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| Nota di contenuto | Contents; Preface; 1. Development of Physics and Physical Chemistry from about 1800 until 1870; 2. Youth and University Period (1864 - 1887); 2.1 Ancestors and Parents; 2.2 Youth and High School in Graudenz; 2.3 University Studies in Zurich and Berlin; 2.4 Graz: The "Second Scientific Home"; 2.4.1 University and physics in Graz: Ludwig Boltzmann and Albert von Ettingshausen; 2.4.2 The Ettingshausen-Nernst effects and the Nernst effect; 2.5 Conclusion of the University Studies in Wurzburg; 3. Habilitation in Leipzig (1887 - 1889); 3.1 The Sciences at the University of Leipzig 3.2 Wilhelm Ostwald 3.3 The Completion of the Thermodynamics of Electro chemistry: The Nernst Equation ; 3.4 The "Ionists" versus the "Anti-Ionists"; 4 . The Gottingen Period: The Rise to World Fame (1890 - 1905); 4.1 The Georgia Augusta University in Gottingen; 4.2 Eduard Riecke, Felix Klein, and Mathematics in Gottingen ; 4.3 Early Studies in Gottingen: The Nernst Distribution Law; 4.4 Marriage with Emma Lohmeyer and the Walther Nernst Family; 4.5 The Textbook |

"Theoretical Chemistry from the Stand- point of Avogadro's Rule and Thermodynamics"

4.6 The First Professorship and the Establishment of a Chair of Physical Chemistry
4.7 The New Institute of Physical Chemistry and Electro-chemistry ; 4.8 Studies and Members in the New Institute ; 4.9 The Nernst Lamp; 4.10 Nernst Law of Electrical Nerve Stimulus Threshold (Reizschwelligengesetz); 4.11 The Construction of Instruments; 4.12 Mathematics and Chemistry; 5 . Professor of Physical Chemistry in Berlin (1905 . 1922); 5.1 The Friedrich-Wilhelm University and Other Academic Institutions in Berlin and Charlottenburg; 5.2 The Famous Year 1905

5.3 The Institute of Physical Chemistry at the University of Berlin
5.4 The First Lecture in Berlin - Announcement of a Fundamental Law of Nature ; 5.5 The Nernst Law of Heat or the Third Law of Thermodynamics; 5.5.1 Remarks on the First and Second Law of Thermodynamics; 5.5.2 The problem and its solution given by Nernst; 5.5.3 The calculation of chemical equilibria; 5.5.4 Specific heats and low-temperature physics; 5.5.5 Quantum Theory; 5.5.6 The impossibility of reaching the absolute zero of temperature; 5.5.7 Formulation of the Third Thermal Law by Max Planck

5.5.8 Research between 1906 and 1916, the monograph, and the Nobel Prize in Chemistry
5.5.9 Critique and priority conflict; 5.6 Other Scientific Studies during this Period; 5.7 Organization of Science; 5.7.1 Kaiser Wilhelm Institutes; 5.7.2 German Electrochemical Society; 5.7.3 Other developments; 5.7.4 Rector of the University and the Institute for Foreigners; 5.8 Managing a Country Estate, Hunting, and Fish Farming ; 5.9 The First World War ; 5.9.1 War-related research: gas warfare, explosives, ballistics; 5.9.2 The effort on peace negotiations; 5.10 Political Activities

5.11 Visits to the USA and to South America

Sommario/riassunto

More than 100 years ago, in 1905, Walther Nernst discovered the Third Law of Thermodynamics, thus completing this fundamental theory. In 1920 he was awarded the Nobel Prize in Chemistry. The book describes the life of this pioneer of science, his major stations being Graz, then Göttingen, and finally Berlin. Also presented is a lively account of the development of low temperature physics by Nernst during the early days of quantum theory, when he was in Berlin, closely associated with Albert Einstein, Max Planck, and Max von Laue. The book outlines the specific advances achieved by Nernst in
