

Supporting Information for:

**Four Point Probe Electrical Measurements on Templated Gold Nanowires Formed on
Single DNA Origami Tiles**

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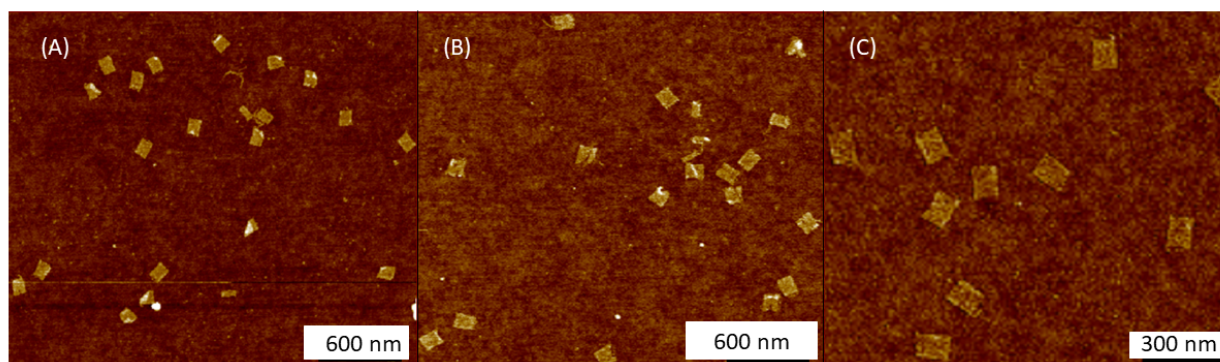


Figure S1. AFM images of the tile DNA templates utilized to create (A) plus, (B) cross and (C) C shapes. The height scale is 5 nm.

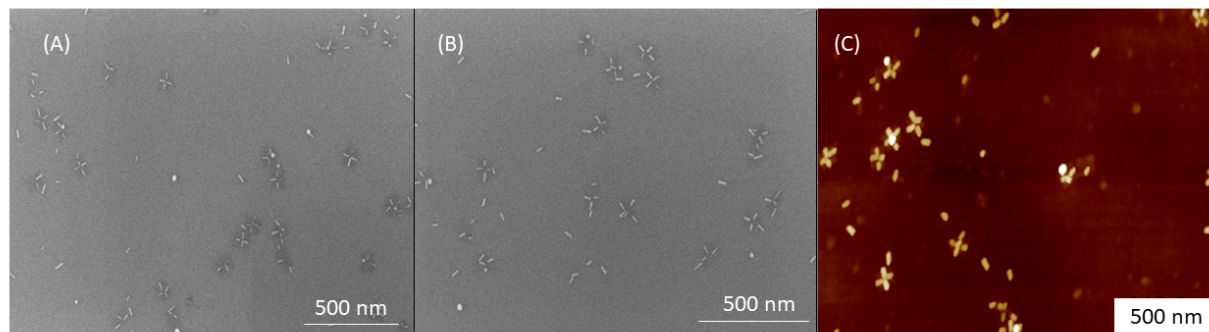


Figure S2. (A-B) SEM images and (C) AFM images of plus structures on tile DNA templates after seeding with Au nanorods. The height scale in (C) is 25 nm.

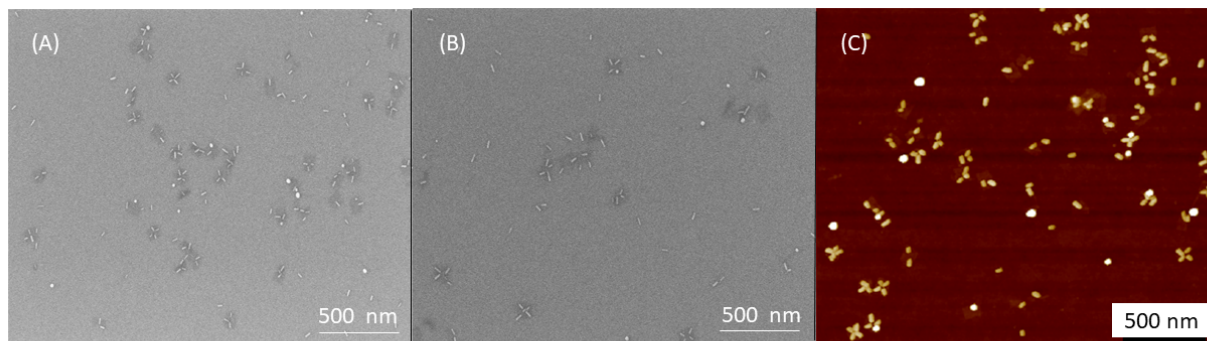


Figure S3. (A-B) SEM images and (C) AFM image of tile DNA templates seeded with Au nanorods to create cross structures. The height scale in (C) is 25 nm.

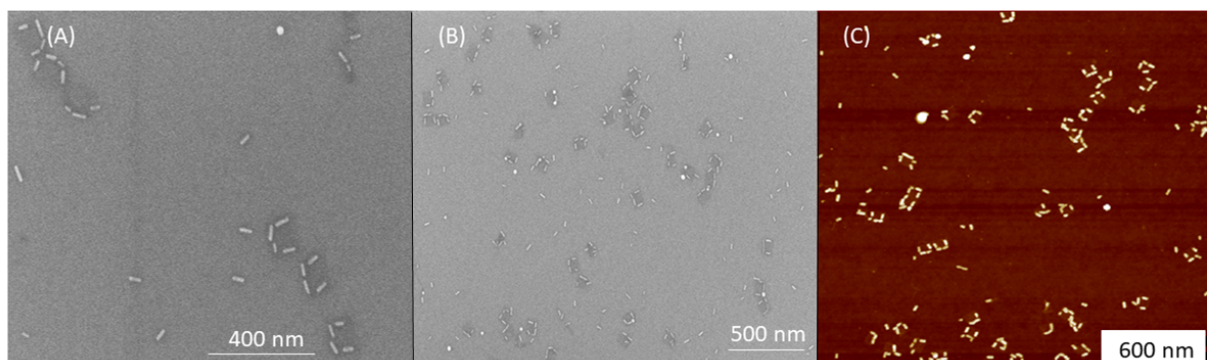


Figure S4. (A-B) SEM images and (C) AFM image of C shapes on tile DNA templates after seeding with Au nanorods. The height scale in (C) is 20 nm.

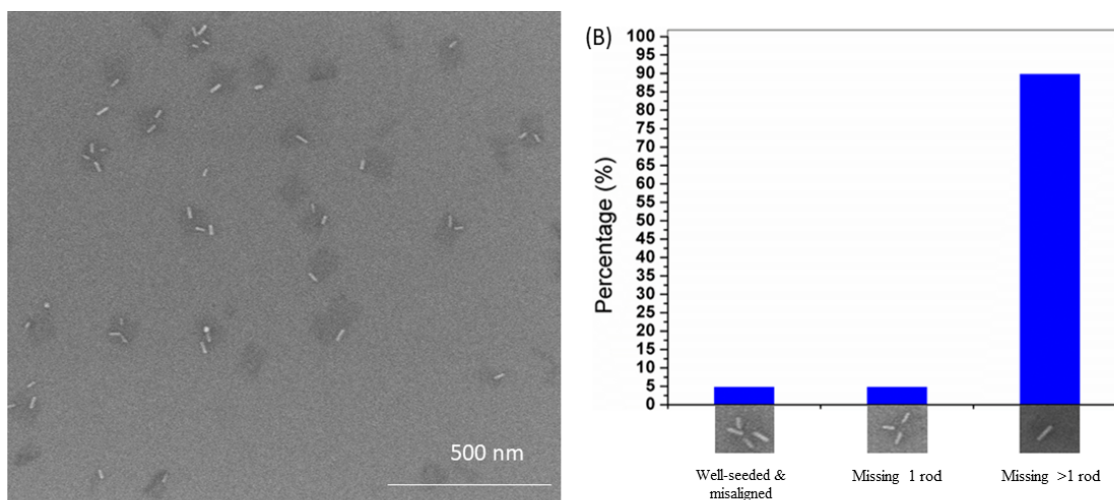


Figure S5. (A) SEM image of Au nanorod seeded cross structures on DNA tiles that have a single attachment sequence row for each Au nanorod. (B) Seeding yield of the cross structures in (A).

List of staple strand DNA sequences. All are given 5' → 3'. Sequences in blue font have a protruding poly(A)₁₀ for DNA-coated Au nanorod capture.

(A) 'Plus' design

TGAACGGTCGCGTCTGGCCTTCCTGGGATGTG
AAGCCTGGGCCAGCTGGCGAAAGGGTAGCCAGAAAAAAAAAA
ATGCTGATGCAACCAAGTACCG
TACTGGTAACCGTTCCAGTAAGCGTAAATATT
GCCCCGAAACAGTCAGGACGTTGGGAGAAACAC
TAACAATTAAGAAGATGATGAAACCTAAAATA
TTTGGAACAAGAGTCCACTATTAAAGCTGTTT
GCACAGACAATTATAATCCTGA
TTGAGTAAAGCCAGAATGGAAAGAATTATCA
TACTTAGCCGGGAGAGGCTTTT
CCGTCACCTAGAAAATTCATATGGGTTTAACG
AATGCCACATCAACGTAACAAAGCGGAACAAC
CATTTTTGATTTCAACGCAAGGATCGTTCTAG
TTAATTTTCATCGGAACGAGGGTAGCTTTTGCG
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GCAAAAGAAGTTTAGCTATATT
GCAAATCAGAATTGAGTTAAGCCCAACGGAAT
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GACCGGAAGCAGTGTAGGTAAA
CCTGTGTGGTCACGACGTTGTAAATTAAATCA

(B) 'Cross' design

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(C) 'C' design

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