

Abstract Submitted
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Topological interactions between ring polymers DIETER HEERMANN, University of Heidelberg — The detailed topological and entropic forces between loops still remain elusive. We have quantitatively determined the potential of mean force between the centers of mass of two ring polymers, i.e. loops. We find that the transition from a linear to a ring polymer induces a strong increase in the entropic repulsion between these two polymers. On top, topological interactions such as the non-catenation constraint further reduce the number of accessible conformations of close-by ring polymers by about 50 percent, resulting in an additional effective repulsion.

Dieter Heermann
University of Heidelberg

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