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Disciplina	530.8
Soggetti	Physical measurements Measurement Materials science Physics Engineering Measurement Science and Instrumentation Characterization and Evaluation of Materials History and Philosophical Foundations of Physics Engineering, general
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Nota di contenuto	Metrology Through the Ages -- System of Quantities and Units -- Various Systems of Units -- Metre Convention and Evolution of Base Units -- BIPM and Metre Convention -- New Definitions SI Base Units -- Realization of the SI Base units (s, m, kilogram) -- Realization of SI Base Unit Ampere and Other Electric Units in the SI -- Boltzmann Constant Defining Kelvin K -- Radiometry, Photometry & Realization of Candela and Mole -- Derived Quantities and Their Units -- Expressing SI Units -- Past Efforts in Redefining SI Units -- Scientists Associated with Units of Measurements.
Sommario/riassunto	This book delivers a comprehensive overview of units of measurement. Beginning with a historical look at metrology in Ancient India, the book explains fundamental concepts in metrology such as basic, derived and dimensionless quantities, and introduces the concept of quantity calculus. It discusses and critically examines various three and four-

dimensional systems of units used both presently and in the past, while explaining why only four base units are needed for a system of measurement. It discusses the Metre Convention as well as the creation of the International Bureau of Weights and Measures, and gives a detailed look at the evolution of the current SI base units of time, length, mass, electric current, temperature, intensity of illumination and substance. This updated second edition is extended with timely new chapters discussing past efforts to redefine the SI base units as well as the most recent 2019 redefinitions based entirely on the speed of light and other fundamental physical constants. Additionally, it provides biographical presentations of many of the historical figures behind commonly used units of measurements, such as Newton, Joule and Ohm, With its accessible and comprehensive treatment of the field, together with its unique presentation of the underlying history, this book is well suited to any student and researcher interested in the practical and historical aspects of the field of metrology.

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