

1. Record Nr.	UNINA9910139296703321
Titolo	Ionic interactions in natural and synthetic macromolecules [[electronic resource] /] / edited by Alberto Ciferri, Angelo Perico
Pubbl/distr/stampa	Hoboken, NJ, : Wiley, c2012
ISBN	1-283-40963-1 9786613409638 1-118-16584-5 1-118-16585-3 1-118-16586-1
Descrizione fisica	1 online resource (872 p.)
Classificazione	SCI013030
Altri autori (Persone)	CiferriA PericoAngelo
Disciplina	547/.7045723
Soggetti	Macromolecules Ion-ion collisions Supramolecular chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Fundamentals -- Ion properties -- Yizhak Marcus -- Ionic interaction in supramolecular complexes -- Hans-Jorg Schnieder -- Polyelectrolyte fundamentals -- Angelo Perico -- Polyelectrolyte and polyampholyte effects in natural and synthetic macromolecules -- Ngo Minh Toan, Bae-Yeun Ha, and D. Thirumalai -- Modelling the structure and dynamics of polyelectrolyte multilayers -- Juan J. Cerdá, Christian Holm, and Baofu Qiao -- Mixed Inteactions -- Ionic-mixed interactions and Hofmeister effects -- Alberto Ciferri -- Hydrophobic Polyelectrolytes -- Andre's F. Olea -- Association of polyelectrolytes to surfactants, and supramolecular assemblies -- Alberto Ciferri and Angelo Perico -- Ion transfer in and through charged membranes. Structure, properties, theory -- V. Nikonenko, A. B. Yaroslavtsev, and G. Pourcelly -- Reversible coordination polymers -- Kim de Lange, Jos M. J. Paulusse, Antonius T. M. Marcelis, and Han Zuilhof -- Structured and functional aspects of metal binding sites in natural and designed metalloproteins -- Ornella Maglio, Flavia Nastri, and Angela Lombardi

Sommario/riassunto

"This book is a comprehensive study of the subject of ionic interactions in macromolecules. The first parts of the book review and analyze the conventional treatments of fixed charges (e.g. in polyelectrolytes and polyampholytes), including screening and condensation by mobile ions. The interaction of ions with less polar sites on the macromolecule (e.g. amide bonds), and the origin of the lyotropic effects (focusing on binding versus condensation) will also be extensively addressed. The book also explores complex micellar organizations involving charged macromolecules (e.g. DNA) and low-molecular-weight ampholytes and strong protein associations. The resulting structures are relevant to a variety of functional biological systems and synthetic analogs. The contribution of electrostatic and hydrophobic interaction to the stability of proteins and other supramolecular structures will also be analyzed. There are chapters on applications such as deionization and cosmetic formulation. This 21-chapter book is divided into three sections: Fundamentals Mixed Interactions Functions and Applications"--
