

1. Record Nr.	UNINA9910688431203321
Titolo	Advanced nanoindentation in materials // edited by Ting Tsui, Matt Pharr
Pubbl/distr/stampa	Basel, Switzerland : , : MDPI, , 2018
ISBN	3-03842-750-0
Descrizione fisica	1 online resource (236 pages) : illustrations
Disciplina	620.5
Soggetti	Nanotechnology Materials testing laboratories
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	About the Special Issue Editors -- Megumi Kawasaki and Jae-il Jang Micro-Mechanical Response of an Al-Mg Hybrid System Synthesized by High-Pressure Torsion doi: 10.3390/ma10060596 -- Pardhasaradhi Sudharshan Phani and Warren Carl Oliver Ultra High Strain Rate Nanoindentation Testing doi: 10.3390/ma10060663 -- Carla C. C. R. de Carvalho, Patrick L. Incio, Rosa M. Miranda and Telmo G. Santos Using Biotechnology to Solve Engineering Problems: Non-Destructive Testing of Microfabrication Components doi: 10.3390/ma10070788 -- Mingzhi Wang, Jianjun Wu, Hongfei Wu, Zengkun Zhang and He Fan A Novel Approach to Estimate the Plastic Anisotropy of Metallic Materials Using CrossSectional Indentation Applied to Extruded Magnesium Alloy AZ31B doi: 10.3390/ma10091065 -- Brandon B. Seo, Zeinab Jahed, Jennifer A. Coggan, Yeung Yeung Chau, Jacob L. Rogowski, Frank X. Gu, Weijia Wen, Mohammad R. K. Mofrad and Ting Yiu Tsui Mechanical Contact Characteristics of PC3 Human Prostate Cancer Cells on ComplexShaped Silicon Micropillars doi: 10.3390/ma10080892 -- Branko Savija, Hongzhi Zhang and Erik Schlangen Influence of Microencapsulated Phase Change Material (PCM) Addition on (Micro) Mechanical Properties of Cement Paste doi: 10.3390/ma10080863 -- Salim Barbhuiya and Benjamin Caracciolo Characterisation of Asphalt Concrete Using Nanoindentation doi: 10.3390/ma10070823 -- Elias Lopez-Alba and Francisco A. Diaz-Garrido Full-Field Indentation Damage Measurement Using Digital Image Correlation doi: 10.3390

/ma10070774 -- Luis Felipe-Sese, Elas Lopez-Alba, Benedikt Hannemann, Sebastian Schmeer and Francisco A. Diaz A Validation Approach for Quasistatic Numerical/Experimental Indentation Analysis in Soft Materials Using 3D Digital Image Correlation doi: 10.3390/ma10070722 -- Heng Chen, Taihua Zhang and Yi Ma Effect of Applied Stress on the Mechanical Properties of a Zr-Cu-Ag-Al Bulk Metallic Glass with Two Different Structure States doi: 10.3390/ma10070711 -- Carolina Bermudo, Lorenzo Sevilla and Germn Castillo Lopez Material Flow Analysis in Indentation by Two-Dimensional Digital Image Correlation and Finite Elements Method doi: 10.3390/ma10060674 -- Carolina Bermudo, Lorenzo Sevilla, Francisco Martin and Francisco Javier Trujillo Hardening Effect Analysis by Modular Upper Bound and Finite Element Methods in Indentation of Aluminum, Steel, Titanium and Superalloys doi: 10.3390/ma10050556 -- Muhammad Zeeshan Mughal, Hugues-Yanis Amanieu, Riccardo Moscatelli and Marco Sebastiani A Comparison of Microscale Techniques for Determining Fracture Toughness of LiMn2O4 Particles doi: 10.3390/ma10040403 -- Felix Rickhey, Karuppasamy Pandian Marimuthu and Hyungyil Lee Investigation on Indentation Cracking-Based Approaches for Residual Stress Evaluation doi: 10.3390/ma10040404 -- Takashi Akatsu, Shingo Numata, Yutaka Shinoda and Fumihiko Wakai Effect of the Elastic Deformation of a Point-Sharp Indenter on Nanoindentation Behavior doi: 10.3390/ma10030270 -- Giorgio Mattei, Ludovica Cacopardo and Arti Ahluwalia Micro-Mechanical Viscoelastic Properties of Crosslinked Hydrogels Using the Nano-Epsilon Dot Method doi: 10.3390/ma10080889.

Sommario/riassunto

This Special Issue "Advanced Nanoindentation in Materials" contains some of the latest developments in the field of small-scale contact mechanics for a wide range of materials and biological cells. The featured manuscript revealed a new ultra-high strain rate nanoindentation method that will enable new scientific understanding of time-dependent material properties. The book also presents unique material properties of super alloys and other structural materials characterized by indentation methods. In addition to engineering materials, deformation behaviors of live cancer cells on sharp pillar structures were discussed in this book with the hope to stimulate interest in the mechanical contact behaviors of biological cells.
