

HU Ying et al



Physical Chemistry

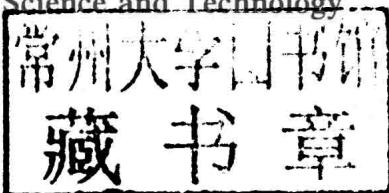


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Preface

The motivation of preparing an English version of the textbook of physical chemistry is quite simple. Because of the globalization, various English courses at different levels are available in universities which ensure the students to enhance their English standard in vocabulary, grammar, rhetoric, oral speaking and writing. However, there is still a gap between the scientific English and the ordinary academic courses in Chinese. The bilingual teaching is therefore advocated recently. On the textbook, it is advisable to use books with the same contents but with both the English and the Chinese versions. We therefore translate our textbook,

Hu Ying, Lyu Ruidong, Liu Guojie, Hei Encheng. *Physical Chemistry*. 5th ed. Beijing: Higher Education Press, 2007, Revised Version, 2012.

In the textbook, we have paid special attention to the framework which is a logistic structure connecting various concrete contents. Not only the framework of the whole physical chemistry is discussed in detail in the introduction part, in each chapter, the Framework of the Chapter is written at the beginning. In starting each paragraph, a subtitle in bold form is also placed which is helpful to make clear not only the general skeleton, but also the detail venation. Because of the time limitation, in a course, we can usually learn only a small number of essentials. The teaching and learning should be more concise and more essential. However, if the framework is clear, and the scientific methods are trained through some typical parts, by a long term of self-learning later, the more comprehensive and well versed knowledge can be commanded and be used to carry out creative work.

To assure the principle of the more concise and more essential, the lengthy derivation is condensed as much as possible except very necessarily, on some occasions it is replaced by elucidating the clues of derivation. Some extended contents that are the component parts of the framework are treated as a synopsis to save the space. Some theoretical contents belonging to advanced readings are elucidated by an outline. New developments are emphasized but briefly mentioned to widen the horizons. The history of scientific developments always gives us wisdom and enlightenment. A brief history is presented at the end of each chapter because after learning the content, it is easier to understand the implications inherited in history. A concluding remarks is provided at the end of each chapter as a summary.

The references are introduced at the end of the whole book. They are distinguished by three parts: I. Referential textbooks. They have different features that can be served as supplementary sources. II. Titles of the 53 topics in the book entitled "Physical Chemistry References". These topics cover directly almost all the contents of this textbook. III. References for each chapter, from them, some of the contents including figures and tables have been cited.

The answers to the general problems and the numerical problems are available in the book entitled “Guide for Teaching and Learning Physical Chemistry”, in which, some further examples and the solving methods are also presented.

The preliminary translation was completed by Professor Hu Ying. The manuscript was then revised by Professor Cai Jun, Professor Hu Jun, Professor Shang Yazhuo, Professor Chen Qibin and Professor Hei Encheng, the latter is also in charge of the publication. The grammar and the rhetoric have been carefully checked and revised by Professor of English literature, Gu Jianhua. Besides, we are very much appreciated that Professor Schwenz Richard W of the Department of Chemistry and Biochemistry, University of Northern Colorado has revised several chapters during his visiting our university in 2011. Finally we have to mention that Ms. Wu Shiqing has given a great help in preparing the figures and tables.

We sincerely hope that this work will be helpful to the chemical education and to the globalization.

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