1. Record Nr. UNINA9910830358303321

Autore	Hadjichristidis Nikos <1943->
Titolo	Block copolymers [[electronic resource]] : synthetic strategies, physical properties, and applications / / Nikos Hadjichristidis, Stergios Pispas, George Floudas
Pubbl/distr/stampa	Hoboken, N.J., : Wiley-Interscience, c2003
ISBN	1-280-36675-3 9786610366750 0-470-23239-0 0-471-46134-2 0-471-26980-8
Descrizione fisica	1 online resource (445 p.)
Altri autori (Persone)	PispasStergios <1967-> FloudasGeorge <1961->
Disciplina	547 547.7 547.84
Soggetti	Block copolymers
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	BLOCK COPOLYMERS; CONTENTS; Preface; Abbreviations and Symbols; I BLOCK COPOLYMER SYNTHESIS; 1 BLOCK COPOLYMERS BY ANIONIC POLYMERIZATION; 1. Synthesis of AB Diblock Copolymers; 2. Synthesis of Triblock Copolymers; 3. Linear Block Copolymers With More Than Three Blocks; 2 BLOCK COPOLYMERS BY CATIONIC POLYMERIZATION; 1. Synthesis of AB Diblock Copolymers; 2. Synthesis of Triblock Copolymers; 3 BLOCK COPOLYMERS BY LIVING FREE RADICAL POLYMERIZATION; 1. Synthesis of AB Diblock Copolymers; 2. Synthesis of ABA Triblock Copolymers 3. Synthesis of ABC Triblock Terpolymers and ABCD Tetrablock Quarterpolymers4 BLOCK COPOLYMERS BY GROUP TRANSFER POLYMERIZATION; 1. Synthesis of AB Diblock Copolymers; 2. Synthesis of ABA Triblock Copolymers; 3. Synthesis of ABC Triblock Terpolymers; 5 BLOCK COPOLYMERS BY RING OPENING METATHESIS POLYMERIZATION; 1. Synthesis of AB Diblock Copolymers; 2. Synthesis

of ABA Triblock Copolymers; 6 SYNTHESIS OF BLOCK COPOLYMERS BY A COMBINATION OF DIFFERENT POLYMERIZATION METHODS; 1. Synthesis of Block Copolymers by Anionic to Cationic Mechanism Transformation
2. Synthesis of Block Copolymers by Anionic to Living Free Radical Mechanism Transformation3. Synthesis of Block Copolymers by Cationic to Anionic Mechanism Transformation; 4. Synthesis of Block Copolymers by Cationic to Onium Mechanism Transformation; 5. Synthesis of Block Copolymers by Cationic to Living Free Radical Mechanism Transformation; 6. Synthesis of Block Copolymers by Living Free Radical to Cationic Mechanism Transformation; 7. Synthesis of Block Copolymers by Ring Opening Metathesis to Living Free Radical Mechanism Transformation
8. Synthesis of Block Copolymers by Ring Opening Metathesis to Group Transfer Mechanism Transformation9. Other Combinations; 10. Bifunctional (DUAL) Initiators; 11. Synthesis of Block Copolymers by Direct Coupling of Preformed Living Blocks; 12. Synthesis of Block Copolymers by Coupling of End-functionalized Prepolymers; 7 SYNTHESIS OF BLOCK COPOLYMERS BY CHEMICAL MODIFICATION; 1. Hydrogenation; 2. Hydrolysis; 3. Quaternization; 4. Sulfonation; 5. Hydroboration/Oxidation; 6. Epoxidation; 7. Chloro/BromoMethylation; 8. Hydrosilylation; 8 NONLINEAR BLOCK COPOLYMERS; 1. Star Block Copolymers
2. Graft Copolymers3. Miktoarm Star Copolymers; 4. Other Complex Architectures; II MOLECULAR CHARACTERIZATION OF BLOCK COPOLYMERS; 9 MOLECULAR CHARACTERIZATION OF BLOCK COPOLYMERS; 1. Purification of Block Copolymers by Fractionation; 2. Molecular Characterization; III SOLUTION PROPERTIES OF BLOCK COPOLYMERS; 10 DILUTE SOLUTIONS OF BLOCK COPOLYMERS IN NONSELECTIVE SOLVENTS; 11 DILUTE SOLUTIONS OF BLOCK COPOLYMERS IN SELECTIVE SOLVENTS; 1. Thermodynamics of Micellization; 2. Phenomenology of Block Copolymer Micellar Structure; 3. Experimental Techniques for Studying Micelle Formation
4. Equilibrium Structure of Block Copolymer Micelles

Sommario/riassunto

Polymers may be classified as either homopolymers, consisting of one single repeating unit, or copolymers, consisting of two or more distinct repeating units. Block copolymers contain long contiguous blocks of two or more repeating units in the same polymer chain. Covering one of the hottest topics in polymer chemistry, Block Copolymers provides a coherent overview of the synthetic routes, physical properties, and applications of block copolymers.This pioneering text provides not only a guideline for developing synthetic strategies for creating block copolymers with defined characteristics