

1. Record Nr.	UNINA9910144327103321
Titolo	Functional synthetic receptors [[electronic resource] /] / Thomas Schrader, Andrew D. Hamilton (eds.)
Pubbl/distr/stampa	Weinheim, : Wiley-VCH, c2005
ISBN	1-280-52059-0 9786610520596 3-527-60572-X 3-527-60553-3
Descrizione fisica	1 online resource (442 p.)
Classificazione	35.53
Altri autori (Persone)	SchraderThomas HamiltonAndrew D
Disciplina	547.1226
Soggetti	Supramolecular chemistry Cell receptors 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	Functional Synthetic Receptors; Table of Contents; Preface; List of Contributors; 1 Artificial (Pseudo)peptides for Molecular Recognition and Catalysis; 1.1 Introduction; 1.2 Recognition of Biological Targets by Pseudo-peptides; 1.2.1 Introduction; 1.2.2 Polyamides as Sequence-specific DNA-minor-groove Binders; 1.2.3 Peptide Nucleic Acids; 1.2.4 Protein Recognition by (Pseudo)peptides; 1.3 Synthetic (Pseudo) peptide-based Supermolecules: From Structure to Function; 1.3.1 Catalytic (Pseudo)peptides; 1.3.2 (Pseudo)peptides Altering Membrane Permeability 1.3.3 Nanoparticle- and Dendrimer-based Functional (Pseudo) peptides1.4 Combinatorial Selection of Functional (Pseudo)peptides; 1.5 Conclusions; References; 2 Carbohydrate Receptors; 2.1 Introduction; 2.2 Carbohydrate Receptors Employing Noncovalent Interactions; 2.2.1 Recognition in Organic Solvents; 2.2.2 Recognition in Two-phase Systems; 2.2.3 Carbohydrate Recognition in Water; 2.3 Receptors Employing B-O Bond Formation; 2.3.1 Carbohydrate Recognition in Water; 2.3.2 Carbohydrate Recognition in Water;

References; 3 Ammonium, Amidinium, Guanidinium, and Pyridinium Cations; 3.1 Introduction
3.2 Ammonium Cations 3.2.1 New Receptor Structures; 3.2.2 Theoretical Investigations; 3.2.3 New Functions; 3.2.4 Peptide and Protein Recognition; 3.2.5 Conclusion and Outlook; 3.3 Amidinium Cations; 3.3.1 Introduction; 3.3.2 Artificial Receptors; 3.3.3 Conclusion; 3.4 Guanidinium Cations; 3.4.1 Introduction; 3.4.2 Artificial Receptors; 3.4.3 Conclusion; 3.5 Pyridinium Cations; 3.5.1 Introduction; 3.5.2 Artificial Receptors; 3.5.3 Conclusion; 3.6 Conclusions and Outlook; References; 4 Artificial Pyrrole-based Anion Receptors; 4.1 Introduction; 4.2 Anions in Biological Systems
4.3 Cationic Pyrrole-based Receptors 4.3.1 Cyclic Receptors; 4.3.2 Linear Receptors; 4.4 Neutral Pyrrole-based Anion Receptors; 4.4.1 Cyclic Receptors; 4.4.2 Linear Receptors; 4.5 Anion Carriers in Transport Applications; 4.6 Anion Sensing; 4.7 Guanidinium-based Anion Receptors; 4.8 Amide-based Anion Receptors; 4.9 Urea-based Anion Receptors; 4.10 Conclusions; Acknowledgment; References; 5 Molecular Containers in Action; 5.1 Introduction; 5.2 Variety of Molecular Containers; 5.3 Chemistry Inside Capsules; 5.3.1 Observing Unusual Species Through Encapsulation
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6.2.1 Acyl Hydrazone and Imine Exchange

Sommario/riassunto

A timely overview of this rapidly-expanding topic, covering the most important classes of compounds and incorporating the latest literature. With its application-oriented approach, this book is the first to emphasize current and potential applications, extending to such fields as materials science, bioorganic chemistry, medicinal chemistry, and organic synthesis. In the biological context in particular, the book clarifies which receptor systems work well in water or better under physiological conditions. From the contents: * Amino Acid, Peptid and Protein Receptors* Carbohydrate Rece
