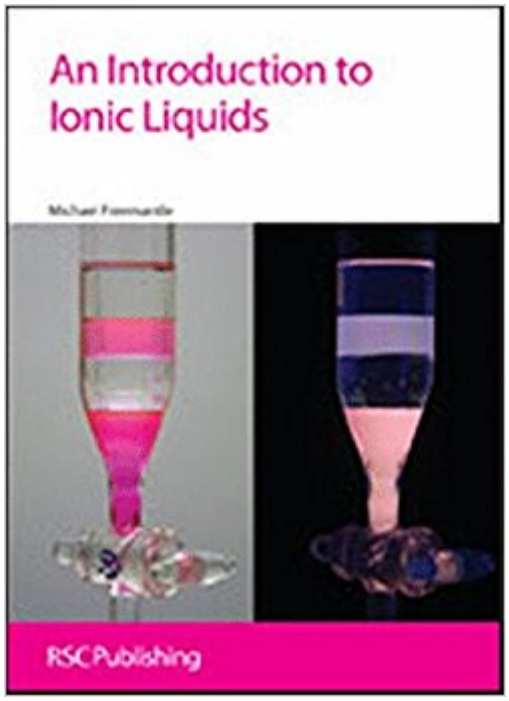
An Introduction To Ionic Liquids: RSC



Synopsis

In the late 1990s, there was an explosion of research on ionic liquids and they are now a major topic of academic and industrial interest with numerous existing and potential applications. Since then, the number of scientific papers focusing on ionic liquids has risen exponentially, including a few edited multi-author books covering the latest advances in ionic liquids chemistry and several volumes of symposium proceedings. Much of the content in these books and volumes is written using technical jargon that only scientists at the cutting edge of ionic liquids research will understand and ionic liquids are hardly covered in most modern chemistry textbooks. This is the first single-author book on ionic liquids and the first introductory book on the topic. It is written in a clear, concise and consistent way. The book provides a useful introduction to ionic liquids for those readers who are not familiar with the topic. It is also wide ranging, embracing every aspect of the chemistry and applications of ionic liquids. The book draws extensively on the primary scientific literature to provide numerous examples of research on ionic liquids. These examples will enable the reader to become familiar with the key developments in ionic liquids chemistry over recent years. The book provides an introduction to: ionic liquids; their nomenclature; history; physical, chemical and biological properties; and their wide ranging uses and potential applications in catalysis, electrochemistry, inorganic chemistry, organic chemistry, analysis, biotechnology, green chemistry and clean technology. Notable and important chapters include "The Green Credentials of Ionic Liquids" and "Biotechnology." The chapter on "Applications" includes sections with brief descriptions of recent research on the development of ionic liquids: - for the construction of a liquid mirror for a moon telescope - for use as rocket propellants - for use as antimicrobial agents that combat MRSA - as active pharmaceutical ingredients and antiviral drugs - for embalming and tissue preservation Science students, researchers, teachers in academic institutions and chemists and other scientists in industry and government laboratories will find the book an invaluable introduction to one of the most rapidly advancing and exciting fields of science and technology today.

Book Information

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Customer Reviews

"This well-crafted book by Freemantle is distinct from other recent volumes on the subject. Ã FreemantleÃ†s book begins with a review of IL synthesis and properties and then concisely describes the diverse applications and merits of ILs in many Ã of the areas in which they are currently used. This book is both scholarly and a great read. Summing Up: Highly recommended. Lower-division undergraduates through professionals."P. G. Heiden (Choice, Vol. 47 (11), August, 2010)"If there ever was a case of a reporter becoming part of the story, it would have to be Michael FreemantleÃ†s pivotal role in the growth of the field now known as ionic liquids." Robin D.Rogers (Chemical and Engineering News, November 29th 2010, Robin D Rogers)

The rapidly expanding field of ionic liquids is now a major topic of academic and industrial interest with numerous existing and potential applications. This is the first introductory book on ionic liquids and is aimed at students, teachers and others in the wider community of chemists and scientists who are unfamiliar with the topic. The book covers the following aspects: - What are ionic liquids? - Why do chemists find them interesting? - An outline of the history of ionic liquids. - The chemical and physical properties of ionic liquids. - The existing and potential use of ionic liquids as "designer solvents" and advanced materials in organic chemistry, inorganic chemistry and a wide range fascinating applications.

Freemantle’s style made this clear to comprehend. Surveys and Intros are always tough - go too deep and lose some readers, don’t go deep enough and leave some readers unsatisfied. For my use and purposes, this was "just right".

perfect

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