

Electronic Supplementary Information

Title: Effects of Mismatches on DNA as an Isothermal Assembly and Disassembly Tool

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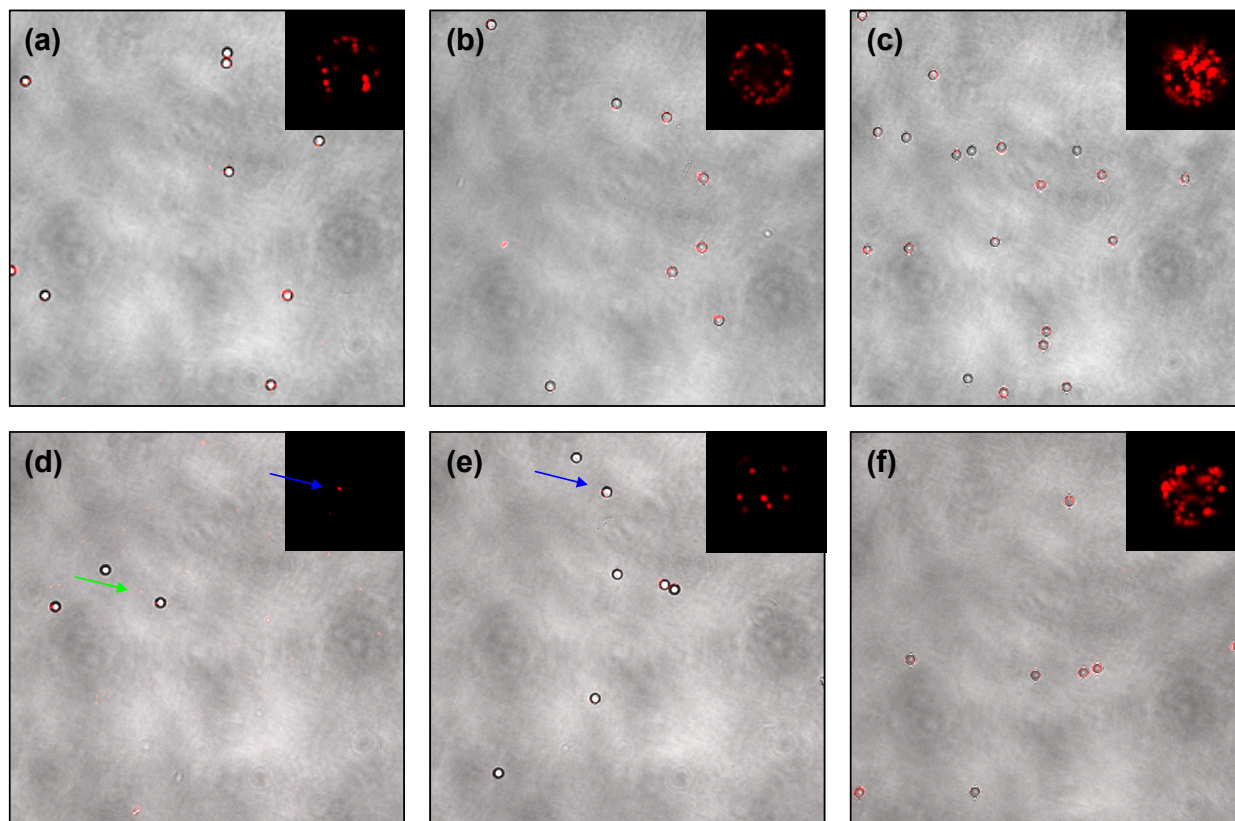


Figure S1: Confocal micrographs (63x) of DNA-linked colloidal satellite structures before (top) and after (bottom) incubation with 15 base-long, perfectly-matched competitive target strands (*PM15*). Top micrographs show colloidal satellites assembled with perfectly-matched linkages (a) *PM11*, (b) *PM13*, and (c) *PM15*. Bottom micrographs show disassembly of the satellites for the (d) *PM11* and to a lesser extent, the (e) *PM13* cases following incubation with the perfectly matched competitive strand *PM15* for 48 hours. Unlike the other two perfectly-matched linkages, negligible disassembly is observed for the *PM15*-based linking duplex indicating negligible displacement by a competitive target of equivalent length and sequence composition, *PM15*. Green arrow in the bottom micrograph in (d) highlights one of several released nanoparticles in the focal plane of the image for the *PM11/PM15* case. The blue arrows in (d) and (e) points to the few remaining adherent nanoparticles following incubation in the *PM11/PM15* and *PM13/PM15* cases, respectively.