

Individual macromolecule motion in a crowded living cell

February 22 2016

The research article embraces the status of the experimental situation and touches obstacles that still hinder the applications of single molecules in the cellular environment.

What's it about?

A [universal theory](#) on single molecules was drawn upon experimental facts by forming the concept of "The Meaningful Time T_m " acting as a fundamental natural law of single-molecule time resolution of freely diffusing molecules in dilute liquid and live cells (3D normal and anomalous diffusion) as well as in artificial or [biological membranes](#) (2D normal and anomalous diffusion). The physical law corresponds to the novel mathematical equations which we use to describe every single molecule.

It must be made clear that the underlying physics and molecular biochemistry can be modified easily but things hardly get worse when there is any trouble with the mathematics which rules the formulations. We prevailed and yet others did not.

Why is it important?

Because now it is possible to see individual macromolecules moving about in a living cell, we can study chemistry at a single-molecule level and in real life. And this is very important for chemistry because

chemistry has traditionally been about studying a large number of [molecules](#) and the effect that they have.

More information: Zeno Foldes-Papp. Individual Macromolecule Motion in a Crowded Living Cell, *Current Pharmaceutical Biotechnology* (2015). [DOI: 10.2174/1389201016666141229103953](https://doi.org/10.2174/1389201016666141229103953)

Provided by Bentham Science Publishers

Citation: Individual macromolecule motion in a crowded living cell (2016, February 22) retrieved 25 April 2024 from <https://phys.org/news/2016-02-individual-macromolecule-motion-crowded-cell.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.