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Nota di contenuto	Cover; Title Page; Copyright Page; Contents; Preface; List of Contributors; 1 High Performance Polymer Hydrogel Based Materials for Fuel Cells; 1.1 Introduction; 1.2 Hydrogel Electrolyte; 1.3 Poly(vinyl alcohol) Hydrogel; 1.3.1 Chitosan-based Hydrogel in Fuel Cells; 1.3.2 Chitosan Membrane for Polymer Electrolyte Membrane Fuel Cell; 1.3.3 Chitosan Membrane for Alkaline Polymer Electrolyte Fuel Cell; 1.3.4 Chitosan for Fuel Cell Electrode; Summary; References; 2 PVAc Based Polymer Blend Electrolytes for Lithium Batteries; 2.1 Introduction; 2.1.1 Polymer Electrolytes 2.1.2 Role of Polymers in Electrolyte 2.1.3 Polymers; 2.1.4 Advantages of Polymer Electrolytes in Battery; 2.1.5 Poly Vinyl Acetate (PVAc); 2.1.6 PVAc Based Polymer Electrolytes; 2.1.7 Surface and Structural Analysis; Conclusion; References; 3 Lithium Polymer Batteries Based on Ionic Liquids; 3.1 Lithium Batteries; 3.1.1 Introduction; 3.1.2 Lithium Polymer Batteries; 3.2 Lithium Polymer Batteries Containing Ionic Liquids; 3.2.1

Ionic Liquids; 3.2.2 Ionic Liquid-Based Polymer Electrolytes; 3.2.3 Ionic Liquid-Based, Lithium Polymer Battery Performance; Glossary; References

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## Sommario/riassunto

Polymers are increasingly finding applications in the areas of energy storage and conversion. A number of recent advances in the polymer molecular structure control thereby tuning of the polymer properties have led to these applications. This book assimilates these advances in the form of a comprehensive text which includes the synthesis and properties of a large number of polymer systems for applications in the areas of lithium batteries, photovoltaics, solar cells, etc. Polymers for Energy Storage and Conversion describes: PVAc-based polymer blend electrolytes for

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