

1. Record Nr.	UNINA9910145263103321
Titolo	The power of functional resins in organic synthesis [[electronic resource] /] / edited by Judit Tulla-Puche and Fernando Albericio
Pubbl/distr/stampa	Weinheim, : Wiley-VCH, c2008
ISBN	1-282-02535-X 9786612025358 3-527-62617-4 3-527-62618-2
Descrizione fisica	1 online resource (685 p.)
Classificazione	540 VK 5500
Altri autori (Persone)	AlbericioFernando Tulla-PucheJudit
Disciplina	547.2
Soggetti	Gums and resins, Synthetic Organic compounds - Synthesis Electronic books.
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	The Power of Functional Resins in Organic Synthesis; Contents; Preface; Part One: Introduction; 1: The (Classic Concept of) Solid Support; 1.1 Introduction; 1.2 Linkers/Handles; 1.3 Solid Supports; 1.3.1 Gel-Type Support; 1.3.1.1 Polystyrene (PS) Resins; 1.3.1.2 Poly(Ethylene Glycol)-Polystyrene (PEG-PS) Resins; 1.3.1.3 Hydrophilic PEG-Based Resins; 1.3.2 Modified Surface Type Supports; 1.3.2.1 Cellulose Membranes; 1.3.2.2 Polyolefinic Membranes; 1.3.2.3 Pellicular Solid Supports; Acknowledgments; References; 2: Molecularly Imprinted Polymers; 2.1 Introduction 2.2 The Concept of Molecular Imprinting2.2.1 Non-covalent Molecular Imprinting; 2.2.2 Covalent Molecular Imprinting; 2.2.3 Semi-covalent Molecular Imprinting; 2.2.4 Metal Ion Mediated Molecular Imprinting; 2.3 Formats of Molecularly Imprinted Polymers; 2.3.1 Irregularly Shaped Particles; 2.3.2 Beads; 2.3.2.1 Homogeneous Polymerization; 2.3.2.2 Heterogeneous Polymerization; 2.3.2.3 Two-Step Swelling Polymerization; 2.3.2.4 Core-Shell Polymerization; 2.3.2.5 Silica

Composite Beads; 2.3.3 Films and Membranes; 2.4 Design of MIPs; 2.4.1 Functional Monomers; 2.4.2 Cross-linking Monomers 2.4.3 The Porogen 2.4.4 Initiation of Polymerization; 2.4.5 Optimization of Imprinting Conditions; 2.5 Characterization of Molecularly Imprinted Polymers; 2.5.1 Characterization of Binding Properties of MIPs; 2.5.2 Characterization of Chemical and Physical Properties of MIPs; 2.6 Applications of Molecularly Imprinted Polymers; 2.6.1 Liquid Chromatography; 2.6.2 Solid-Phase Extraction; 2.6.3 Solid-Phase Binding Assay; 2.6.4 Sensors; 2.6.4.1 Optical Sensors; 2.6.4.2 Mass Sensitive Sensors; 2.6.4.3 Electrochemical Sensors; 2.6.5 Synthetic Enzymes; 2.7 Conclusions; References

3: Nanoparticles Functionalized with Bioactive Molecules: Biomedical Applications 3.1 Introduction; 3.2 MNPs; 3.2.1 Gold Nanoparticles; 3.2.1.1 Synthesis and Properties; 3.2.1.2 Functionalization of GNPs with Bioactive Compounds and Biomedical Applications of Functionalized GNPs; 3.2.2 Nanoshells and Metal Heterodimers; 3.2.3 Iron Oxide NPs; 3.2.3.1 Synthesis and Properties; 3.2.3.2 Functionalization of IONPs; 3.2.4 Silver NPs; 3.2.5 Quantum Dots; 3.2.6 Nanowires; 3.3 CNTs; 3.4 Organic Nanoparticles (ONPs); 3.4.1 Synthesis and Properties of ONPs; 3.4.2 Functionalization Strategies 3.4.3 ONPs Types and Applications 3.4.3.1 Fluorescent ONPs; 3.4.3.2 Cancer-Aimed ONPs; 3.4.3.3 Delivery of ONPs through the Blood-Brain Barrier (BBB); 3.4.3.4 Nucleic Acids/Gene Delivery; 3.4.3.5 Other Biomedical Uses of ONPs; 3.5 Conclusions; Acknowledgments; List of Abbreviations; References; Part Two: Solid-Supported Reagents and Scavengers; 4: Oxidizing and Reducing Agents; 4.1 Introduction; 4.2 Considerations Concerning the Nature of the Solid Support Used for Polymer-Supported Redox Reagents; 4.3 Oxidizing Resins; 4.3.1 Novel Oxidative Resins 4.3.1.1 Solid-Supported Hypervalent Iodine Reagents

Sommario/riassunto

While many books cover solid phase synthesis and combinatorial synthesis, this one is unique in its exclusive coverage of the other aspects of solid-phase synthesis. As such, it contains everything you need to know -- from supported reagents, to scavengers, resins, and the synthesis of biomolecules and natural products. An invaluable companion for all chemists and biochemists working in university research and industry.
