



PHYSICS COLLOQUIUM 293

Engineering Self-Assembly at Micro and Macro Scales

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Location: SSB 120

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ABSTRACT

Lipids can self-assemble into membranes and peptides can self-fold into structures. These hard-to-predict emergent phenomena produce biologically useful materials such as cell membranes and functional protein complexes. In our group we engineer systems to direct self-assembly and self-folding towards useful goals. In this seminar I will introduce a means for directed self-assembly of non-equilibrium lipid membrane gradients, and highlight a few applications. I will also introduce a macro-scale self-assembly platform that could help us understand folding pathways, and potentially produce self-weaving, reactive materials.

BIO:

Babak Sanii is an assistant professor of Chemistry jointly at three co-located undergraduate liberal arts colleges: Claremont McKenna, Pitzer and Scripps. His postdoctoral work was in nanotechnology at The Molecular Foundry of Lawrence Berkeley National Lab, his graduate work was in directed self-assembly at UC Davis, and prior to that he worked as an engineer at NASA/JPL and Pixar Animation Studios.

