



Exact Solution of the First-Order Perturbed Percus-Yevick Equation for Arbitrary Pair Potentials (Classic Reprint) (Paperback)

By Jerome K Percus

Forgotten Books, United States, 2015. Paperback. Book Condition: New. 229 x 152 mm. Language: English . Brand New Book ***** Print on Demand *****.Excerpt from Exact Solution of the First-Order Perturbed Percus-Yevick Equation for Arbitrary Pair Potentials The effect upon the correlation functions of a fluid of adding a pair potential of arbitrary range to a repulsive hard core is investigated in the case of the Percus-Yevick approximation of classical equilibrium statistical mechanics. The nonlinear P. Y. equation is perturbed, to first-order, and the resulting linear integral equation for the first-order correlation functions is then solved exactly for a general interparticle potential. The method of solution is presented for one-dimensional systems, but three-dimensional non-polar and polar liquids can be encompassed. Essential to the technique is the calculation of a certain zeroth-order quantity, which is proportional to the falting of the hard core pair correlation function with itself, and which is composed of a sum of nth-neighbor contributions. Obtaining this quantity allows conversion of the first-order perturbed P. Y. integral equation to an ordinary differential equation of fourth order for the direct correlation function inside the core. About the Publisher Forgotten Books publishes hundreds of thousands of rare and classic books....

 [READ ONLINE](#)

Reviews

An exceptional pdf and the typeface utilized was fascinating to read through. It can be written in straightforward words and phrases instead of confusing. I am just quickly could possibly get a delight of looking at a written ebook.

-- Prof. Arlie Bogan

It is in a single of the best book. This is for those who state there had not been a well worth reading through. Once you begin to read the book, it is extremely difficult to leave it before concluding.

-- Dr. Barney Robel Jr.