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Ilich, Predrag-Peter. [Selected problems in physical chemistry: strategies and interpretations](#). Springer, 2010. 208p bibl index afp [ISBN 3642043267](#)
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[1] "Perhaps this work should have been entitled "What They Did Not Tell Students in Their Science Classes." The book is very well conceived and is written in a quite appealing conversational prose; it should be a primer for all chemistry students. Ilich (Dana College) concentrates the essence of physical chemistry in a very few well-selected problems, leading the reader through step-by-step thought processes and embellishing the problems with interpretations regarding their significance to people's understanding of the physical world. The organization of the text is conventional; it starts with Newtonian mechanics and proceeds through thermodynamics, electrochemistry, kinetics, quantum physics, and finally spectroscopy. The author accomplishes his goals by emphasizing how topics relate to one another so one can comprehend the development of science and empirical philosophy. Ilich uses what he calls "little big tricks" to remove roadblocks to the solution of each problem utilizing basic mathematics that all college science students understand. Summing Up: Highly recommended. Lower- and upper-division undergraduate chemistry students." (K. Bennett, Choice, Vol. 48 (9), May, 2011)

[2] "This book starts from the premise that existing physical chemistry textbooks have a limited readership due to being written for those students who have 'an interest in and aptitude for mathematics'. The author seeks to redress this balance by providing detailed solutions to a number of problems which go rather beyond providing just a mathematical solution. ... this book is a useful addition to the repertoire of tools available to those who are both studying and teaching physical chemistry." (Paul Yates, Education in Chemistry, March, 2011)

[Amazon] Product Description:

This book is a collection of 50 original problems in physical chemistry including several living systems. Each problem is accompanied by a detailed step-by-step solution, organized as strategy, assumptions, approximations, numerical calculation and interpretation. Solutions to the key problems (e.g. thermal equilibration, ligand-receptor interaction, aminoacid zwitterions, HOMO-LUMO gap) are accompanied by simple introductory explanations. In addition, informal notes are provided on difficult concepts, for example: entropy, reaction activation barrier, wave mechanics. Schemes, diagrams and structural formulas accompany most solutions and explanations.

Thus, this textbook may serve as a self-tutorial for undergraduate students in physical chemistry, biophysics, biochemistry, and medicinal chemistry.