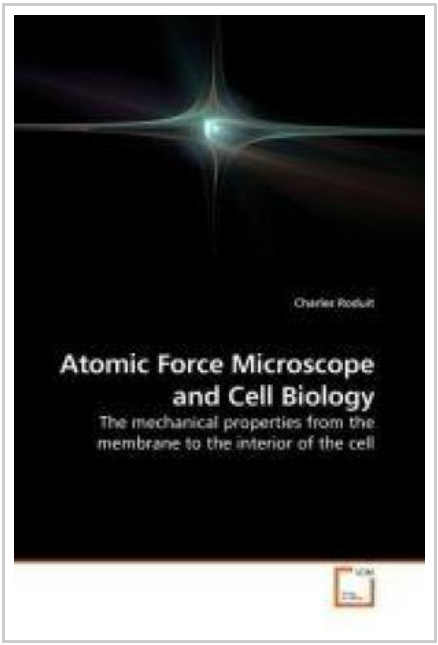

Atomic Force Microscope and Cell Biology

By Charles Roduit

VDM Verlag Aug 2009, 2009. Taschenbuch. Book Condition: Neu. 220x152x13 mm. This item is printed on demand - Print on Demand Neuware - This book describes the doctoral thesis where we explore the mechanical properties of living cells using the Atomic Force Microscope (AFM). The cell membrane contains lipids microdomains, called rafts, enriched in cholesterol and sphingolipids. The lipid rafts are believed to play an important role in signal processing by acting as a signaling platform . The mechanical properties of these rafts were characterized by targeting one of its component, the GPI-anchored protein. This work revealed these domains to be stiffer than the surrounding membrane. The stiffness specificity of rafts may be related to the lower diffusion rate of proteins and can be, therefore, an important property for its role as a signaling platform. During this thesis, we also introduced a new AFM imaging mode, which we called stiffness tomography . With this imaging mode, we were able to distinguish stiff materials inclusion located into the sample. A significant part of this project was the development of a post-processing software to automate the computations of the acquired data. In this book we describes the algorithms used in the open-source...

Reviews

Most of these publication is the perfect ebook accessible. It is amongst the most awesome publication i have got read through. You wont truly feel monotony at whenever you want of the time (that's what catalogs are for regarding in the event you request me).

-- ***Prof. Edgar Kshlerin***

It is easy in study safer to comprehend. It can be writter in basic phrases and never confusing. It is extremely difficult to leave it before concluding, once you begin to read the book.

-- ***Emmitt Harber***