FIRST PRINCIPLES OF CHEMISTRY

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PREFACE

From a variety of causes, a considerable number of students practically begin the study of chemistry at the University. As this number shews no sign of diminishing, we have carried out a long contemplated project by producing a textbook more particularly designed for the use of such students; a book to be studied as an adjunct to lecture-room and laboratory teaching rather than one to be merely read. We think it should minimize the time taken up by writing notes in class—a practice which withdraws attention from what is being said or demonstrated by the lecturer.

The scope of the book amply covers the requirements of the School Certificate Examinations of all the English Universities, and we hope it may be found useful and acceptable for School teaching.

The order in which the subject matter is treated has been found in practice to work very well, and it certainly seems to us to be more logical than the older systems of textbook arrangement. Certain sections may be omitted with advantage on a first reading, at least by those who are really beginning the study of the subject, but these have not in general been indicated in the text. Individual students differ so much in ability and in requirements that selection is better made by the lecturer.

General principles and general methods have been emphasized throughout, and details have only been stressed where they have a special significance.

We do not consider the Periodic Law suitable for inclusion in an elementary course, since it can be studied

profitably only in the light of a fairly extended knowledge of descriptive chemistry, and it has therefore received but little attention, while the now obsolete Laws of Multiple and Reciprocal Proportions have been omitted altogether. On the other hand, hydrogen-ion concentration and the chemistry of colloids are too important nowadays to be ignored even in elementary courses, while a knowledge of them is especially necessary to medical students, who preponderate in the first-year classes at the University. We do not find that they present exceptional difficulties to the average pupil, and a few pages dealing with these subjects have therefore been included.

In conclusion, we desire to offer our grateful thanks to our friends and colleagues C. T. Heycock, F.R.S., Fellow of King's College, Goldsmiths' Reader in Metallurgy, for his kindly interest and advice while the book was in preparation; H. McCombie, D.S.O., M.C., M.A., D.Sc., Fellow of King's College, University Lecturer in Chemistry, who read the book in manuscript, for his assistance and suggestions; and U. R. Evans, M.A., for his welcome help and criticisms of Chapter XI.

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