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Nota di contenuto	Dedication; Preface; Contents; Chapter 1 Conventional SEM Design; Chapter 2 Spectrometer Design Principles; Chapter 3 In-lens Improvements; Chapter 4 Sub-nanometer Probe Diameters; Chapter 5 Secondary Electron Spectrometers; Chapter 6 Full Range Deflector Spectrometer Designs; Chapter 7 Full Range Parallel Energy Spectrometer Designs; Chapter 8 Spectroscopic SEM proposals; Appendix 1.0 Field Expansions; Appendix 1.1 Derivation of the Paraxial Equation; Appendix 1.2 Spherical Aberration; Appendix 1.3 Chromatic Aberration; Appendix 2 Multipole Lenses; Bibliography; Index
Sommario/riassunto	This book contains proposals to redesign the scanning electron microscope, so that it is more compatible with other charged particle beam instrumentation and analytical techniques commonly used in surface science research. It emphasizes the concepts underlying spectrometer designs in the scanning electron microscope, and spectrometers are discussed under one common framework so that their relative strengths and weaknesses can be more readily appreciated. This is done, for the most part, through simulations and derivations carried out by the author himself. The book is aimed at scientists, engi