

Top-down meets bottom-up: guided deposition of DNA origami on silicon

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This talk will present some recent results on the hierarchical assembly and guided deposition of DNA origami. Four strategies for organizing DNA origami into larger structures in solution will be compared; one gives nearly perfect orientation and alignment of the origami.

I will also give an overview of DNA attachment to surfaces and how the binding of DNA origami to silicon can be controlled through appropriately designed self-assembled monolayers (SAMs).

SAM anchor pads for DNA origami were fabricated by electron-beam lithography and molecular liftoff, and attachment, orientation, and alignment of DNA origami were observed both under buffer and in air.