

Evanescent light scattering

Optical Tweezers

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Abstract auf Englisch (10-15 Zeilen) Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

1 Introduction

4 Results

1.1 Physical Principles

kompakten Zusammenstellung der physikalischen Grundlagen

Mean square deviation and velocity autocorrelation: https://de.wikipedia.org/wiki/Mittlere_quadratische_Verschiebung#Verbindung_zur_Geschwindigkeitsautokorrelation

$$\langle v(t) \cdot v(t + \tau) \rangle = -\frac{d}{d\tau} \frac{\langle r^2(\tau) \rangle}{6\tau} \quad (1)$$
$$\Rightarrow \quad \langle r^2(\tau) \rangle = 6 \int_0^\tau (\tau - s) \langle v(0) \cdot v(s) \rangle ds \quad (2)$$

The maxwell boltzmann relations (from script) are given by

$$P(x) \propto \exp\left(-\frac{V(x)}{k_B T}\right) \quad (3)$$

$$V(x) \propto -\frac{\log P(x)}{k_B T} \quad (4)$$

2 Methods

Mit einer Skizze des Versuchsaufbaus

3 Procedure

All recorded data and the analysis is available at [www.github.com/leooole100/fp2](https://github.com/leooole100/fp2).

5 Discussion