

1. Record Nr.	UNINA9910349518403321
Titolo	Application of Ionic Liquids in Biotechnology // edited by Toshiyuki Itoh, Yoon-Mo Koo
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-23081-3
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (X, 336 p. 167 illus., 25 illus. in color.)
Collana	Advances in Biochemical Engineering/Biotechnology, , 0724-6145 ; ; 168
Disciplina	541.372
Soggetti	Solucions iòniques Biotecnologia Biotechnology Biophysics Chemistry, Physical and theoretical Green chemistry Biomaterials Biomedical engineering Biological and Medical Physics, Biophysics Physical Chemistry Green Chemistry Biomedical Engineering/Biotechnology Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Ionic Liquids in Bioseparation Processes -- DES/NADES for Biological Applications -- Ionic Liquid Pretreatment of Lignocellulosic Biomass for Enzymatic Delignification -- Activation of biocatalyst using ionic liquids -- Microbially catalyzed transformation in Ionic Liquids -- ILs for the preparation of biopolymer-based hydrogels -- Advances in processing biomaterials from ionic liquids -- Synthesis of ionic liquids originated from natural products -- Hydrated ionic liquids as stabilization and refolding media for proteins -- Extraction and isolation of medicinal

compounds from bioresources using ionic liquids -- Environmental concerns of ionic liquids in biotechnological applications.

Sommario/riassunto

This volume explores how ionic liquids are used in different areas of biotechnology. It also provides insights on the interaction of ionic liquids with biomolecules and biomaterials. Ionic liquids have become essential players in the fields of synthesis, catalysis, extraction and electrochemistry, and their unique properties have opened a wide range of applications in biotechnology. Readers will discover diverse examples of the application of ionic liquids as solvents for biomaterials extraction and pretreatment, in enzymatic and whole cell catalysed reaction, and as activation agents for biocatalysis. Particular attention is given to the biologically functionalized ionic liquids employed in medical and pharmaceutical applications. Although ionic liquids are considered “green solvents”, the contributing authors will also explore their environmental impact when applied to biotechnology. Chemical, biological and medical scientists interested in ionic liquids and biotechnology will find this work instructive and informative.
