Record Nr. UNINA9910144717103321 Polymer brushes [[electronic resource]]: synthesis, characterization, **Titolo** applications / / edited by Rigoberto C. Advincula ... [et al.] Pubbl/distr/stampa Weinheim,: Wiley-VCH, c2004 **ISBN** 1-280-52014-0 9786610520145 3-527-60382-4 3-527-60499-5 Descrizione fisica 1 online resource (509 p.) Altri autori (Persone) AdvinculaRigoberto C Disciplina 620.192 668.9 Soggetti Polymerization Polymers - Surfaces Thin films Polymeres - Surfaces Polymerisation Couches minces Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Polymer Brushes; Contents; Preface; List of Contributors; Polymer Nota di contenuto Brushes: On the Way to Tailor-Made Surfaces; 1 Growth of Polymer Molecules at Surfaces: Introductory Remarks; 2 Coatings: From First Principles to High-Tech Applications; 3 Surface-Coating Techniques; 4 Surface-Attached Polymers; 5 Polymer Brushes: General Features; 6 Theory of Polymer Brushes; 7 Synthesis of Polymer Brushes; 8 Polymer Brushes as Functional Materials; 9 Microstructured Polymer Brushes; 10 Surface-Initiated Polymerization: The Overall Picture; Part I Synthesis; 1 Recent Advances in Polymer Brush Synthesis 1.1 Introduction1.2 "Grafting To" Synthesis Technique; 1.3 "Grafting

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## Sommario/riassunto

Materials scientists, polymer chemists, surface physicists and materials engineers will find this book a complete and detailed treatise on the field of polymer brushes, their synthesis, characterization and manifold applications. In a first section, the various synthetic pathways and different surface materials are introduced and explained, followed by a second section covering important aspects of characterization and analysis in both flat surfaces and particles. These specific surface initiated polymerization (SIP) systems such as linear polymers, homopolymers, block copolymers, and hyperbra