

1. Record Nr.	UNINA9910298613503321
Titolo	Fundamentals of Friction and Wear on the Nanoscale / / edited by Enrico Gnecco, Ernst Meyer
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-10560-4
Edizione	[2nd ed. 2015.]
Descrizione fisica	1 online resource (703 p.)
Collana	NanoScience and Technology, , 1434-4904
Disciplina	530 620.44 620.5 620115
Soggetti	Nanoscience Nanostructures Nanotechnology Materials—Surfaces Thin films Nanoscale Science and Technology Nanotechnology and Microengineering Surfaces and Interfaces, Thin Films
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Experimental Techniques -- Atomic-Scale Friction -- Multiscale Friction -- Nanomanipulation and Surface Diffusion -- Carbon Materials -- Polymer Friction, Nanowear -- Dissipation Mechanisms at Finite Separations -- Applications.
Sommario/riassunto	This book provides an updated review on the development of scanning probe microscopy and related techniques, and the availability of computational techniques not even imaginable a few decades ago. The 36 chapters cover instrumental aspects, theoretical models and selected experimental results, thus offering a broad panoramic view on fundamental issues in nanotribology which are currently being investigated. Compared to the first edition, several topics have been

added, including triboluminescence, graphene mechanics, friction and wear in liquid environments, capillary condensation, and multiscale friction modeling. Particular care has been taken to avoid overlaps and guarantee the independence of the chapters. In this way, our book aims to become a key reference on this subject for the next five to ten years to come.
