1. Record Nr. UNINA9910821150003321

Titolo	Polymer surface characterization / / edited by Luigia Sabbatini
Pubbl/distr/stampa	Berlin ; ; Boston : , : De Gruyter, , [2014] ©2014
ISBN	1-5231-0050-8 3-11-037692-X 3-11-028811-7
Descrizione fisica	1 online resource (308 p.)
Collana	De Gruyter graduate
Classificazione	VE 8000
Disciplina	547/.70453
Soggetti	Polymers - Surfaces - Analysis
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	Front matter -- Preface -- Contents -- Contributing authors -- 1. Introductory remarks on polymers and polymer surfaces / Cometa, Stefania / Sabbatini, Luigia -- 2. Investigation of polymer surfaces by time-of-flight secondary ion mass spectrometry / Keller, Beat A. -- 3. Polymer surface chemistry: Characterization by XPS / Giglio, Elvira De / Ditaranto, Nicoletta / Sabbatini, Luigia -- 4. Attenuated total reflection-Fourier transform infrared spectroscopy: A powerful tool for investigating polymer surfaces and interfaces / Mangolini, Filippo / Rossi, Antonella -- 5. Scanning probe microscopy of polymers / Yablon, Dalia -- 6. Polymer surface morphology: Characterization by electron microscopies / Šlouf, Miroslav / Vacková, Tatana / Lednický, František / Wandrol, Petr -- 7. Wettability: Significance and measurement / Palumbo, Fabio / Mundo, Rosa Di -- 8. Advances of spectroscopic ellipsometry in the analysis of thin polymer films-polymer interfaces / Bittrich, Eva / Eichhorn, Klaus-Jochen -- Index
Sommario/riassunto	Polymer Surface Characterization provides a comprehensive approach to the surface analysis of polymers of technological interest by means of modern analytical techniques. Basic principles, operative conditions, applications, performance, and limiting features are supplied, together with current advances in instrumental apparatus. Each chapter is devoted to one technique and is self-consistent; the end-of-chapter

references would allow the reader a quick access to more detailed information. After an introductory chapter, techniques that can interrogate the very shallow depth of a polymer surface, spanning from the top few angstroms in secondary ions mass spectrometry to 2-10 nm in X-ray photoelectron spectroscopy are discussed, followed by Fourier transform infrared spectroscopy and chapters on characterization by scanning probe microscopy, electron microscopies, wettability and spectroscopic ellipsometry.