1. Record Nr. UNINA9911019365203321

Titolo	Handbook of fluorous chemistry / / John A. Gladysz, Dennis P. Curran, Istvan T. Horvath (Eds.)
Pubbl/distr/stampa	Weinheim, : Wiley-VCH, c2004
ISBN	9786610519798 9781280519796 1280519797 9783527603909 3527603905 9783527604494 3527604499
Descrizione fisica	1 online resource (627 p.)
Altri autori (Persone)	GladyszJohn A CurranDennis P HorvathIstvan T
Disciplina	546/.731
Soggetti	Fluorine compounds Fluorine
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	Handbook of Fluorous Chemistry; Contents; Preface; Contributors; 1 Fluorous Chemistry: Scope and Definition; 1.1 The Birth of a Term; 1.2 The Definition of Fluorous Today; 1.3 Other Definitions within the Fluorous Repertoire; 1.4 Present Scope of Fluorous Chemistry; References; 2 A Personal View of the History of Fluorous Chemistry; References; 3 Fluorous Solvents and Related Media; 3.1 Introductory Remarks; 3.2 Commercial Fluorous Solvents; 3.3 Related Solvents and Media; 3.3.1 Amphiphilic or Hybrid Solvents; 3.3.2 Fluorous Ionic Liquids; 3.3.3 ""Faux Fluorous"" Solvents 3.3.4 Fluorous Greases3.3.5 Bonded Fluorous Phases; 3.4 Polarities of Fluorous Solvents; 3.5 Solubilities of Solutes in Fluorous Solvents; 3.5.1 General Aspects; 3.5.2 Gas Solubilities; 3.6 Fluorous/Non-fluorous Solvent Miscibilities; 3.7 Special Reactivity Phenomena in Fluorous Solvents; References; 4 Strategies for the Recovery of Fluorous

Catalysts and Reagents: Design and Evaluation; 4.1 Introduction; Basic Recycling Concepts; 4.2 Fluorous/Non-Fluorous Liquid/Liquid Biphase Catalysis; 4.3 Fluorous Catalysis in Amphiphilic or Hybrid Solvents
4.4 Fluorous Catalysis Without Non-Fluorous Solvents4.5 Fluorous Catalysis Without Fluorous Solvents; 4.5.1 Thermomorphic Catalysts; 4.5.2 Other Approaches; 4.6 Fluorous Catalysis Without Solvents; 4.7 Recovery of Fluorous Catalysts using Supports; 4.8 Criteria for Recoverability; 4.8.1 Yield as a Function of Cycle; 4.8.2 TOF as a Function of Cycle; 4.8.3 Catalyst Inventory; 4.9 Slanting Data: How to Make a Non-recoverable Catalyst Appear Recoverable; 4.10 Prospects; References; 5 Ponytails: Structural and Electronic Considerations; 5.1 Introduction; 5.2 Structural Aspects of Ponytails
5.3 NMR Characterization of Ponytails5.4 Electronic Effects: Introduction; 5.5 Electronic Effects: IR Data; 5.6 Electronic Effects: Gas Phase Ionization Data; 5.7 Electronic Effects: Calorimetry; 5.8 Electronic Effects: Solution Equilibria; 5.9 Electronic Effects: Computational Data; 5.10 Electronic Effects: Reactivity; 5.11 Electronic Effects: Additional Probes; 5.12 Electronic Effects: Conclusions; References; 6 Partition Coefficients Involving Fluorous Solvents; 6.1 Introduction; 6.2 Literature Data; 6.3 Trends with Respect to Functional Groups; 6.3.1 Non-Aromatic Hydrocarbons
6.3.2 Non-Aromatic Monofunctional Compounds6.3.3 Simple Monoarenes; 6.3.4 Triarylphosphines; 6.3.5 Pyridines; 6.3.6 Metal Complexes; 6.4 General Trends and Special Situations; 6.5 Quantitative Analysis and Prediction of Partition Coefficients; 6.6 Future Directions; 6.7 Sample Experimental Determinations; References; 7 Separations with Fluorous Silica Gel and Related Materials; 7.1 Introduction; 7.1.1 Fluorous Silica Gel; 7.1.2 Types and Sources of Fluorous Silica Gel Materials and Products; 7.2 Fluorous Solid Phase Extraction (FSPE)
7.2.1 Fluorous Solid Phase Extraction and its Relationship to Chromatography and Liquid/Liquid Extraction

Sommario/riassunto

Edited by the leading experts John Gladysz, Dennis Curran, and Istv?n Horv?th, this handbook is the first to summarize all the essential aspects of this emerging field of chemistry. Whether the reader is seeking an introduction to the concept of fluorous biphase catalysis, summaries of partition coefficients involving fluorous and organic solvents, or information on the latest fluorous mixture separation techniques, this authoritative compilation of contributions, written by the world's top authors, provides key information needed for successfully working with the diverse and fascinating famil