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Nota di contenuto	v. 1 v. 2 Ionic Liquids in Synthesis; Contents; Preface to the Second Edition; A Note from the Editors; Acknowledgements; List of Contributors; 1 Introduction; 2 Synthesis and Purification; 2.1 Synthesis of Ionic Liquids; 2.1.1 Introduction; 2.1.2 Quaternization Reactions; 2.1.3 Anion-exchange Reactions; 2.1.3.1 Lewis Acid-based Ionic Liquids; 2.1.3.2 Anion Metathesis; 2.1.4 Purification of Ionic Liquids; 2.1.5 Improving the Sustainability of Ionic Liquids; 2.1.6 Conclusions; 2.2 Quality Aspects and Other Questions Related to Commercial Ionic Liquid Production; 2.2.1 Introduction 2.2.2 Quality Aspects of Commercial Ionic Liquid Production2.2.2.1 Color; 2.2.2.2 Organic Starting Material and Other Volatiles; 2.2.2.3 Halide Impurities; 2.2.4 Protic Impurities; 2.2.2.5 Other Ionic Impurities from Incomplete Metathesis Reactions; 2.2.4 Novel, Halide- Free Ionic Liquids; 2.2.5 Scale-up of Ionic Liquid Synthesis; 2.2.6

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	 Health, Safety and Environment; 2.2.7 Corrosion Behavior of Ionic Liquids; 2.2.8 Recycling of Ionic Liquids; 2.2.9 Future Price of Ionic Liquids 2.3 Synthesis of Task-specific Ionic Liquids2.3.1 Introduction; 2.3.2 General Synthetic Strategies; 2.3.3 Functionalized Cations; 2.3.4 Functionalized Anions; 2.3.5 Conclusion; 3 Physicochemical Properties; 3.1 Physicochemical Properties of Ionic Liquids: Melting Points and Phase Diagrams; 3.1.1 Introduction; 3.1.2 Measurement of Liquid Range; 3.1.2.1 Melting Points; 3.1.2.2 Upper Limit - Decomposition Temperature; 3.1.3 Effect of Ion Sizes on Salt Melting Points; 3.1.3.1 Anion Size; 3.1.3.2 Mixtures of Anions; 3.1.3.3 Cation Size; 3.1.3.4 Cation Symmetry; 3.1.3.5 Imidazolium Salts 3.1.3.6 Imidazolium Substituent Alkyl Chain Length3.1.3.7 Branching; 3.1.4 Summary; 3.2 Viscosity and Density of Ionic Liquids; 3.2.1 Viscosity of Ionic Liquids; 3.2.1.1 Viscosity Measurement Methods; 3.2.1.2 Ionic Liquid Viscosities; 3.2.2 Density of Ionic Liquids; 3.2.2.1 Density Measurement; 3.2.2.2 Ionic Liquid Densities; 3.3 Solubility and Solvation in Ionic Liquids; 3.3.1 Introduction; 3.3.2 Metal Salt Solubility; 3.3.1 Halometallate Salts; 3.3.2.2 Metal Complexes; 3.3.3 Extraction and Separations; 3.3.4 Organic Compounds; 3.3.5 Conclusions; 3.4 Gas Solubilities and Related Thermodynamic Properties; 3.4.2.1 Gas Solubilities and Related Thermodynamic Properties; 3.4.2.2 The Stoichiometric Technique; 3.4.2.3 The Gravimetric Technique; 3.4.2.4 Spectroscopic Techniques; 3.4.2.5 Gas Chromatography; 3.4.3 Gas Solubilities; 3.4.3.1 CO(2); 3.4.3.2 Reaction Gases (O(2), H(2), CO); 3.4.3.3 Other Gases (N(2), Ar, CH(4), C(2)H(6), C(2)H(4), H(2)O, SO(2), CHF(3), etc.); 3.4.3.4 Mixed Gases; 3.4.3.5 Enthalpies and Entropies; 3.4.4 Applications; 3.4.4.1 Reactions Involving Gases; 3.4.4.2 Gas Storage; 3.4.4.3 Gas Separations 3.4.4 Extraction of Solutes from Ionic Liquids with Compressed Gases or Supercritical Fluids
Sommario/riassunto	The second, completely revised and enlarged edition of what has become the standard reference work in this fascinating field brings together the latest developments, supplemented by numerous practical tips, providing those working in both research and industry with an indispensable source of information. New contributions have been added, to reflect the fact that industrial processes are already established, and ionic liquids are now commercially available. A must for everyone working in the field.