1. Record Nr. UNINA9910300432403321

Titolo	Applications of Ionic Liquids in Polymer Science and Technology / / edited by David Mecerreyes
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2015
ISBN	3-662-44903-X
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (392 p.)
Disciplina	530 530.41 541.2254
Soggetti	Amorphous substances Complex fluids Polymers Soft and Granular Matter, Complex Fluids and Microfluidics Polymer Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	With 119 figures and 10 tables.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction Ionic Liquids and Polymers: Versatile Combination of Materials -- Poly(ionic Liquids).- Structurally controlled Polymeric Ionic Liquids and related Block Copolymers.- Ionic Liquids and Polymers as Stimuli Responsive Materials.- Ionic Liquids and Polymers in analytical environmental applications.- Ionic Liquids and Polymers in energy.- Ionic Liquids and Polymers in Nanomedicine -- Ionic Liquids and Polymers in Gas Separation.- Ionic Liquids as Polymer Additives. .
Sommario/riassunto	This book summarizes the latest knowledge in the science and technology of ionic liquids and polymers in different areas. Ionic liquids (IL) are actively being investigated in polymer science and technology for a number of different applications. In the first part of the book the authors present the particular properties of ionic liquids as speciality solvents. The state-of-the art in the use of ionic liquids in polymer synthesis and modification reactions including polymer recycling is outlined. The second part focuses on the use of ionic liquids as

speciality additives such as plasticizers or antistatic agents. The third part examines the use of ionic liquids in the design of functional polymers (usually called polymeric ionic liquids (PIL) or poly(ionic liquids)). Many important applications in diverse scientific and industrial areas rely on these polymers, like polymer electrolytes in electrochemical devices, building blocks in materials science, nanocomposites, gas membranes, innovative anion sensitive materials, smart surfaces, and a countless set range of emerging applications in different fields such as energy, optoelectronics, analytical chemistry, biotechnology, nanomedicine or catalysis.