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Soggetti	Electronic circuits Electronics Microelectronics Optical materials Electronics - Materials Nanotechnology Semiconductors Electronic Circuits and Devices Electronics and Microelectronics, Instrumentation Optical and Electronic Materials Nanotechnology and Microengineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Introduction -- Basic principles -- Experimental equipment and technique -- Modern developments in theoretical research of field emission -- Simulation of structure and parameters of field emission cathodes -- Field-emission cathodes -- Carbon-based field-emission cathodes -- Computation of field-emission cathode-based electron guns -- Field-emission cathode-based devices and equipment. .
Sommario/riassunto	This book is dedicated to field emission electronics, a promising field at the interface between “classic” vacuum electronics and nanotechnology. In addition to theoretical models, it includes detailed descriptions of experimental and research techniques and production technologies for different types of field emitters based on various

construction principles. It particularly focuses on research into and production of field cathodes and electron guns using recently developed nanomaterials and carbon nanotubes. Further, it discusses the applications of field emission cathodes in new technologies such as light sources, flat screens, microwave and X-ray devices.