



Modern Physics, Second Edition: for Scientists and Engineers

By John Morrison

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The second edition of *Modern Physics for Scientists and Engineers* is intended for a first course in modern physics. Beginning with a brief and focused account of the historical events leading to the formulation of modern quantum theory, later chapters delve into the underlying physics. Streamlined content, chapters on semiconductors, Dirac equation and quantum field theory, as well as a robust pedagogy and ancillary package, including an accompanying website with computer applets, assist students in learning the essential material. The applets provide a realistic description of the energy levels and wave functions of electrons in atoms and crystals. The Hartree-Fock and ABINIT applets are valuable tools for studying the properties of atoms and semiconductors.

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Editorial Review

About the Author

John Morrison received a BS degree in Physics from University of Santa Clara in California. During his undergraduate years, he majored in English, Philosophy, and Physics and served as the editor of the campus literary magazine, the Owl. Enrolling at Johns Hopkins University in Baltimore, Maryland, he received a PhD degree in theoretical Physics and moved on to postdoctoral research at Argonne National Laboratory where he was a member of the Heavy Atom Group.

He then went to Sweden where he received a grant from the Swedish Research Council to build up a research group in theoretical atomic physics at Chalmers Technical University in Goteborg, Sweden. Working together with Ingvar Lindgren, he taught a graduate level-course in theoretical atomic physics for a number of years. Their teaching lead to the publication of the monograph, Atomic Many-Body Theory, which ?rst appeared as Volume 13 of the Springer Series on Chemical Physics. The second edition of this book has become a Springer classic.

Returning to the United States, John Morrison obtained a position in the Department of Physics and Astronomy at University of Louisville where he has taught courses in elementary physics, astronomy, modern physics, and quantum mechanics. In recent years, he has traveled extensively in Latin America and the Middle East maintaining contacts with scientists and mathematicians at the Hebrew University in Jerusalem and the Technion University in Haifa. During the Fall semester of 2009, he taught a course on computational physics at Birzeit University near Ramallah on the West Bank, and he has recruited Palestinian

students for the graduate program in physics at University of Louisville. He speaks English, Swedish, and Spanish, and he is currently studying Arabic and Hebrew.

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