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Titolo	Electrolytes at interfaces [[electronic resource] /] / by S. Durand-Vidal, J.-P. Simonin and P. Turq
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ISBN	1-280-20500-8 9786610205004 0-306-46940-5
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Descrizione fisica	1 online resource (359 p.)
Collana	Progress in theoretical chemistry and physics ; ; v. 1
Altri autori (Persone)	SimoninJ.-P TurqPierre
Disciplina	541.3/72
Soggetti	Electrolytes Interfaces (Physical sciences)
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Basic Concepts -- Hydrodynamic properties -- Electrostatics -- Van der Waals forces -- Bulk Electrolytes -- The mean spherical approximation (MSA) for the equal size primitive model -- Thermodynamic properties -- Ion association in the MSA -- Thermodynamic excess properties of ionic solutions in the primitive MSA -- Mathematical background -- Specific applications -- Ions at liquid/air and liquid/liquid interfaces -- Solute transfer kinetics at a liquid/liquid interface -- Electrokinetic phenomena -- Description of electrolyte transport using the MSA for simple electrolytes, polyelectrolytes and micelles -- Polyelectrolytes.
Sommario/riassunto	The aim of this book is to provide the reader with a modern presentation of ionic solutions at interfaces, for physical chemists, chemists and theoretically oriented experimentalists in this field. The discussion is mainly on the structural and thermodynamic properties, in relation to presently available statistical mechanical models. Some dynamic properties are also presented, at a more phenomenological level. The initial chapters are devoted to the presentation of some basic concepts for bulk properties: hydrodynamic interactions, electrostatics, van der Waals forces and thermodynamics of ionic solutions in the

framework of a particular model: the mean spherical approximation (MSA). Specific features of interfaces are then discussed: experimental techniques such as in-situ X-ray diffraction, STM and AFM microscopy are described. Ions at liquid/air, liquid/metal and liquid/liquid interfaces are considered from the experimental and theoretical viewpoint. Lastly some dynamic (transport) properties are included, namely the self-diffusion and conductance of small colloids (polyelectrolytes and micelles) and the kinetics of solute transfer at free liquid/liquid interfaces.