

1. Record Nr.	UNINA9910781421403321
Titolo	Energy conversion for space power [[electronic resource]] : a selection of technical papers based mainly on a Symposium of the American Rocket Society held at Santa Monica, California, September 27-30, 1960 // edited by Nathan W. Snyder
Pubbl/distr/stampa	New York, : Academic Press, 1961
ISBN	1-60086-477-5 1-60086-258-6
Descrizione fisica	1 online resource (796 p.)
Collana	Progress in astronautics and rocketry ; ; v. 3
Altri autori (Persone)	SnyderNathan W
Disciplina	629.45
Soggetti	Space vehicles - Electric equipment Thermoelectric apparatus and appliances Photoelectric cells Fuel cells
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Sponsored by the American Rocket Society's Power Systems Committee and others. Continued in 1964 by the American Institute of Aeronautics and Astronautics Aerospace Power Systems Conference.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	""Cover""; ""Title""; ""Copyright""; ""Power Systems Committee""; ""Preface""; ""Contents""; ""A. Thermoelectricity""; ""Physics of Thermoelectricity""; ""Thermoelectric Generator Materials""; ""High-Temperature Semiconductors for Thermoelectric Conversion""; ""The Use of High Temperature Thermoelectric Materials(Silicides) for Power Generation in Space""; ""Irradiation Effects on Thermoelectric Materials""; ""Thermoelectric Elements in Space Power Systems""; ""Thermoelectric Materials for Space Cooling""; ""B. Thermionics""; ""Review of the Physics of Thermionics""; ""Plasma Thermionics"" ""Cesium Converter Studies"" ""Parametric Optimization of the Emission-Limited Thermionic Converter""; ""Experimental Research on Plasma Thermionic Energy Converters""; ""Theory of the Cesium Plasma Energy Converter with a Tungsten Cathode""; ""Chemistry of Fuel Element Cathode Materials""; ""A Nuclear-Thermionic Fuel Element Test""; ""C. Photovoltaic Cells""; ""The Photovoltaic Effect and Solar Energy

Conversion""; ""Advances in Silicon Solar Cell Development""; ""Large Area Solar Cells""; ""Evaporated CdS Film Photovoltaic Cells for Solar Energy Conversion""

""Integrally Composed Variable Energy Gap Photovoltaic Cells""""Some Theoretical Aspects of the Physics of Solar Cells""; ""Electron Bombardment of Silicon Solar Cells""; ""Radiation Damage in Satellite Solar Cell Power Systems""; ""High Energy Proton Radiation Damage""; ""The Use of Vacuum Deposited Coatings to Improve the Conversion Efficiency of Silicon Solar Cells in Space""; ""D. Electrochemical Cells""; ""General Evaluation of Chemicals for Regenerative Fuel Cells""; ""Resume of Thermally Regenerative Fuel Cell Systems""; ""Regenerative Hydrogen-Oxygen Fuel Cell""

""Fuel Cells with Ion Exchange Membranes""""Regenerative Ion Exchange Membrane Fuel Cell Developments""; ""Fuel Cells for Astronautic Application""; ""Secondary Batteries for Energy Storage in Space""; ""Battery Considerations for a Communications Satellite""; ""E. Dynamic Engines""; ""Vapor Turbine for Space Power""; ""Stirling Engine Development for Space Power""; ""Comparative Rating of Positive-Displacement Engines and Turbines for Cryogenic Power Systems""; ""Zero Gravity Boiling and Condensing""; ""An Electro-Mechanical Energy Storage System for Space Application""

""F. Magnetohydrodynamics""""The Prospects for MHD Power Generation""; ""Aspects of Magnetohydrodynamic (MHD) Generators for Space""; ""Experiments Relating to Generation of Power by Magnetohydrodynamics""; ""A Vortex MHD Power Generator""; ""On the Magnetogasdynamics of Compressible Vortices""; ""G. Electrostatic Generators""; ""High Voltage Generation in Space: The Parametric Electrostatic Machine""; ""Electrostatic Generators in Space Power Systems""
