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Autore	Ibrahimoglu Beycan
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Sommario/riassunto	This book re-examines the conventional pressure-temperature phase diagrams of pure substances, taking into account a universally acknowledged, albeit often neglected, state of matter—the plasma phase. It argues that only the temperature component of the endpoint on the gas-liquid equilibrium curve is critical, not the pressure and volume, which themselves are the corresponding components of the critical temperature. The book features the compiled results of many recent experimental studies on the physical properties of benzene,

hydrogen, and carbon dioxide, extracting the endpoints of the liquid-solid and solid-gas equilibria and yielding the real critical pressure and volume. These discoveries highlight the position of plasma on the phase diagram and the existence of the equilibrium ionization curve along with it. Detailed knowledge of the plasma state of matter is essential not only in many fields of physics and chemistry but in engineering and industrial applications as well. This book will easily benefit researchers, engineers, and instructors who routinely interact with phase diagrams.