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Topology based theory of helix-coil transition KINGSHUK GHOSH, Dept of Pharm Chem, UCSF 2240, KEN DILL, Dept of Pharm. Chem, University of California, San Francisco — We revisit the problem of helix-coil transition. We propose a new theory based on topology, significantly different from Zimm-Bragg theory. Our model predicts the cooperativity and is in excellent agreement with available experimental data. The model can be extended to study the thermodynamics of other structures as well. It also provides a framework to understand the kinetics of formation for different structures.

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