

Cooperative effects in DNA Nanofabrication-Supplementary material

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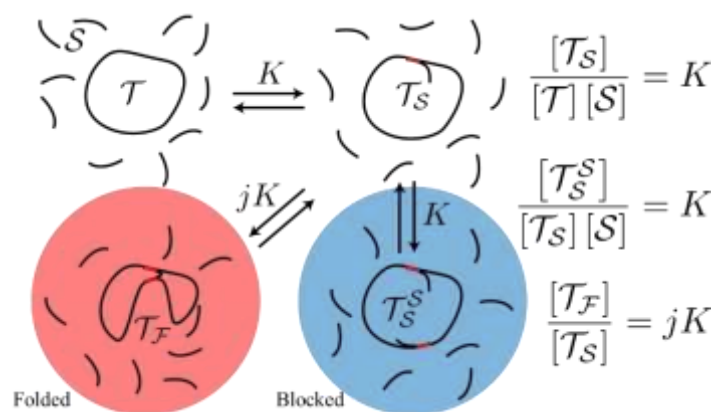


Figure 1. Schematic illustrating the equilibria existing between staple binding, and the folded and blocked states.

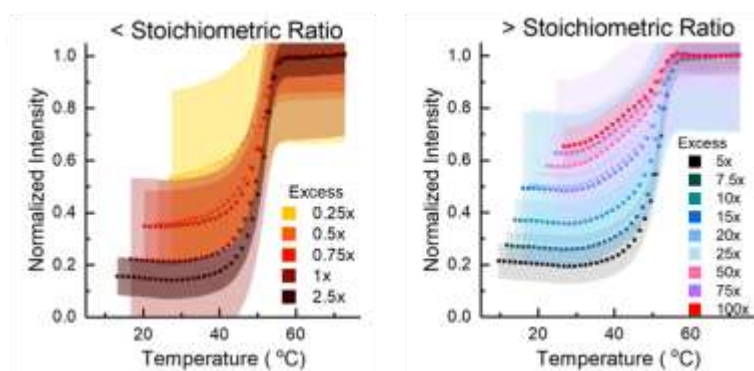


Figure 2. Relative yield as function of folding strand excess concentration relative to scaffold strand concentration. Yield increases linearly up to 1:1 stoichiometry (left panel), then decreases approximately as 1/excess (right panel). This behavior results from the ability of folding strands to bind at one or both complementary locations on scaffold strand. At high concentrations, both binding sites are occupied by two different folding strands (Blocked state in Fig. 1), preventing folding by a single strand from occurring.

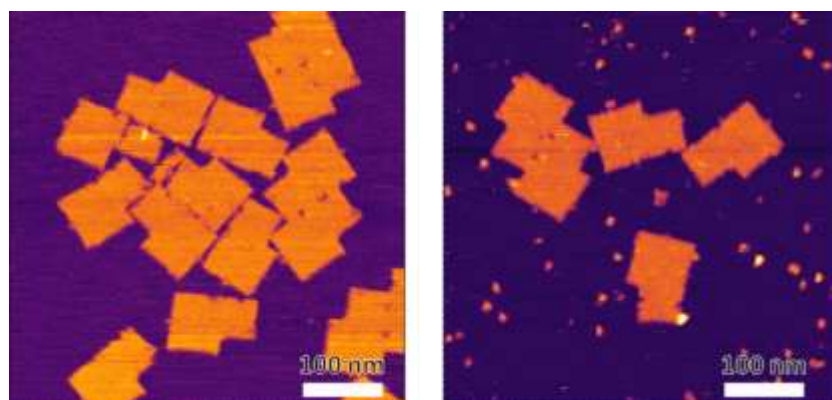


Figure 3. Atomic force microscope images of origami formed at a 5:1 (left) and 100:1 (right) staple-to-scaffold concentration ratio. There is no apparent difference in the quality of the assembled structures.