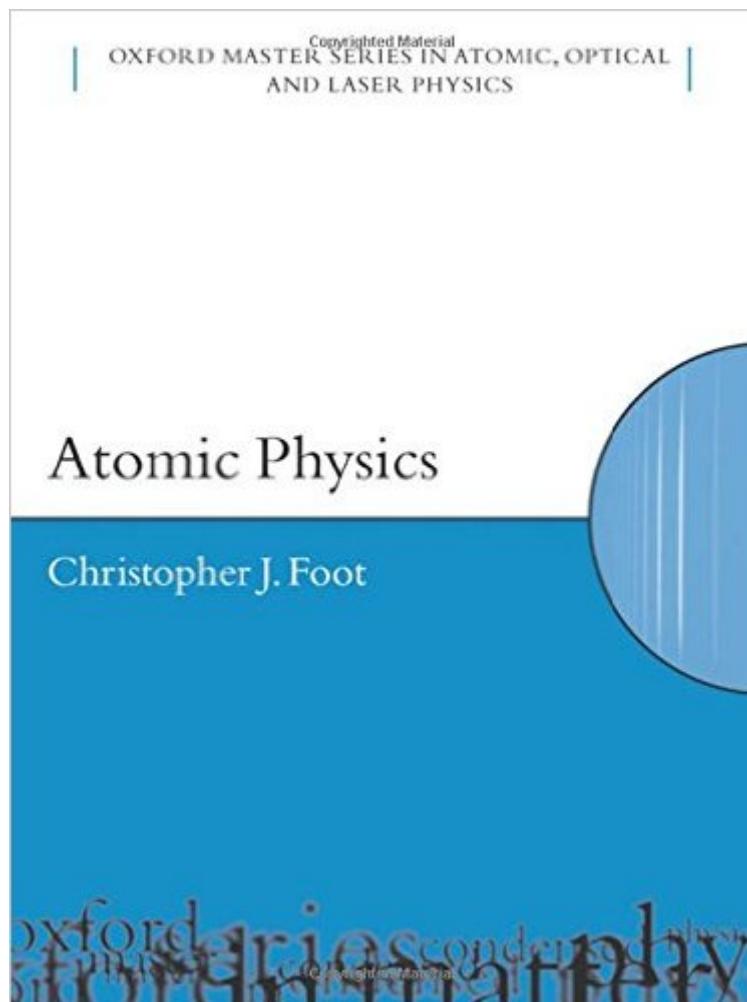


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# Atomic Physics (Oxford Master Series In Atomic, Optical And Laser Physics)



## **Synopsis**

This text will thoroughly update the existing literature on atomic physics. Intended to accompany an advanced undergraduate course in atomic physics, the book will lead the students up to the latest advances and the applications to Bose-Einstein Condensation of atoms, matter-wave interferometry and quantum computing with trapped ions. The elementary atomic physics covered in the early chapters should be accessible to undergraduates when they are first introduced to the subject. To complement the usual quantum mechanical treatment of atomic structure the book strongly emphasizes the experimental basis of the subject, especially in the later chapters. It includes ample tutorial material (examples, illustrations, chapter summaries, graded problem sets).

## **Book Information**

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## **Customer Reviews**

This book has two types of material; both well done. The first could have been written decades ago, and is the "traditional" atomic physics. Where you start with the hydrogen atom, and investigate its spectroscopy with the Schrodinger equation. Then the book takes the next logical step by going to helium and thence to heavier atoms. LS and JJ coupling and other refinements. Such material is now quite well known and you need this for a solid background. But the book also has much more recent material. On quantum computing using qubits. These attempt to use the quantum states of small groups of atoms, to perform computations fundamentally different from current digital efforts. Enough detail is given for you to appreciate the severe experimental travails of the field, and how

much more remains to be done, if qubits are ever to become useful.

A very useful reference text for advanced undergraduate or higher atomic physics. It moves rather quickly and assumes prior knowledge of quantum mechanics, but provides a lot of good information on modern experimental techniques.

This has the same problem as *Introduction to Plasma* by Chen where the text is printed too close to the spine. The reason print exists is so that you can read words on flat sheets of paper, instead of having to crane your neck to see what's on the other side.

Foot is awesome. I love this book. It's well-written, clear, and wonderfully explained for the most part. I wish I'd found it years ago. Great for graduate students in AMO.

Well written. Requires knowledge of basic physics.

it's good

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