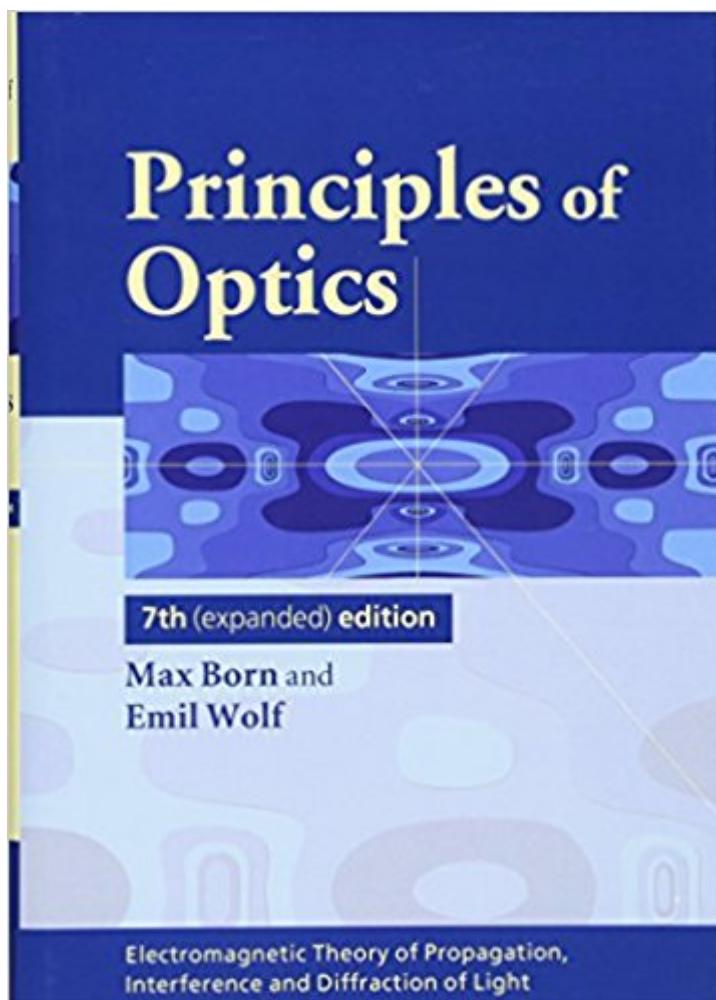


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# Principles Of Optics: Electromagnetic Theory Of Propagation, Interference And Diffraction Of Light



## Synopsis

Principles of Optics is one of the classic science books of the twentieth century, and probably the most influential book in optics published in the past forty years. This edition has been thoroughly revised and updated, with new material covering the CAT scan, interference with broad-band light and the so-called Rayleigh-Sommerfeld diffraction theory. This edition also details scattering from inhomogeneous media and presents an account of the principles of diffraction tomography to which Emil Wolf has made a basic contribution. Several new appendices are also included. This new edition will be invaluable to advanced undergraduates, graduate students and researchers working in most areas of optics.

## Book Information

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## Customer Reviews

'Principles of Optics is a great book, the seventh edition is a fine one, and if you work in the field you probably ought to own it.' Physics Today 'The seventh edition of this classic optics text is the most thoroughly revised and expanded version since it was first published in 1959. The first chapters lay the foundations of the field of optics, covering basic properties of the electromagnetic field, polarization, dispersion and geometric optics. The chapter dedicated to optical imaging features new material about computerized axial tomography, while a whole new chapter covers scattering from inhomogeneous media including diffraction tomography. The text concludes with the optics of crystals, which introduces the reader to nonlinear optical phenomena.' Max Born and Emil Wolf, 'All-Time Favourites', Nature Photonics

Principles of Optics is one of the classic science books of the twentieth century. It presents optics deductively as a system based on Maxwell's equations. It deals with those optical phenomena that can be described with the help of a continuous distribution of matter and aims at giving a complete picture of our knowledge of optics as a whole. This standard reference continues to be invaluable to advanced undergraduates, graduate students and researchers working in most areas of optics.

--This text refers to an out of print or unavailable edition of this title.

This is a great book that I have used often. This is a graduate text. You should have had an undergraduate course in optics first. A typical undergraduate text that I recommend is Optics by Eugene Hecht who also wrote the Schaum's Outline for Optics. This being a graduate text you should have taken math for each of the four years of your undergraduate studies. My graduate work is in Microelectronics & Photonics and I use the book now as reference book. This book covers the theory very well; I have not found any other book that even comes close.

This book is the most comprehensive and readable book in all my books collected in optics. I specifically like the chapters devoted to geometrical optics and the rigorous treatment of diffraction. I have no doubt at all in my assignment of five stars to this book. It is no wonder that many of the scientists and engineers in NASA have the book in their possession.

Without any doubt, Born and Wolf are still the deepest theory book. Consider this book as the main source for most of other optical books.

I've been reading this book and it's obvious it's an essential for optics students but I'm not sure everyone would like its style of teaching or explaining. In the beginning, it illustrates how several optics principles originate from Maxwell's equations but I'm not sure it does a good job of explaining everything. It just states several things and assumes the reader knows.

This classical reference in optics has been fittingly updated and enriched. A new edition of this must that should, however, be kept along the classic one. Apart from its historical connotation, the latter will be in fact highly appreciated for its clearer typography.

This reviews the fundamentals of Optics with a mathematical rigor rarely surpassed by any other authors. If I were looking for a book to teach me the fundamentals I would need nothing else. It does

use different units from time to time!

My husband bought this book. This is a landmark work of fundamental scientific optic principles that is the foundation of most optics fields today. This book is recommended as a great reference for your personal scientific library.

all world is using it for years. all you need in optics. i love it. engineers around me love it

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