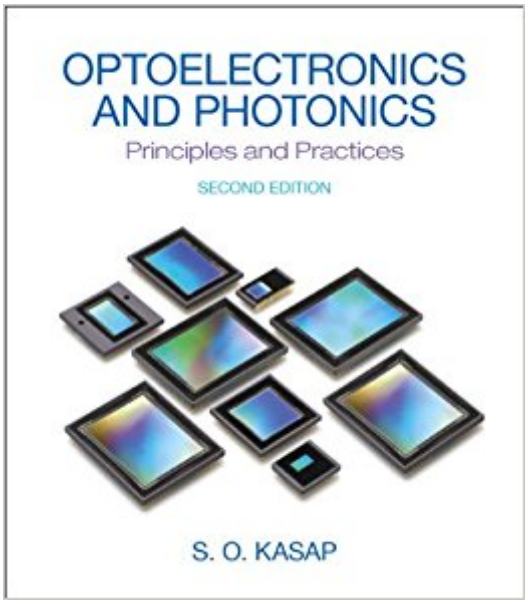
Optoelectronics & Photonics: Principles & Practices (2nd Edition)



Synopsis

For one-semester, undergraduate-level courses in Optoelectronics and Photonics, in the departments of electrical engineering, engineering physics, and materials science and engineering.

This text takes a fresh look at the enormous developments in electo-optic devices and associated materials.

Book Information

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Customer Reviews

The information is presented in a clear and logical fashion, lots of example problems, lots of the problems at the end of the chapter follow the example problems. It’s a good book for an introductory course, BUT there are A LOT of mistakes and typos. Even the solutions have mistakes! The result is usually correct but sometimes the wrong value for a constant is shown. I also noticed in several places where inconsistent terminology is used, which can make the problems very confusing. One problem talks about coefficients of drift mobility, then later refers to "motility", which doesn’t appear anywhere else in the book. It’s not clear to a student if this is referring to something else or not. This book badly needs to be revised with LOTS of corrections, but glossing over that the information contained within is well laid out.

This book has great examples, and lots of them!

I highly recommend this for anyone who needs a cheaper alternative to the second edition of Kasap’s book. The content is all the same.

The book is wonderful at breaking things down and making clear the way the world of optoelectronics works. I am very impressed.

one of the best book for optoelectronics, one should must go through it

This it the first update to a long-standing textbook, and the definitely did it right. Good introduction to the field - very broad application.

very good book. This book is well written and well organized.

The first edition of this book was a pleasure to read. It was a 5 star textbook. When I discovered that the second edition had just come out, I could not wait to get hold of the second edition.Well, the second edition is about 530 pages. Although it is thicker than the first edition, it is still thinner and more usable than other optoelectronic texts. The second edition has many modern topics as well. It seems as if the author has rewritten everything and redrawn all the diagrams and redone all the examples and problems. It feels and looks like a totally new book. My impression is that second edition looks very professional, and has beautiful clear illustrations and photographs throughout the book. It is obvious that it has been prepared with deep dedication to detail. It is full of hundreds of practical examples and solved problems. There are also various historical anecdotes and biographies of famous scientists in photonics. I found these most enjoyable to read. For example, I had not realized Dr. Kapany played a key role in the early development of optical fibers. The author seems to have dug and found some of the most interesting photos and illustrations I have seen in any book. The explanations are exceptionally clear - actually this is typical of this author. The level of mathematics is about right at the third or fourth year university level. Indeed, the author never seems to avoid getting into long derivations but provides a clear explanation of the principles that are involved in the equation derivation. He then applies the equation in a practical example using typical values. It is not however a qualitative textbook. It is a proper undergraduate book. There is still sufficient rigor and the balance is just right for undergraduate students to read the book, thoroughly enjoy it, and understand what is photonics. I particularly liked his treatment of erbium doped fiber amplifiers, photonic crystals and holey fibers with beautiful images.In my view, the second edition looks nothing like the first edition. There are probably twice as many topics and the coverage is across the whole of field of photonics, including photonic crystals. What I liked is the

"Additional Topics" at the end of each chapter where more advanced topics are gradually introduced. Moreover, the second edition has much better presentation of the material in a clear and understandable way with numerous illustrations. Just about every page has one or two illustrations. I would rate the book 5 stars but why did the publisher chose not to have this book on photonics in color? All books on photonics should be in color. I'm planning on getting the e-version as well for my Reader. Overall, if you are looking for an excellent, readable, modern book on photonics with hundreds of examples, and hundreds of beautiful illustrations and photographs, you would not regret buying this second edition. In my view, it maintains its 5-star rating as the best book at the undergraduate level.Ramin Banan Sadeghian, Ph.D.Senior Research EngineerH2scan Corp.27215 Turnberry Lane, Ste AValencia, CA 91355