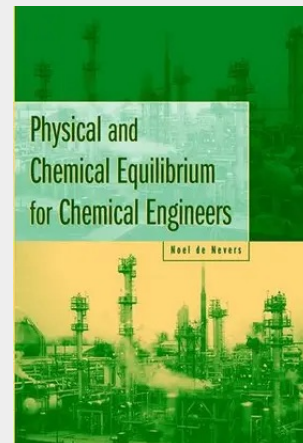


Physical & Chemical Equilibrium

Eine technisch exakte Darstellung des physikalischen und chemischen Gleichgewichts erwartet den Leser in diesem Buch. Mathematische Herleitungen sind so einfach wie möglich gehalten. Beim Verständnis der Algorithmen helfen zahlreiche durchgerechnete Beispiele. Der Schwerpunkt liegt auf den physikalischen Grundlagen von Rechenverfahren in der Industrie. Berücksichtigt werden auch neueste Aspekte der Ingenieurtechnik, zum Beispiel Gleichgewichte in wässriger Lösung und in Elektrolyten oder der osmotische Druck. Mit einer Sammlung physikalischer Daten!

The first accessible, in-depth, and up-to-date exploration of physical and chemical equilibrium This textbook provides a thorough introduction to the basic tools of chemical engineers-physical and chemical equilibrium. It is a text for second course thermodynamics students in chemical engineering. While traditional texts combine this topic with the first thermodynamics course, Physical and Chemical Equilibrium for Chemical Engineers gives chemical engineers the rigorous yet clear treatment more advanced students and chemical engineers require. Professor Noel de Nevers provides readers with a technically accurate and rigorous look at physical and chemical equilibrium-often called "solution thermodynamics." He presents the material in an accessible format that uses simple mathematics without sacrificing rigor. The text shows where "modern" terminology differs from "classic" terminology and covers different standard states, a common stumbling block for both students and professionals. Emphasis is placed on such up-to-date topics as aqueous solutions, electrolytes, and osmotic pressure, all of which play an important role in modern industrial processes and biotechnology. Unique coverage includes: * Minimization of Gibbs Free Energy * Vapor Pressure, the Clapeyron Equation, and Single Pure Species Phase Equilibrium * Partial Molal Properties * Fugacity, Ideal and Non-Ideal Solutions, Activity, and Activity Coefficient * The Phase Rule With numerous physical data and commercial process examples, Physical and Chemical Equilibrium for Chemical Engineers goes beyond the fundamentals to extend the mastery of both students and practicing chemical engineers in this critical area.

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