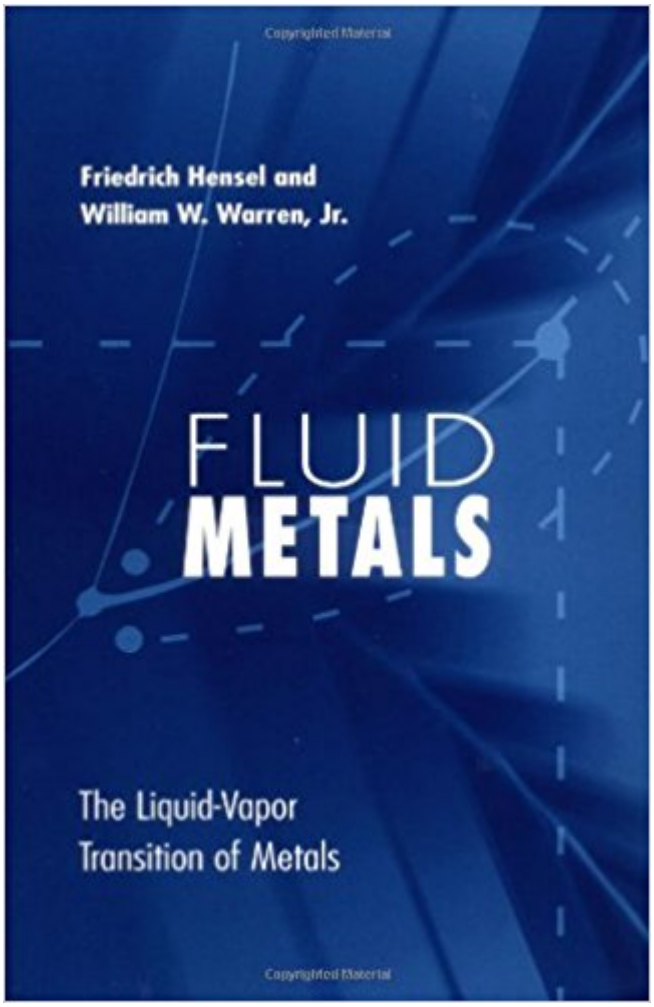
# Fluid Metals



## Synopsis

This is a long-needed general introduction to the physics and chemistry of the liquid-vapor phase transition of metals. Physicists and physical chemists have made great strides understanding the basic principles involved, and engineers have discovered a wide variety of new uses for fluid metals. Yet there has been no book that brings together the latest ideas and findings in the field or that bridges the conceptual gap between the condensed-matter physics relevant to a dense metallic liquid and the molecular chemistry relevant to a dilute atomic vapor. Friedrich Hensel and William Warren seek to change that here. They draw on cutting-edge research and data from carefully selected fluid-metal systems as they strive to develop a rigorous theoretical approach to predict the thermodynamic behavior of fluid metals over the entire liquid-vapor range. This book will appeal to theoreticians interested in metal-nonmetal transitions or continuous phase transitions in general. It will also be of great value to those who need to understand the practical applications of fluid metals, for example, as a high-temperature working fluid or as a key component of semiconductor manufacturing. Originally published in 1999. The Princeton Legacy Library uses the latest print-on-demand technology to again make available previously out-of-print books from the distinguished backlist of Princeton University Press. These paperback editions preserve the original texts of these important books while presenting them in durable paperback editions. The goal of the Princeton Legacy Library is to vastly increase access to the rich scholarly heritage found in the thousands of books published by Princeton University Press since its founding in 1905.

## Book Information

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## Customer Reviews

Friedrich Hensel is Professor of Physical Chemistry at the Phillips-University of Marburg, Germany. He has served on the editorial boards of both Philosophical Magazine and Zeitschrift fur Physikalische Chemie. William W. Warren is Professor of Physics at Oregon State University in Corvallis. He is a pioneer in the application of Nuclear Magnetic Resonance techniques at high temperatures and pressures. This is their first book.

This book presents the general physics of fluid metals, in an understandable form. Moreover than that, the book provides extensive insight to the Metal-Nonmetal (MNM) transition. Unfortunately, the book really only emphasizes on Mercury and Selenium metals. But the general ideas are maintained.

Applications (Woodhead Publishing Series in Metals and Surface Engineering) An Introduction to Grain Boundary Fracture in Metals (1) Fracture Mechanics of Metals, Composites, Welds, and Bolted Joints: Application of LEFM, EPFM, and FMDM Theory