

MAR07-2006-001332

Abstract for an Invited Paper
for the MAR07 Meeting of
the American Physical Society

Is experimental heteropolymer sequence design practical, or does it belong to the realm of science fiction?
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In the protein folding context, theorists consider various methods of sequence design, which turns out a very useful way to look at various heteropolymer properties. Simultaneously and largely independently, there is a rather old idea to find an experimental counterpart of computational and theoretical sequence design algorithms. Here, we review some of the experiments in this direction along with some of the more recent theoretical advances and come to the guarded conclusion that full experimental realization of sequence design is possible but probably remote.