1. Record Nr. UNINA9910140950003321

Titolo	Handbook of aqueous electrolyte thermodynamics [[electronic resource]] : theory & application / / Joseph F. Zemaitis, Jr. ... [et al.]
Pubbl/distr/stampa	New York, N.Y., : Design Institute for Physical Property Data sponsored by the American Institute of Chemical Engineers, c1986
ISBN	1-282-81745-0 9786612817458 0-470-93841-2 0-470-93840-4
Descrizione fisica	1 online resource (876 p.)
Altri autori (Persone)	ZemaitisJoseph F. <b. 1940.>
Disciplina	541.3/746 541.3746
Soggetti	Electrolytes - Thermal properties Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Handbook of Aqueous Electrolyte Thermodynamics Theory & Application; TABLE OF CONTENTS; I INTRODUCTION; II THERMODYNAMICS OF SOLUTIONS; Basic Thermodynamic Functions; Solutions - Basic Definitions and Concepts; Equilibrium - Necessary Conditions; Activities, Activity Coefficients and Standard States; III EQUILIBRIUM CONSTANTS; Ionic and/or Reaction Equilibrium in Aqueous Solutions; Solubility Equilibria Between Crystals and Saturated Solutions; Vapor-Liquid Equilibria in Aqueous Solutions; Temperature Effects on the Equilibrium Constant Estimating Temperature Effects on Heat Capacity and Other Thermodynamic PropertiesEquilibrium Constants from Tabulated Data; Pressure Effects on the Equilibrium Constant; Appendix 3.1 - Criss and Cobble Parameters; IV ACTIVITY COEFFICIENTS OF SINGLE STRONG ELECTROLYTES; History; Limitations and Improvements to the Debye-Huckel Limiting Law; Further Refinements; Bromley's Method; Meissner's Method; Pitzer's Method; Chen's Method; Short Range Interaction Model; Long Range Interaction Model; Temperature Effects;

Bromley's Method; Meissner's Method; Pitzer's Method; Chen's Method; Application
Bromley's MethodMeissner's Method; Pitzer's Method; Chen's Method; NBS Smoothed Experimental Data; Test Cases:; HCl; KCl; KOH; NaCl; NaOH; CaCl2; Na2SO4; MgSO4; Bromley's Extended Equation; MgSO4 Test Case; Comparison of Temperature Effect Methods; Bromley; Meissner; Pitzer and Chen; Experimental Data; Test Cases:; HCl at 50° Celsius; KCl at 80° Celsius; KOH at 80° Celsius; NaCl at 100 and 300° Celsius; NaOH at 35° Celsius; CaCl2 at 108.85 and 201.85° Celsius; Na2SO4 at 80° Celsius; MgSO4 at 80° Celsius; Appendix 4.1 - Values for Guggenheim's Parameter
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Sommario/riassunto

Expertise in electrolyte systems has become increasingly important in traditional CPI operations, as well as in oil/gas exploration and production. This book is the source for predicting electrolyte systems behavior, an indispensable ""do-it-yourself"" guide, with a blueprint for formulating predictive mathematical electrolyte models, recommended tabular values to use in these models, and annotated bibliographies. The final chapter is a general recipe for formulating complete predictive models for electrolytes, along with a series of worked illustrative examples. It can serve as a useful resea