

**PUTNAM'S ELEMENTARY  
SCIENCE SERIES. INORGANIC  
CHEMISTRY: FOR USE IN SCIENCE  
CLASSES AND HIGHER AND  
MIDDLE CLASS SCHOOLS**

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**W. B. KEMSHEAD**

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Putnam's Elementary Science Series.

# INORGANIC CHEMISTRY:

FOR USE IN

SCIENCE CLASSES AND HIGHER AND MIDDLE  
CLASS SCHOOLS.

BY

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TO THE

Rev. A. J. Carber, D.D.,

*Master of Dulwich College,*

THIS LITTLE WORK IS  
RESPECTFULLY INSCRIBED, AS A SLIGHT RECOGNITION  
OF PAST KINDNESSES AND COURTESIES  
RECEIVED BY

*THE AUTHOR.*





## P R E F A C E.

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THE following work does not pretend to be a complete text-book on the science of INORGANIC CHEMISTRY, or even on that portion of it which would confine itself to the Non-metals. Written with an especial purpose, viz., for the use of pupils preparing for the First Stage, or Elementary Examination of the Science and Art Department, South Kensington, it necessarily confines itself to the subjects prescribed in the Syllabus of that Examination.

My aim throughout has been to express, in as clear and simple language as possible, the earlier principles of the science, so as to fit the book for the use of mere beginners, but at the same time to be sufficiently full and accurate that it might be useful as a text-book in the hands of more advanced students. The limits to which this series is confined have prevented me from giving all the experimental illustrations I could have wished; but I have, I trust, given amply sufficient to illustrate every assertion in the text, and have sought to make choice of those which, while they are striking and conclusive, combine also the property of being easily performed, and are therefore most suitable to students whose command of apparatus may be limited.

I make no apology for introducing the Graphic Formulæ and Notation in so elementary a work. Independently of my own proclivities in its favour, the examination for which this book is specially prepared demands a knowledge of the theory of atomicity and of its graphic representation—to have omitted it, therefore, would have been impossible. For the benefit of those teachers who may not have adopted it, I have in all cases added the equations in the ordinary symbols as used by the late Professor Miller, Professor Williamson, &c.

I have to offer my warm acknowledgments to Professor Frankland for the ready and kind manner in which he gave me permission to make free use of his valuable work, *Lecture Notes for Chemical Students*.

The elementary character of the work did not admit of much originality, except perhaps in the matter of arrangement; and I must here acknowledge my obligations to the works of Faraday, Miller, Williamson, Bloxam, &c., &c.

The work while in the form of notes has done good service in preparing my own pupils for the South Kensington Examination; I trust it may be equally successful in the hands of those teachers who may adopt it.

W. B. KEMSHEAD.

DULWICH COLLEGE, LABORATORY,  
DULWICH, September, 1873.

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