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Sommario/riassunto	A promising long-term evolution of surgery relies on intracorporeal microrobotics. This book reviews the physical and methodological principles, and the scientific challenges to be tackled to design and control such robots. Three orders of magnitude will be considered, justified by the class of problems encountered and solutions implemented to manipulate objects and reach targets within the body: millimetric, sub-millimetric in the 10- 100 micrometer range, then in the 1-10 micrometer range. The most prominent devices and prototypes of the state of the art will be described to illustrate th

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16 Normal Science -- 17 The Structure of The Haze -- 18 Dynamic of The Haze -- 19 Between Science and Industry: The Stage of 10-100 -- 20 Risk and the Acceptance of Failure -- 21 The Haze: Interdependencies in Science -- 22 One Final Element -- A Approximations of Free Energy Fitting Functions -- B Theoretical Determinations of the Free Energy: Hermann von Helmholtz and Walther Nernst -- References -- Subject Index -- Places and People.

Sommario/riassunto

This Open Access book discusses the progress of science and the transfer of scientific knowledge to technological application. It also identifies the factors necessary to achieve this progress. Based on a case study of the physical chemist Fritz Haber's discovery of ammonia synthesis between 1903 and 1909, the book places Haber's work in historical and scientific (physicochemical) context. The scientific developments of the preceding century are framed in a way that emphasizes the confluence of knowledge needed for Haber's success. Against this background, Haber's work is presented in detail along with the indispensable contributions of his colleague, the physical chemist, Walter Nernst, and their assistants. The detailed accounts of scientific advancement remind us of the physical basis on which our scientific theories and ideas are built. Without this reminder we often forget how complex, and how beautiful achievements in science can be.