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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Fundamentals -- Materials and their characterization -- Technical Systems and their characterization.
Sommario/riassunto	This book presents the principles, methods and techniques to characterize materials and technical systems. The book is organized with concise text-graphics compilations in three parts: The first part describes the fundamentals of measurement, testing and sensor technology, including a survey of sensor types for dimensional metrology, kinematics, dynamics, and temperature. It describes also microsensors and embedded sensors. The second part gives an overview of materials and explains the application of measurement, testing and sensor technology to characterize composition, microstructure, properties and performance of materials as well as deterioration mechanisms and reliability. The third part introduces the general systems theory for the characterization of technical systems, exemplified by mechatronic and tribological systems. It describes technical diagnostics for structural health monitoring and performance control. .

