Record Nr. UNINA9910811958803321 Supported ionic liquids: fundamentals and applications / / edited by **Titolo** Rasmus Fehrmann, Anders Riisager, and Marco Haumann Pubbl/distr/stampa Weinheim:,: Wiley-VCH Verlag GmbH,, [2014] ©2014 **ISBN** 3-527-65480-1 3-527-65478-X 3-527-65481-X Descrizione fisica 1 online resource (497 p.) Altri autori (Persone) FehrmannRasmus RiisagerAnders HaumannMarco Disciplina 541.395 Soggetti Ionic solutions Catalysis 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. Supported Ionic Liquids; Contents; Preface; List of Contributors; Nota di contenuto Chapter 1 Introduction: 1.1 A Century of Supported Liquids: 1.2 Supported Ionic Liquids; 1.3 Applications in Catalysis; 1.4 Applications in Separation: 1.5 Coating of Heterogeneous Catalysts: 1.6 Monolayers of IL on Surfaces; 1.7 Conclusion; References; Part I Concept and Building Blocks; Chapter 2 Introducing Ionic Liquids; 2.1 Introduction; 2.2 Preparation; 2.3 Liquid Range; 2.4 Structures; 2.4.1 The Liquid/Solid Interface; 2.4.2 The Liquid/Gas Interface; 2.5 Physical Properties; 2.5.1 The Liquid/Solid Interface 2.5.2 The Liquid/Gas Interface2.5.3 Polarity; 2.5.4 Chromatographic Measurements and the Abraham Model of Polarity; 2.5.5 Infinite Dilution Activity Coefficients; 2.6 Effects of Ionic Liquids on Chemical Reactions; 2.7 Ionic Liquids as Process Solvents in Industry: 2.8 Summary; References; Chapter 3 Porous Inorganic Materials as Potential Supports for Ionic Liquids; 3.1 Introduction; 3.2 Porous Materials - an Overview; 3.2.1 History; 3.2.2 Pore Size; 3.2.3 Structural Aspects; 3.2.4 Chemistry; 3.2.5 Synthesis; 3.3 Silica-Based Materials - Amorphous;

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Sommario/riassunto

This unique book gives a timely overview about the fundamentals and applications of supported ionic liquids in modern organic synthesis. It introduces the concept and synthesis of SILP materials and presents important applications in the field of catalysis (e.g. hydroformylation, hydrogenation, coupling reactions, fine chemical synthesis) as well as energy technology and gas separation. Written by pioneers in the field, this book is an invaluable reference book for organic chemists in academia or industry.