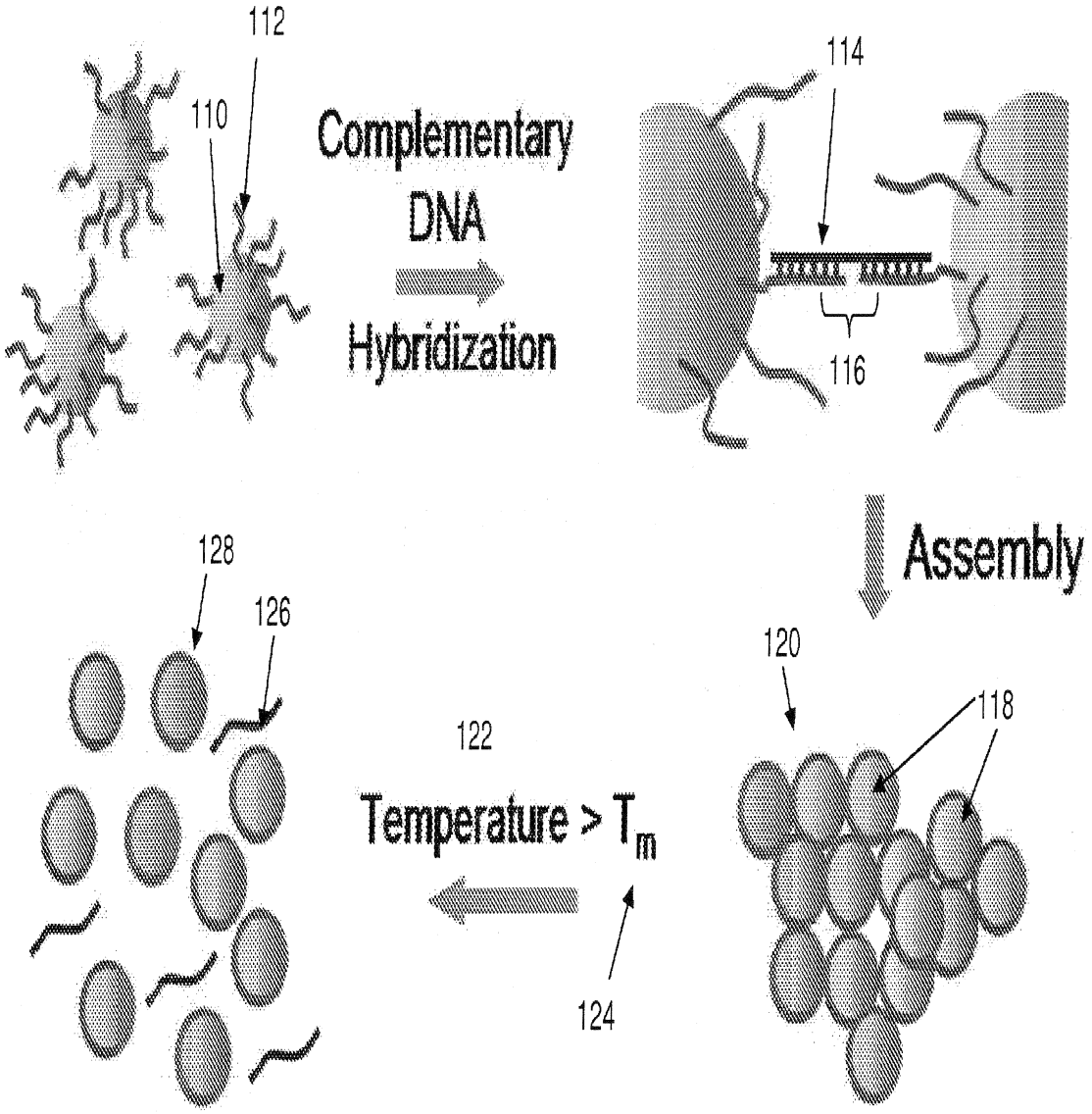

112
110
Complementary
DNA
Hybridization
114
116
Assembly
128
126
122
Temperature > T_m
124
120
118

Figure 1

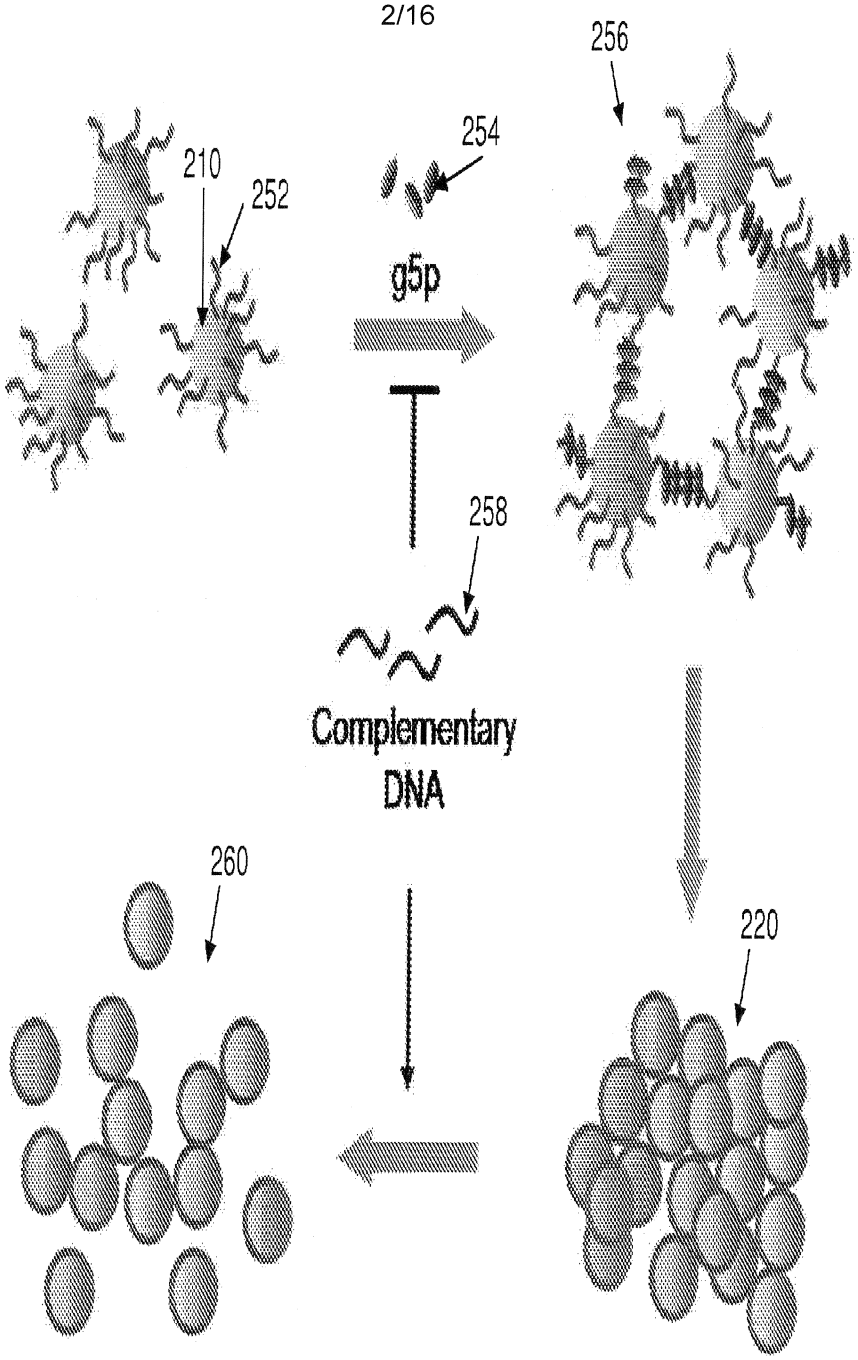


Figure 2

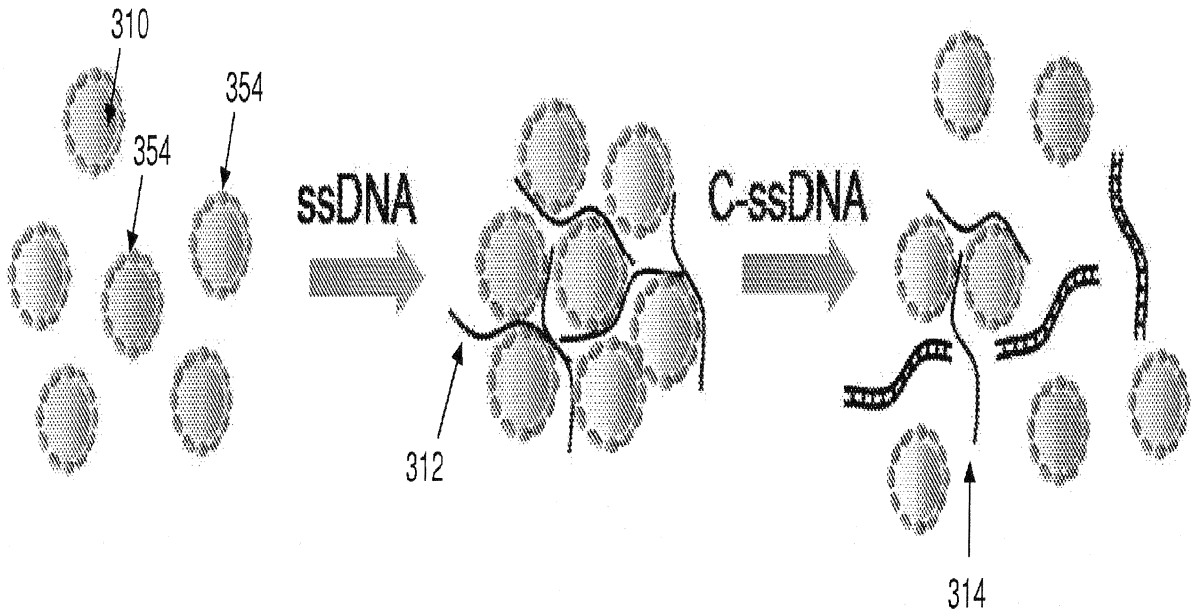


Figure 3

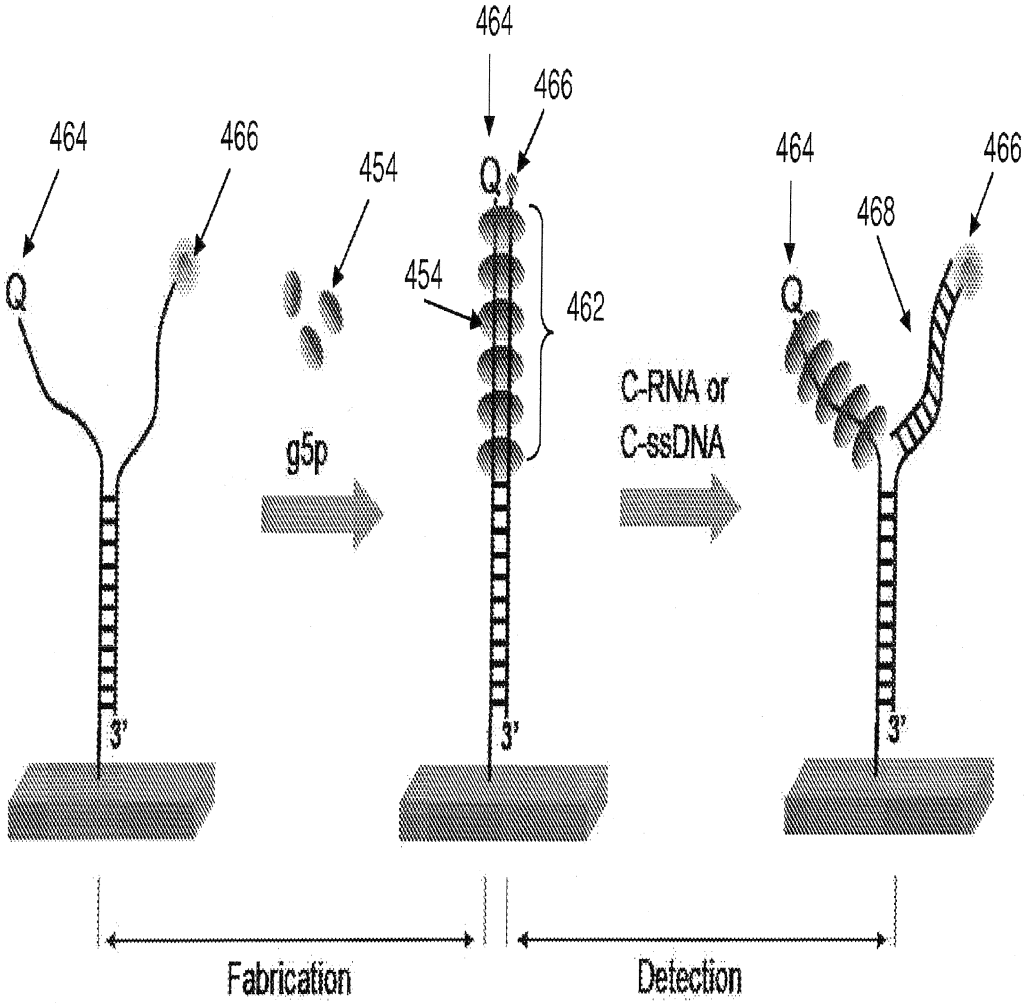

464
466
Q
454
462
g5p
C-RNA or
C-ssDNA
468
3'
Fabrication
Detection

Figure 4

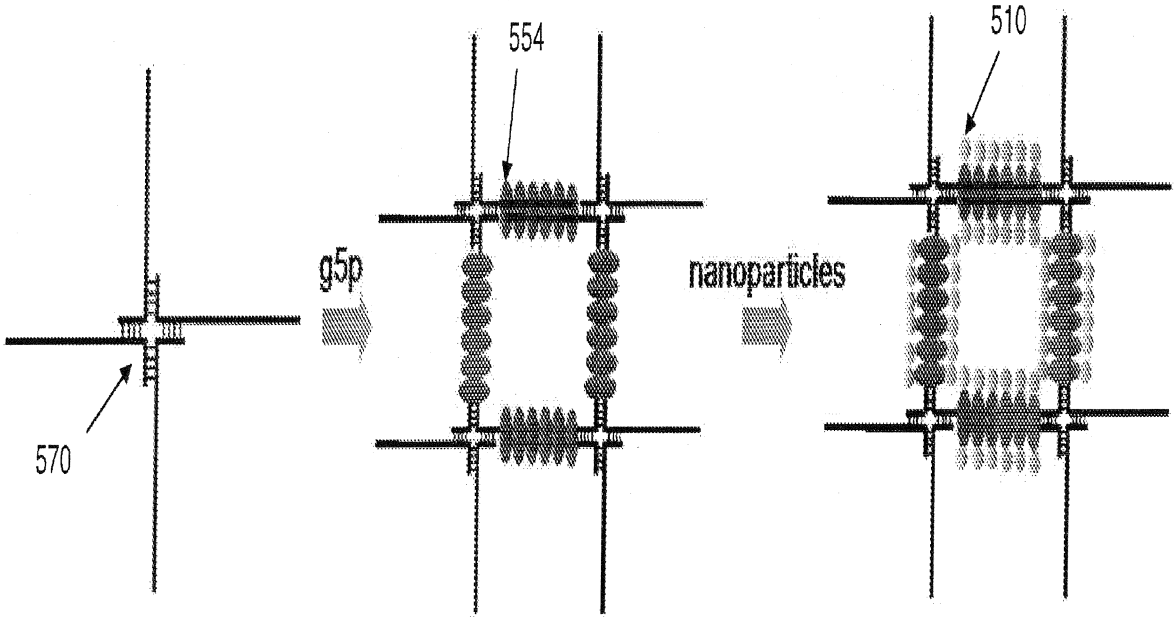


Figure 5

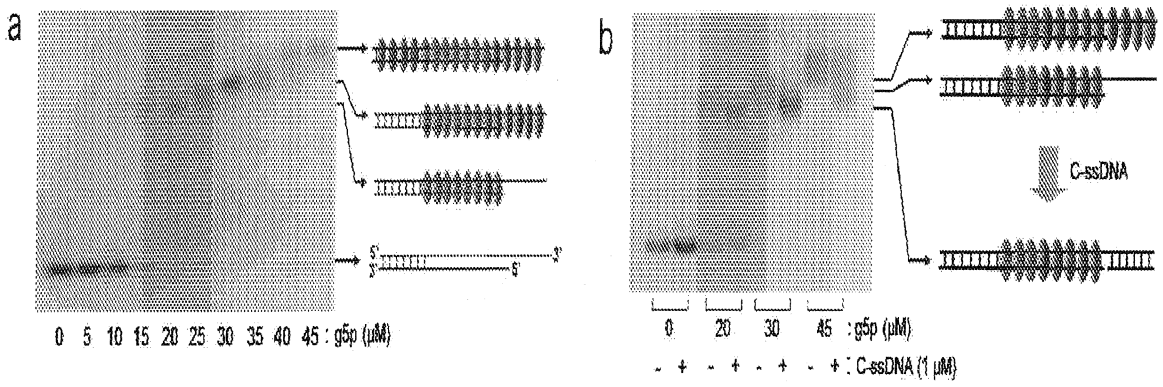

a
0 5 10 15 20 25 30 35 40 45 : g5p (μM)
b
C-ssDNA
0 20 30 45 : g5p (μM)
- + - + - + - + : C-ssDNA (1 μM)

Figure 6

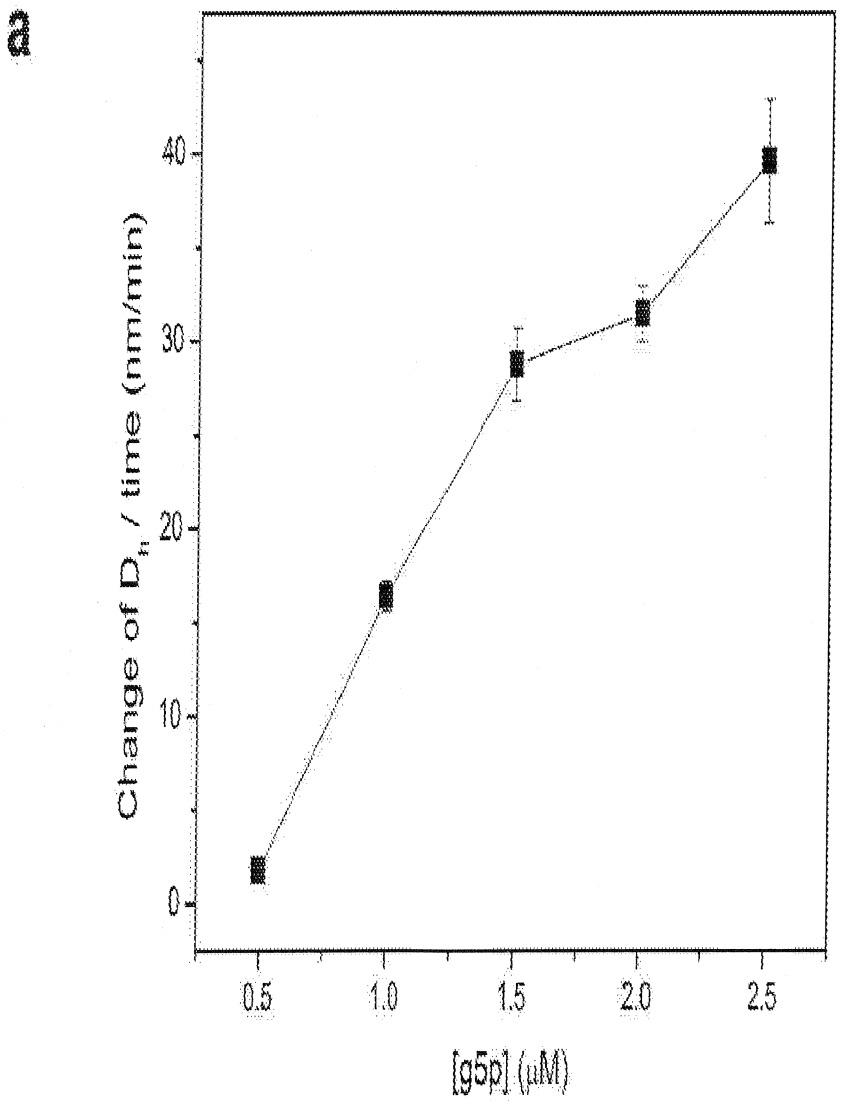


Figure 7a

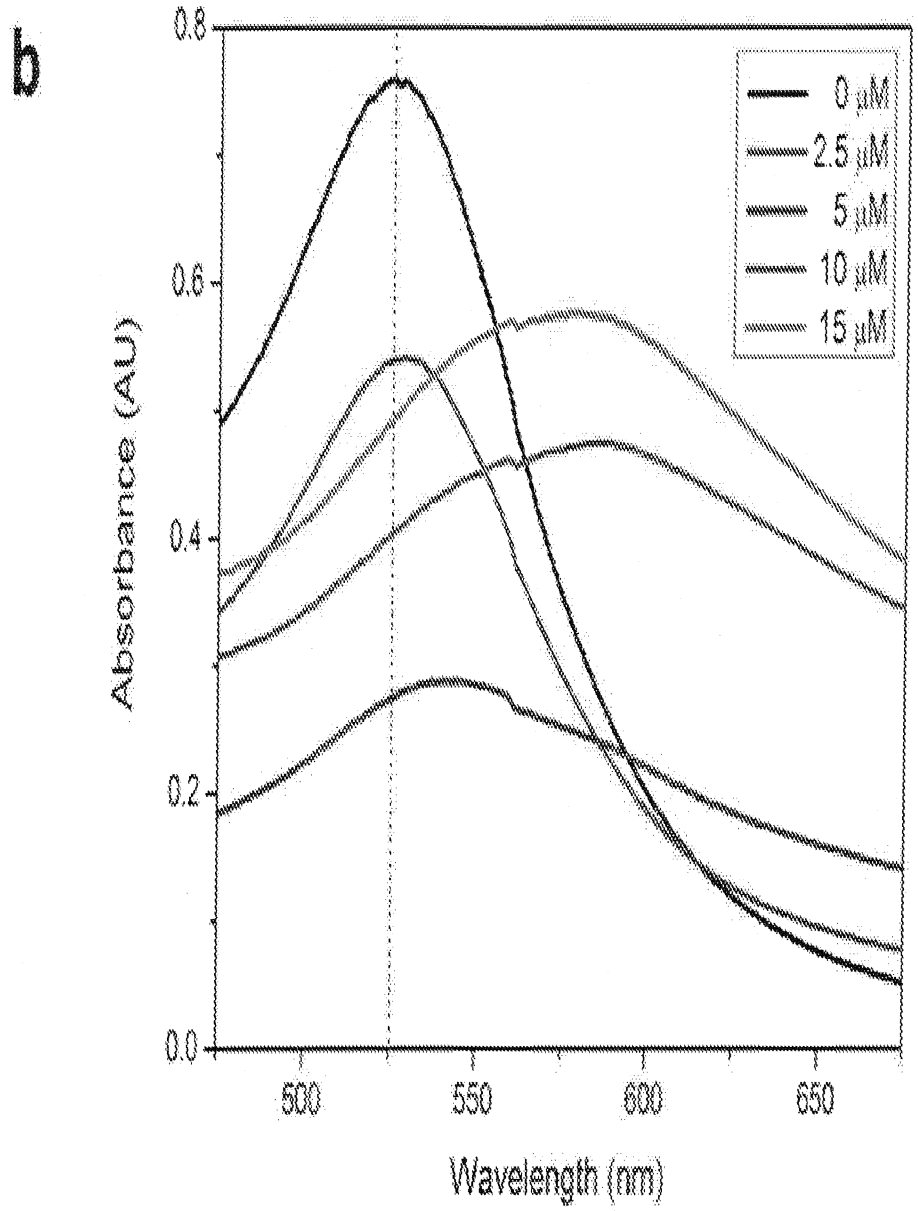

b
0.8
0.6
0.4
0.2
0.0
Absorbance (AU)
0 μM
2.5 μM
5 μM
10 μM
15 μM
500
550
600
650
Wavelength (nm)

Figure 7b

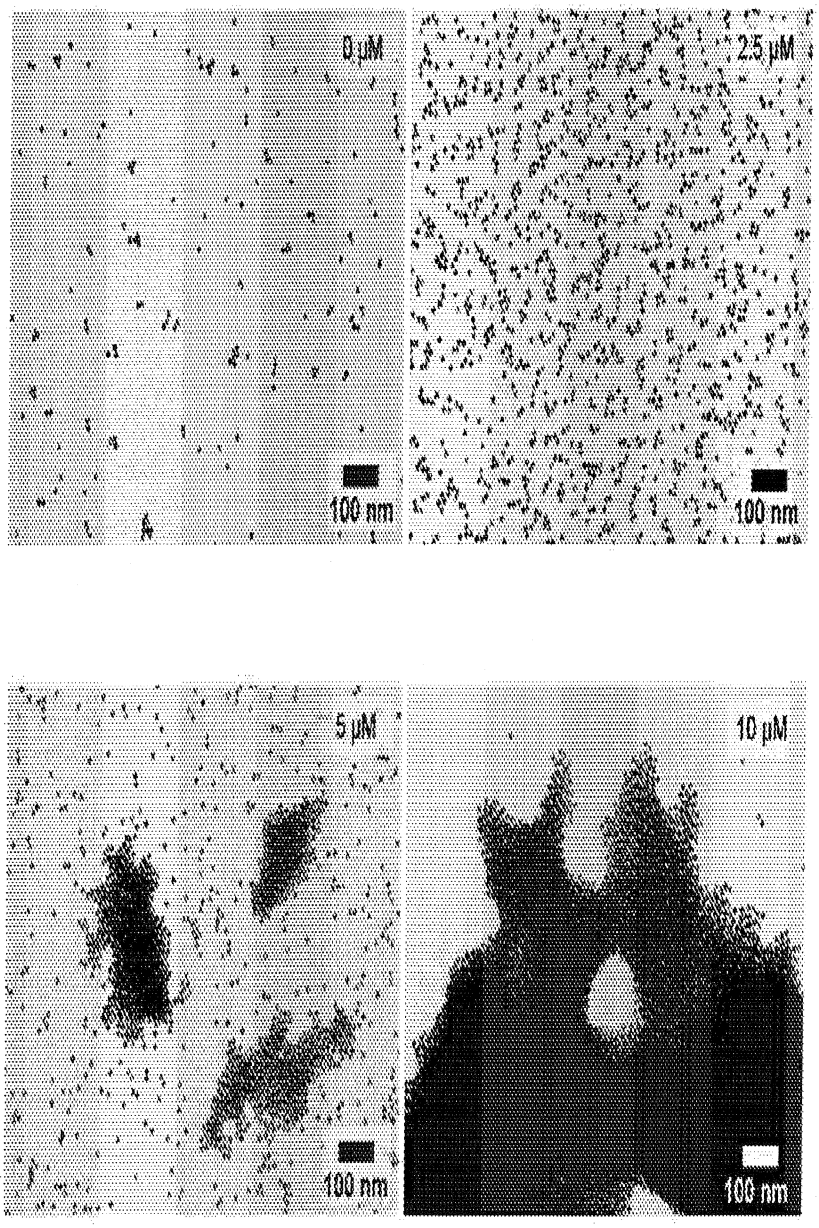


Figure 7c

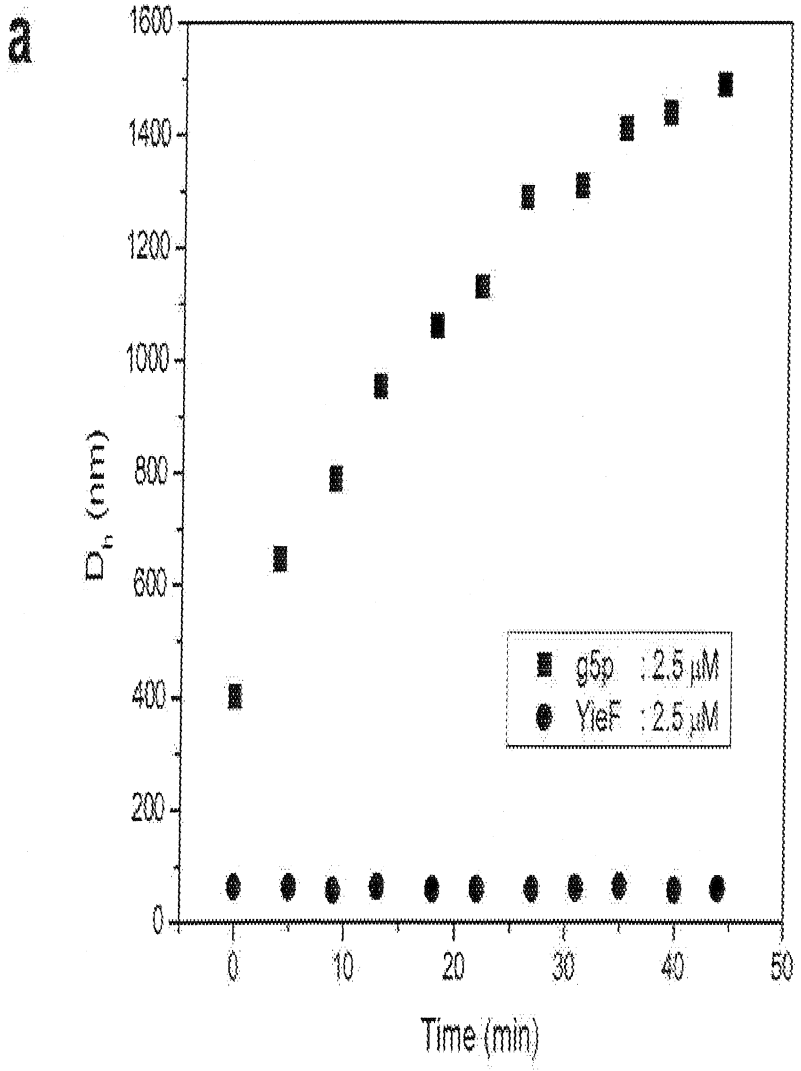

a
1600
1400
1200
1000
800
600
400
200
0
D_c (nm)
0
10
20
30
40
50
Time (min)
g5p : 2.5 μM
YieF : 2.5 μM

Figure 8a

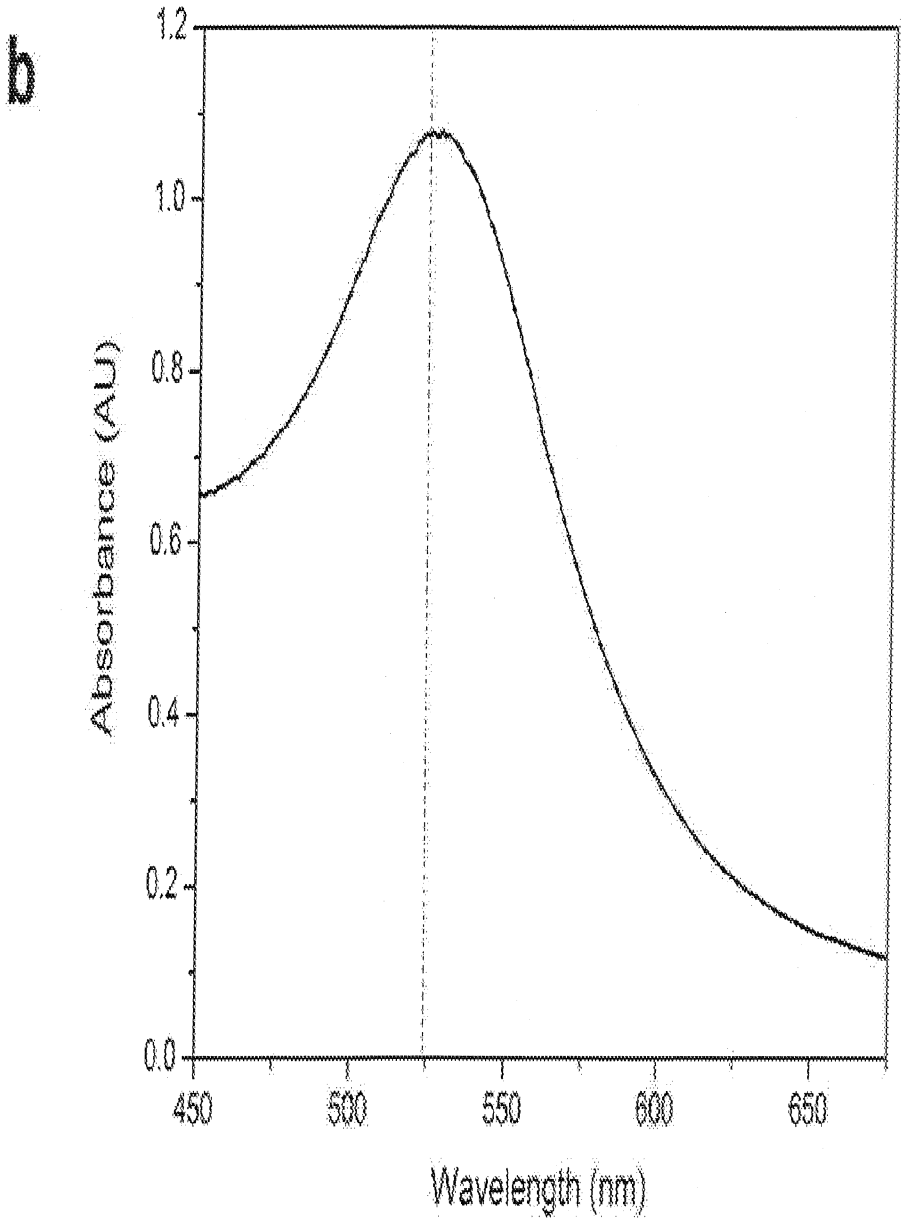

b
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Absorbance (AU)
450
500
550
600
650
Wavelength (nm)

Figure 8b

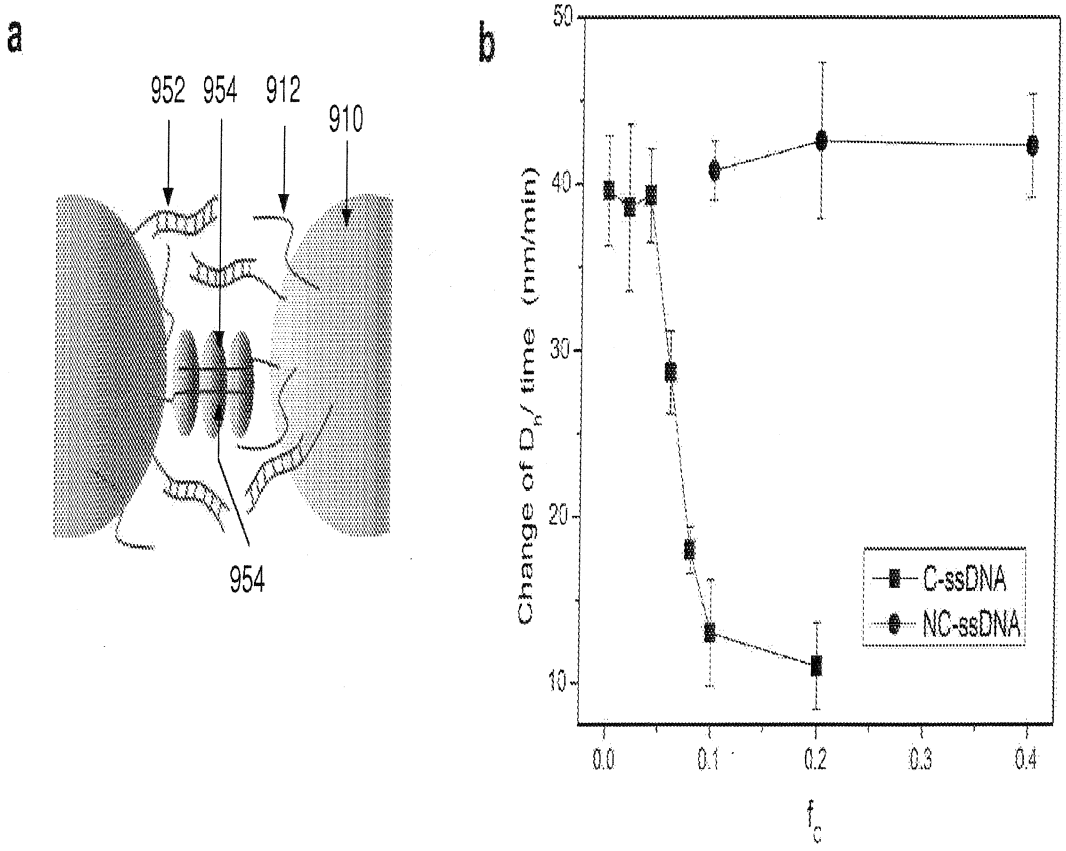

a
952
954
912
910
954
b
Change of D_h / time (nm/min)
50
40
30
20
10
0.0
0.1
0.2
0.3
0.4
f_c
C-ssDNA
NC-ssDNA

Figure 9

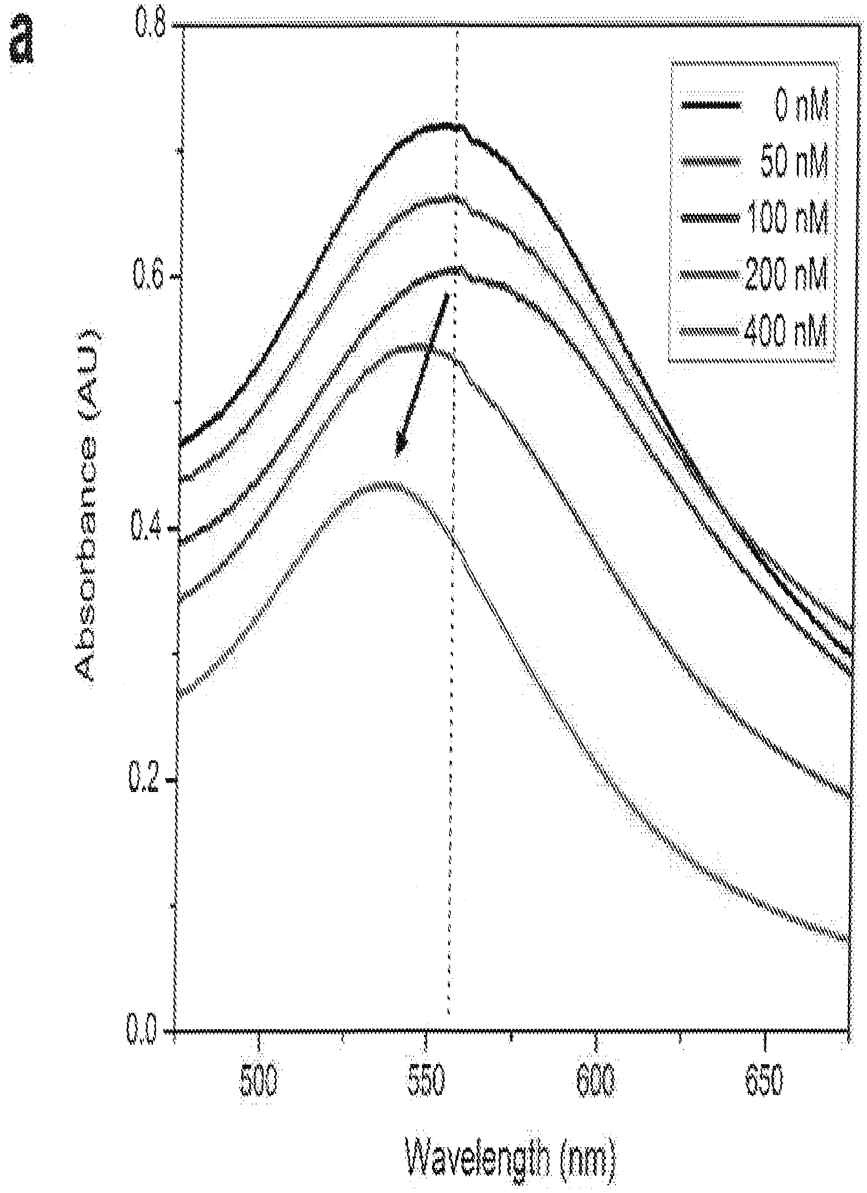

a
0.8
0.6
0.4
0.2
0.0
Absorbance (AU)
0 nM
50 nM
100 nM
200 nM
400 nM
500
550
600
650
Wavelength (nm)

Figure 10a

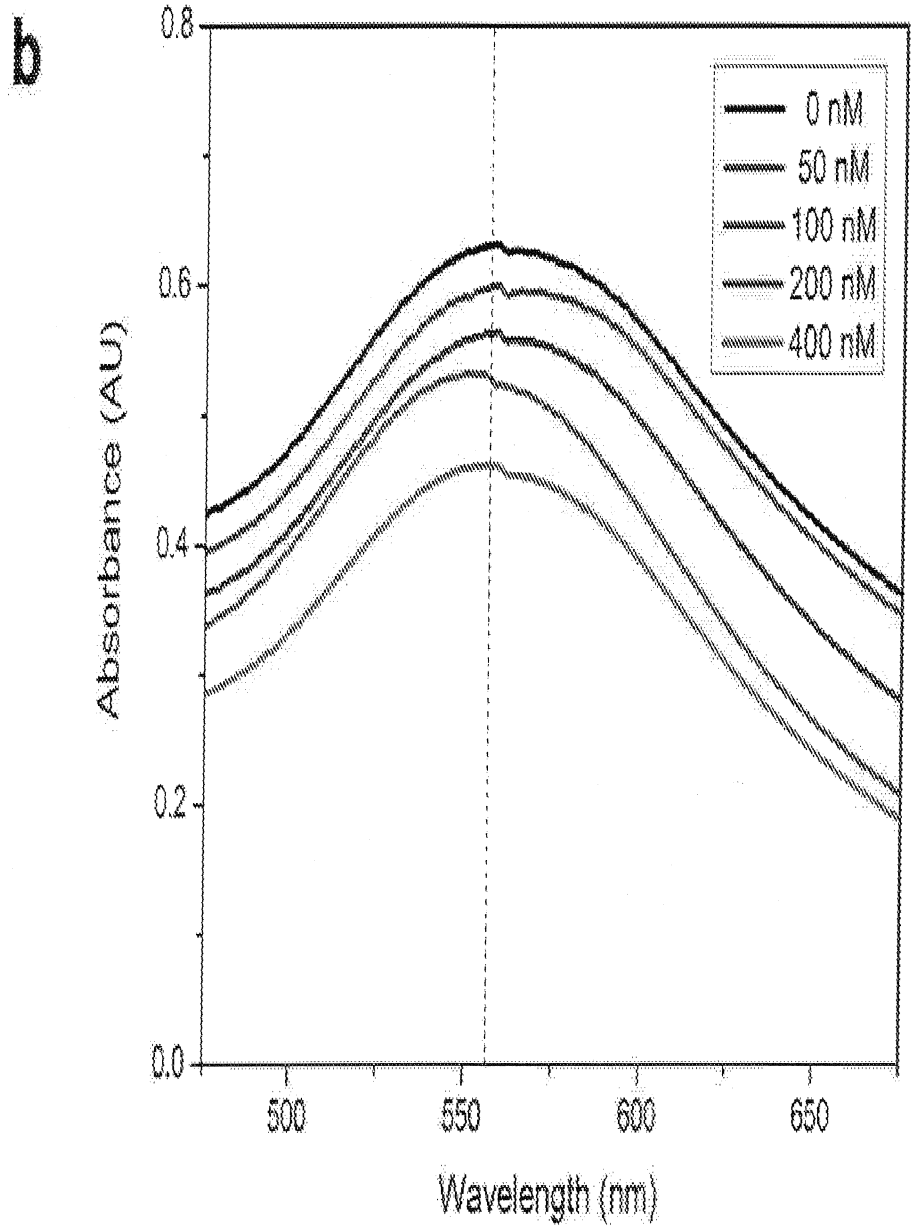

b
0.8
0.6
0.4
0.2
0.0
Absorbance (AU)
0 nM
50 nM
100 nM
200 nM
400 nM
500
550
600
650
Wavelength (nm)

Figure 10b

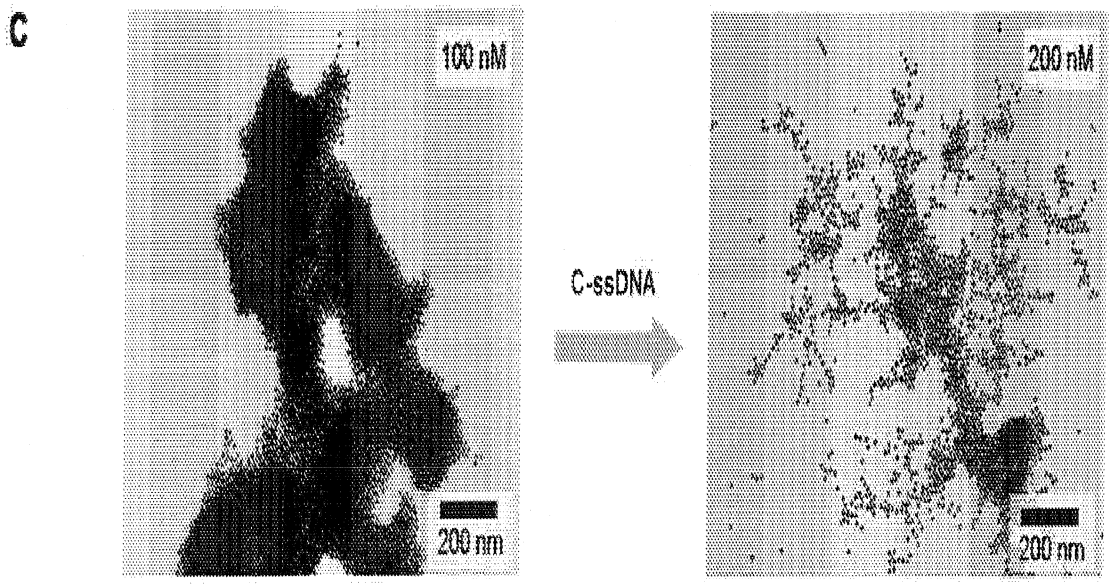


Figure 10c

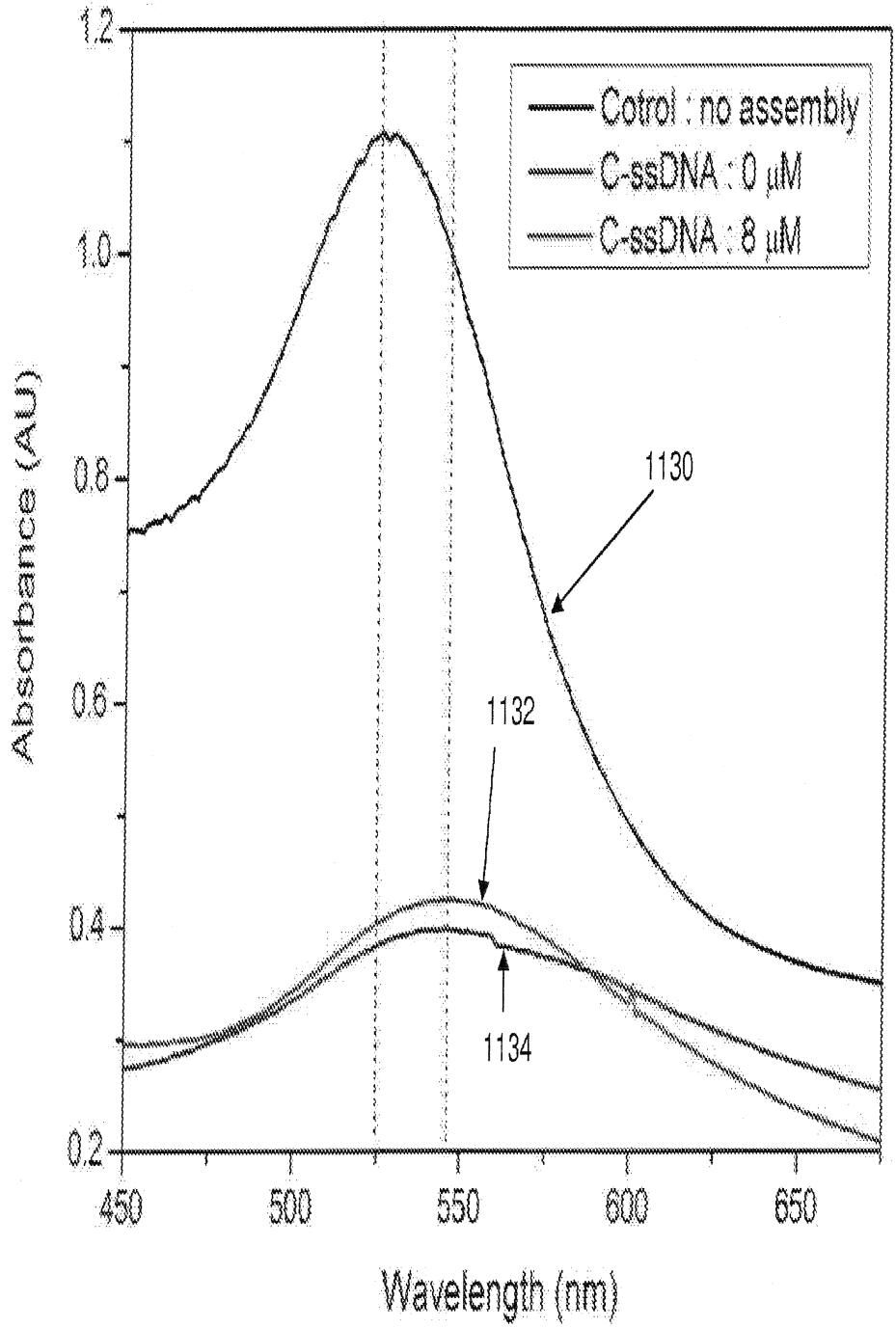

Cotrol : no assembly
C-ssDNA : 0 μM
C-ssDNA : 8 μM
1130
1132
1134
Absorbance (AU)
Wavelength (nm)
1.2
1.0
0.8
0.6
0.4
0.2
450
500
550
600
650

Figure 11

SEQUENCE LISTING

<110> Brookhaven Science Associates

<120> CONTROLLABLE ASSEMBLY AND DISASSEMBLY OF NANOPARTICLE SYSTEMS VIA PROTEIN AND DNA AGENTS

<130> SG2098A

<140> TBD
<141> 2009-06-01

<150> US 61/058,037
<151> 2008-06-02

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<220>
<223> complementary single-stranded DNA

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<210> 3
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
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<400> 3
aatattgata aggatagc 18

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<212> DNA
<213> Artificial Sequence

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<223> complementary single-stranded DNA

<220>
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<222> (1)..(1)
<223> 5'-HS-C3H6

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gacttc 66

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<220>

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<211> 15
<212> DNA
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<220>
<223> complementary single-stranded DNA

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