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Titolo	Application of Ionic Liquids on Rare Earth Green Separation and Utilization / / edited by Ji Chen
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ISBN	3-662-47510-3
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Descrizione fisica	1 online resource (260 p.)
Collana	Green Chemistry and Sustainable Technology, , 2196-6982
Disciplina	541.372
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Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Part I Introduction -- Ionic Liquids in the Context of Rare Earth Separation and Utilization -- Part II Chemistry of ionic liquids with rare earth -- Using Crystal Structures of Ionic Compounds to Explore Complexation and Extraction of Rare Earth Elements in Ionic Liquids -- Part III Ionic liquids for the extraction and separation of rare earth -- Separating Rare Earth Elements with Ionic Liquids -- Ionic Liquid-Based Extraction and the Application to Liquid Membrane Separation of Rare Earth Metals -- Application of Ionic Liquids Extractants on Rare Earth Green Separation -- Part IV Electrodeposition of rare earth metal in ionic liquids -- Electrodeposition of Rare Earth Metal in Ionic Liquids -- Part V of Ionic liquids for rare earth utilization -- Ionic Liquids and Rare Earth Soft Luminescent Materials -- Photo functional Rare Earth Materials Based on Ionic Liquids -- Ionic liquid – assisted hydrothermal synthesis of rare earth luminescence materials.
Sommario/riassunto	This book comprehensively details the applications of ionic liquids in

rare earth green separation and utilization based on the unique interactions of ionic liquids with rare earth ions. It consists of nine chapters demonstrating the synthesis and properties of ionic liquids, coordination chemistry of ionic liquids and rare earth, ionic liquids as diluents, extractants, adsorption resins for rare earth extraction and separation, electrodeposition of rare earth metals in ionic liquids, and preparation of rare earth material with the aid of ionic liquids. It is both interesting and useful to chemists, metallurgists and graduate students working on fundamental research of ionic liquids as well as professionals in the rare earth industry. It provides considerable insights into green chemistry and sustainable processes for rare earth separation in order to meet the environmental challenge of rare earth metallurgy around the globe, especially in China. Ji Chen is a Professor of Chemistry at the Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, China.