

Accepted Manuscript

Theoretical study of DNA's deformation and instability subjected to mechanical stress

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PII: S0020-7403(17)30127-3
DOI: [10.1016/j.ijmecsci.2017.06.017](https://doi.org/10.1016/j.ijmecsci.2017.06.017)
Reference: MS 3745



To appear in: *International Journal of Mechanical Sciences*

Received date: 16 January 2017
Revised date: 9 May 2017
Accepted date: 13 June 2017

Please cite this article as: Monrudee Liangruksa , Teeraphan Laomettachit , Somchai Wongwises , Theoretical study of DNA's deformation and instability subjected to mechanical stress, *International Journal of Mechanical Sciences* (2017), doi: [10.1016/j.ijmecsci.2017.06.017](https://doi.org/10.1016/j.ijmecsci.2017.06.017)

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Highlights

- An elastic model of DNA's deformation in response to stress is proposed.
- The problem is solved by perturbation method to find equilibrium configurations of DNA.
- DNAs overwind under tension about 30 pN and beyond which it begins to unwind.

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