



micromachines



Special Issue Reprint

Small Scale Deformation using Advanced Nanoindentation Techniques

www.mdpi.com/books/reprint/1333

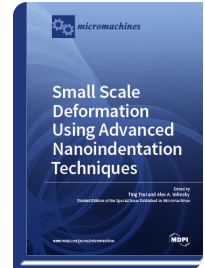
Edited by

Ting Tsui

Alex A. Volinsky

ISBN 978-3-03897-966-1 (Softback)

ISBN 978-3-03897-967-8 (PDF)



Small scale mechanical deformations have gained a significant interest over the past few decades, driven by the advances in integrated circuits and microelectromechanical systems. One of the most powerful and versatile characterization methods is the nanoindentation technique. The capabilities of these depth-sensing instruments have been improved considerably. They can perform experiments in vacuum and at high temperatures, such as in-situ SEM and TEM nanoindenters. This allows researchers to visualize mechanical deformations and dislocations motion in real time. Time-dependent behavior of soft materials has also been studied in recent research works. This Special Issue on "Small Scale Deformation using Advanced Nanoindentation Techniques"; will provide a forum for researchers from the academic and industrial communities to present advances in the field of small scale contact mechanics. Materials of interest include metals, glass, and ceramics. Manuscripts related to deformations of biomaterials and biological related specimens are also welcome. Topics of interest include, but are not limited to: Small scale fracture Nanoscale plasticity and creep Size-dependent deformation phenomena Deformation of biological cells Mechanical properties of cellular and sub-cellular components Novel mechanical properties characterization techniques New modeling methods Environmentally controlled nanoindentation In-situ SEM and TEM indentation



Order Your Print Copy

You can order print copies at

www.mdpi.com/books/reprint/1333

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.