Supporting Information for “Allosteric modulation of local reactivity in DNA origami”

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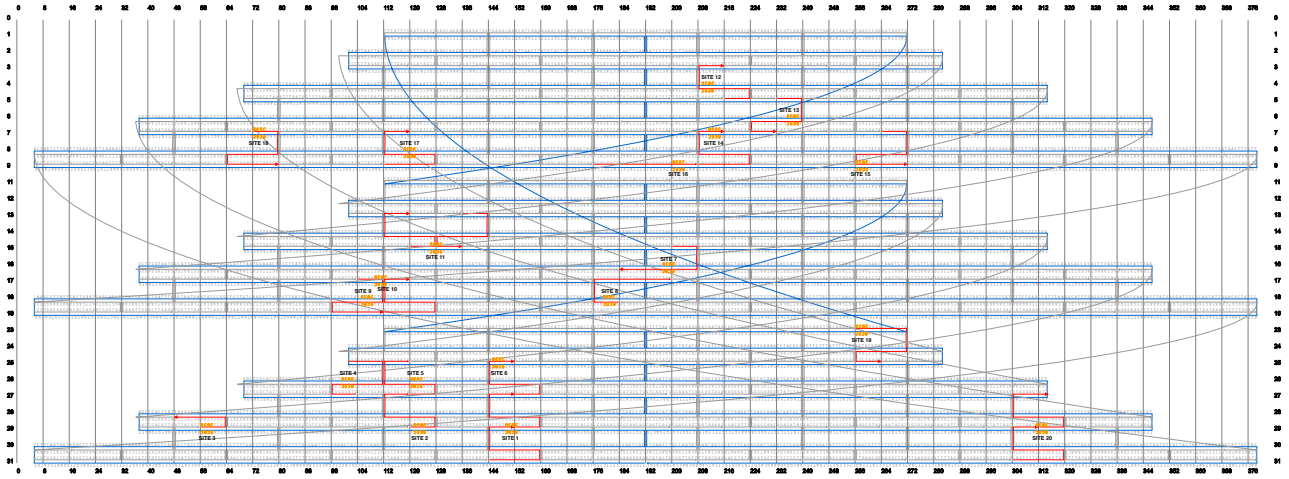
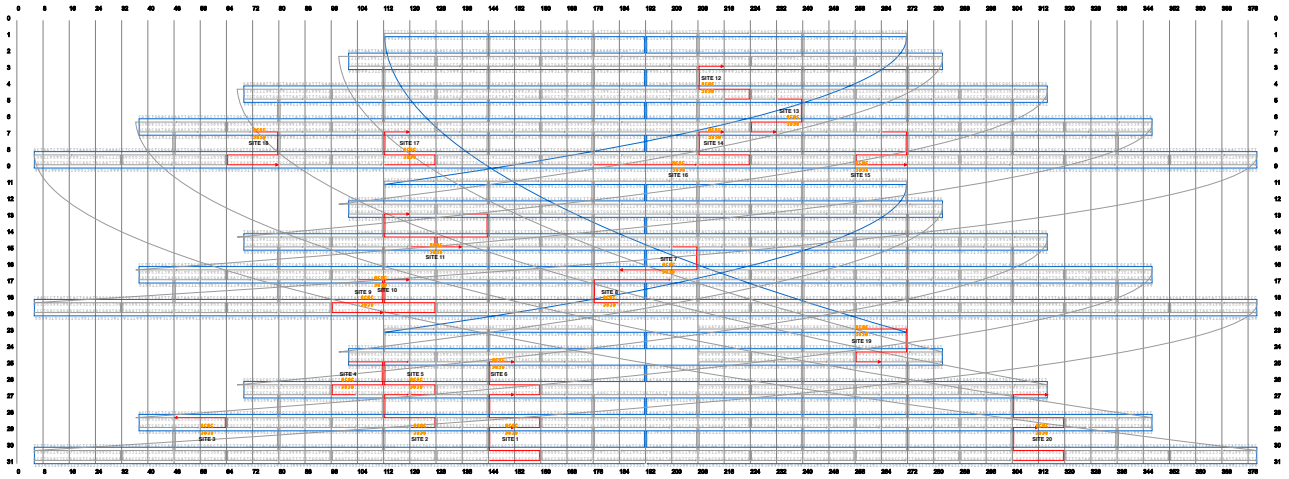
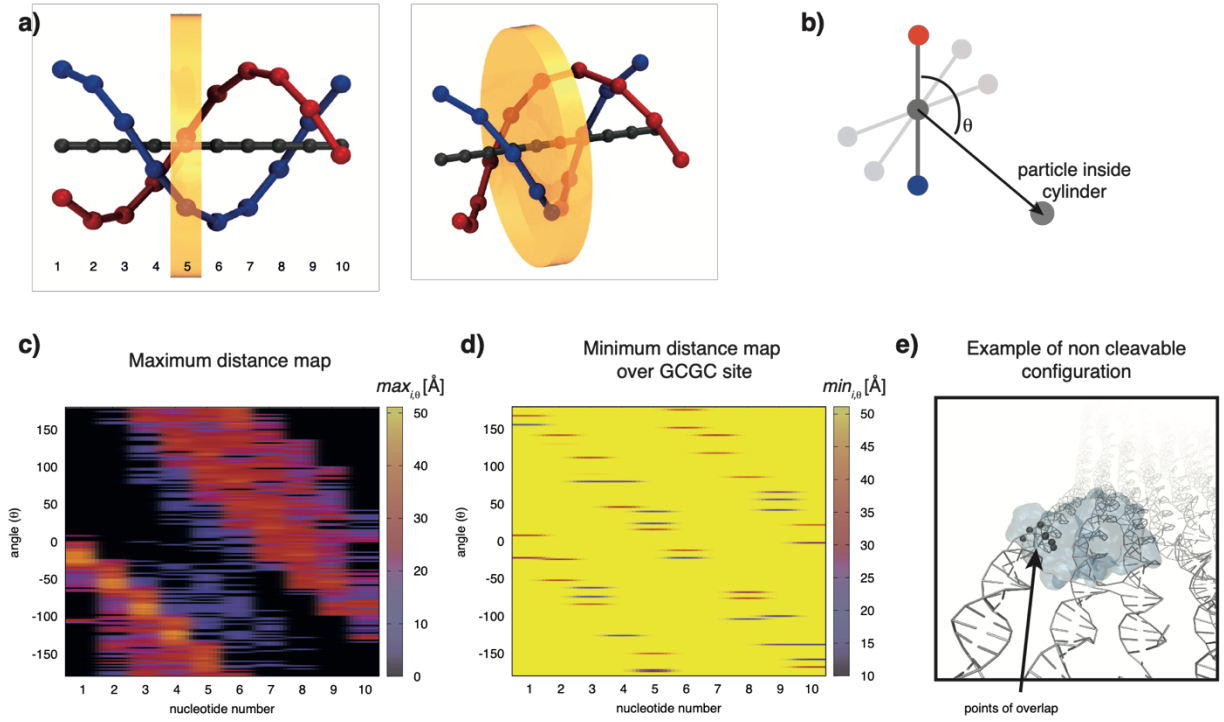


Supplementary Figure S1: Cadnano representation of the sharp triangle, with GCGC sites highlighted.



Supplementary Figure S2: Same as Fig. S1, but for the defective triangle.



Supplementary Figure S3: Geometric criteria used to build the maximum and minimum distance maps. a) A perfect dsDNA of ten bases used as a reference frame. For each of the ten nucleotides, a cylinder centered on the nucleotide is defined with the axis parallel to the DNA centerline, the height equal to the base-to-base distance and infinite radius. Any particle inside the i-th cylinder is considered when constructing the distance maps for the corresponding nucleotide. To compute the angle θ, we use one of the two strands as a reference and compute the angle between its base-pair vector and the particle position vector, see b). Thus, the angular reference frame rotates along the double strand. c) Maximum distance map required by the protein ($max_{i,\theta}$) to dock on the DNA. d) Example of minimum distance map ($min_{i,\theta}$) constructed for site 8 (on the scaffold side), for a single frame. In this case, the comparison between the two maps indicates that the site is not accessible; indeed, there is overlap between the protein residues and one of the adjacent strands, see e).