Electronic Supplementary Material (ESI) for Nanoscale.

Supplementary Information (SI) for

Self-assembly of DNA Parallel Double-Crossover Motifs

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Experimental Methods

SI-1 Sequence design

To design DNA tiles with varied hybridization pathways, each tile was divided into 6 domains with a different number of base pairs for each domain. Then, DNA sequences were applied randomly to the tile with the GC percentage of approximately 45 to 65 %. Based on this sequence assignment, the shortest domain of all 6 domains in a tile was expected to form last during annealing process due to its expected, lowest melting temperature. To facilitate the designing process, Nupack software was utilized to supplement the design by providing information such as the minimum energy feature as well as possible mismatches. The same design strategy has been adopted to the tiles in Figure 3, in which the location of crossover was varied with a few sequence changes for design optimization. Overall, the tiles in this study were designed with the same sticky end sequences from Winfree *et al.*'s tiles[1] and mostly followed the J1 sequences[2] for the two base pairs next to crossover junctions.

For all the DNA strands design figures in the following pages:

1) Each DNA strand in monomers is labelled with different colors including blue, green, cyan, and pink colors. All the corresponding DNA sequences are listed at the end of SI.
2) The 5' end of a DNA strand is indicated with a numeric value from 1 to 8 (a total of 8 strands for two monomers).
3) Stick figures with three colors (yellow, orange, and red colors) are drawn to show various, assigned hybridization pathways based on the differences in the number of base pairs (bps) between domains. At least 2 bps difference is required for different color assignment. The colors indicate expected, relative differences in melting temperatures: red colors with the highest melting temperatures; orange colors with the intermediate melting temperatures; yellow colors with the lowest melting temperatures.

SI-2 Material

All the designed strands were ordered and synthesized with 25 nmole for each strand from Integrated DNA Technologies Inc. (www.IDTDNA.com) and underwent purification using denaturing PAGE gel electrophoresis.

SI-3 Tile annealing/assembly protocol

Two monomers or tiles were annealed together stoichiometrically at a one-to-one ratio of 1.0 μM in 1xTAE-Mg^{2+} (12.5 mM Mg^{2+}) as a one-pot following the temperature ramp from 94°C to 5°C for 14.5 hours: 94°C to 86°C at 4°C per 5 minutes; 85°C to 70°C at 1°C per 5 minutes; 70°C to 40°C at 1°C per 15 minutes; 40°C to 5°C at 1°C per 10 minutes; finally holding at 5°C.

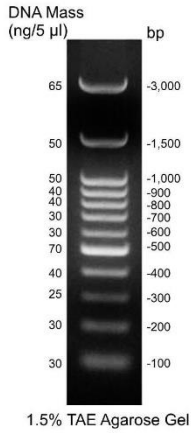
SI-4 Monomer annealing protocol

Each monomer was annealed stoichiometrically at a one-to-one ratio of either 0.2 or 1.0 μM in 1xTAE-Mg^{2+} (12.5 mM Mg^{2+}) following two short different annealing programs: 1) (with the 0.2 μM strand concentrations) 95°C for 2 minutes, 75°C for 30 seconds, 60°C for 30 seconds, 45°C for 30 second, 20°C for 2 minutes, holding at 5°C. 2) (with the 1.0 μM strand concentrations)

95°C for 5 minutes, 65°C for 5 minutes, 50°C for 30 minutes, 37°C for 30 minutes, 22°C for 30 minutes, 10°C for 30 minutes, holding at 5°C.

SI-5 Characterization (Gel)

Five microliters of each annealed tile array were loaded onto the well of a 4.5 percent native PAGE gel. A DNA ladder (IBI 100 bp DNA ladder, see image below) was used as a reference indicator of the number of base pairs associated with each band.



SI-6 Atomic Force Microscopy (AFM) imaging

First, several microliters of each assembled array sample were diluted in 65 microliters of 1x TAE-Mg^{2+} buffer (12.5 mM Mg^{2+}). The diluted sample was placed on a freshly pealed mica from Ted Pella, Inc. (water-washed or not) for about 4-5 minutes of adsorption process. Then, the dilution 1x TAE-Mg^{2+} buffer was washed away, followed by the addition of another 65 microliters of 1x TAE-Mg^{2+} buffer. Finally, 2-7 microliters of Nickel (100 mM) were added to the sample on mica and remained for 2 minutes before AFM imaging. The instruments of AFM and SCANASSYST-FLUID+ tips were purchased from Bruker, Inc. The AFM scanning mode was "ScanAssyst mode in fluid."

SI-7 DNase I digestion experiment

Five microliters of assembled arrays were mixed with 1 microliter of DNase I enzyme (0.1U/microliter). The array-DNase I mixtures were incubated at 37 °C for different time periods (15, 30, 45, 60, 120 minutes). The samples collected after incubation were characterized using a native or non-denaturing PAGE gel to show the variations in DNase I degradation over time.

SI-8 Fluorescence imaging

5 µL of preassembled DNA samples (1 µM) were diluted in 20 µL of 1xTAE/Mg 2+ buffer and mixed with 2.5 µL of freshly prepared gel red solution (0.2 µL of DMSO stock dissolved in 100 µL of 1xTAE/Mg 2+ buffer). The mixture was gently mixed with pipette and drop casted onto a clean glass slide and allowed to adsorb for ~6 h. The gel red stained DNA samples were covered with a coverslip and then imaged with a confocal laser scanning microscope. The images were acquired (λ ex =553 nm & λ em = 568 nm) using Axio Observer Z1 confocal microscope (Zeiss) with a 100x oil immersion objective lens.

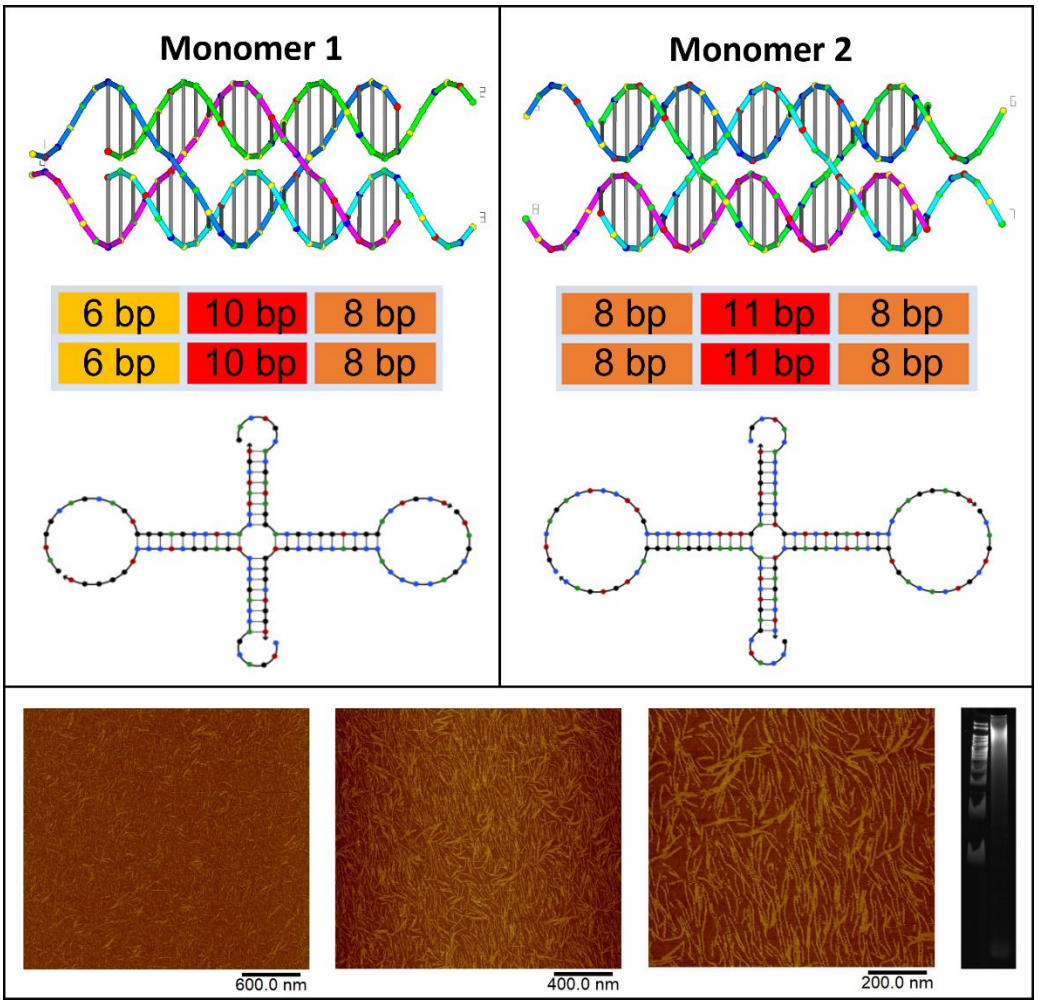


Figure S1. Schematics (including Nupack models below the numbered stick figures) and additional AFM/gel images for the **Figure 1c** design: the CO pathway design of **1DP** monomers. The Nupack models show various colored circles indicating DNA nucleotides: green (adenine, A), blue (cytosine, C), black (guanine, G), red (thymine, T). The AFM images indicate the dominant formation of fibular arrays.

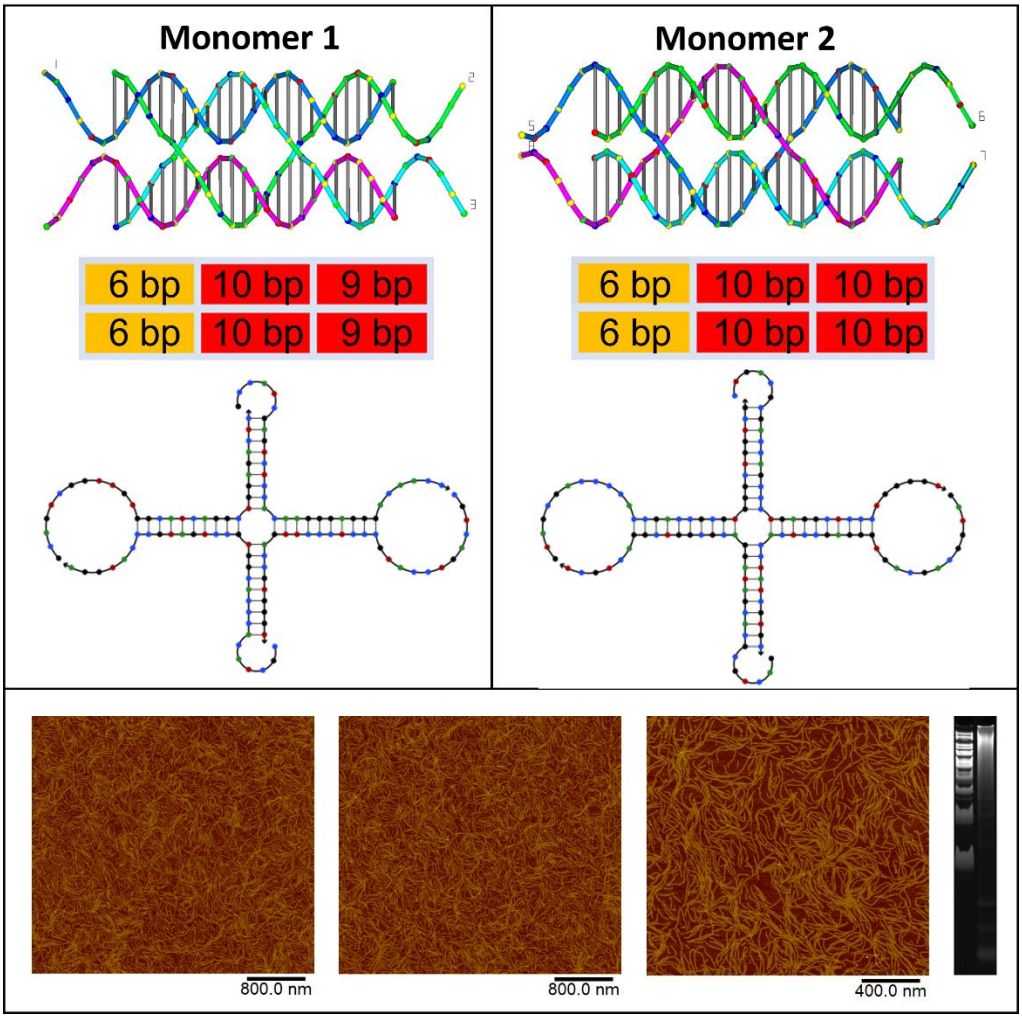


Figure S2. Schematics (including Nupack models below the numbered stick figures) and additional AFM/gel images for the **Figure 1d** design: the CB pathway design of **1DP** monomers. The Nupack models show various colored circles indicating DNA nucleotides: green (adenine, A), blue (cytosine, C), black (guanine, G), red (thymine, T). The AFM images indicate the dominant formation of fibular arrays.

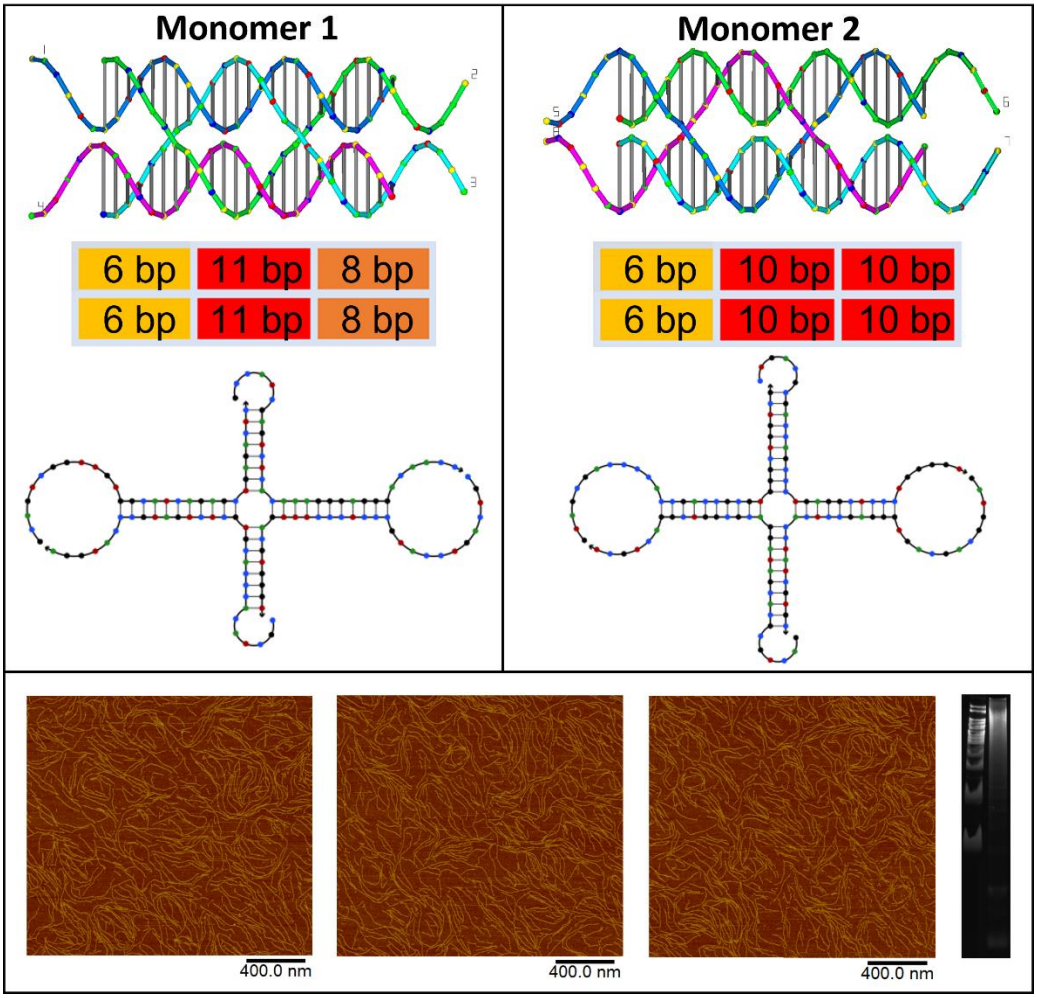


Figure S3. Schematics (including Nupack models below the numbered stick figures) and additional AFM/gel images for the **Figure 1e** design: the CO&CB pathway design of **1DP** monomers. The Nupack models show various colored circles indicating DNA nucleotides: green (adenine, A), blue (cytosine, C), black (guanine, G), red (thymine, T). The AFM images indicate the dominant formation of fibular arrays.

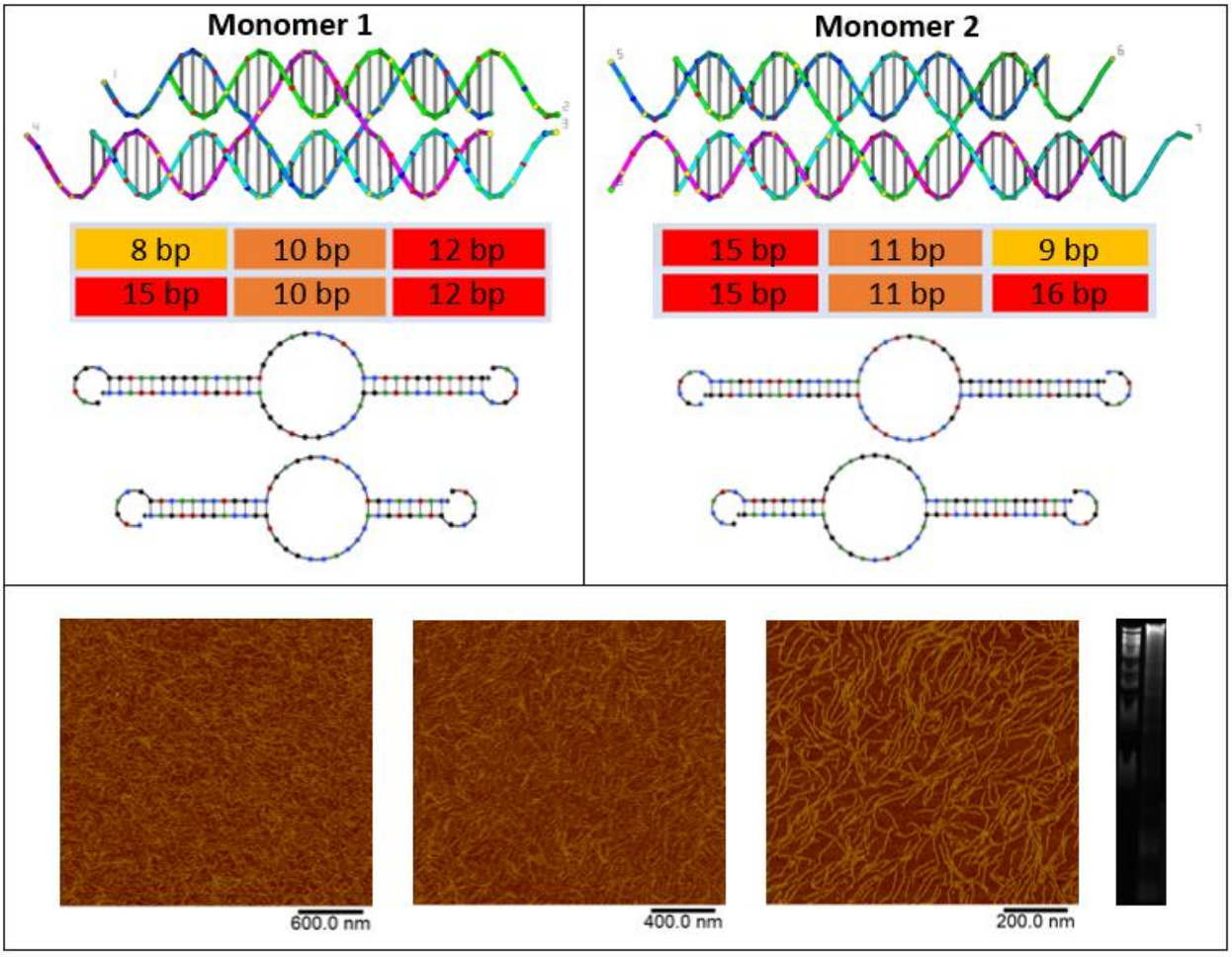


Figure S4. Schematics (including Nupack models below the numbered stick figures) and additional AFM/gel images for the **Figure 1f** design: the OS pathway design of **1DP** monomers. The Nupack models show various colored circles indicating DNA nucleotides: green (adenine, A), blue (cytosine, C), black (guanine, G), red (thymine, T). The AFM images indicate the dominant formation of fibular arrays.

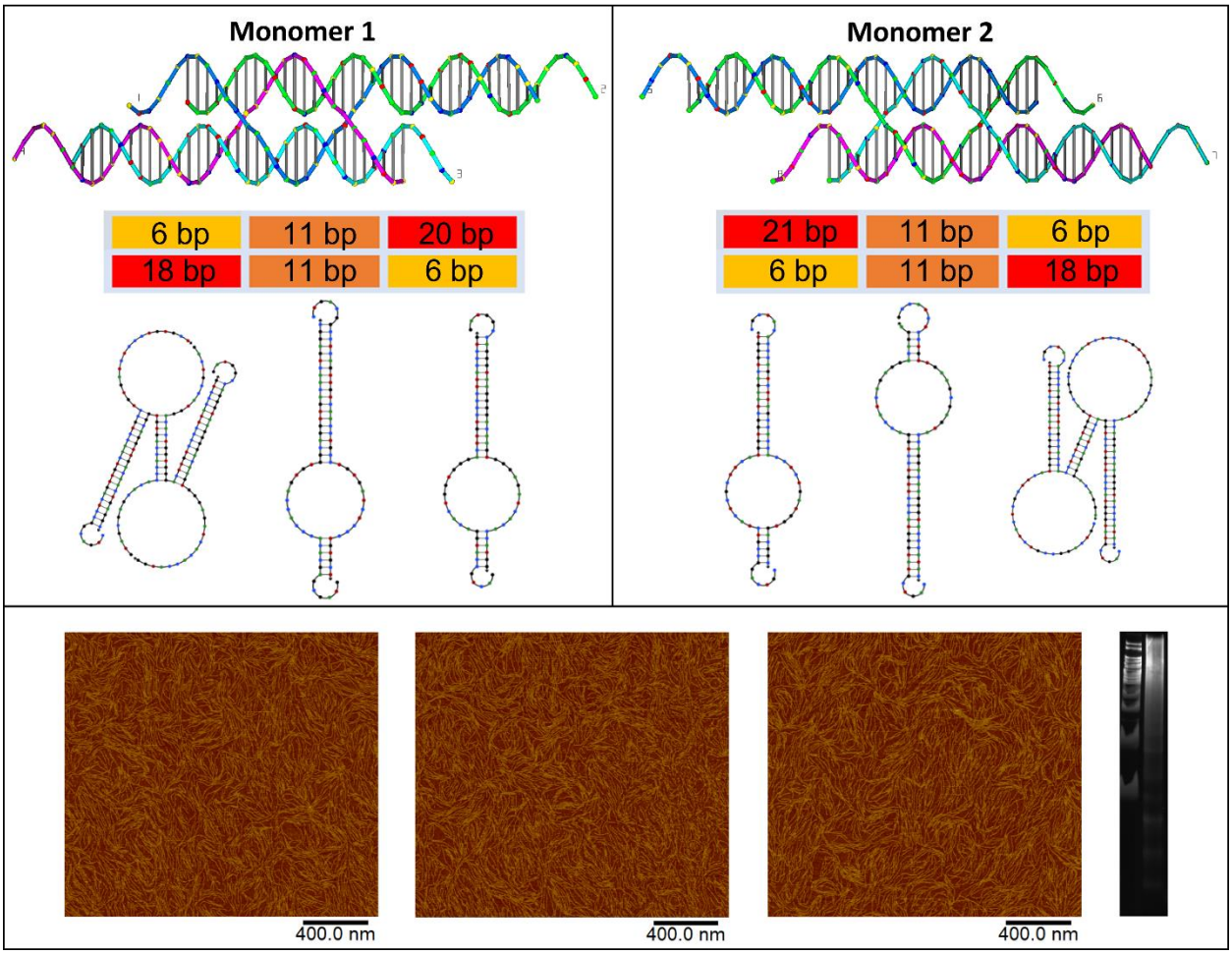


Figure S5. Schematics (including Nupack models below the numbered stick figures) and additional AFM/gel images for the **Figure 1g** design: the TS pathway design of **1DP** monomers. The Nupack models show various colored circles indicating DNA nucleotides: green (adenine, A), blue (cytosine, C), black (guanine, G), red (thymine, T). The AFM images indicate the dominant formation of fibular arrays.

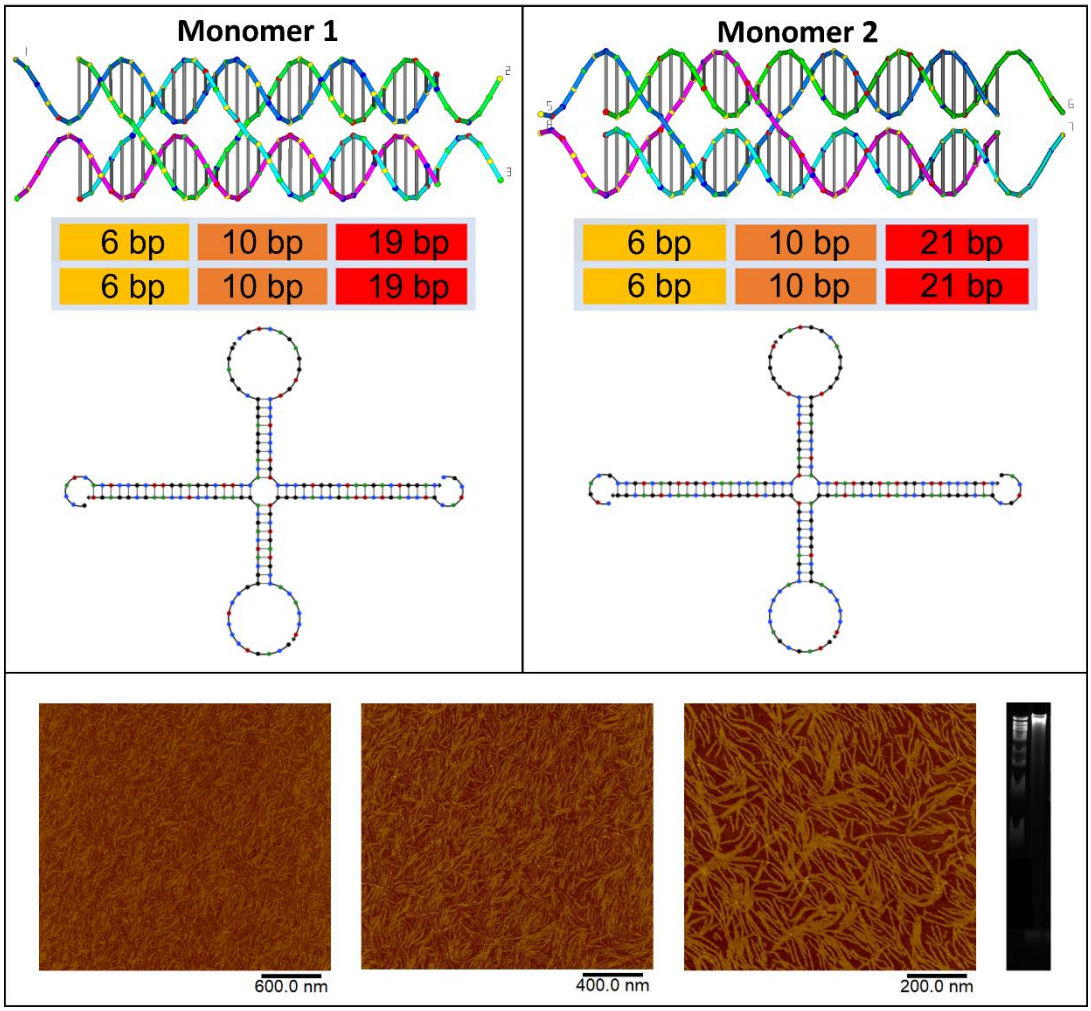


Figure S6. Schematics (including Nupack models below the numbered stick figures) and additional AFM/gel images for the **Figure 1h** design: the NtoN pathway design of **1DP** monomers. The Nupack models show various colored circles indicating DNA nucleotides: green (adenine, A), blue (cytosine, C), black (guanine, G), red (thymine, T). The AFM images indicate the dominant formation of fibular arrays.

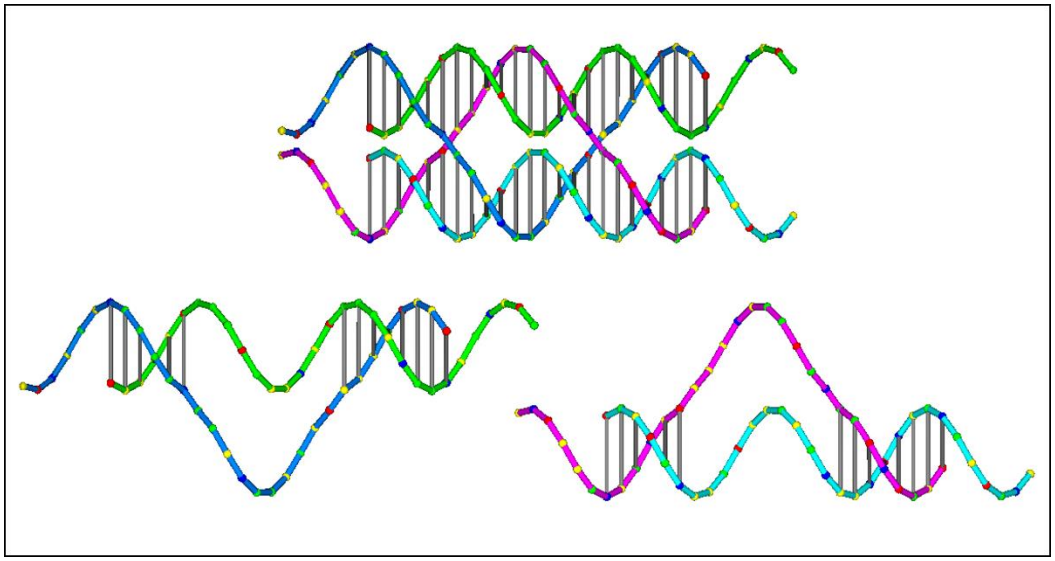


Figure S7 Unfavorable intermediate structures in an **1DP monomer.** Each pair of the two strands hybridizes first and is locked at the partially formed structures, blocking the formation of the target monomer structure with all four strands joined.

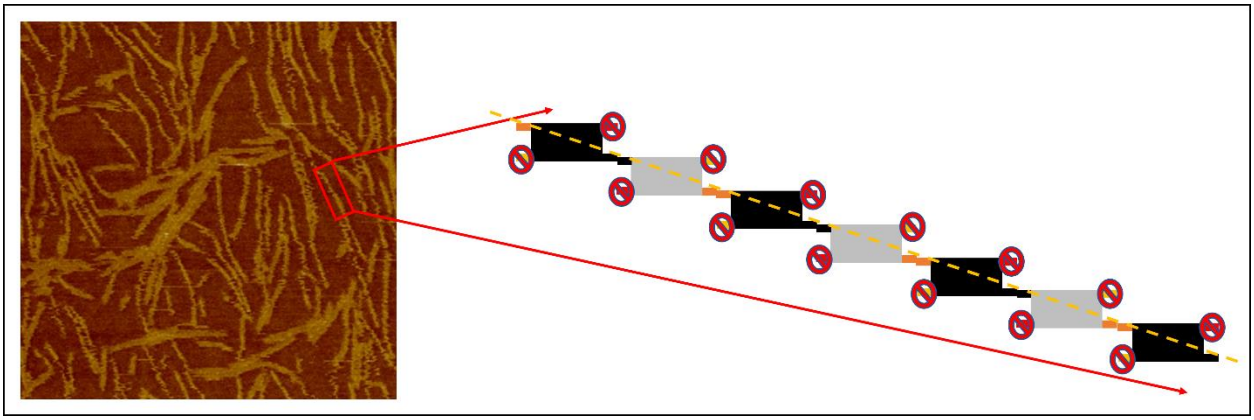


Figure S8 A schematic of 1D array formation mechanism for the **1DP**-based arrays.

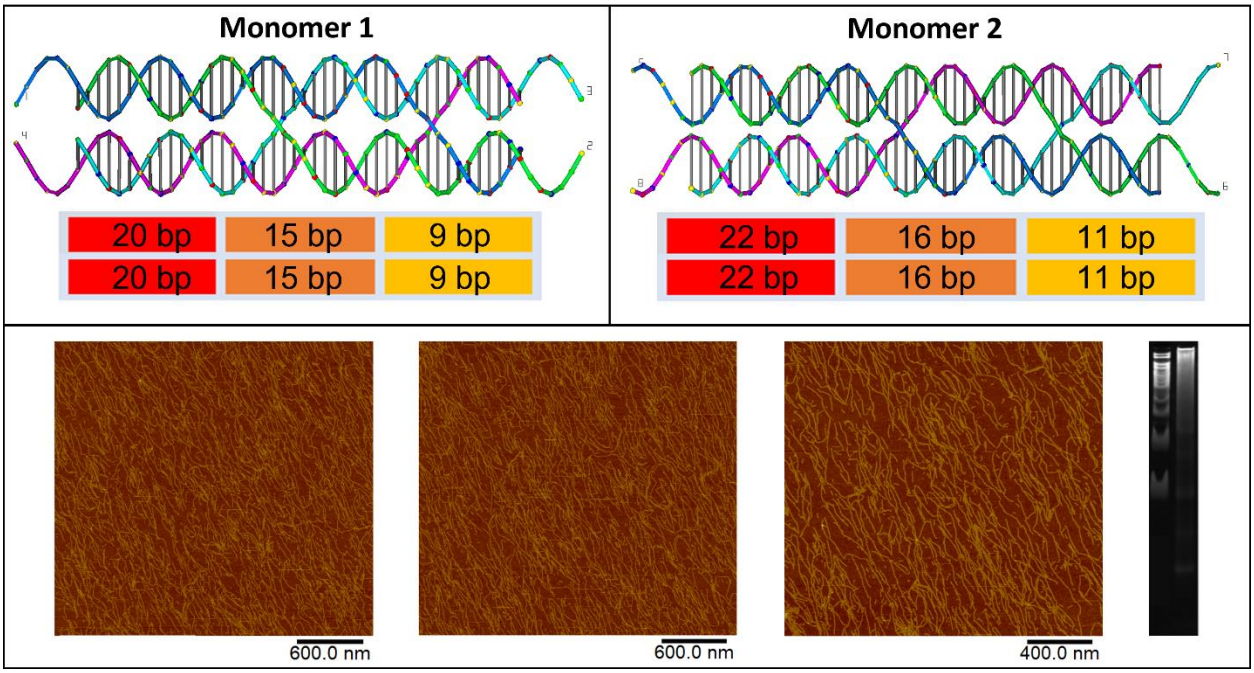


Figure S9. Schematics and additional AFM/gel images for the **Figure 2b** design: the NtoNL pathway design of **1.5DP** monomers. The AFM images indicate the dominant formation of fibular arrays.

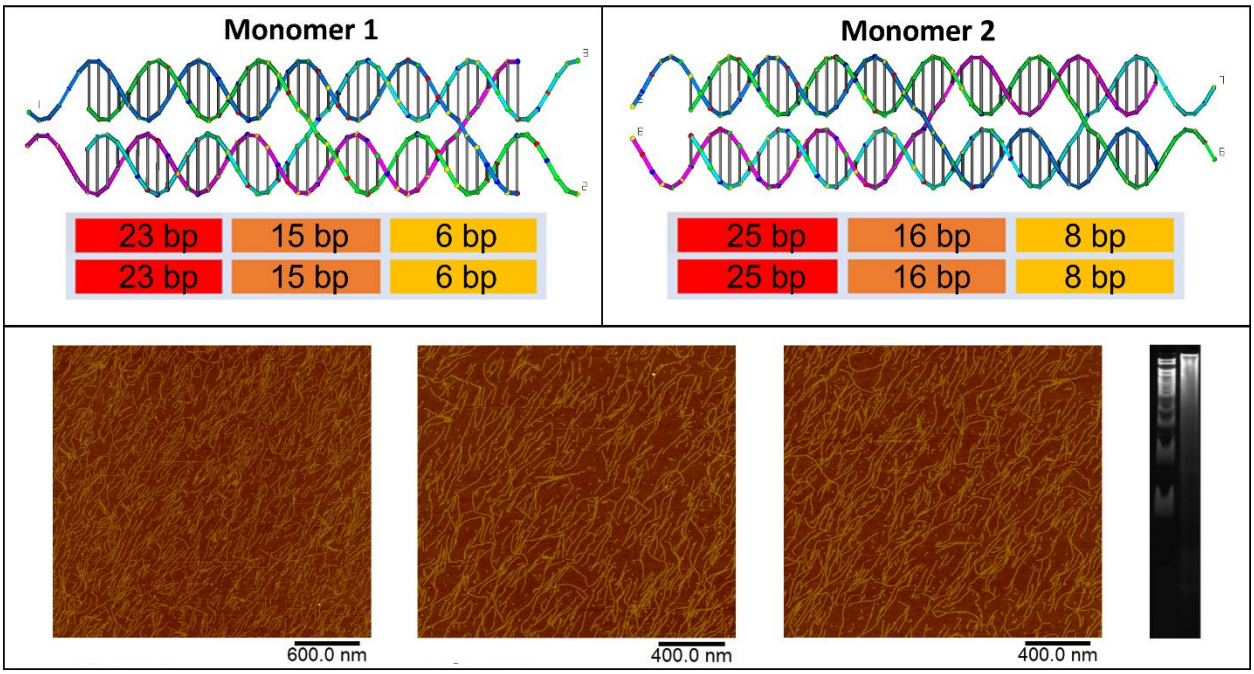


Figure S10. Schematics and additional AFM/gel images for the **Figure 2c** design: the NtoNS pathway design of **1.5DP** monomers. The AFM images indicate the dominant formation of fibular arrays.

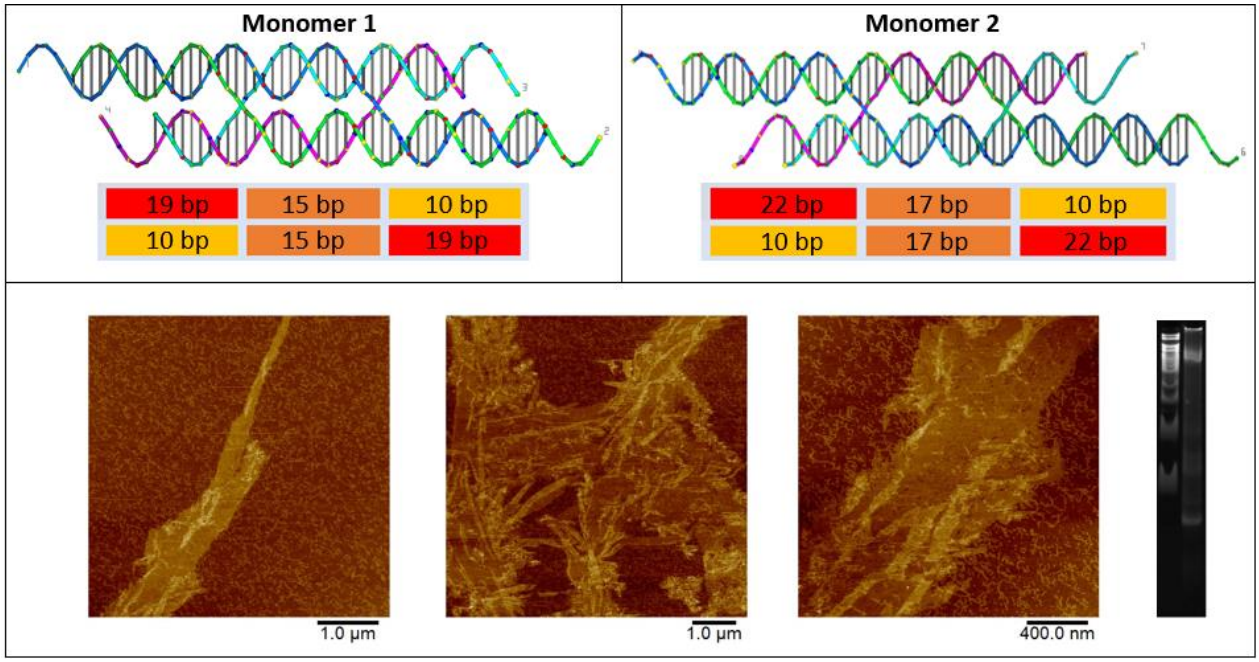


Figure S11. Schematics and additional AFM/gel images for the **Figure 2d** design: the TS pathway design of **1.5DP** monomers. The AFM images indicate the dominant formation of partially wrapped arrays and sharply curved, circular nanostructures.

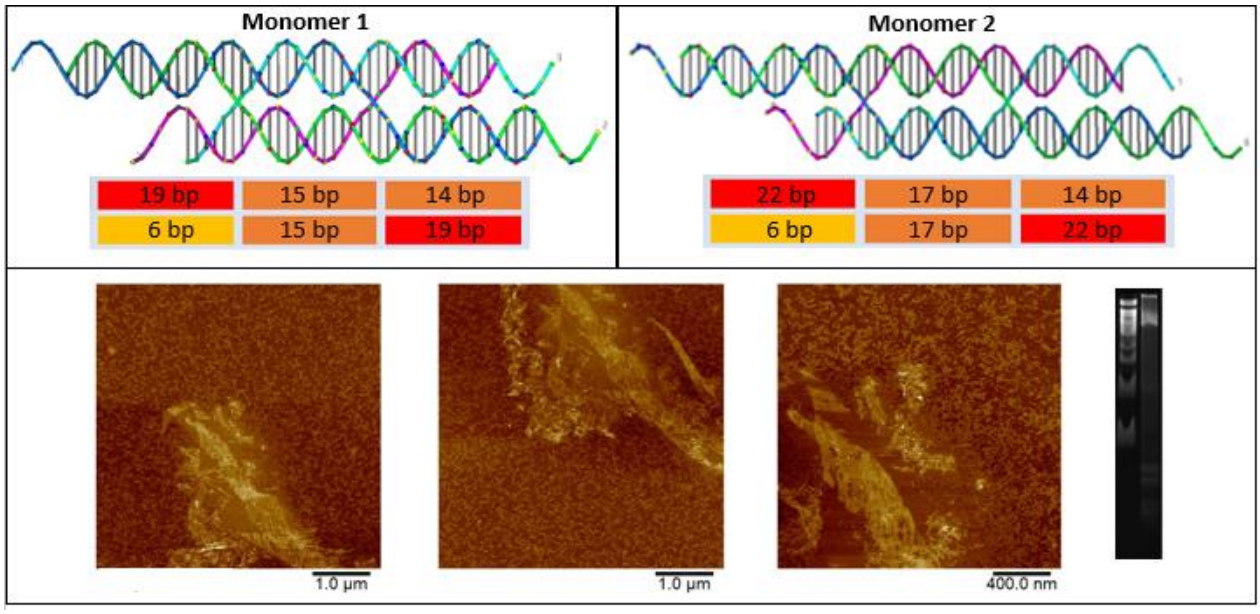


Figure S12. Schematics and additional AFM/gel images for the **Figure 2e** design: the OS pathway design of **1.5DP** monomers. The AFM images indicate the dominant formation of partially wrapped arrays and sharply curved, circular nanostructures.

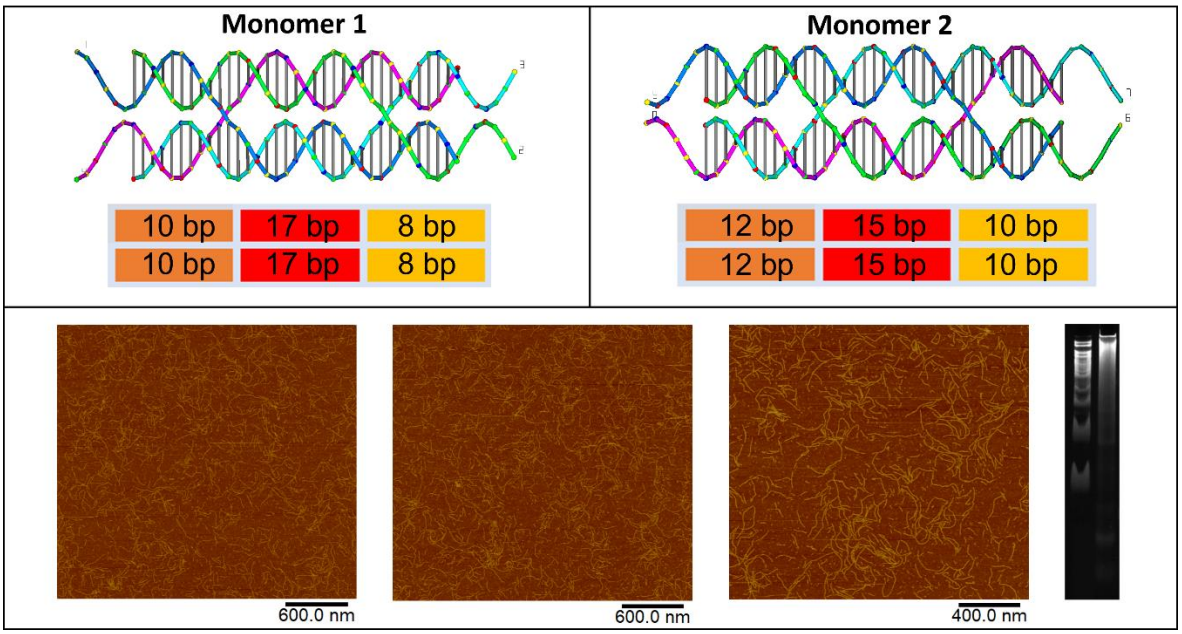


Figure S13. Schematics and additional AFM/gel images for the **Figure 2f** design: the CO pathway design of **1.5DP** monomers. The AFM images indicate the dominant formation of fibular arrays.

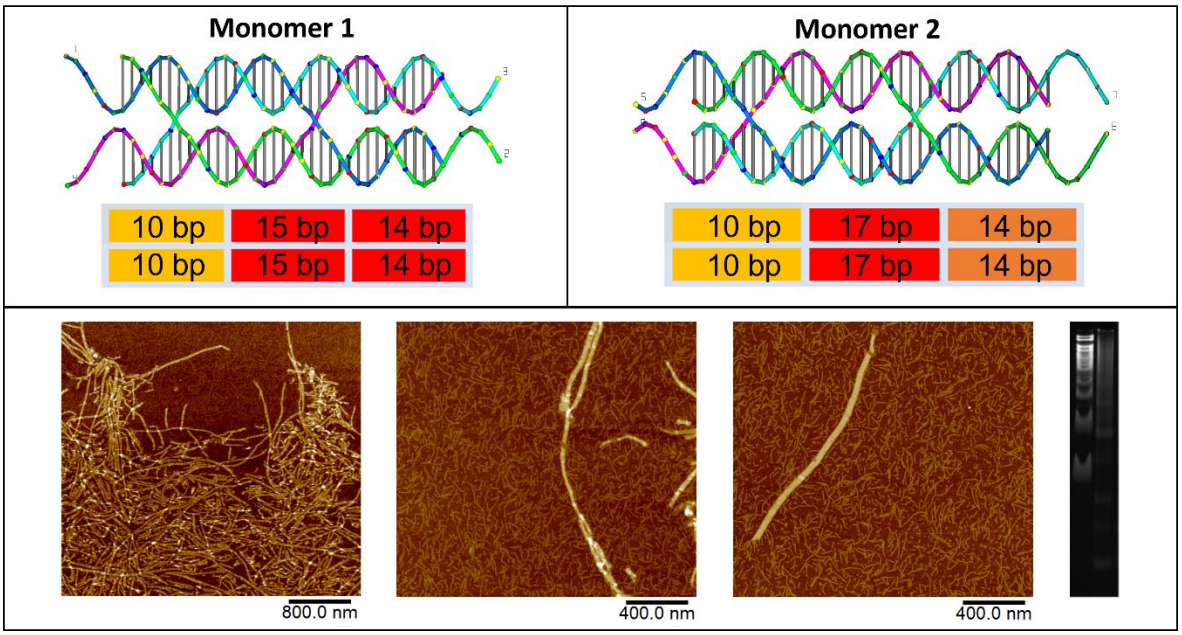


Figure S14. Schematics and additional AFM/gel images for the **Figure 2g** design: the CB&CO pathway design of **1.5DP** monomers. The AFM images show the formation of nanotubes, parts of which can open during the AFM procedures: 1) mica deposition 2) scanning with an AFM tip.

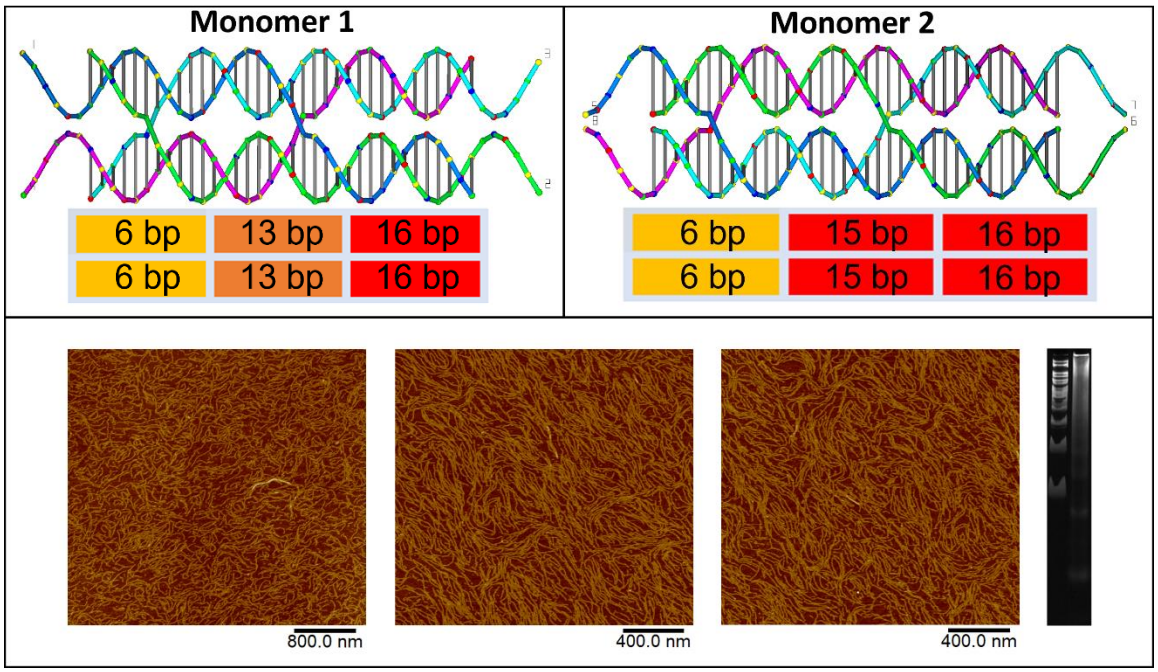


Figure S15. Schematics and additional AFM/gel images for the **Figure 3c** design: arrays based on **1.5DP** monomers (13&15). The AFM images indicate the dominant formation of fibular arrays.

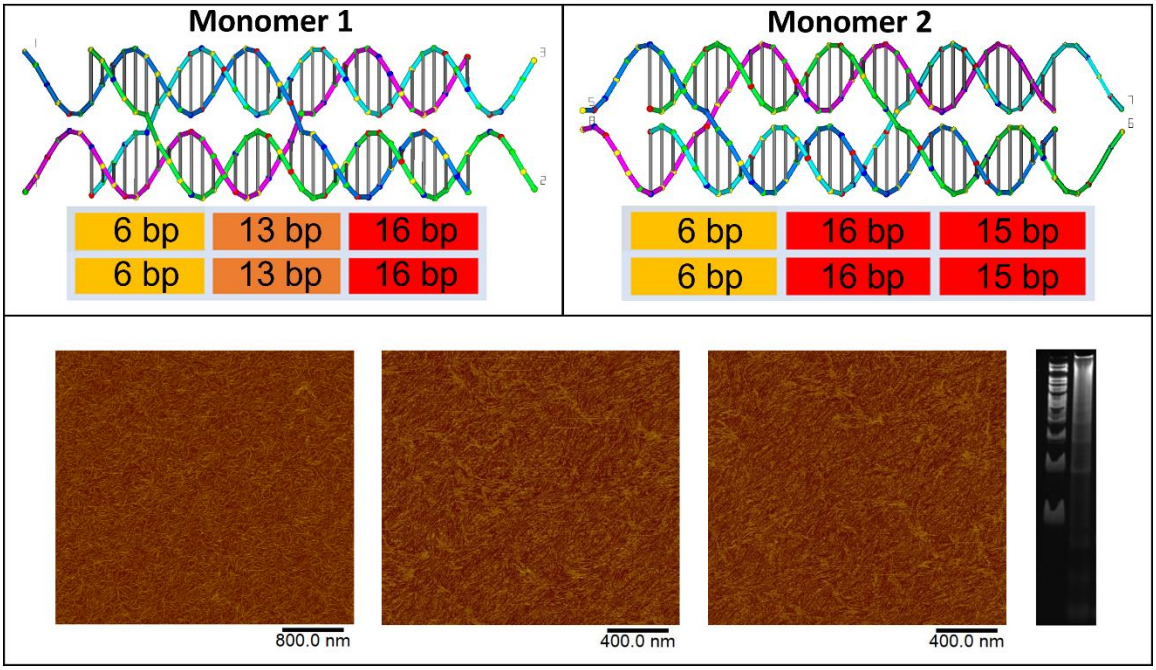


Figure S16. Schematics and additional AFM/gel images for the **Figure 3d** design: arrays based on **1.5DP** monomers (13&16). The AFM images indicate the dominant formation of fibular arrays.

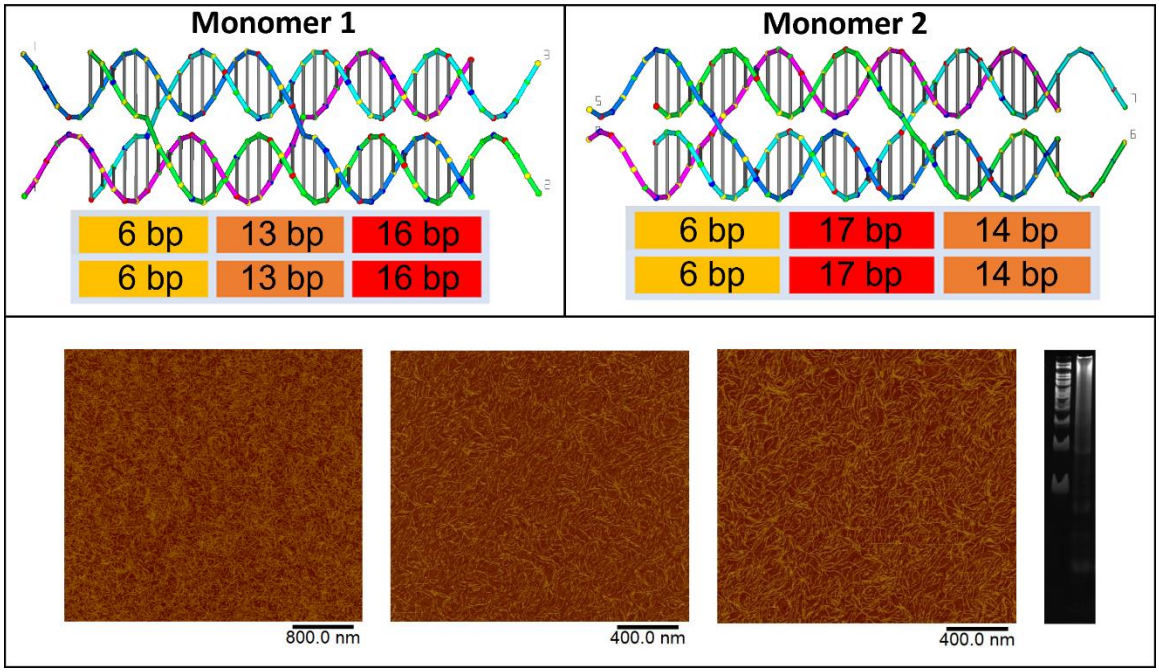


Figure S17. Schematics and additional AFM/gel images for the **Figure 3e** design: arrays based on **1.5DP** monomers (13&17). The AFM images indicate the dominant formation of fibular arrays.

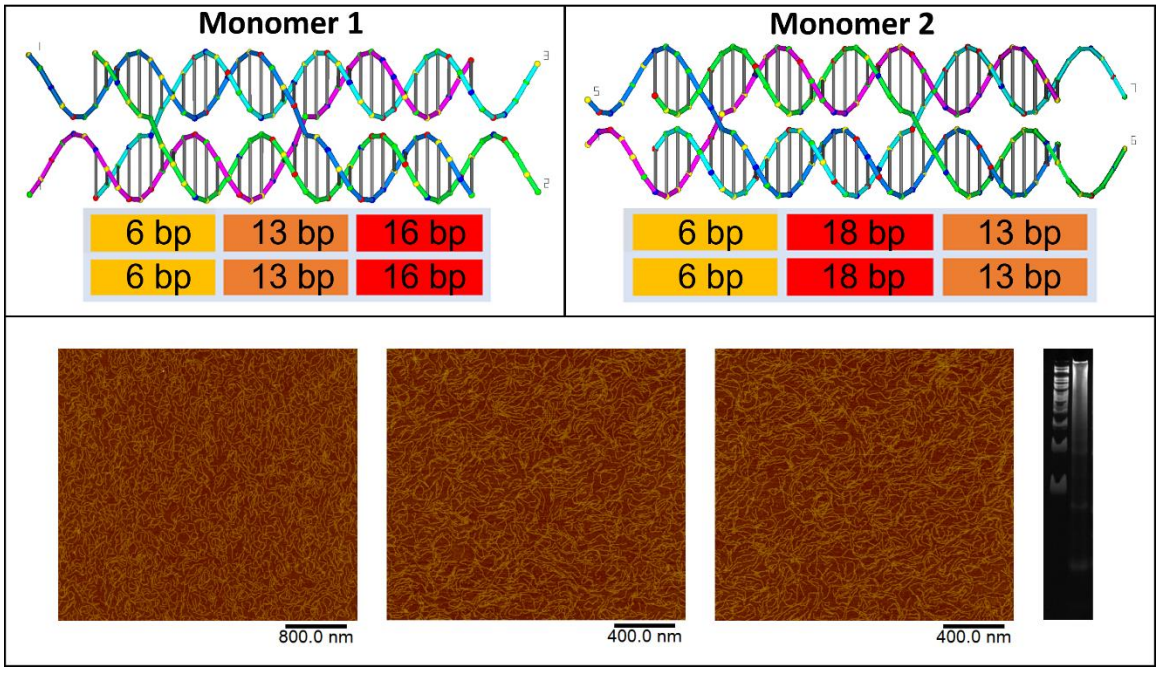


Figure S18. Schematics and additional AFM/gel images for the **Figure 3f** design: arrays based on **1.5DP** monomers (13&18). The AFM images indicate the dominant formation of fibular arrays.

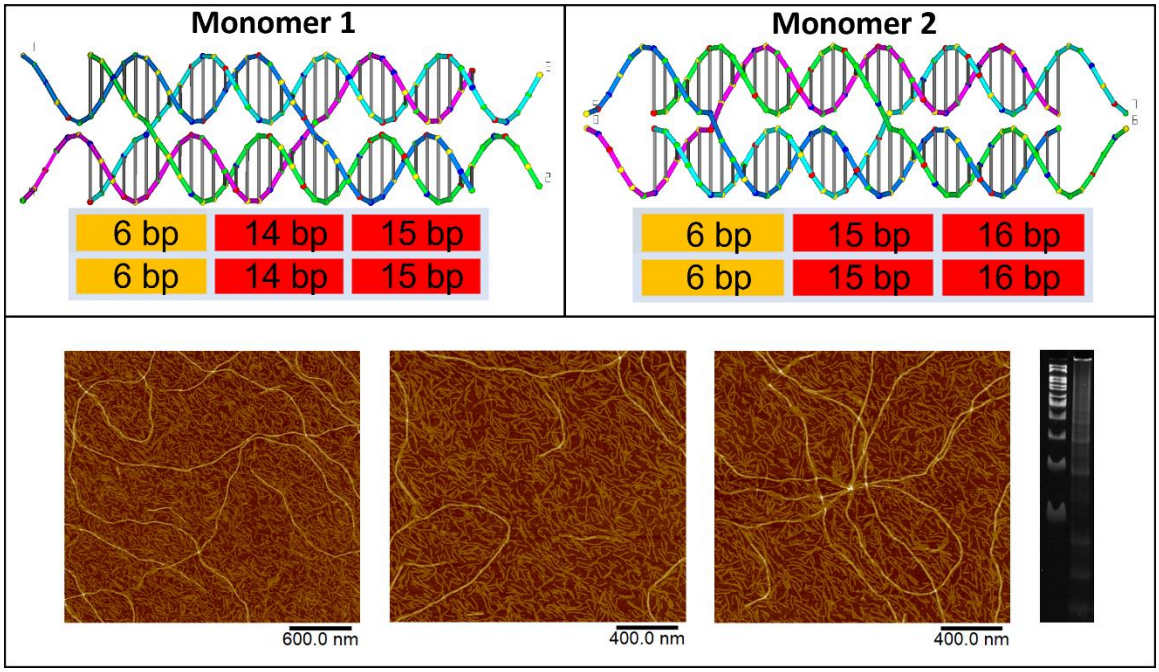


Figure S19. Schematics and additional AFM/gel images for the **Figure 3g** design: arrays based on **1.5DP** monomers (14&15). The AFM images show the formation of nanotubes, parts of which can open during the AFM procedures: 1) mica deposition 2) scanning with an AFM tip.

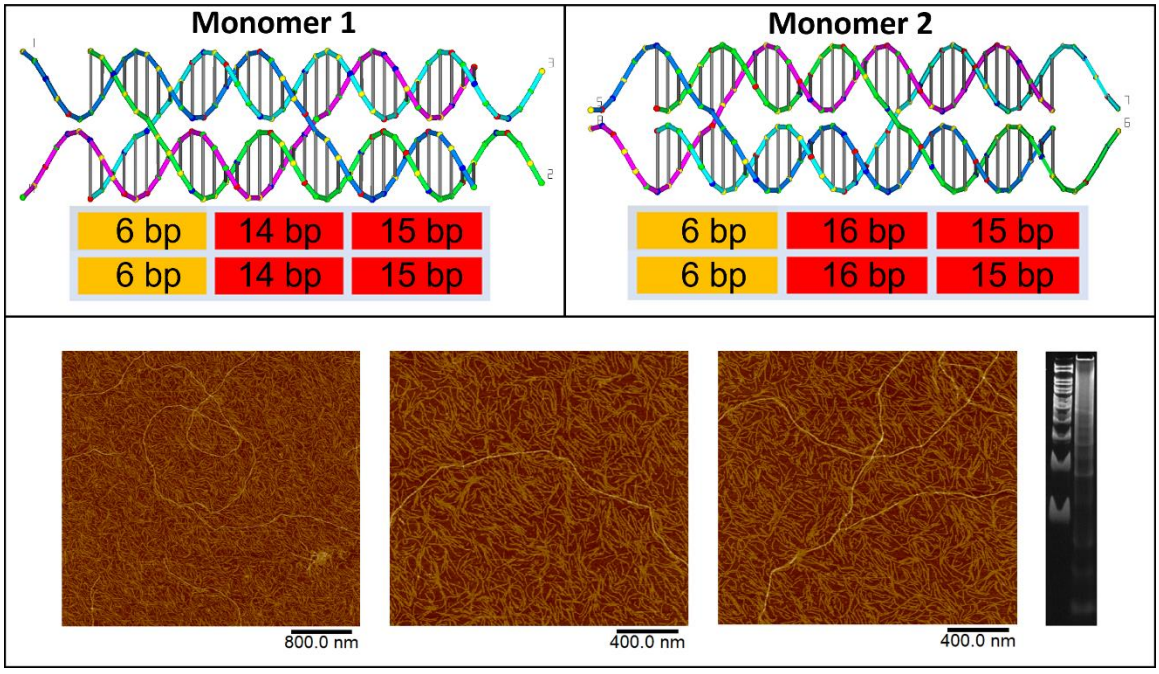


Figure S20. Schematics and additional AFM/gel images for the **Figure 3h** design: arrays based on **1.5DP** monomers (14&16). The AFM images show the formation of nanotubes, parts of which can open during the AFM procedures: 1) mica deposition 2) scanning with an AFM tip.

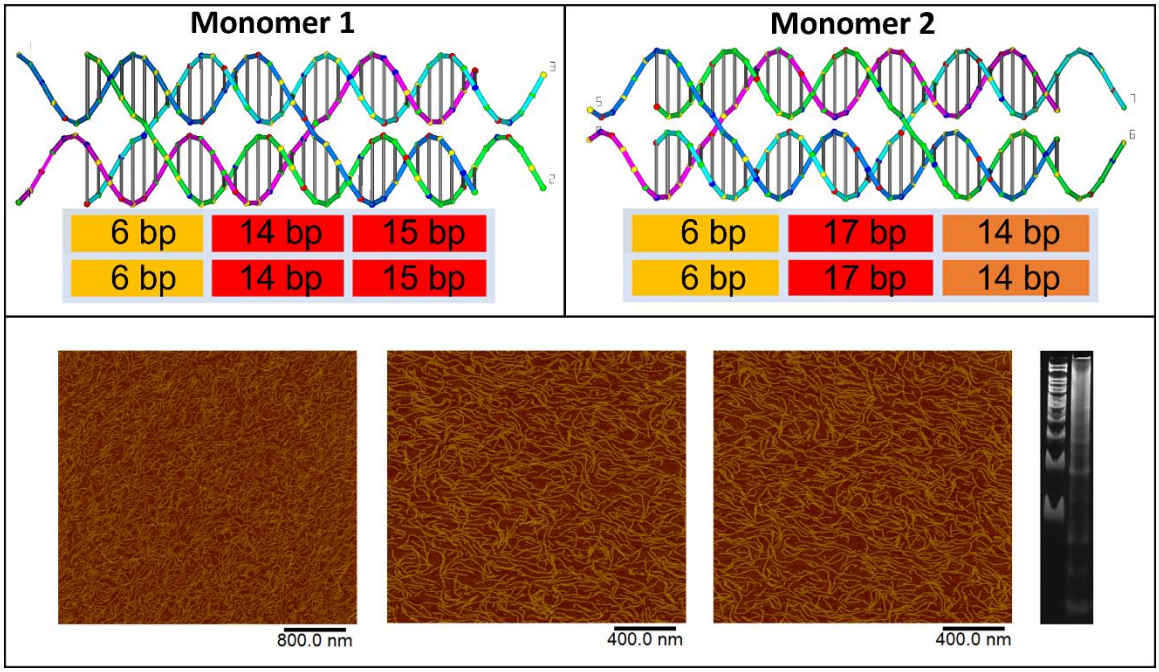


Figure S21. Schematics and additional AFM/gel images for the **Figure 3i** design: arrays based on **1.5DP** monomers (14&17). The AFM images indicate the dominant formation of fibular arrays.

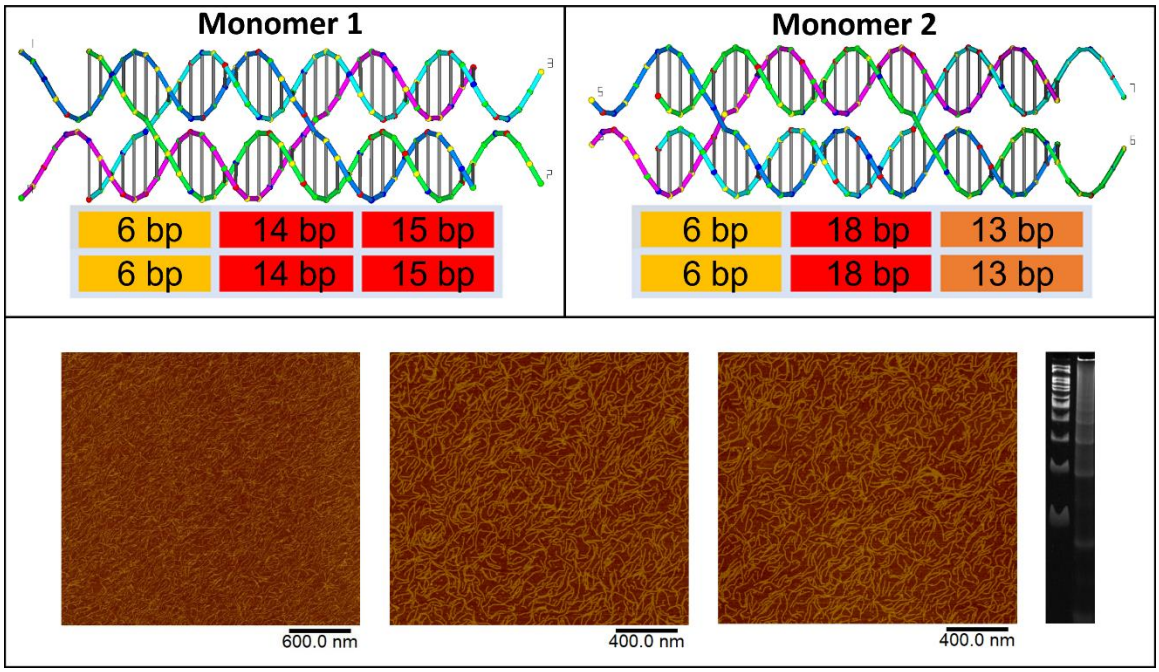


Figure S22. Schematics and additional AFM/gel images for the **Figure 3j** design: arrays based on **1.5DP** monomers (14&18). The AFM images indicate the dominant formation of fibular arrays.

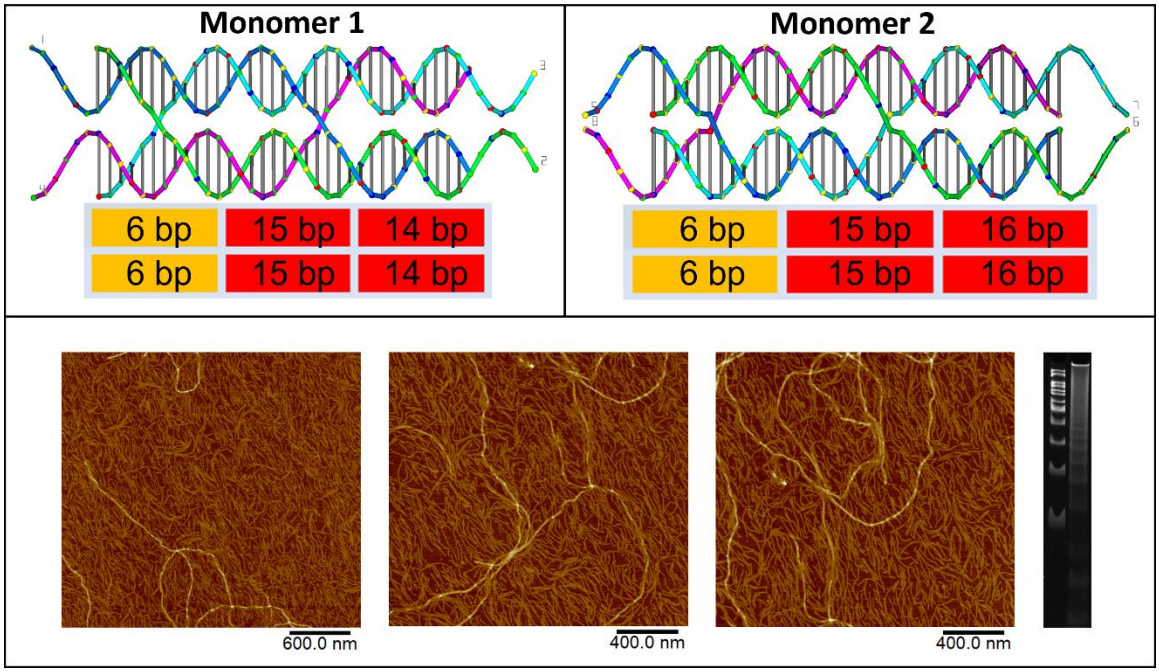


Figure S23. Schematics and additional AFM/gel images for the **Figure 3k** design: arrays based on **1.5DP** monomers (15&15). The AFM images show the formation of nanotubes, parts of which can open during the AFM procedures: 1) mica deposition 2) scanning with an AFM tip.

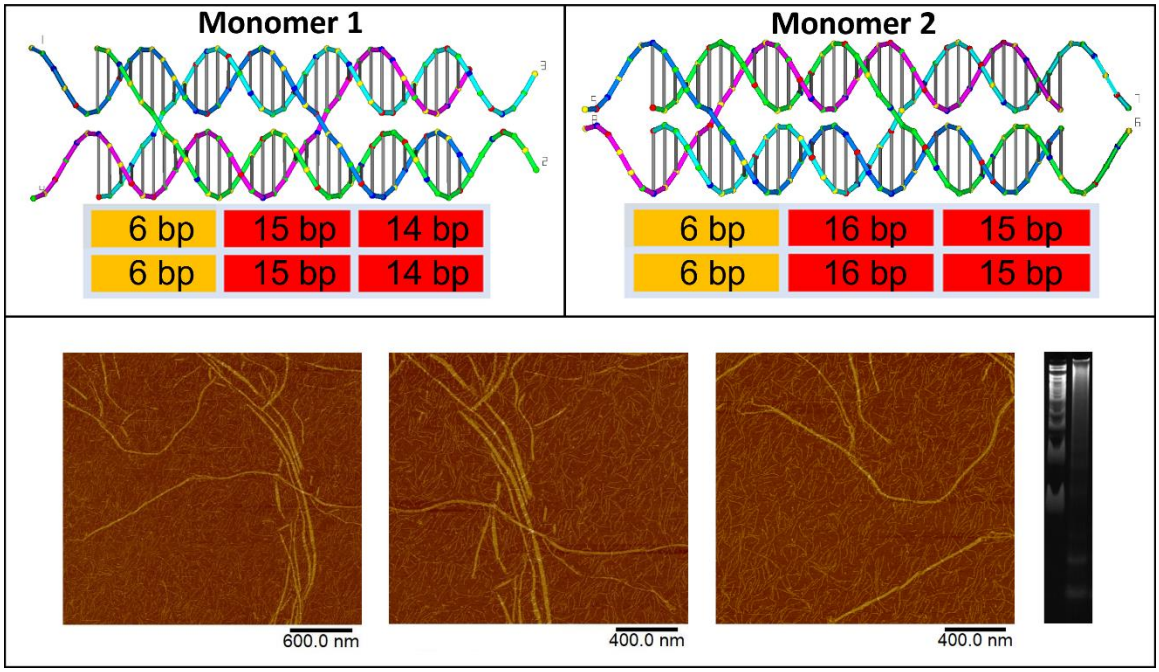


Figure S24. Schematics and additional AFM/gel images for the **Figure 3l** design: arrays based on **1.5DP** monomers (15&16). The AFM images show the formation of nanotubes, parts of which can open during the AFM procedures: 1) mica deposition 2) scanning with an AFM tip.

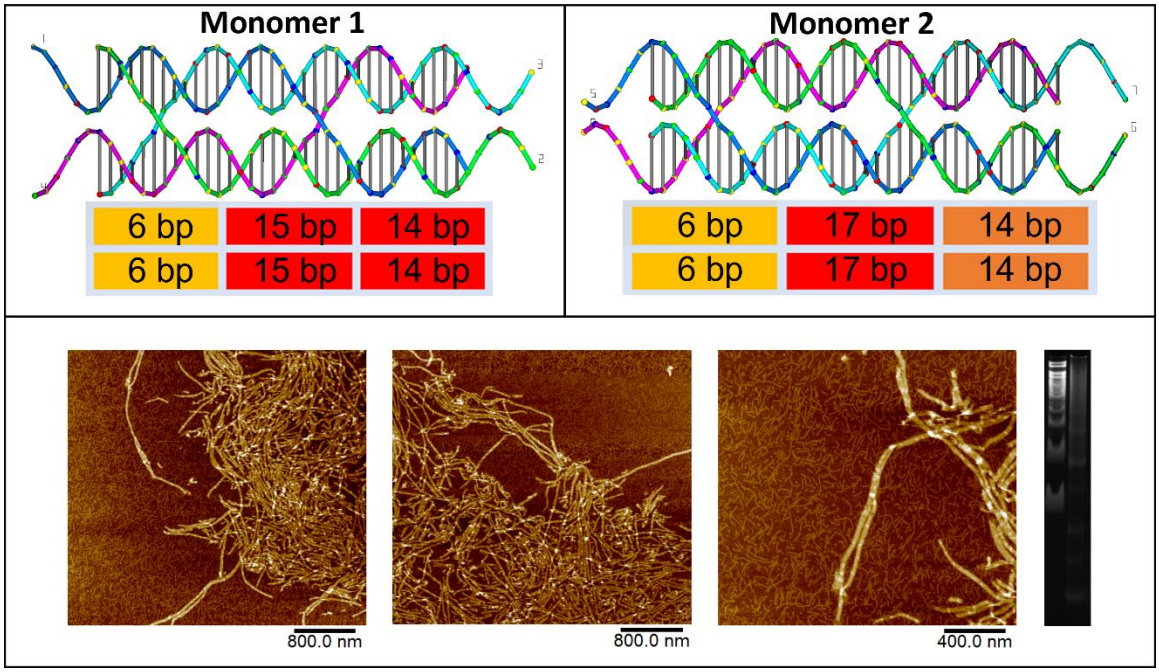


Figure S25. Schematics and additional AFM/gel images for the **Figure 3m** design: arrays based on **1.5DP** monomers (15&17). The AFM images show the formation of nanotubes, parts of which can open during the AFM procedures: 1) mica deposition 2) scanning with an AFM tip.

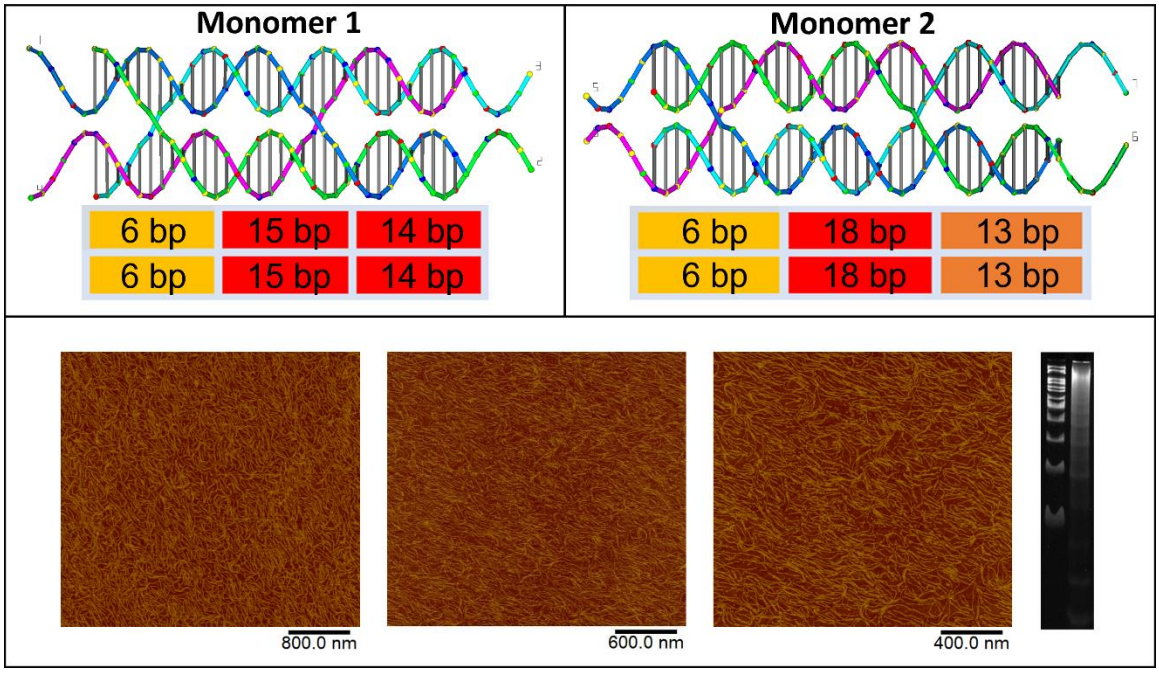


Figure S26. Schematics and additional AFM/gel images for the **Figure 3n** design: arrays based on **1.5DP** monomers (15&18). The AFM images indicate the dominant formation of fibular arrays.

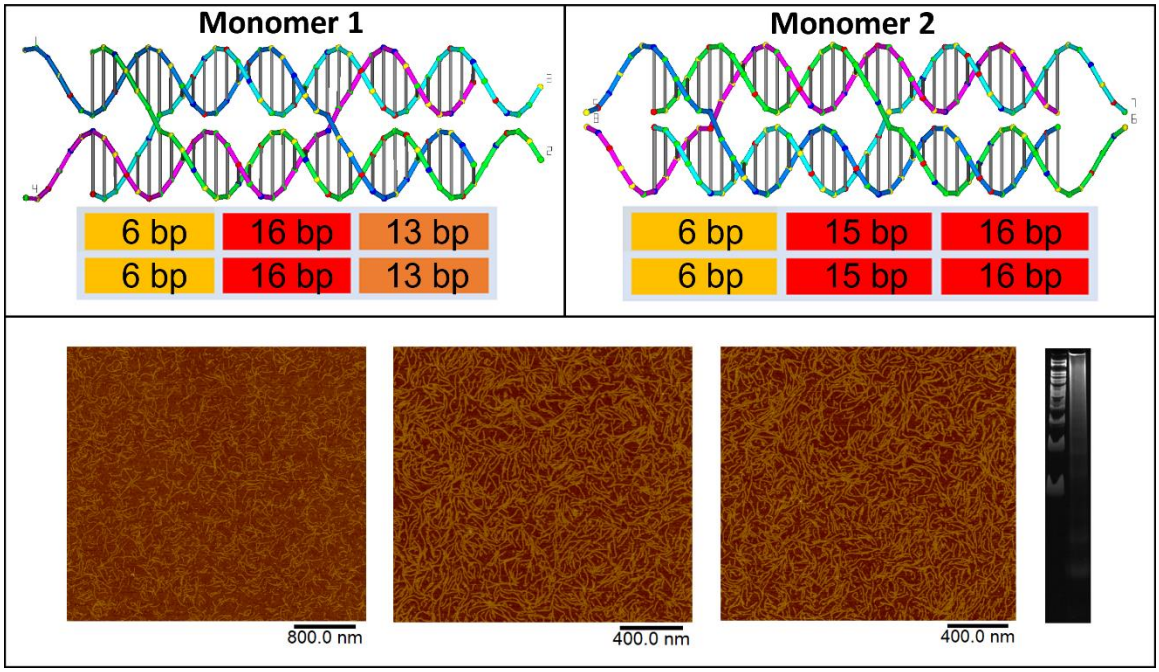


Figure S27. Schematics and additional AFM/gel images for the **Figure 3o** design: arrays based on **1.5DP** monomers (16&15). The AFM images indicate the dominant formation of fibular arrays.

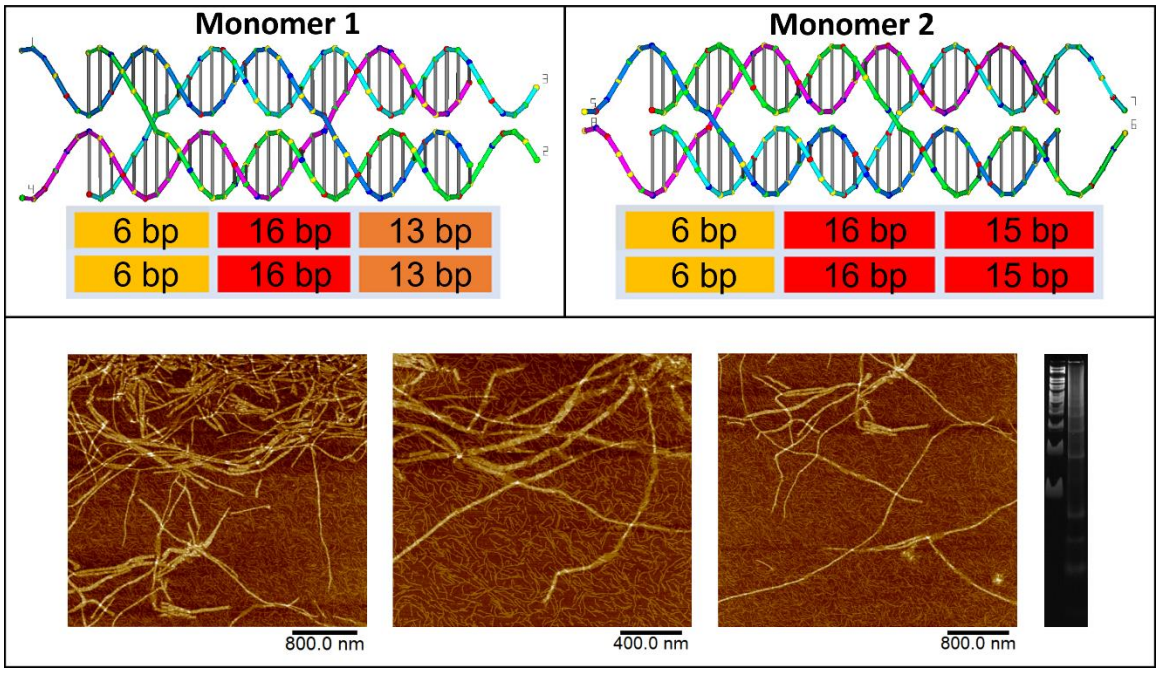


Figure S28. Schematics and additional AFM/gel images for the **Figure 3p** design: arrays based on **1.5DP** monomers (16&16). The AFM images show the formation of nanotubes, parts of which can open during the AFM procedures: 1) mica deposition 2) scanning with an AFM tip.

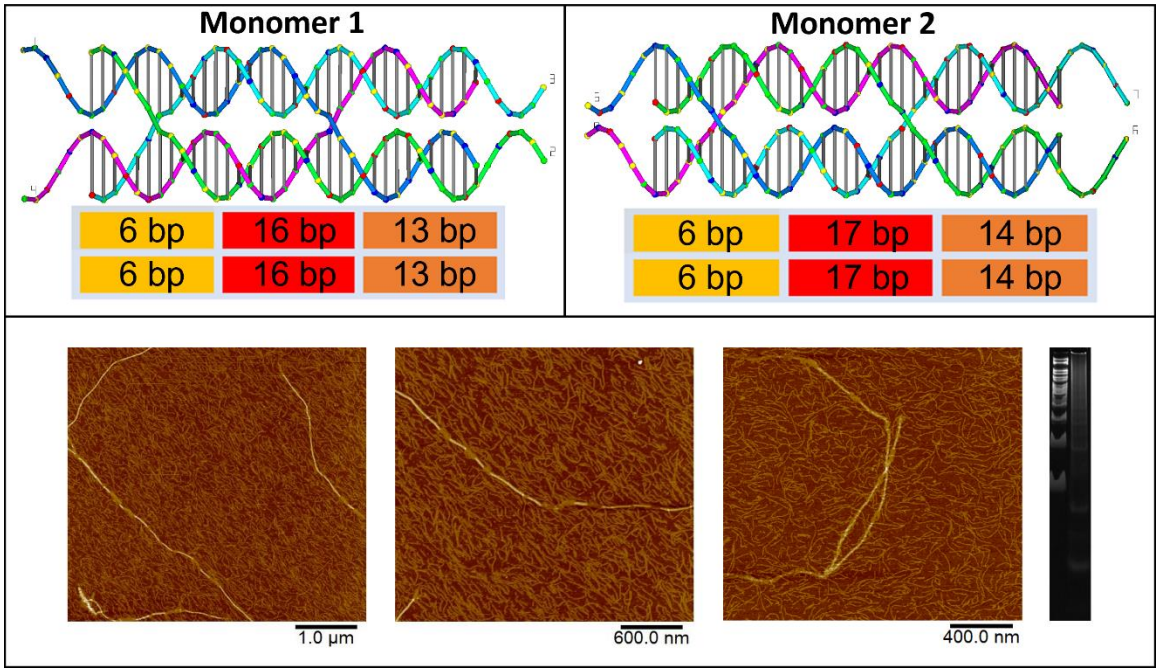


Figure S29. Schematics and additional AFM/gel images for the **Figure 3q** design: arrays based on **1.5DP** monomers (16&17). The AFM images show the formation of nanotubes, parts of which can open during the AFM procedures: 1) mica deposition 2) scanning with an AFM tip.

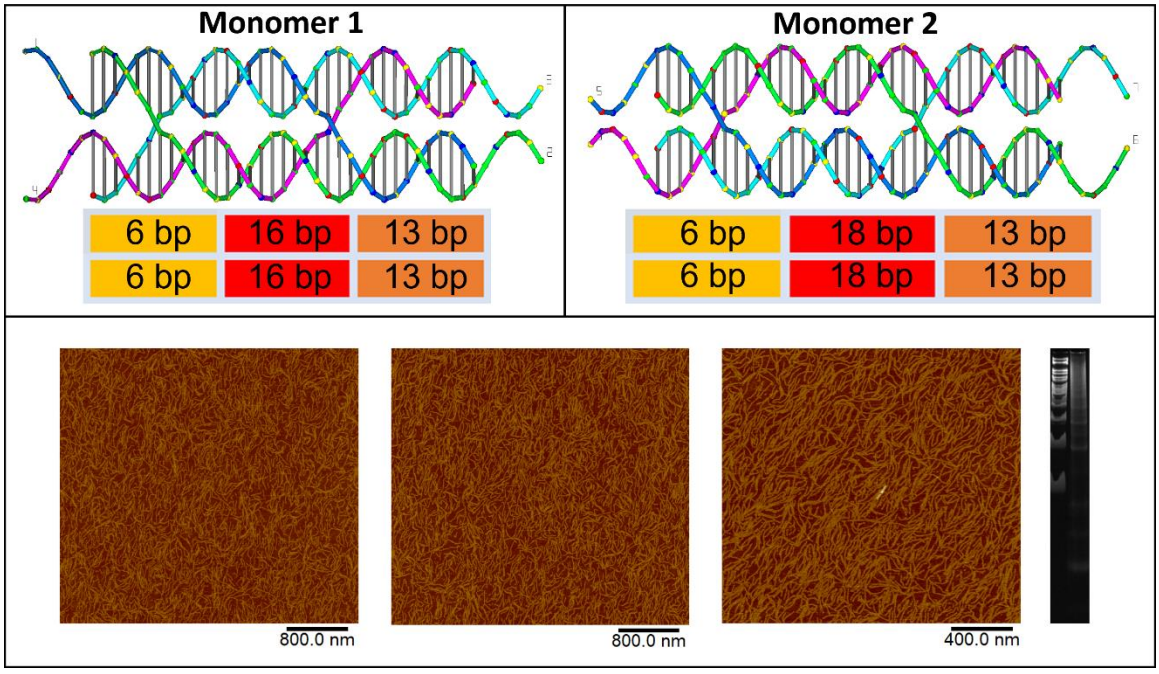


Figure S30. Schematics and additional AFM/gel images for the **Figure 3r** design: arrays based on **1.5DP** monomers (16&18). The AFM images indicate the dominant formation of fibular arrays.

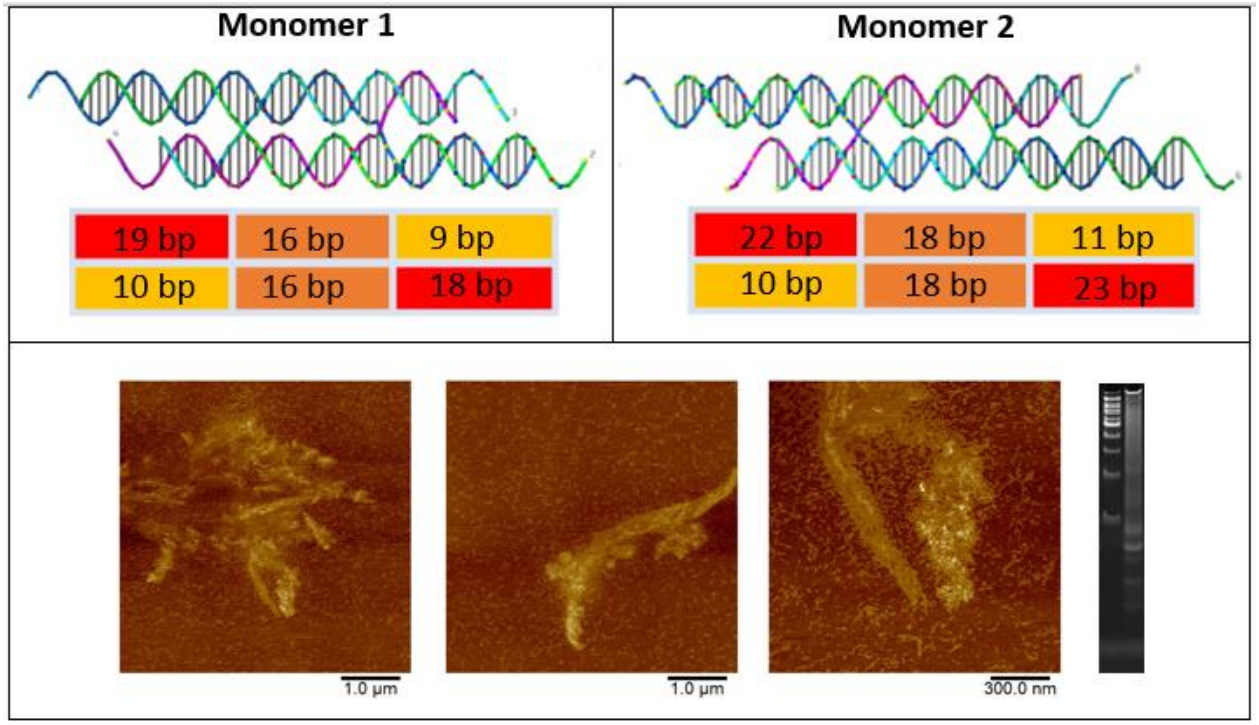


Figure S31. Schematics and additional AFM/gel images for the TS16&16 design. The AFM images indicate two dominant structures: partially wrapped assemblies and small, self-limited structures.

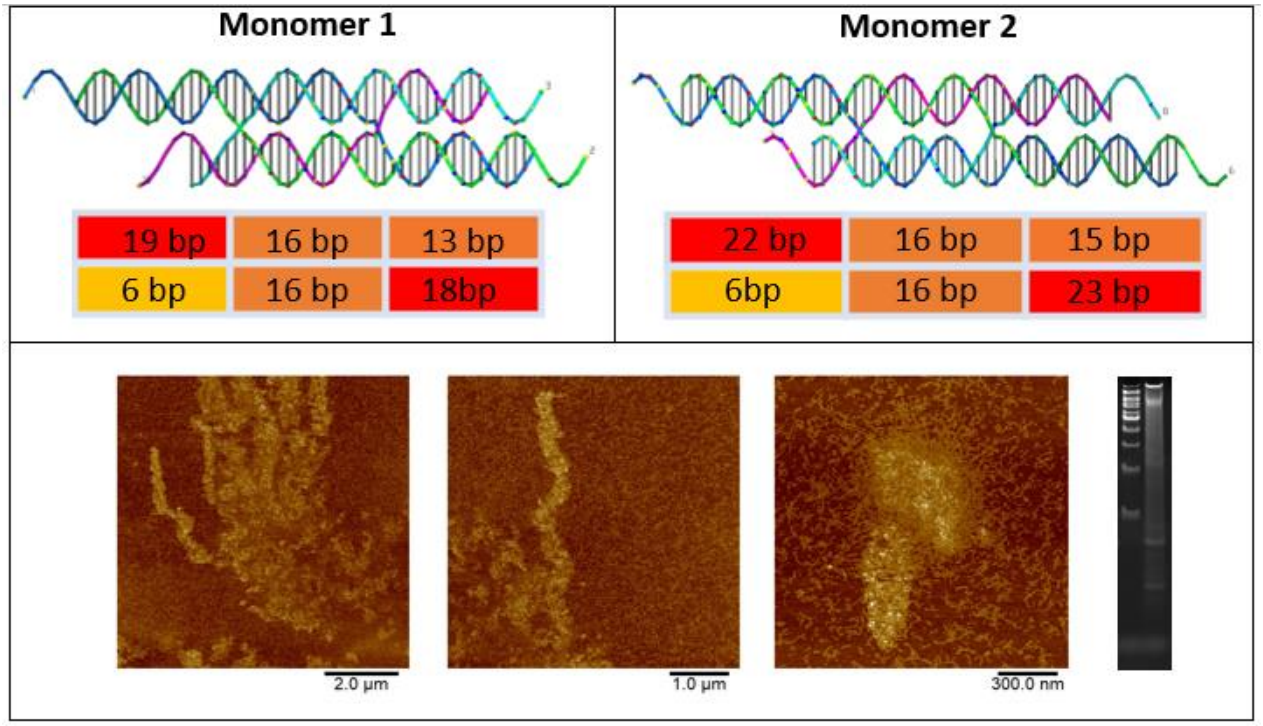


Figure S32. Schematics and additional AFM/gel images for the OS16&16 design. The AFM images indicate two dominant structures: partially wrapped assemblies and small, curved self-limited structures.

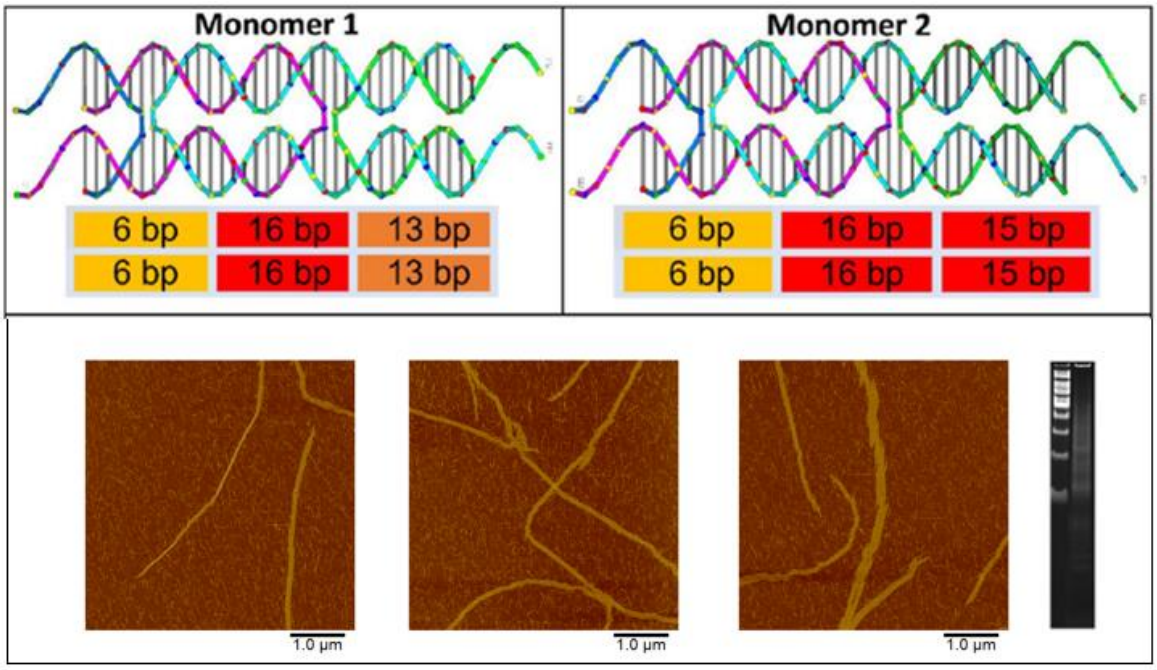


Figure S33. Schematics and additional AFM/gel images for the counterpart antiparallel-crossover 16&16 designs. The AFM images show the formation of assembled arrays (tube-like) growing in a linear direction that have both wrapped portion and open portion. The open portion could form during the AFM procedures: 1) mica deposition 2) scanning with an AFM tip.

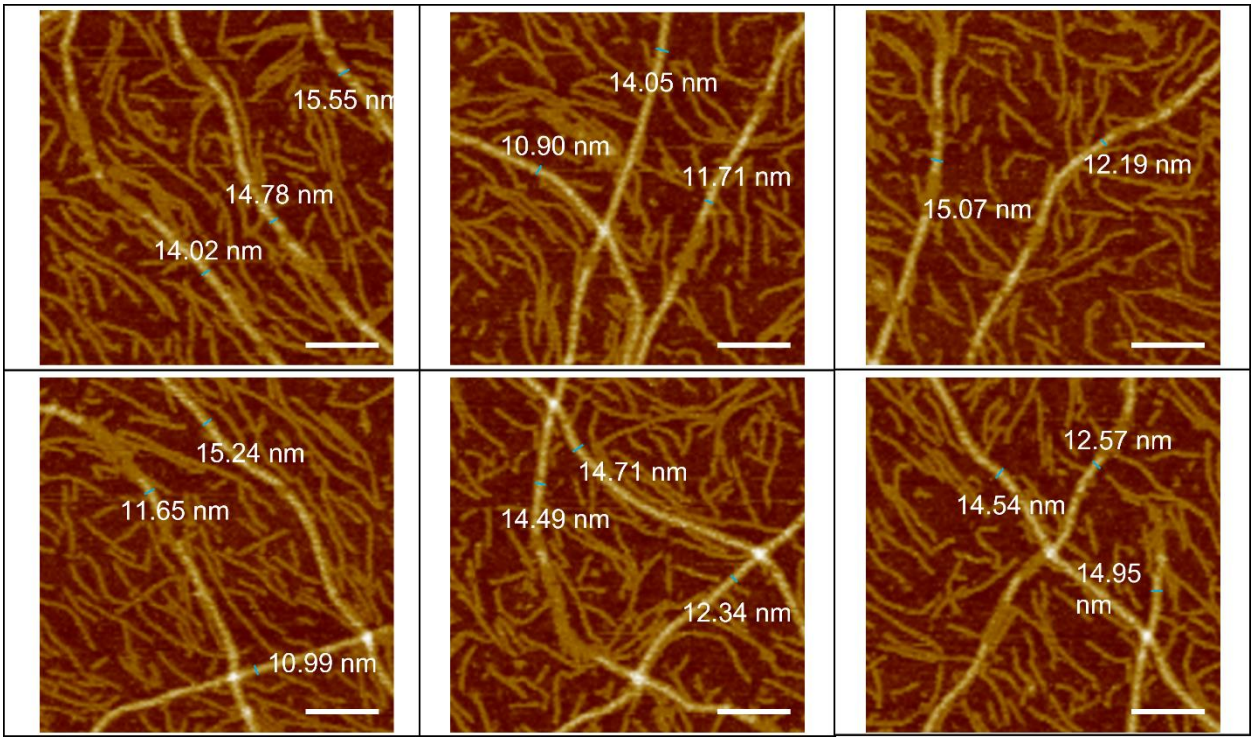


Figure S34. The measured diameters of nanotubes from the **Figure 3g** (14&15) using AFM. All scale bars are 100 nm.

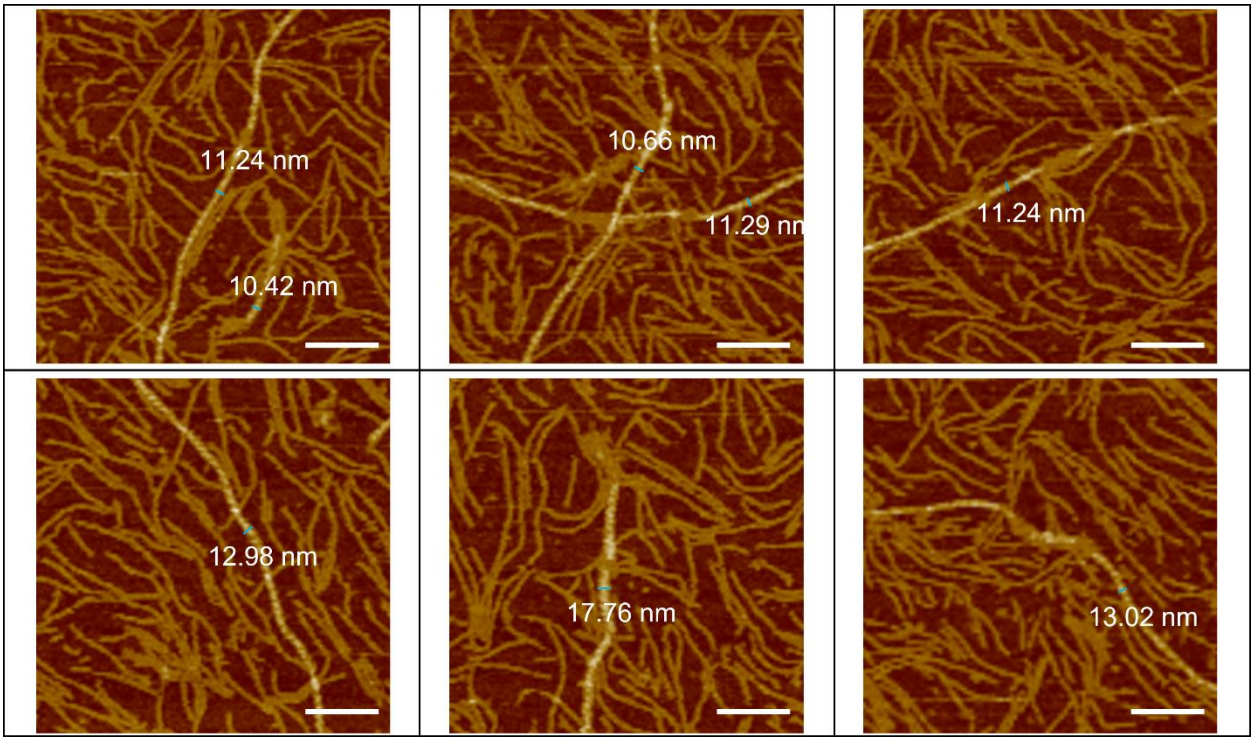


Figure S35. The measured diameters of nanotubes from the **Figure 3h (14&16)** using AFM. All scale bars are 100 nm.

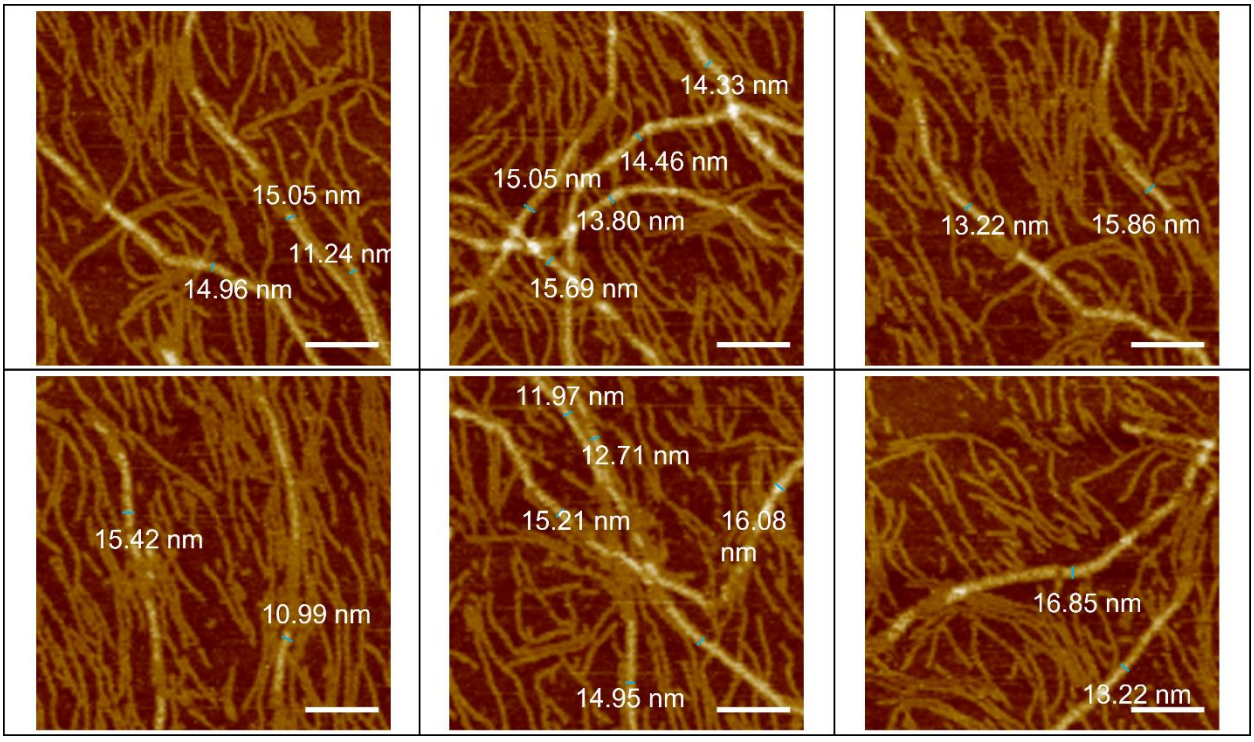


Figure S36. The measured diameters of nanotubes from the **Figure 3k (15&15)** using AFM. All scale bars are 100 nm.

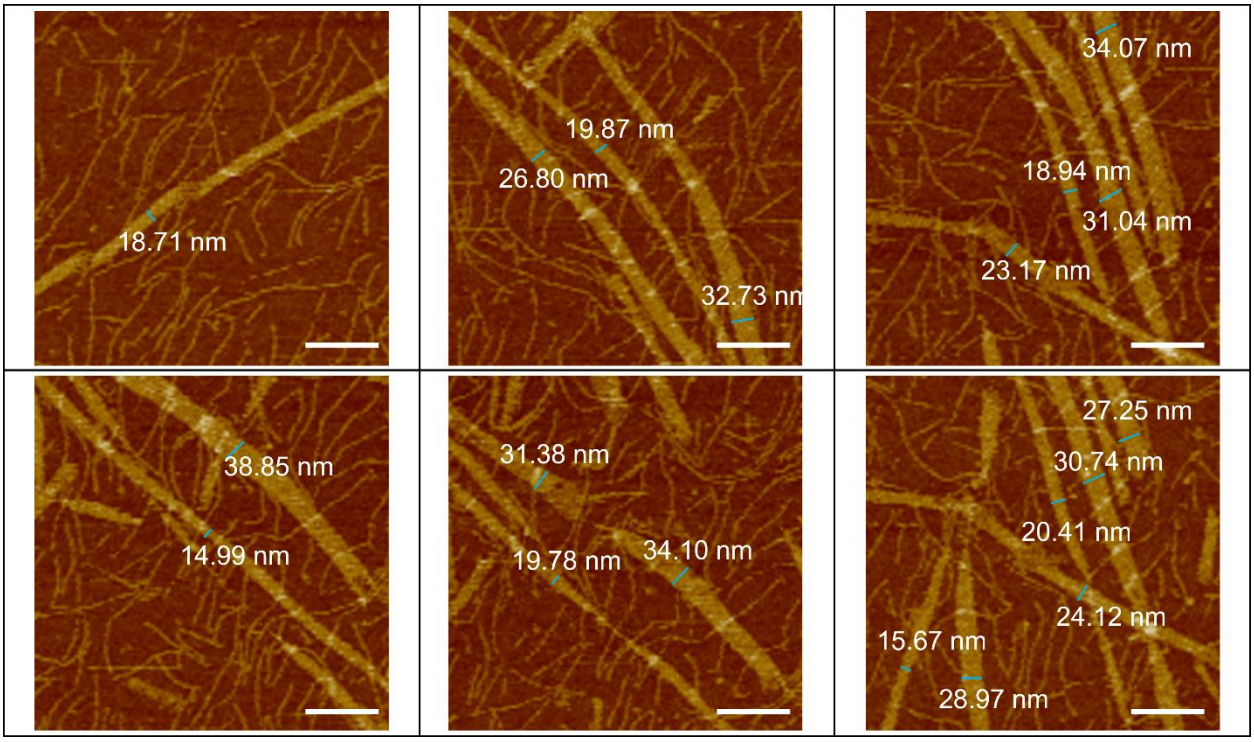


Figure S37. The measured diameters of nanotubes from the **Figure 3l (15&16)** using AFM. All scale bars are 100 nm.

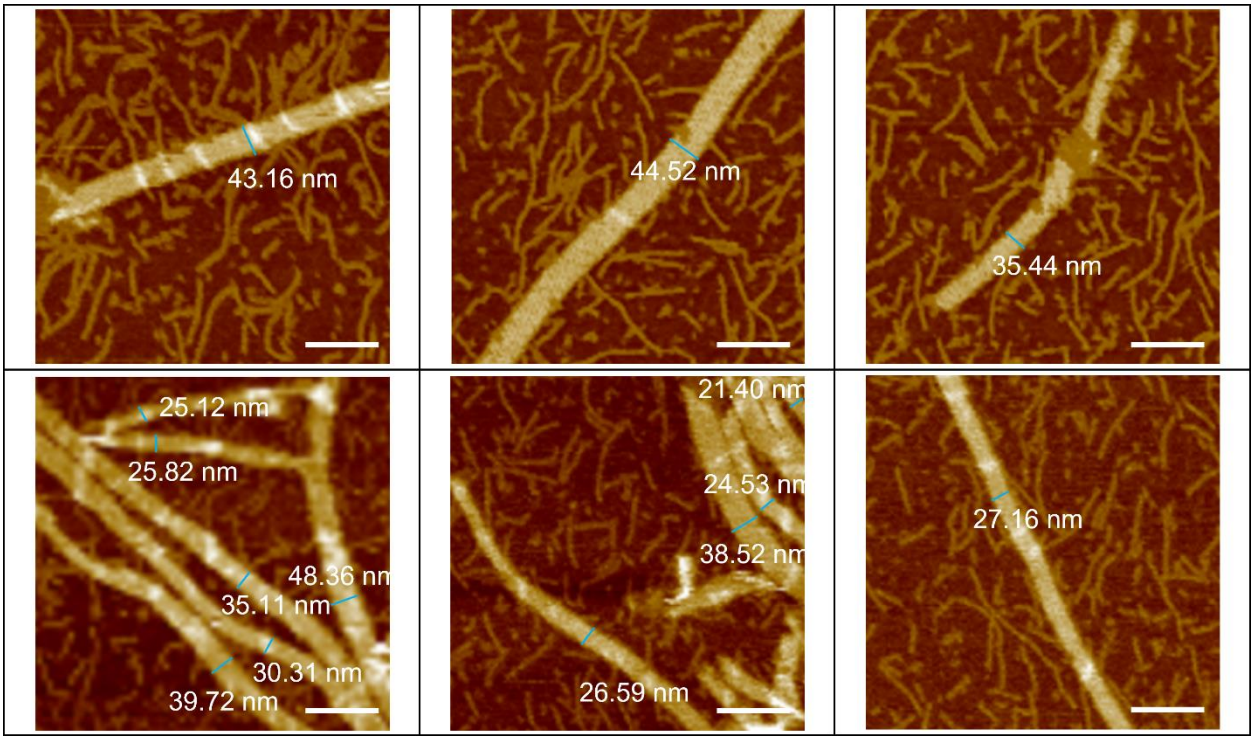


Figure S38. The measured diameters of nanotubes from the **Figure 3m (15&17)** using AFM. All scale bars are 100 nm.

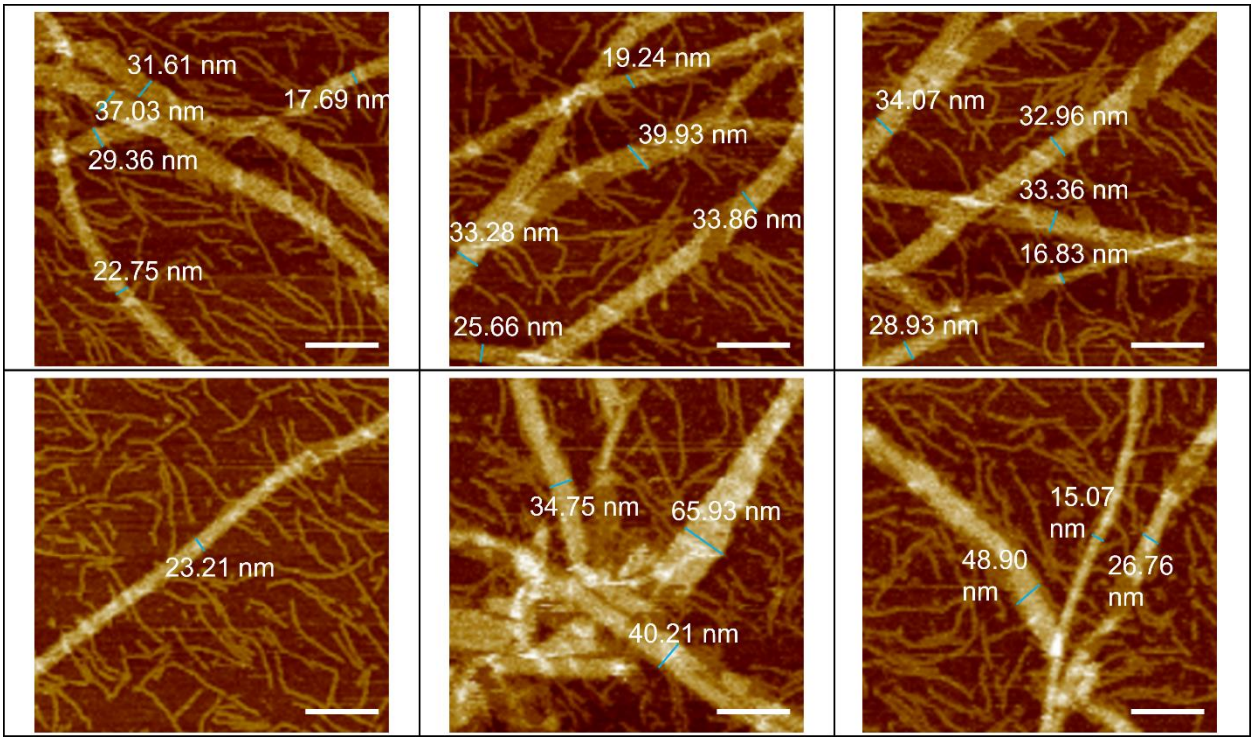


Figure S39. The measured diameters of nanotubes from the **Figure 3p (16&16)** using AFM. All scale bars are 100 nm.

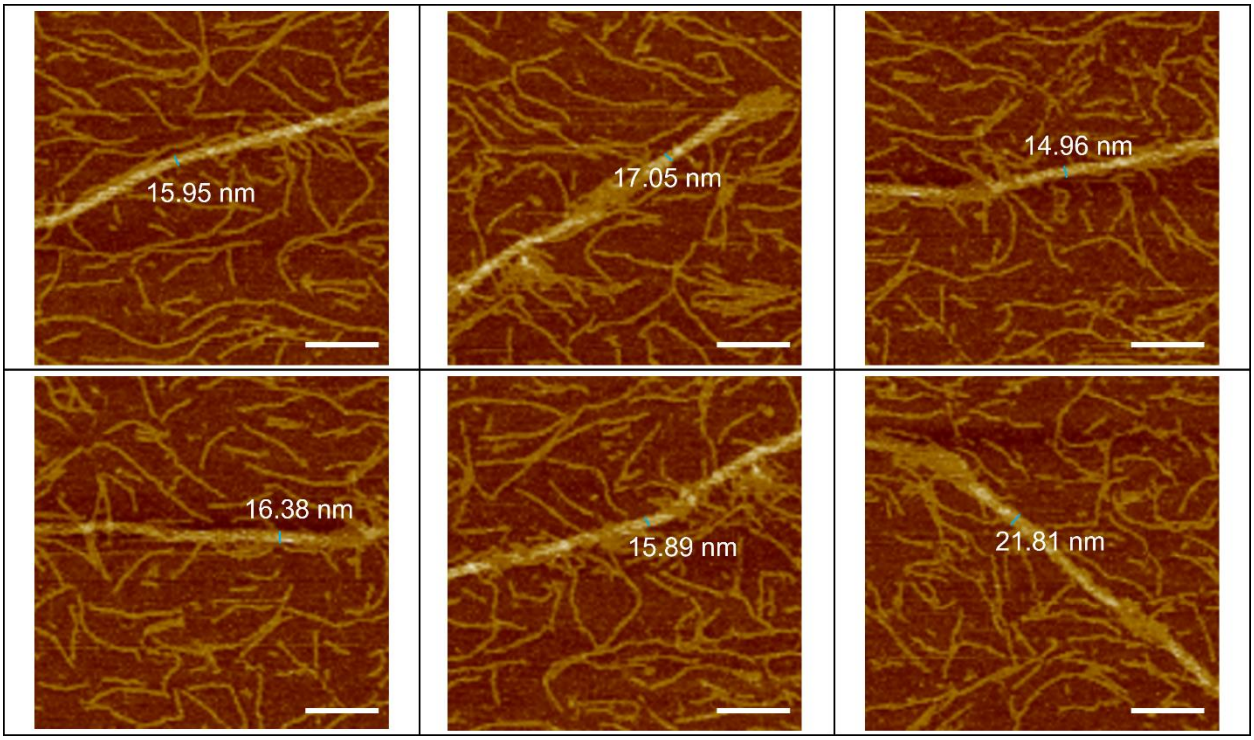


Figure S40. The measured diameters of nanotubes from the **Figure 3q (16&17)** using AFM. All scale bars are 100 nm.

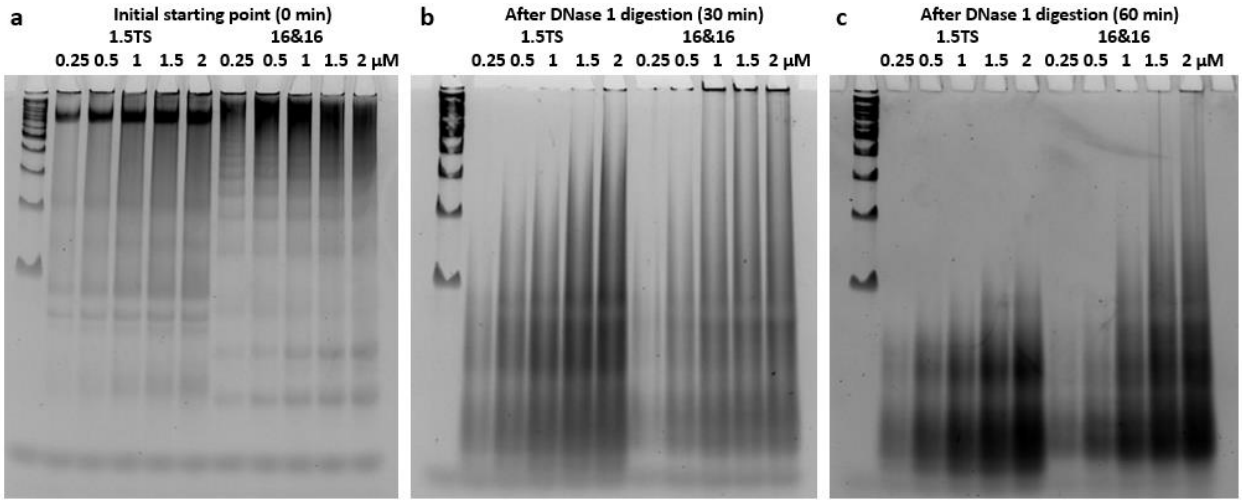


Figure S41. Native gels showing concentration-dependent nuclease resistance of **1.5DP** TS (**Figure 2d** design, labelled as 1.5TS) and 16&16 designs (**Figure 3p** design). The two designs were annealed at five different concentrations as indicated above gel wells. a) Initial arrays formed before exposure to DNase I (0 min). b) Arrays characterized after 30-minute DNase I digestion. c) Arrays after 60-minute DNase I digestion.

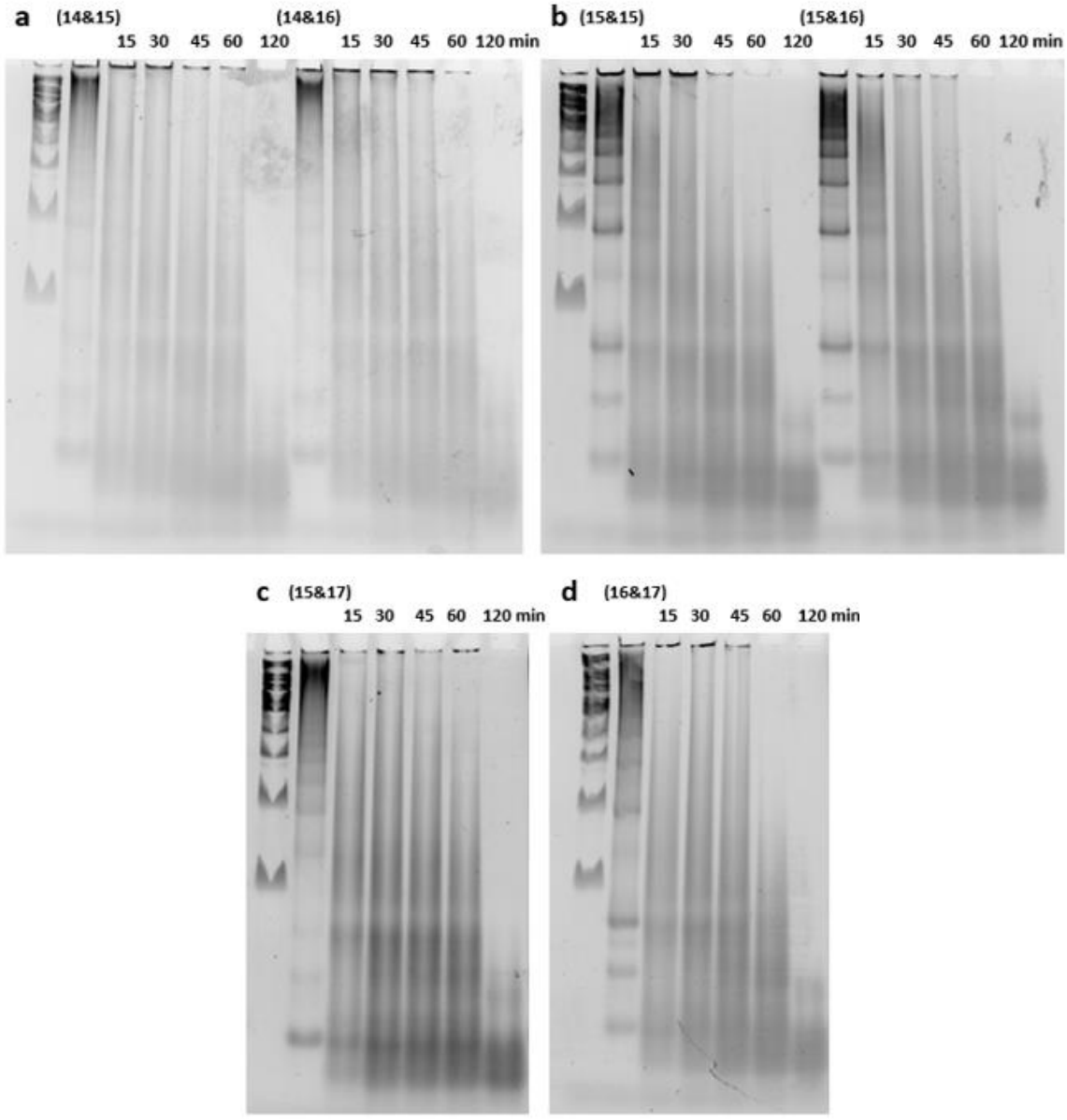


Figure S42. Native gels showing nuclease resistance of six other PX-based nanotubes. The nanotubes include designs from **Figure 3**: a) 14&15, 14&16; b) 15&15, 15&16; c) 15&17; d) 16&17.

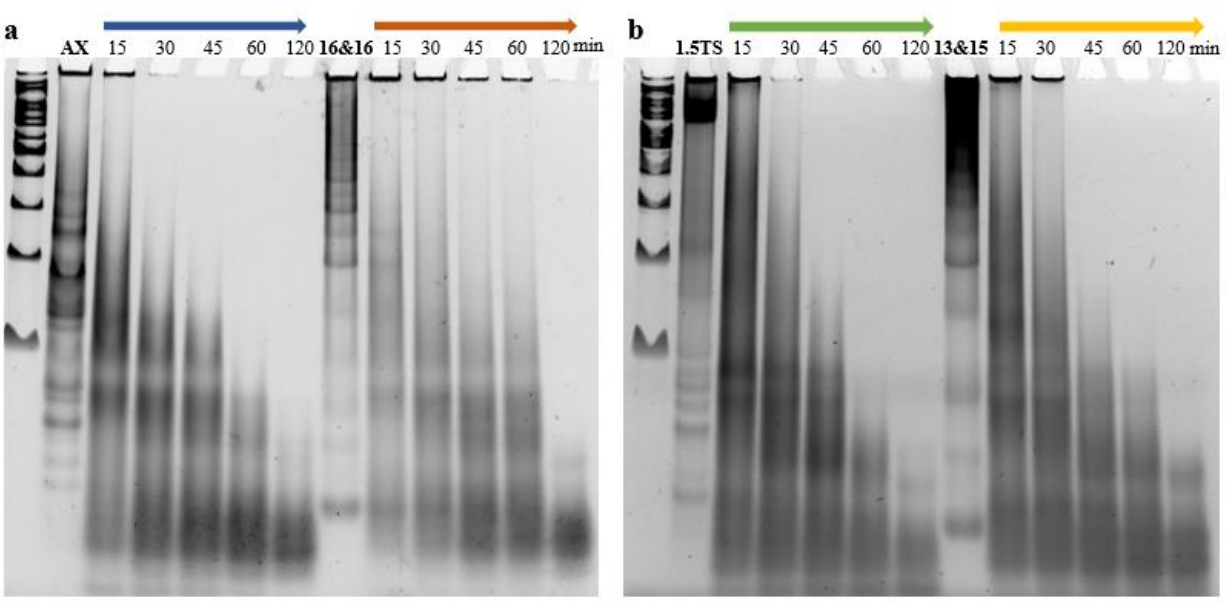


Figure S43. Native gel showing morphology-dependent nuclease resistance of designs: a) 16&16 (nanotubes) with its antiparallel-crossover-based (AX) counterpart in comparison, b) **1.5DP** TS, or 1.5TS (**Figure 2d** design with 2D assemblies) and 13&15 (fibular shapes).

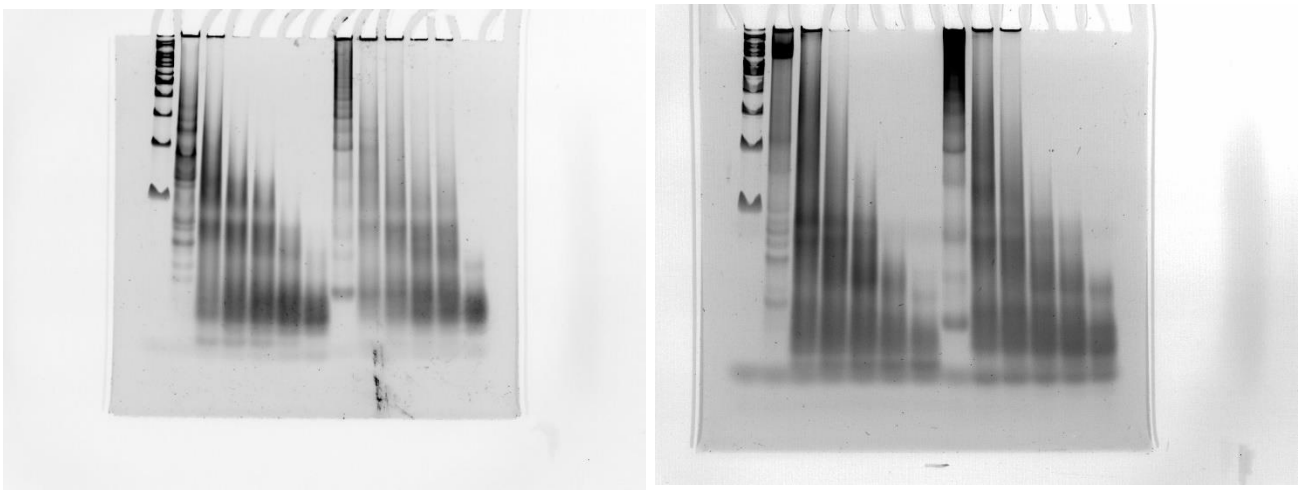


Figure S44. Unmodified gel images for Figure S43a and Figure S43b.

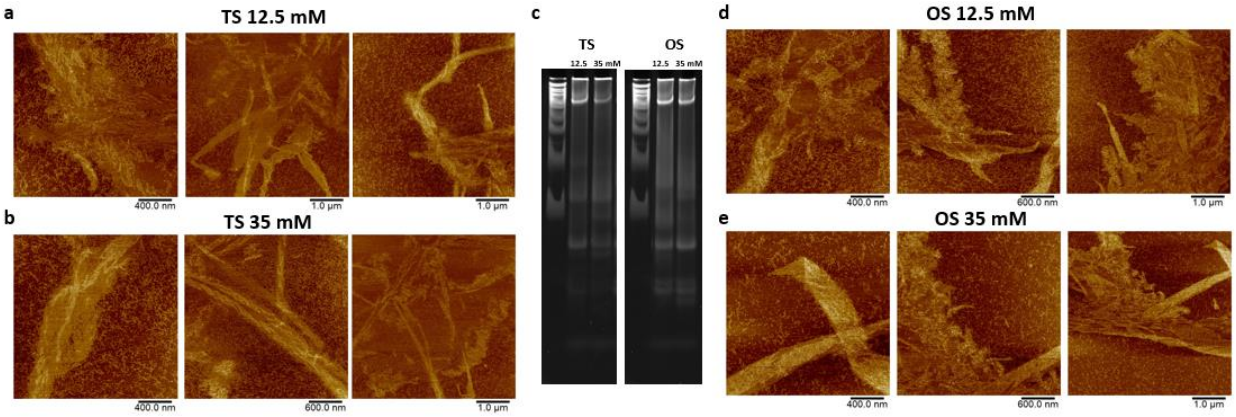


Figure S45. AFM and native gel data characterizing the assemblies of **Figure 2** TS and OS designs annealed at two different Mg concentrations: 12.5 mM (standard) and 35 mM (a high Mg concentration). AFM images include a) **Figure 2** TS design annealed at 12.5 mM Mg concentration and b) at 35 mM and d) **Figure 2** OS design annealed at 12.5 mM Mg concentration and e) at 35 mM. c) Native gel data characterizing the two design arrays formed at both Mg concentrations.

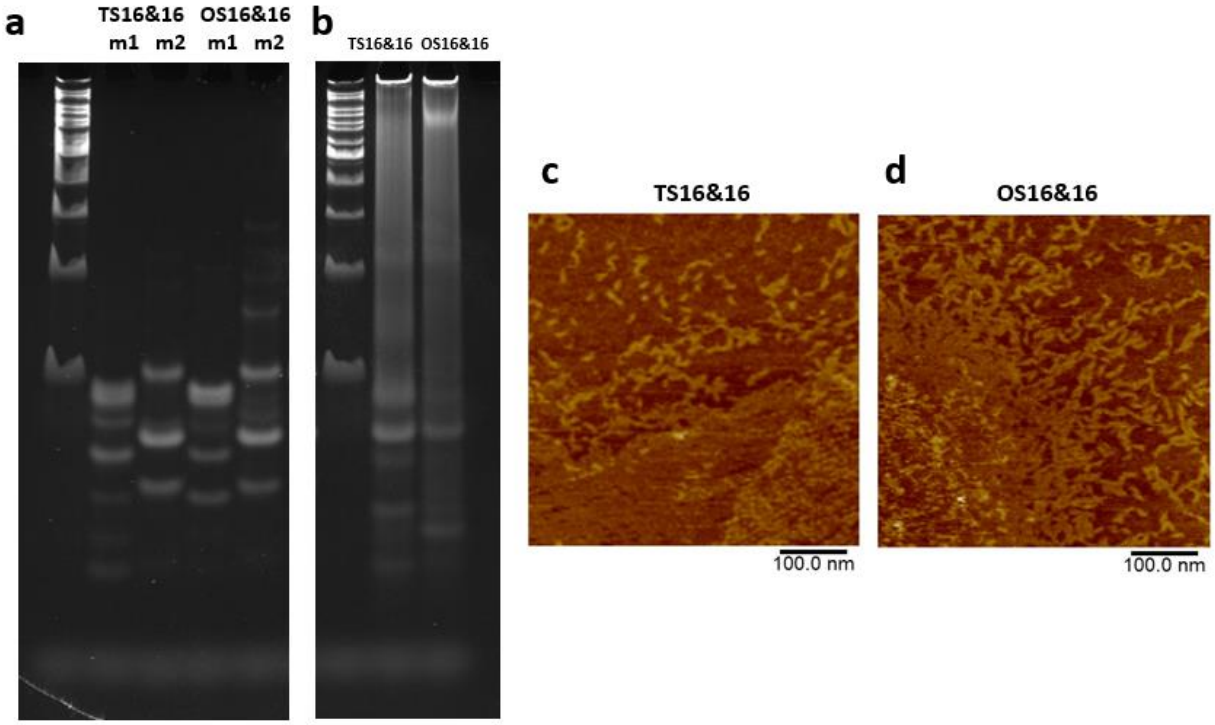


Figure S46. Native gel and AFM characterization of crossover-optimized designs (TS16&16 and OS16&16) based on original **Figure 2** TS and OS designs. a) Monomer gels of each design (m1: monomer 1 and m2: monomer 2). b) A native gel result showing arrays formed for both designs. AFM images of c) TS16&16 and d) OS16&16. (Refer to Figure S31 and S32).

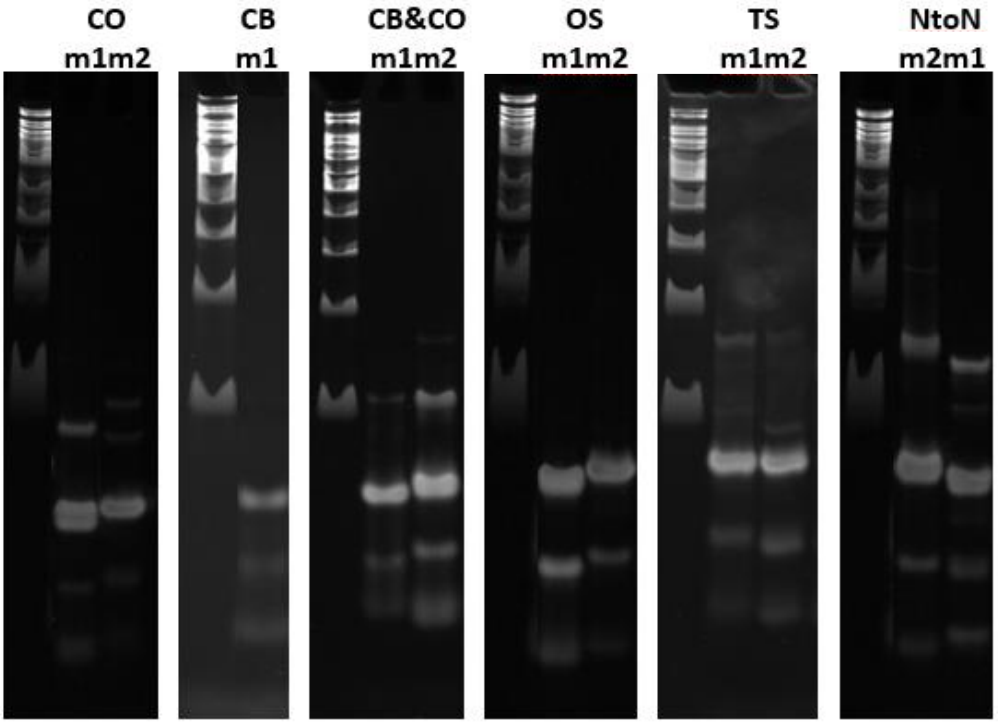


Figure S47. Native gel data showing monomers of **Figure 1** designs. The monomer 2 (m2) of the CB pathway design is the same as the monomer 2 of the CB&CO pathway design.

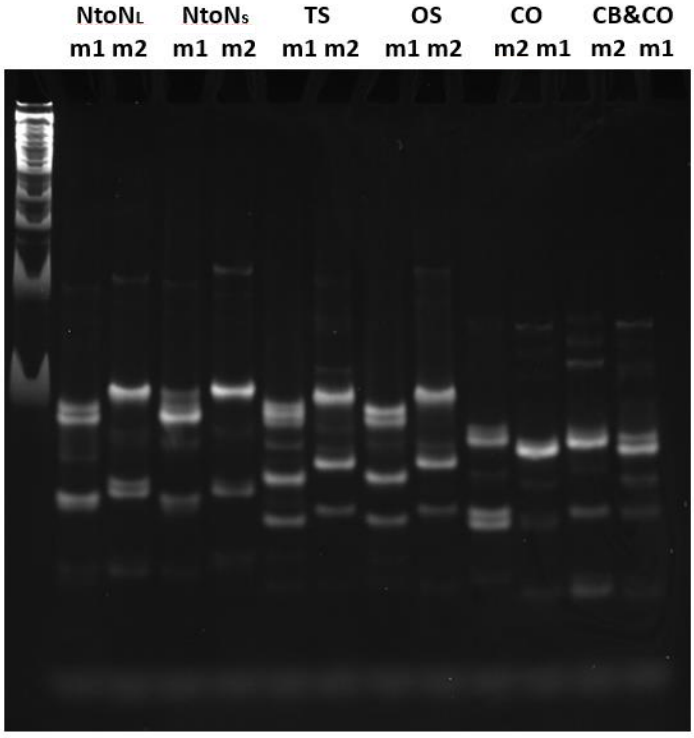


Figure S48. Native gel data showing monomers of **Figure 2** designs.

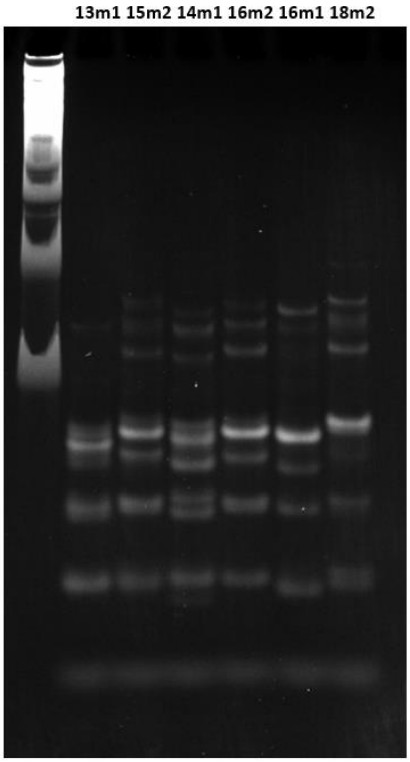


Figure S49. Native gel data showing monomers of **Figure 3** designs. The labelling here indicates the two monomers (m1 and m2) with the corresponding crossover-distance studied including 13 to 18. The monomers such as 15m1 (same as m1 in **Figure 2** CB&CO) and 16m2 (same as m2 in **Figure 2** CB&CO) are not included here since they are the same as CB&CO monomers from **Figure 2**.

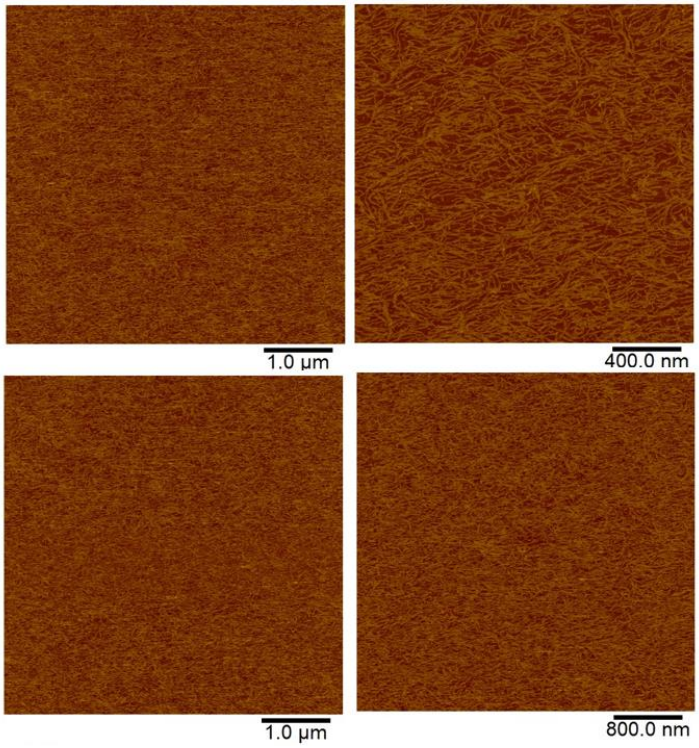


Figure S50. Repeated AFM images of **Figure 2** NtoN$_L$ design.

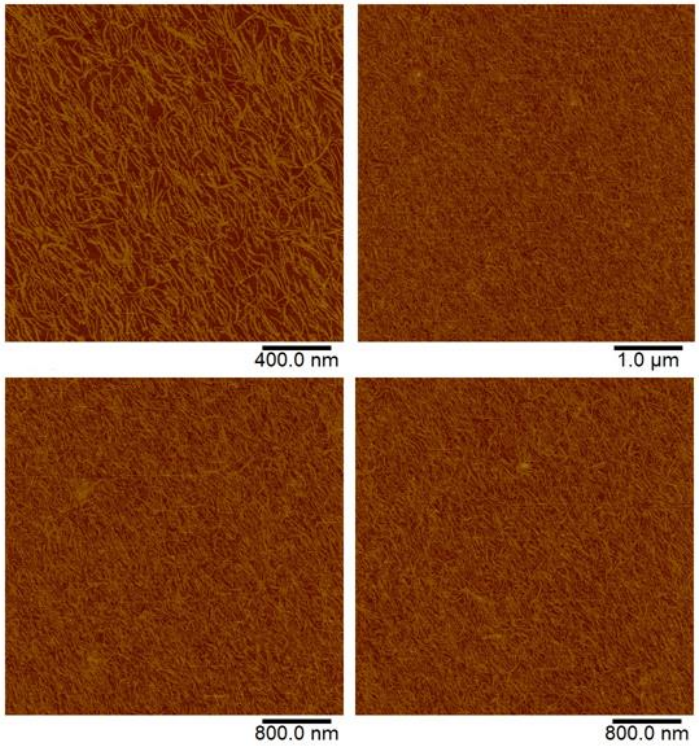


Figure S51. Repeated AFM images of **Figure 2** NtoNs design.

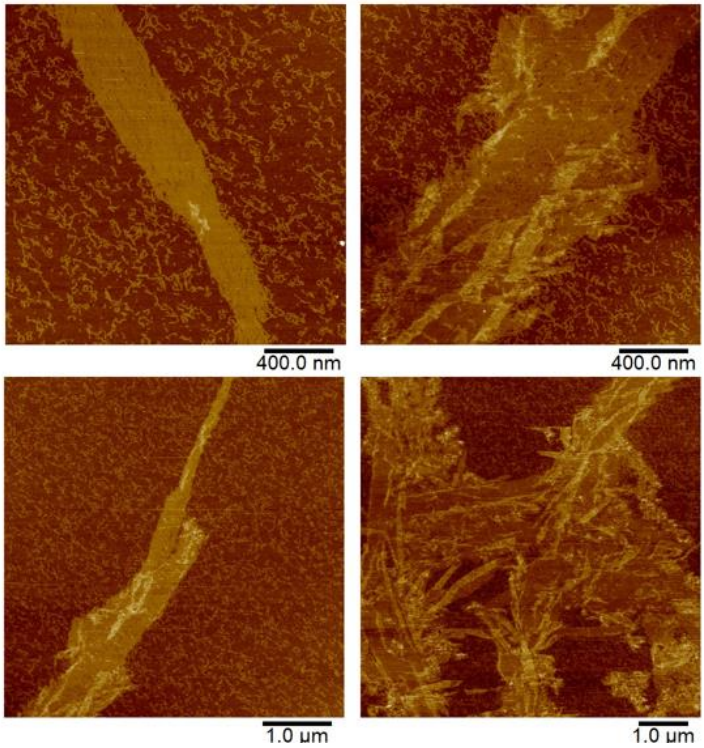


Figure S52. Repeated AFM images of **Figure 2** TS design.

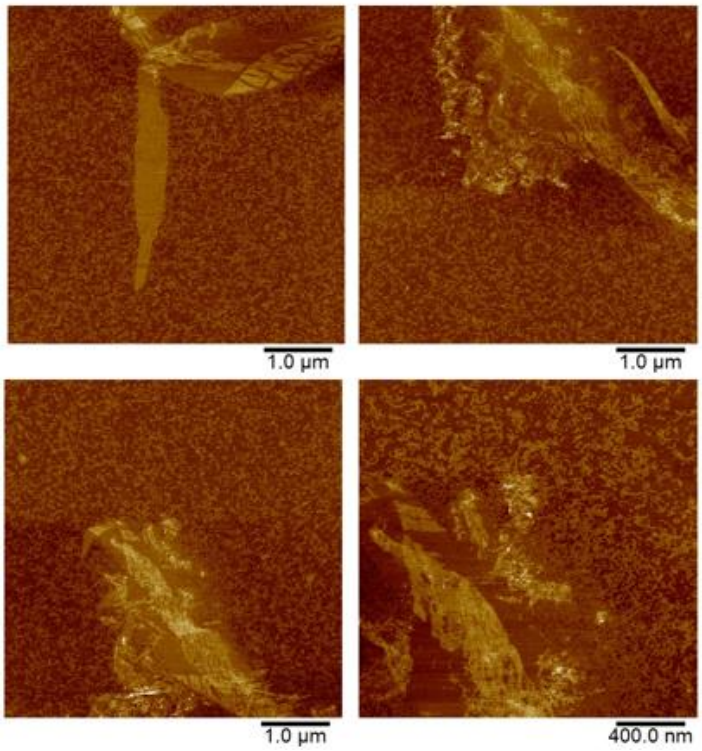


Figure S53. Repeated AFM images of **Figure 2** OS design.

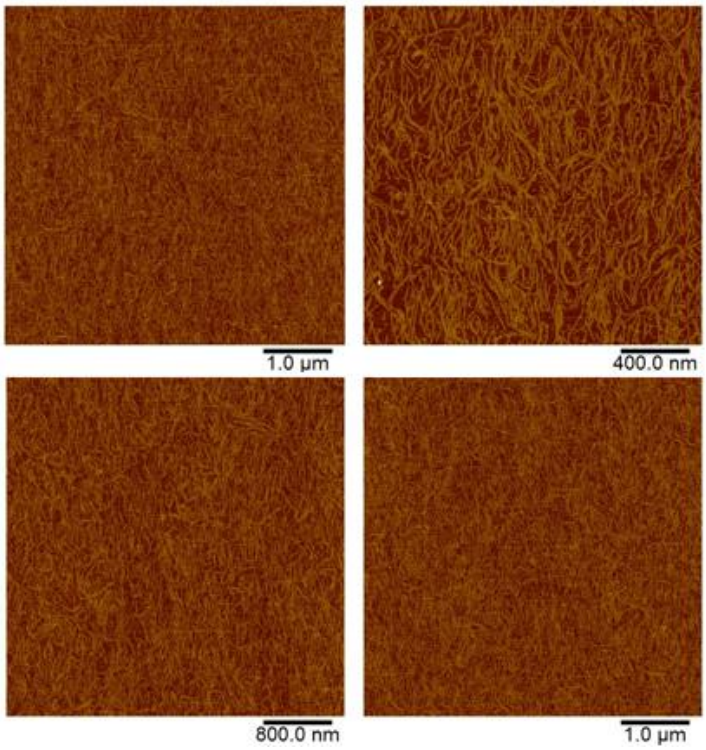


Figure S54. Repeated AFM images of **Figure 2** CO design.

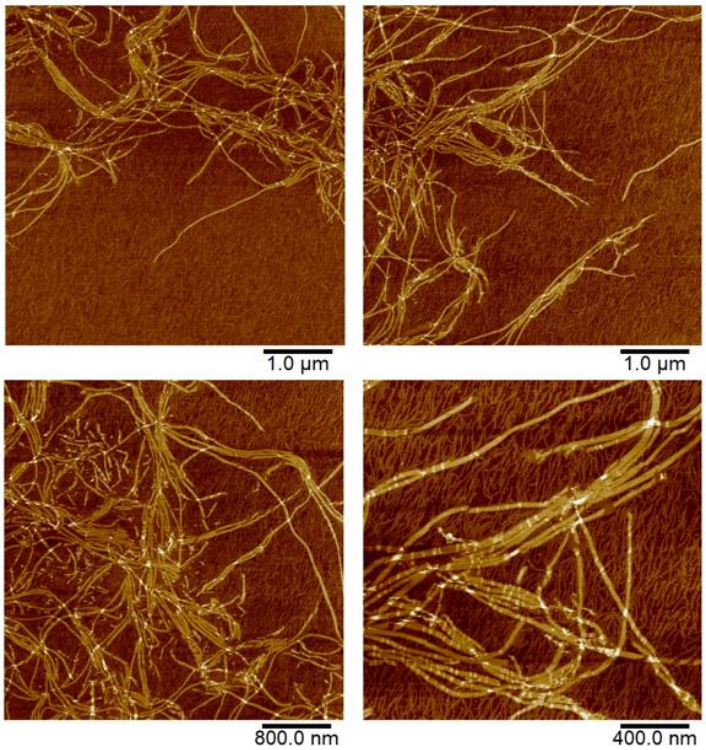


Figure S55. Repeated AFM images of **Figure 2** CB&CO design.

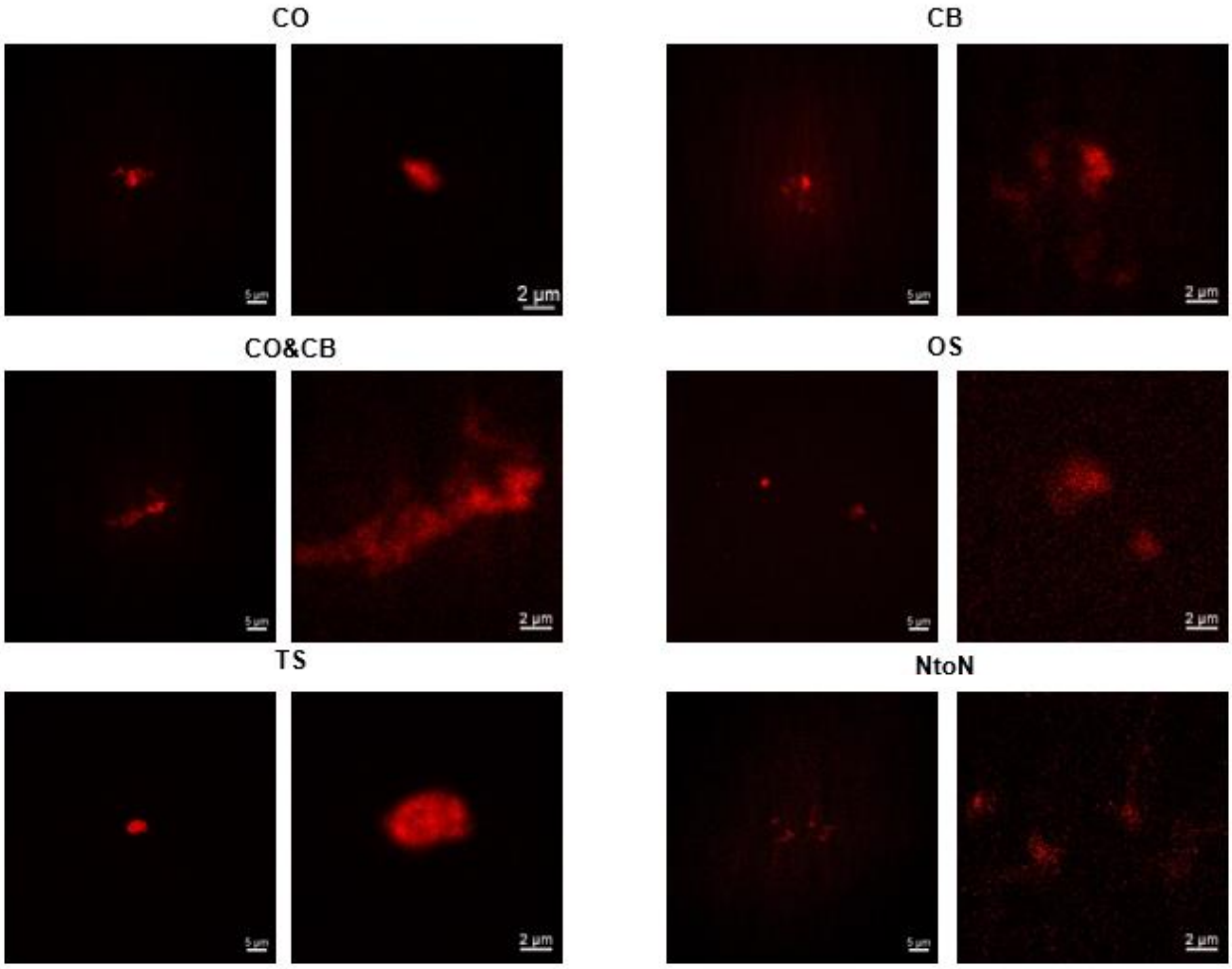


Figure S56. Fluorescence images of **Figure 1** designs. The images show that fibular structures have weak fluorescence. The left panel image of each design has a 5-micrometer scale bar, whereas the right panel has a 2-micrometer scale bar.

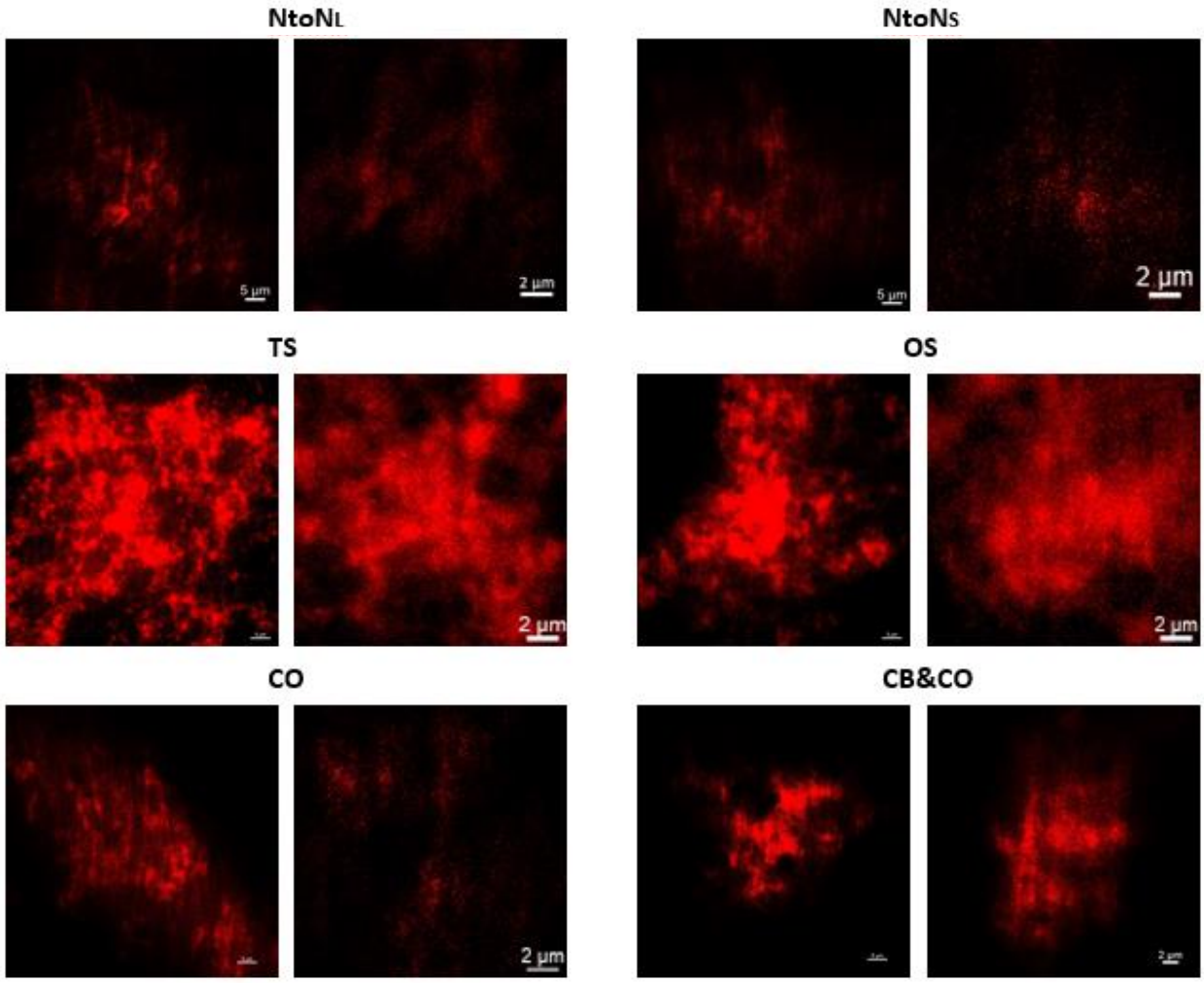


Figure S57. Fluorescence images of **Figure 2** designs. The images show that fibular structures have weak fluorescence, whereas large assemblies including 2D assemblies in the TS and OS and nanotubes in CB&CO show strong fluorescence. The left panel image of each design has a 5-micrometer scale bar, whereas the right panel has a 2-micrometer scale bar.

Sequences for Figure S1

Monomer 1	
Strand 1 (blue)	GTAGCGACCCCACCGACCGCGTGGGCTGGT
Strand 2 (green)	CTGACGACCAGCCCTGAGGCTCCCTGGGGT
Strand 3 (cyan)	GACTGCACGATAGGACGCGGTCGGACTGCT
Strand 4 (pink)	GATGGCAGCAGTGGGAGCCTCACCTATCGT
Monomer 2	
Strand 5 (blue)	GCAGTCGTCACAGTGGCATCAGAGCTGAGACTC
Strand 6 (green)	GCCATCGAGTCTCACAAAGGGAGGGACTGTGAC
Strand 7 (cyan)	CGCTACACCCACGTGCTCTGATGCCCAAGGAGT
Strand 8 (pink)	CGTCAGACTCCTTGCCCTCCCTTTGACGTGGGT

Sequences for Figure S2

Monomer 1	
Strand 1 (blue)	GCAGTCGGTTGTGGCATCAGGCTGGAGACTC
Strand 2 (green)	GCCATCGAGTCTCCACAAGGGAGGGACAACC
Strand 3 (cyan)	CGCTACACCCACGGTGCCTGATGCCCATGGA
Strand 4 (pink)	CGTCAGTCCATGCCCTCCCTTGACCGTGGGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCGCGTGGGCTGGTCG
Strand 6 (green)	CTGACGCGACCAGCCCTGAGGCTCCCTGGGGT
Strand 7 (cyan)	GACTGCGCACGATAGGACGCGGTCGGACTGCT
Strand 8 (pink)	GATGGCAGCAGTGGGAGCCTCACCTATCGTGC

Sequences for Figure S3

Monomer 1	
Strand 1 (blue)	GCAGTCGGTTGTGGCATCAGAGCTGAGACTC
Strand 2 (green)	GCCATCGAGTCTCACAAAGGGAGGGACAACC
Strand 3 (cyan)	CGCTACACCCACGTGCTCTGATGCCCATGGA
Strand 4 (pink)	CGTCAGTCCATGCCCTCCCTTTGACGTGGGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCGCGTGGGCTGGTCG
Strand 6 (green)	CTGACGCGACCAGCCCTGAGGCTCCCTGGGGT
Strand 7 (cyan)	GACTGCGCACGATAGGACGCGGTCGGACTGCT
Strand 8 (pink)	GATGGCAGCAGTGGGAGCCTCACCTATCGTGC

Sequences for Figure S4

Monomer 1	
Strand 1 (blue)	GTAGCGGTAGTGCACCCACCGGGTGGCCAGGTTGAC
Strand 2 (green)	CTGACGGTCAACCTGGCCTGAGGCTCCCTGCACTAC
Strand 3 (cyan)	GACTGCCCATACCATAGGACCCGGTGGGACTTGTCCCCTTACC
Strand 4 (pink)	GATGGCGGTAAGGGGACAAGTGGGAGCCTCACCTATGGTATGG
Monomer 2	
Strand 5 (blue)	GCAGTCGTACCCTTGTCCTGGACCATCAGAGGACAGCACAG
Strand 6 (green)	GCCATCCTGTGCTGTGGAAGGGAGCACCAGGACAAGGGTAC
Strand 7 (cyan)	CGCTACCCAGTCTTAGCCACCACCTCTGATGGTGGCGGCTTGACTCCG
Strand 8 (pink)	CGTCAGCGGAGTCAAGCCGCCTGCTCCCTTCCTGGTGGCTAAGACTGG

Sequences for Figure S5

Monomer 1	
Strand 1 (blue)	GTAGCGAGCACACCCACCAGTGTGGCAGGTTGACAACTGAGGC
Strand 2 (green)	CTGACGGCCTCAGTTGTCAACCTGCCTGTGATCTCCCTGTGCT
Strand 3 (cyan)	GACTGCCATGGACACTGGTGGGACTTGTCCCCTTACCCTG
Strand 4 (pink)	GATGGCCAGGGTAAGGGGACAAGTGGGAGATCACACCATGG
Monomer 2	
Strand 5 (blue)	CAGTCGTATGGGTACCCTTGTCCTGGACCATCAGAGGACAGGA
Strand 6 (green)	GCCATCTCCTGTTGAAGCGAGTACCAGGACAAGGGTACCCATAC
Strand 7 (cyan)	CGCTACACCCAGTCTTAGCCACCACCTCTGATGGTGACGGC
Strand 8 (pink)	CGTCAGGCCGTCTACTCGCTTCATGGTGGCTAAGACTGGGT

Sequences for Figure S6

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGCAGGAAGCCTCCAAGCGGAGT
Strand 2 (green)	GCCATCACTCCGCTTGGAGGCTTCCACAGGGAGGGCGGAGG
Strand 3 (cyan)	CGCTACGTCCAGTCTTAGCCACGGGTGCTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTGTCCCGTGGCTAAGACTGGAC
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCGCGTGGGCTGGTTGACAACTGACGG
Strand 6 (green)	CTGACGCCGTCAGTTGTCAACCAGCCCTGAGGCTCCCTGGGGT
Strand 7 (cyan)	GACTGCGACGGGAAGCCATACCATAGGACGCGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTCACCTATGGTATGGCTTCCCGTC

Sequences for Figure S9

Monomer 1	
Strand 1 (blue)	CGTCAGAGGACACTGCAGTAGCCACCTGTTGTGCCTCTTGTGGAAGTCTA
Strand 2 (green)	GCCATCTAGACTTCCGGTCACCTGTCTGGTGGTGGCTACTGCAGTGTCCT
Strand 3 (cyan)	CGCTACCTGTCCCGGACAAGAGGCACAACACCATCCTCGCCTGCTATACC
Strand 4 (pink)	GCAGTCGGTATAGCAGGCGAGGATGGACCAGACAGGTGACCCCGGGACAG
Monomer 2	
Strand 5 (blue)	GATGGCCCAGTGGTTCCCATTCAGTGGTGGCCTAGGTTGGAAGGACTTCCAAGCT
Strand 6 (green)	CTGACGAGCTTGGAAGTGGTCGGACATACGGGGACCACTGAATGGGAACCACTGG
Strand 7 (cyan)	GACTGCACTGCTATACACCTTCCAACCTAGGCCTGCGTGACGTGACCATGTGGGG
Strand 8 (pink)	GTAGCGCCCCACATGGTCACGTCACGCACCCCGTATGTCCGACCTGTATAGCAGT

Sequences for Figure S10

Monomer 1	
Strand 1 (blue)	CGTCAGGATAGGACACTGCAGTAGCCACCTGTTGTGCCTCTTGTGGAAGT
Strand 2 (green)	GCCATCACTTCCGGTCACCTGTCTGGTGGTGGCTACTGCAGTGTCCTATC
Strand 3 (cyan)	CGCTACTCCCGGACAAGAGGCACAACACCATCCTCGCCTGCTATACCGTC
Strand 4 (pink)	GCAGTCGACGGTATAGCAGGCGAGGATGGACCAGACAGGTGACCCCGGGA
Monomer 2	
Strand 5 (blue)	GATGGCGCTCCAGTGGTTCCCATTCAGTGGTGGCCTAGGTTGGAAGGACTTCCAA
Strand 6 (green)	CTGACGTTGGAAGTGGTCGGACATACGGGGACCACTGAATGGGAACCACTGGAGC
Strand 7 (cyan)	GACTGCGCTATACACCTTCCAACCTAGGCCTGCGTGACGTGACCATGTGGGACCT
Strand 8 (pink)	GTAGCGAGGTCCCACATGGTCACGTCACGCACCCCGTATGTCCGACCTGTATAGC

Sequences for Figure S11

Monomer 1	
Strand 1 (blue)	CGTCAGGGACACTGCAGTAGCCACCTGTTGTGCCTCTTGTG GATGTCACTTGTACTCTA
Strand 2 (green)	GCCATCTAGAGTACAAGTGACATCCGGTCACCTGTCTGGTG GTGGCTACTGCAGTGTCC
Strand 3 (cyan)	CGCTACTCTGTCCCGGACAAGAGGCACAACACCATCCTCCC
Strand 4 (pink)	GCAGTCGGGAGGATGGACCAGACAGGTGACCCCGGGACAGA
Monomer 2	
Strand 5 (blue)	GATGGCCCAGTGGTTCCCATTCAGTGGTGGCCTAGGTTGGACA GGACTTCCAAGCTTCATCATGTAC
Strand 6 (green)	CTGACGGTACATGATGAAGCTTGGAAGTGGGTCGGACATACGG GGACCACTGAATGGGAACCACTGG
Strand 7 (cyan)	GACTGCCTGCTATACACCTGTCCAACCTAGGCCTGGGGAGGGG
Strand 8 (pink)	GTAGCGCCCCTCCCCACCCCGTATGTCCGACCCTGTATAGCAG

Sequences for Figure S12

Monomer 1	
Strand 1 (blue)	CGTCAGGAACATTGTACTAGCCACCGGTTGTGCCTCTTGTG GATGTCACTTGTACTCTG
Strand 2 (green)	GCCATCCAGAGTACAAGTGACATCCGGTCACCTGTCTGGTG GTGGCTAGTACAATGTTC
Strand 3 (cyan)	CGCTACCTACTCTGTCCCGGACAAGAGGCACAACCCCATCC
Strand 4 (pink)	GCAGTCGGATGGACCAGACAGGTGACCCCGGGACAGAGTAG
Monomer 2	
Strand 5 (blue)	GATGGCCTACTTGTTCTCATTCACTTGTGGCCTAGGTTGGACA GGACTTCCAAGCTTCATCATGTAC
Strand 6 (green)	CTGACGGTACATGATGAAGCTTGGAAGTGGGTCGGACATACG GGGACAAGTGAATGAGAACAAGTAG
Strand 7 (cyan)	GACTGCCTGCCTGCTATACACCTGTCCAACCTAGGCCTGGGGA
Strand 8 (pink)	GTAGCGTCCCCACCCCGTATGTCCGACCCTGTATAGCAGGCAG

Sequences for Figure S13

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGAGGTGGCTGAGACGTGGCTGTCCCTGGAC
Strand 2 (green)	CGCTACGTCCAGGGCGGAGGCTTCTTGCTGGACCTCGGAGG
Strand 3 (cyan)	GCCATCAGACTGCCACAGCCACGTCTCAGCCTGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTGGCACCAGCAAGAAGCCTCCGGGCAGTCT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCTGGAGAGTCCGACAGCTGGTTCCCCTTCACGAC
Strand 6 (green)	GACTGCGTCGTGAAGGACTACCATAGCCACCACTCTCCAGGGT
Strand 7 (cyan)	CTGACGCCCTGGATCCGGAACCAGCTGTCGGTGTCCGTGCCCT
Strand 8 (pink)	GATGGCAGGGCACGGACAGGTGGCTATGGTAGTGGATCCAGGG

Sequences for Figure S14

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGTCGGAGTGGCTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTAGCCTGGGGTGAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGGAGGACTCCGACTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTCACCCCACCTCCAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCACGCAGTATCAGGTGGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCCACCACAGCTTGGAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTCGGTGATACTGCGTGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTCCAAGCTGTCCGACAACTGACGG

Sequences for Figure S15

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGGTCGTGGAGCTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTAGCTCCTGTCCAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGGAGTGGACGACCTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTGGACACCACTCCAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCGCACCATCAGGGATGGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCCATCCCACCTGGTAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTCAGGGTGATGGTGCGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTACCAGGTCCCTGACAACTGACGG

Sequences for Figure S16

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGGTCGTGGAGCTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTAGCTCCTGTCCAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGGAGTGGACGACCTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTGGACACCACTCCAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCGCACCATACAGGATGGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCCATCCACGCTGGTAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTCAGGTGTATGGTGCGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTACCAGCGTCCTGACAACTGACGG

Sequences for Figure S17

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGGTCGTGGAGCTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTAGCTCCTGTCCAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGGAGTGGACGACCTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTGGACACCACTCCAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCACGCAGTATCAGGTGGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCCACCACAGCTTGGAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTCGGTGATACTGCGTGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTCCAAGCTGTCCGACAACTGACGG

Sequences for Figure S18

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGGTCGTGGAGCTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTAGCTCCTGTCCAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGGAGTGGACGACCTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTGGACACCACTCCAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCACGCAGTATCCAGGTGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCACCACCAGCTTGGAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTGGTGGATACTGCGTGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTCCAAGCTGGTCCACAACTGACGG

Sequences for Figure S19

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGGTCGGTGGGCTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTAGCCCTGGTCCAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGGAGGGACCGACCTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTGGACCACCCTCCAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCGCACCATCAGGGATGGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCCATCCCACCTGGTAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTCAGGGTGATGGTGCGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTACCAGGTCCCTGACAACTGACGG

Sequences for Figure S20

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGGTCGGTGGGCTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTAGCCCTGGTCCAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGGAGGGACCGACCTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTGGACCACCCTCCAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCGCACCATACAGGATGGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCCATCCACGCTGGTAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTCAGGTGTATGGTGCGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTACCAGCGTCCTGACAACTGACGG

Sequences for Figure S21

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGGTCGGTGGGCTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTAGCCCTGGTCCAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGGAGGGACCGACCTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTGGACCACCCTCCAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCACGCAGTATCAGGTGGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCCACCACAGCTTGGAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTCGGTGATACTGCGTGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTCCAAGCTGTCCGACAACTGACGG

Sequences for Figure S22

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGGTCGGTGGGCTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTAGCCCTGGTCCAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGGAGGGACCGACCTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTGGACCACCCTCCAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCACGCAGTATCCAGGTGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCACCACCAGCTTGGAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTGGTGGATACTGCGTGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTCCAAGCTGGTCCACAACTGACGG

Sequences for Figure S23

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGTCGGAGTGGCTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTAGCCTGGGGTGAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGGAGGACTCCGACTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTCACCCCACCTCCAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCGCACCATCAGGGATGGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCCATCCCACCTGGTAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTCAGGGTGATGGTGCGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTACCAGGTCCCTGACAACTGACGG

Sequences for Figure S24

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGTCGGAGTGGCTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTAGCCTGGGGTGAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGGAGGACTCCGACTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTCACCCCACCTCCAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCGCACCATACAGGATGGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCCATCCACGCTGGTAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTCAGGTGTATGGTGCGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTACCAGCGTCCTGACAACTGACGG

Sequences for Figure S25

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGTCGGAGTGGCTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTAGCCTGGGGTGAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGGAGGACTCCGACTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTCACCCCACCTCCAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCACGCAGTATCAGGTGGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCCACCACAGCTTGGAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTCGGTGATACTGCGTGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTCCAAGCTGTCCGACAACTGACGG

Sequences for Figure S26

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGTCGGAGTGGCTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTAGCCTGGGGTGAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGGAGGACTCCGACTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTCACCCCACCTCCAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCACGCAGTATCCAGGTGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCACCACCAGCTTGGAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTGGTGGATACTGCGTGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTCCAAGCTGGTCCACAACTGACGG

Sequences for Figure S27

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGTCGGAGGTGGTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTACCTGAGGGTGAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGTGGACCTCCGACTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTCACCCTCACCACAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCGCACCATCAGGGATGGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCCATCCCACCTGGTAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTCAGGGTGATGGTGCGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTACCAGGTCCCTGACAACTGACGG

Sequences for Figure S28

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGTCGGAGGTGGTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTACCTGAGGGTGAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGTGGACCTCCGACTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTCACCCTCACCACAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCGCACCATACAGGATGGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCCATCCACGCTGGTAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTCAGGTGTATGGTGCGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTACCAGCGTCCTGACAACTGACGG

Sequences for Figure S29

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGTCGGAGGTGGTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTACCTGAGGGTGAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGTGGACCTCCGACTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTCACCCTCACCACAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCACGCAGTATCAGGTGGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCCACCACAGCTTGGAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTCGGTGATACTGCGTGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTCCAAGCTGTCCGACAACTGACGG

Sequences for Figure S30

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGGGCATCAGTCGGAGGTGGTAAGACTGGAC
Strand 2 (green)	CGCTACGTCCAGTCTTACCTGAGGGTGAGGGAGGGCGGAGG
Strand 3 (cyan)	GCCATCACTCCGCTTGTGGACCTCCGACTGATGCCACACCT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTCACCCTCACCACAAGCGGAGT
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCACCGACCACGCAGTATCCAGGTGCTTCCCGTC
Strand 6 (green)	GACTGCGACGGGAAGCACCACCAGCTTGGAGGCTCCCTGGGGT
Strand 7 (cyan)	CTGACGCCGTCAGTTGTGGTGGATACTGCGTGGTCGGACCCCT
Strand 8 (pink)	GATGGCAGGGGTGGGAGCCTCCAAGCTGGTCCACAACTGACGG

Sequences for Figure S31

Monomer 1	
Strand 1 (blue)	CGTCAGGGACACTGCAGTAGCCACCTGTTGTGCCTCTTGGTGGTGTCACTTGTACT CTA
Strand 2 (green)	GCCATCTAGAGTACAAGTGACACCGGGTCACCTGTCTGGTGGTGGCTACTGCAGT GTCC
Strand 3 (cyan)	CGCTACTCTGTCGGGACCAAGAGGCACAACACCATCCTCCC
Strand 4 (pink)	GCAGTCGGGAGGATGGACCAGACAGGTGACCCCCCGACAGA
Monomer 2	
Strand 5 (blue)	GATGGCCTCTTATGTGTCAATCAGTGGTGGCCTAGGTTGGACGGACCTTCCAAGCT TCATCATGTAC
Strand 6 (green)	CTGACGGTACATGATGAAGCTTGGAAGGTGGTCGGACATACGGGGACCACTGATT GACACATAAGAG
Strand 7 (pink)	GTAGCGCCCATATCCACCCCGTATGTCCGACCTGGTATAGCAG
Strand 8 (cyan blue)	GACTGCCTGCTATACCACCGTCCAACCTAGGCCTGGATATGGG

Sequences for Figure S32

Monomer 1	
Strand 1 (blue)	CGTCAGGAACATTGTACTAGCCACCGGTTGTGCCTCTTGGTGGTGTCACTTGTACTCTG
Strand 2 (green)	GCCATCCAGAGTACAAGTGACACCGGGTCACCTGTCTGGTGGTGGCTAGTACAATGTTC
Strand 3 (cyan)	CGCTACCTACTCTGTCCGGACCAAGAGGCACAACCCCATCC
Strand 4 (pink)	GCAGTCGGATGGACCAGACAGGTGACCCCCGGACAGAGTAG
Monomer 2	
Strand 5 (blue)	GATGGCCTACTTGTTCTCATTCACTTGTGGCCTAGGTTGGACGGACCTTCCAAGCTTCATCATGTAC
Strand 6 (green)	CTGACGGTACATGATGAAGCTTGGAAGGTGGTCGGACATACGGGGACAAGTGAATGAGAACAAGTAG
Strand 7 (cyan)	GTAGCGTCCCCACCCCGTATGTCCGACCTGGTATAGCAGGCAG
Strand 8 (pink)	GACTGCCTGCCTGCTATACCACCGTCCAACCTAGGCCTGGGGA

Sequences for Figure S33

Monomer 1	
Strand 1 (blue)	GCAGTCCCTCCGACACCT
Strand 2 (green)	GCCATCACTCCGCTTGTGGGGTAAGACTGGAC
Strand 3 (cyan)	CGCTACGTCCAGTCTTACCTGAGGGTGAGGGAGGGGGCATCAG TCGGAGGTCCACAAGCGGAGT
Strand 4 (pink)	CGTCAGAGGTGTCCCTCCCTCACCCTCAACCTCCGACTGATGCC CGGAGG
Monomer 2	
Strand 5 (blue)	GTAGCGACCCCAACCCCT
Strand 6 (green)	CTGACGCCGTCAGTTGTCAGGGGATGGCTTCCCGTC
Strand 7 (cyan)	GACTGCGACGGGAAGCCATCCTGTATGGTGCGGTCGGGGGAGC CTACCAGCGTCCTGACAACTGACGG
Strand 8 (pink)	GATGGCAGGGGTCCGACCGCACCATACAACGCTGGTAGGCTCC CTGGGGT

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