A FAMILIAR INTRODUCTION TO THE STUDY OF POLARIZED LIGHT: WITH A DESCRIPTION OF, AND INSTRUCTIONS FOR USINS THE TABLE AND HYDRO-OXYGEN POLARISCOPE AND MICROSCOPE

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649298457

A familiar introduction to the study of polarized light: With a Description Of, and Instructions for usins the table and hydro-oxygen polariscope and microscope by Charles Woodward

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

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CHARLES WOODWARD

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Trieste

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A DESCRIPTION OF, AND INSTRUCTIONS FOR USING,

THE

TABLE AND HYDRO-OXYGEN

POLARISCOPE AND MICROSCOPE.

BY

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ILLUSTRATED BY NUMEROUS WOOD ENGRAVINGS.

SECOND EDITION.

LONDON:

PRINTED FOR SMITH & BECK,

ACHROMATIC MICROSCOPE MAKERS AND OPTICIANS,

6, COLEMAN STREET;

AND PUBLISHED FOR THEM BY

JOHN VAN VOORST, PATERNOSTER ROW,

MDCCCLI.

PREFACE

TO THE SECOND EDITION.

HAVING undertaken to prepare for Messrs. SMITH & BECK another edition of my "Familiar Introduction to the Study of Polarized Light," I readily embrace the opportunity thus afforded me of tendering my thanks to the many scientific friends who have expressed their approbation of the attempt "to facilitate the inquiries" of those who desire to study this highly interesting but "confessedly abstruse" branch of science.

Some few, indeed, have intimated that I should have prosecuted the subject still further; but this could scarcely have been accomplished without defeating the professed object of "presenting, in a concise and familiar manner, such introductory information" as might prepare the inquirer for "deeper research."

I have, however, carefully revised the whole; and by altering Figures 9 and 10, and adding two others illustrative of the polarization of light by reflection, I trust it will be found that I have more clearly explained that part of the subject.

C. W.

COMPTON TERRACE, ISLINGTON,
JUNE 1851.

PREFACE

TO THE FIRST EDITION.

Messrs. SMITH & BECK having requested me "to oblige them with a description of, and instructions for using, my Table and Hydro-oxygen Polariscope and Microscope," and several friends possessing achromatic microscopes fitted with the polarizing apparatus having lamented the difficulty of comprehending the laws of the phenomena thereby exhibited, I have endeavoured to render the use of these instruments more interesting, by presenting, in a concise and familiar manner, such introductory information as may smooth the threshold of a subject confessedly abstruse, and lead to the study of works of far higher pretensions and deeper research.

I have briefly noticed those facts which have gradually led to the very general adoption of a theory concerning the nature of light differing in some important respects from that advanced by Sir Isaac Newton; and I have endeavoured to shew that his successors, whilst they have adopted another theory, have yet done little more than given new names to old facts, leaving his discoveries and his calculations still to form the firm basis of the science.

During my earlier studies I read many works connected with the subject of light, and have, no doubt, almost imperceptibly adopted the ideas of others, when they were

subsequently confirmed by my own observations or experiments. As, however, the following pages have been written without referring to any but a few notes forming the outlines of lectures on the polarization of light, which, as an amateur, I have occasionally delivered in a popular style, I am now only able to acknowledge my obligations *generally* to those who may have assisted my investigations, and to evince my gratitude by attempting to facilitate the inquiries of others.

C. W.

COMPTON TERRACE, ISLINGTON.
APRIL 1848.

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