Vacuum Science and Technology is a comprehensive book on vacuum physics and technology. Vacuum plays a crucial role in science and industry; we only need to think of examples like vacuum packaging, light bulbs, freeze drying of foodstuffs, X-ray tubes, flat panel displays, solar cells, space technology, the production of microchips, vacuum coating and, closely related to it, more fundamental instances such as high energy storage rings and the research on solid state surfaces. It's not too much to say that without the ability to evacuate both large and small volumes, our society would remain at the technological level of the early 20th century. This book is a completely revised and updated English translation of the Dutch-language standard work 'Basisboek Vacuümtechniek', first published in 2000 by the Dutch Vacuum Society NEVAC, and covers all the currently relevant vacuum topics. Throughout the volume, the emphasis is on the basic physics which underlies present day technology. The book serves both as an excellent reference work as well as a flexible textbook with a unique graded structure. Text meant for high graduates is placed behind margin lines. Omitting this text gives a textbook for middle graduates. Both with and without the margin texts the volume shows the desired internal coherence for the associated training level. Several chapters are provided with exercises, divided in two levels of difficulty. Researchers, engineers, students and course participants will experience the book as a synthesis of vacuum physics and modern practice.

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