

A TEXT-BOOK OF PHYSICS

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A Text-Book of Physics by J. H. Poynting & J. J. Thomson

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J. H. POYNTING & J. J. THOMSON

**A TEXT-BOOK
OF PHYSICS**

By PROFESSORS J. H. POYNTING AND J. J. THOMSON.

In Royal 8vo. Fully Illustrated.

A TEXT-BOOK OF PHYSICS.

BY

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AND

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TEXT-BOOK OF PHYSICS.

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P R E F A C E.

THE following account of the phenomena of Sound and of the theory connecting them together forms one part only of a Text-Book of Physics which the authors are preparing. The Text-Book is intended chiefly for the use of students who lay most stress on the study of the experimental part of Physics, and who have not yet reached the stage at which the reading of advanced treatises on special subjects is desirable. To bring the subject within the compass thus prescribed, an account is given only of phenomena which are of special importance, or which appear to throw light on other branches of Physics, and the mathematical methods adopted are very elementary. The student who possesses a knowledge of advanced mathematical methods, and who knows how to use them, will, no doubt, be able to work out and remember most easily a theory which uses such methods. But at present a large number of earnest students of Physics are not so equipped, and the authors aim at giving an account of the subject which will be useful to students of this class.

Even for the reader who is mathematically trained, there is some advantage in the study of elementary methods, compensating for their cumbrous form. They bring before us more evidently the points at which the various assumptions are made, and they render more prominent the conditions under which the theory holds

good. For such readers the authors hope that this work may afford a fitting introduction to more advanced treatises, and especially to Helmholtz's great work, *The Sensations of Tone*, which deals chiefly with the physiological aspect of Sound, and to Lord Rayleigh's *Theory of Sound*, at once the most systematic, original, and complete work on the subject.

January 1899.

PREFACE TO SECOND EDITION.

It is with much satisfaction that we find a new edition of this work is called for within about twelve months of the issue of the first large edition. Opportunity has been taken to make a few minor corrections.

April 1900.

