Record Nr. UNINA9910141161703321 Soft matter gradient surfaces [[electronic resource]]: methods and **Titolo** applications / / edited by Jan Genzer Pubbl/distr/stampa Hoboken, N.J., : Wiley, c2012 **ISBN** 1-283-40124-X 9786613401243 1-118-16607-8 1-118-16608-6 1-118-16605-1 Descrizione fisica 1 online resource (459 p.) Classificazione TEC021000 Altri autori (Persone) GenzerJan 620.1/18 Disciplina Functionally gradient materials Soggetti Surfaces (Technology) 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 SOFT MATTER GRADIENT SURFACES; CONTENTS; Contributors; Preface; 1 Gradient Libraries: Harnessing a Ubiquitous Phenomenon to Accelerate Experimentation; 2 Classification of Key Attributes of Soft Material Gradients: 3 Discovery and Optimization of Sensing Materials Using Discrete and Gradient Arrays; 4 Colliding Self-Assembly Waves in Organosilane Monolayers; 5 Orientational Anchoring of Liquid Crystals on Surfaces Presenting Continuous Gradients in Composition; 6 Continuous Infusion Microchannel Approach to Generate Composition Gradients from Viscous Polymer Solutions 7 Gradient Assembly of Complex Surfaces for Sensing, Fabrication, and High Throughput Analysis8 Making Gradient Patterns by Electron-Beam Chemical Lithography with Monomolecular Resists; 9 Electrochemical Mapping for Polymer Chemical and Physical Gradients; 10 Directed Assembly of Block Copolymer Films: Effects of Rough Substrates and Thermal Fields: 11 Hydrogel Gradients by Self-Initiated Photografting and Photopolymerization: Preparation, Characterization, and Protein Interactions: 12 Polymer Gradients: Responsive Grafted Layers: 13

Bioactive Self-Assembled Monolayer Gradients

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A comprehensive look at the latest advances in soft material gradients Tremendous progress has been made in the field of surface-bound soft material gradients in recent years, with intriguing new areas of investigation opening up and advances in bioanalytics changing the way high-throughput screening methods are used in the design and discovery of catalysts and new materials. This volume provides the first complete, up-to-date summary of the progress in this field, showing readers how to harness the powerful properties of soft matter gradients in the design and development of modern