

FREE ELEMENTS OF PHYSICAL CHEMISTRY PDF



Peter Atkins, Julio de Paula | 624 pages | 03 Sep 2015 | Oxford University Press | 9780199608119 | English | Oxford, United Kingdom

Elements of Physical Chemistry (7th edition) | Oxford University Press

A tightly focused, engaging, and easy-to-follow text for the one-semester Physical Chemistry course, from a best-selling author team. Elements of Physical Chemistry has been carefully developed to help students increase their confidence when using physics and mathematics to answer fundamental questions about the structure of molecules, how chemical reactions take place, and why materials behave the way they do.

Featuring an appealing design and layout, this acclaimed text provides extensive mathematical and pedagogical support while also remaining concise and accessible. For the seventh edition, the material has been reorganized into short "Topics," which are grouped into thematic "Focuses"

to make the text more digestible for students and more flexible for instructors. At the beginning of each Topic, three questions are posed, emphasizing why it is important, what the key idea is, Elements of Physical Chemistry what students should already know.

It also contains multiple-choice questions and numerical answers to end-of-chapter questions for students. Peter Atkins is a Fellow of Lincoln College at the University of Oxford and the author of more than sixty books for students and a general audience. His texts are market-leaders around the globe.

His research activities encompass Elements of Physical Chemistry areas of molecular spectroscopy, biophysical chemistry, and nanoscience. Robert M. Granger, Hank M. Yochum, Jill Atkins, Elements of Physical Chemistry.

Request examination copy. Stephen Berry, Stuart A. Rice, and John Ross. Jeremy K. Sanders, Edwin C. Constable, Brian K. Oxford University Press Elements of Physical Chemistry a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide.

US Higher Education Not for profit. All for education. Skip to main content. Search Start Search. Go directly to our online catalogue. Description New to this Edition Book Information Table of Contents Description Elements of Physical Chemistry has been carefully developed to help students increase their confidence when using physics and mathematics to answer fundamental questions about the structure of molecules, how chemical reactions take place, and why materials behave the way they do.

New to this Edition A radically updated structure to help improve digestibility and flexibility; the material has been broken down into short "Topics" that are Elements of Physical Chemistry into "Focus" sections Three questions posed at the beginning of each "Topic" explain why it is important, what the key idea is, and what students already need to know New "Collect Your Thoughts" features show students how they might go about approaching particular problems New "Impact" sections online show the application of physical chemistry in a diverse range of modern contexts Many derivations and worked examples now include more intermediate steps, helping students gain a deeper understanding of the underlying mathematics.

About the Author s Peter Atkins is a Fellow of Lincoln College at the University of Oxford and the author of more than sixty books for students and a general audience. Related Titles. Elements of Quantum Mechanics Michael D. Physical Chemistry Second Edition R. Pilling and Paul W. Sanders and Brian K. Monday - Friday, am - pm EST.

Elements of Physical Chemistry – CHEMICAL ENGINEERING EBOOK

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Find more information on the Elements of Physical Chemistry Attention Score and how the score is calculated. Freeman: New York, ISBN 0 4. The second Elements of Physical Chemistry of the text The Elements of Physical Chemistry by Atkins is Elements of Physical Chemistry written and should be readily understandable to undergraduates.

In general, the presentation of topics is traditional, beginning with the behavior of gases, moving next to classical thermodynamics and related topics, and then covering quantum phenomena. Aspects of most major topics generally presented in undergraduate physical chemistry courses are included in the text.

The author purposely minimizes the use of mathematics, especially calculus. Such minimization of mathematics disallows many questions about physical chemistry from being adequately addressed, and students will be limited to using physical chemistry as a mere tool and likely will lack good understanding of the underlying principles.

At the end of some sections that do not show the underlying mathematics, the author includes justification sections for the Elements of Physical Chemistry reader, in which more of the mathematics is presented.

The text contains numerous worked examples Elements of Physical Chemistry are solved by the use of a stated strategy which precedes the actual solution. Ample use is made of figures and illustrations, which for the most part are readily understandable, and symbols and abbreviations are uniform and standard. The figures are presented in shades of grey rather than in color, to keep low the purchase price of the text.

The author states in the preface that "I have had students of the life sciences particularly in mind while preparing this revision", and the level of difficulty is appropriate for such students with weak backgrounds in mathematics. However, very few topics of interest to the life Elements of Physical Chemistry are presented in the text, and few Elements of Physical Chemistry problems and questions related to actual problems faced by persons in the life sciences are presented.

Moreover, more thorough physical biochemistry texts are available that give greater coverage of topics and include a broader range of problems of interest to the life sciences. The level of difficulty of the Atkins text is too low for most standard physical chemistry courses for chemistry and chemical engineering majors. The text could serve as a relatively uncomplicated, one-semester introduction to physical chemistry or as a text or accompanying text in special courses at the advanced freshman level.

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Elements of Physical Chemistry - Peter Atkins, Julio de Paula - Oxford University Press

Elements of Physical Chemistry. Peter Atkins/Julio de Paula. Getting to grips with physical chemistry can be a daunting task. With new concepts to understand and a large amount of mathematics to master, it is no wonder that students can sometimes find it overwhelming.

Elements of Physical Chemistry has been carefully developed to help readers increase their confidence when using physics and mathematics to answer fundamental questions about the structure of molecules, how chemical reactions Elements of Physical Chemistry place, and why materials behave the way they do.

The content is tightly focussed and well-matched to undergraduate courses, making it easy to find the information needed. Topics are covered in a clear, easy-to-follow style, using everyday examples to help students to visualise concepts and procedures that can otherwise seem very abstract.

This edition sees further Elements of Physical Chemistry of the learning features. These include Chemist's toolkits, which provide a reminder of mathematical techniques and introductory Elements of Physical Chemistry and physics needed to Elements of Physical Chemistry material in the chapters; worked examples providing step-by-step routes through problems; brief illustrations explaining how to use equations to calculate numerical values; and self-tests that allow students to check their understanding.

On the accompanying Online Resource Centre, students have access to multiple choice questions and Webcasts, short videos showing, step-by-step, how to solve an exercise. For lecturers, there is a test bank and the figures from the text are available to download.

Chapter 1 The properties of gases. Chapter 15 Molecular interactions. Elements of Physical Chemistry 16 Macromolecules and aggregates. Chapter 17 Metallic ionic and covalent solids. Chapter 18 Solid surfaces. Chapter 12 Quantum theory. Chapter 22 Statistical thermodynamics. Resource section. His texts are market leaders around the globe. A frequent lecturer in the United States and throughout the world, he has held visiting professorships in France, Israel, Japan, China, and New Zealand.

A native of Brazil, Professor de Paula received a B. His research activities encompass the areas of molecular spectroscopy, biophysical chemistry, and nanoscience. He has taught courses in general chemistry, physical chemistry, biophysical chemistry, instrumental analysis, and writing.