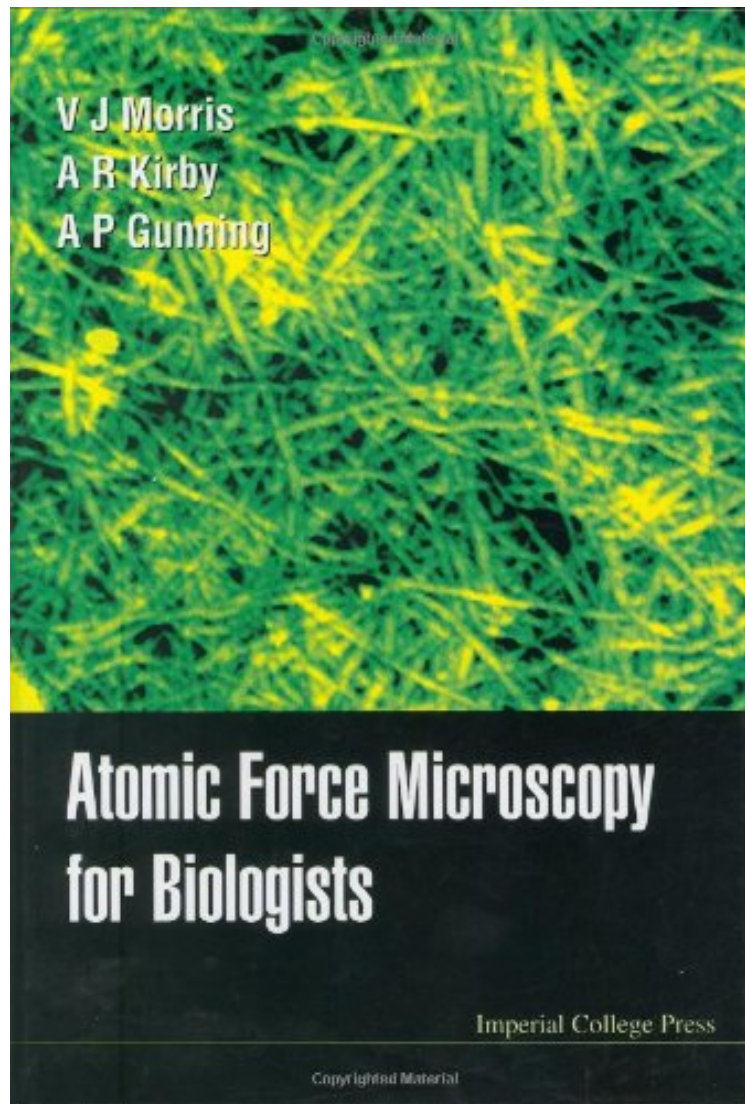


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Patrick A Gunning

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mathematical equations. Unlike many other volumes, practical advice on sample preparation techniques is provided for common systems such as proteins, cells and DNA. A comprehensive review of leading research in this area at the time of publication is sectioned by biomaterial type. Different approaches to imaging are tackled. The text is supported by numerous supporting images. In summary I would strongly recommend this book to any biologist planning on carrying out research using SPM imaging techniques and existing users in the field who wish to broaden their knowledge of SPM imaging and the research already carried out in common biological systems. 4 of 5 people found the following review helpful. A powerful tool in biological sciences By Prof. Y.F. Dufrene Atomic force microscopy (AFM) is one technique in a family of new microscopies called scanning probe microscopies (SPMs) which has recently opened a wide range of novel, fascinating applications for biologists (biochemists, biophysicists, cell biologists, microbiologists,...). This book provides an excellent survey of those applications. It is nicely illustrated with numerous images from leading experts in the field. Clear descriptions of the apparatus and its basic principles are provided in a way accessible to students/scientists that do not have a strong physics background. This book will be useful to biologists, but also non-biologists dealing with biosystems, to evaluate the advantages and limitations of AFM in their specific field and to define appropriate procedures that will lead them to successful experiments.

Atomic force microscopy (AFM) is part of a range of emerging microscopic methods for biologists which offer the magnification range of both the light and electron microscope, but allow imaging under the 'natural' conditions usually associated with the light microscope. To biologists AFM offers the prospect of high resolution images of biological material, images of molecules and their interactions even under physiological conditions, and the study of molecular processes in living systems. This book provides a realistic appreciation of the advantages and limitations of the technique and the present and future potential for improving the understanding of biological systems.

...strongly recommend this book to any biologist who carry out research using SPM imaging techniques... -- Drew Murray, Veeco Instruments, Cambridge, UK It provides an excellent survey of novel applications... accessible to students/scientists who do not have a strong physics background -- Prof Y F Dufrene, UCL, Belgium easy to read with clear, simple explanations of a complex topic -- Microscopy and Analysis, Jan 2001 fills an important niche by providing an introduction to AFM that will be understandable to a wide range of scientists -- Nature Cell Biology, Vol2, Dec 2000 From the Inside Flap Atomic force microscopy (AFM) is part of a range of emerging microscopic methods for biologists which offer the magnification range of both the light and electron microscope, but allow imaging under the "natural" conditions usually associated with the light microscope. To biologists, AFM offers the prospect of high resolution images of biological material, images of molecules and their interactions even under physiological conditions, and the study of molecular processes in living systems. This book provides a realistic appreciation of the advantages and limitations of the technique and the present and future potential for improving the understanding of biological systems. The second edition of this bestseller has been updated to describe the latest developments in this exciting field, including a brand new chapter on force spectroscopy. The dramatic developments of AFM over the past ten years from a simple imaging tool to the multi-faceted, nano-manipulating technique that it is today are conveyed in a lively and informative narrative, which provides essential reading for students and experienced researchers alike.