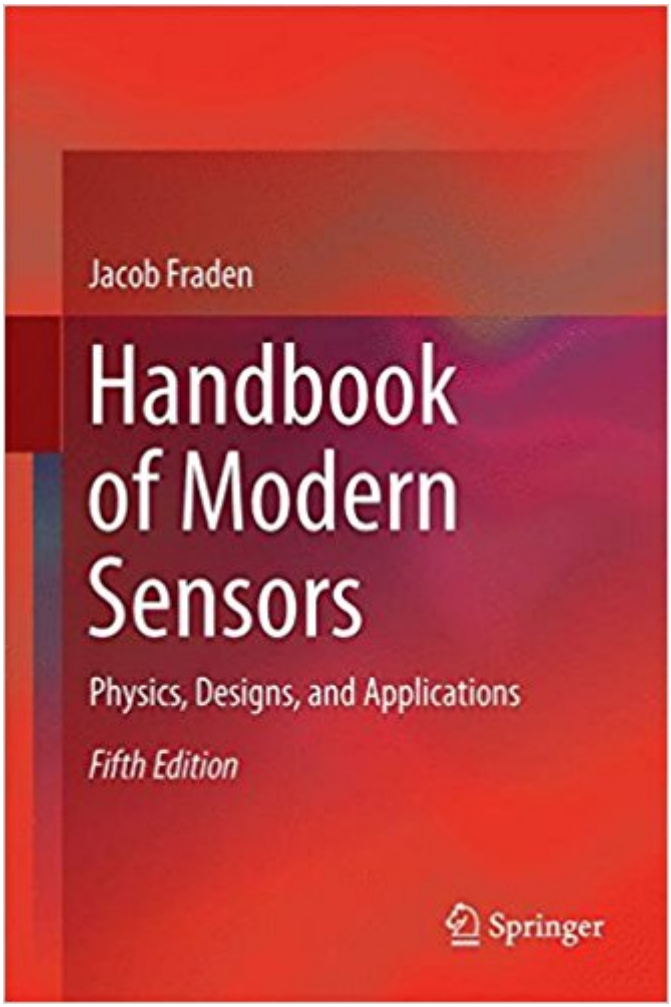
Handbook Of Modern Sensors: Physics, Designs, And Applications



Synopsis

This book presents a comprehensive and up-to-date account of the theory (physical principles), design, and practical implementations of various sensors for scientific, industrial, and consumer applications. This latest edition focuses on the sensing technologies driven by the expanding use of sensors in mobile devices. These new miniature sensors will be described, with an emphasis on smart sensors which have embedded processing systems. The chapter on chemical sensors has also been expanded to present the latest developments.Digital systems, however complex and intelligent they may be, must receive information from the outside world that is generally analog and not electrical. Sensors are interface devices between various physical values and the electronic circuits that "understand" only a language of moving electrical charges. In other words, sensors are the eyes, ears, and noses of silicon chips.Unlike other books on sensors, theÃ Â Handbook of Modern SensorsÃ Â is organized according to the measured variables (temperature, pressure, position, etc.). This book is a reference text for students, researchers interested in modern instrumentation (applied physicists and engineers), sensor designers, application engineers and technicians whose job it is to understand, select and/or design sensors for practical systems.

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Customer Reviews

Selected by Choice magazine as an "Outstanding Academic Title" for 2016Ã¢â ¬Å“Each class of sensors is individually addressed in detail from its basics to modern usage. Besides the physics behind the operation of the sensors, sensor applications and limitations are explained well. Ã¢â ¬Â¦

This clearly written work would be an excellent resource for most technical readers who want to understand, use, and design with sensors. Summing Up: Highly recommended. Upper-division undergraduates through professionals/practitioners; two-year technical program students.Ã¢â ¬Â• (M. Mehrubeoglu, Choice, Vol. 53 (10), June, 2016)Ã¢â ¬Å“This book appeared at a time of increasing need for sensor handbooks and is therefore a good choice for students as well as engineers. It presents an overview giving a comprehensive and up-to-date physical principles, design, and practical implementations of various sensors for scientific, industrial, and consumer applications. Ã¢â ¬Â¦ Owing to the amount of content, this is still a worthwhile handbook, which would be interesting for a lot of readers coming from different scientific disciplines.Ã¢â ¬Â• (Gerald Urban, Analytical and Bioanalytical Chemistry, May, 2016)

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