Record Nr.	UNINA9910781433903321
Titolo	Electrostatic propulsion [[electronic resource]]: a selection of technical papers based mainly on a Symposium of the American Rocket Society held at U.S. Naval Postgraduate School, Monterey, California, November 3, 4, 1960 / / edited by David B. Langmuir, Ernst Stuhlinger, J.M. Sellen, Jr
Pubbl/distr/stampa	New York, : Academic Press, 1961
ISBN	1-60086-479-1 1-60086-260-8
Descrizione fisica	1 online resource (591 p.)
Collana	Progress in astronautics and rocketry ; ; v. 5
Altri autori (Persone)	LangmuirDavid B SellenJ. M StuhlingerErnst
Disciplina	629.4225
Soggetti	Ion rockets Plasma rockets
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Sponsored by the Ion and Plasma Propulsion Committee of the American Rocket Society.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	""Cover""; ""Title""; ""Copyright""; ""Ion and Plasma Propulsion Committee""; ""Preface""; ""Contents""; ""A. Ion Generation""; ""Introduction""; ""Experimental Performance of Ion Rockets Employing Electron-Bombardment Ion Sources""; ""The Duoplasmatron: Theoretical Studies and Experimental Observations""; ""The Development of a Negative Ion Source""; ""Liquid Metal Droplets for Heavy Particle Propulsion""; ""The Oscillating-Electron Plasma Source""; ""Theory of Ion Emission From Porous Media""; ""Characteristics of Porous Surface Ionizers"" ""The Effects of Surface Structure and Adsorption on the Ionization Efficiency of a Surface Ionization Source"""B. Ion Acceleration and Impact Effects""; ""Introduction""; ""Multiple Beam Ion Motors""; ""Space- Charge Theory for Ion Beams""; ""Sputtering Due to High Velocity Ion Bombardment""; ""Sputtering of Copper by Ion Bombardment in the Energy Range of 5 - 25 keV""; ""C. Neutralization""; ""Introduction""; ""A Three Dimensional Calculation of the Effects of Insufficient Space

Charge Neutralization on Ion Rockets""

""Numerical Techniques in the Calculation of Effects of Insufficient Space Charge Neutralization on Ion Rockets"""Justification of the Use of the Collisionless Boltzmann Equation for Ion Beam Neutralization Studies""; ""Circular Beam Neutralization""; ""An Electrogasdynamic Approach to the Ion Jet Charge Neutralization Problem""; ""Neutralization of Ion Beams for Propulsion by Electron Trap Formation""; ""Transient and Steady State Behavior in Cesium Ion Beams""; ""Neutralization of Ion Beams""; ""On Ion Rocket Neutralization""; ""Present Status of the Beam Neutralization Problem"" ""D. Techniques and Testing"""Introduction""; ""Theory and Application of Hot-Wire Calorimeter for Measurement of Ion Beam Power""; ""Beam Diagnostic Techniques""; ""Diagnostics of the Space Charge Neutralization of Ion Beams by Electron Injection""; ""Engineering Research in Electrostatic Propulsion Devices""; ""Diffusion of Cesium and Ionization on Porous Tungsten""; ""Trajectories and Thrust-Measurement Techniques for Space Testing of Ion Rocket Motors"; ""Instrumentation Program for Ion Engine Testing""; ""Concluding Remarks""