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# 私の 本棚

My favorite books



## ● Novel: An Epitome of Eighteen Historie

During my college days I came across this novel and found it very interesting, so I read all six volumes. It's a vivid description of what strategies historical figures in China took to get into power and challenges they faced after becoming rulers. As a postdoctoral fellow staying overseas, I read this book again and again to learn what course of action I should take to overcome difficulties due to differences in cultural background.

## ● Quantum Mechanics

As a "standard" textbook on quantum mechanics, this book explains fundamentals through to the quantum theory on interaction between light and objects. Because of its elaborate explanation of the basic knowledge required to understand optical properties, I've read it again and again since my college days. In Japan there are many good textbooks written in Japanese by Japanese authors, which made my friends from other Asian countries envious. Indeed, it's a great thing that we can study in our own language.

## ● Solid-State Physics

This book is an easy-to-understand introduction to the fundamentals of solid-state physics. Unlike other textbooks that typically begin with the explanation of general crystal structures, this book begins with the Bloch's theorem (regarding characteristics of a wave function of electrons within a crystal). I feel that this book's approach would better allow students to enter into the world of condensed matter physics, so I often refer to this book in my lecture for the "Condensed Matter Physics I" class. A friend of mine recommended this book when I was a research associate and we studied it together.

## ● Fundamentals of Optical Physics

When advancing from basic subjects for undergraduates to graduate school specialized subjects on optical physics, special care must be taken to ensure that there is no significant gap between the two. I came across this book when I was looking for a suitable book that would bridge between basics and the forefront of research. This book introduces, in an easy-to-understand way, a wide range of themes from basics of electrodynamics to topics relating to the latest research on optical pulse propagation. I refer to this book as needed when teaching optical physics.

## ● Optoelectronics

This book gives a truly easy-to-understand explanation of nonlinear optical physics and their applications. Whenever explaining frequency conversion technologies (such as the second harmonic generation and generation of terahertz waves) based on nonlinear optics, I usually refer to this book. This book is valuable for me as a physics specialist because a Department of Physics in general rarely handles optoelectronics.

## ● From X-Rays to Quarks

This book highlights leading physicists of the early 20th century. While addressing their individual humane nature, it describes how they strove and accomplished their historical achievements. Abundant photos make this book readable even for students who are weak in physics. This book aroused my interest in physics when I was a high school student.

## ● Principles of Optics

This is the representative textbook on the field of optics. While its Japanese version consists of three volumes, the original English version is a thick single-volume book, making the reader feel assured that everything about optics is explained in this book. I keep this book ready in hand because recently I felt the need to understand wave-like properties of light in detail. I have both the Japanese version (which I acquired during my college days) and the original English version. I heard that the latter had been updated to introduce the latest topics.