Record Nr. UNINA9910877430703321 Autore Oks E. M. Titolo Plasma cathode electron sources: physics, technology, applications // Efim Oks Weinheim, : Wiley-VCH, 2006 Pubbl/distr/stampa **ISBN** 1-280-92154-4 9786610921546 3-527-60941-5 3-527-60924-5 Descrizione fisica 1 online resource (183 p.) Disciplina 530.442 Soggetti Plasma (Ionized gases) Ionized gases Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Plasma Cathode Electron Sources; Contents; Preface; 1 Low-Pressure Discharges for Plasma Electron Sources; 1.1 Hollow-Cathode Discharge; 1.2 Discharges in Crossed Electric and Magnetic Fields; 1.3 Arc Discharges: 1.3.1 Vacuum-Arc Discharge: 1.3.2 Constricted Low-Pressure Arc Discharge; References; 2 Electron Emission from Plasma; 2.1 General Features of Electron Emission from Plasma; 2.1.1 Ion Extraction from Plasma: 2.1.2 Processes Associated with Electron Extraction from Plasma; 2.2 Control of Plasma Electron Emission Current: 2.2.1 Control of Steady-State Electron Current 2.2.2 Control of Electron Emission in Pulsed Mode2.3 Emission Characteristics of the Plasma of a Constricted Arc Discharge with an Extended Anode Section; 2.4 Electron Emission from Plasma at Fore-Vacuum Pressures; 2.5 Special Features of Electron Emission from Nonstationary Plasma; References; 3 Plasma Sources for Axially Symmetric Electron Beams; 3.1 Cylindrical Electron-Beam Sources Based on Hollow-Cathode Discharges: 3.2 Sources of Steady-State

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Sommario/riassunto

This book fills the gap for a textbook describing this kind of electron beam source in a systematic and thorough manner: from physical processes of electron emission to examples of real plasma electron sources and their applications.