

Equilibrium and out-of-equilibrium mechanics of living mammalian cytoplasm

Satish Kumar Gupta , Ming Guo

PII: S0022-5096(17)30104-7
DOI: [10.1016/j.jmps.2017.07.007](https://doi.org/10.1016/j.jmps.2017.07.007)
Reference: MPS 3149



To appear in: *Journal of the Mechanics and Physics of Solids*

Received date: 6 February 2017
Revised date: 17 May 2017
Accepted date: 8 July 2017

Please cite this article as: Satish Kumar Gupta , Ming Guo , Equilibrium and out-of-equilibrium mechanics of living mammalian cytoplasm, *Journal of the Mechanics and Physics of Solids* (2017), doi: [10.1016/j.jmps.2017.07.007](https://doi.org/10.1016/j.jmps.2017.07.007)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Highlights

- Two distinct regimes of mechanical behavior in living cells are identified.
- Living mammalian cytoplasm behaves as an equilibrium material at short time scales.
- It behaves as an out-of-equilibrium material at long time scales.
- Intracellular fluctuation is used to measure cytoplasmic moduli at high frequencies.

Download English Version:

<https://daneshyari.com/en/article/5018176>

Download Persian Version:

<https://daneshyari.com/article/5018176>

[Daneshyari.com](https://daneshyari.com)