Record Nr.	UNINA9910818946303321
Titolo	Power systems for space flight [[electronic resource] /] / edited by Morris A. Zipkin, Russell N. Edwards
Pubbl/distr/stampa	New York, : Academic Press, 1963
ISBN	1-60086-484-8 1-60086-265-9
Descrizione fisica	1 online resource (960 p.)
Collana	Progress in astronautics and rocketry ; ; v. 11
Altri autori (Persone)	ZipkinMorris A EdwardsRussell N
Soggetti	Electric rocket engines Space vehicles - Electric propulsion systems Space vehicles - Electric equipment
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"A selection of technical papers based mainly on the American Rocket Society Space Power Systems Conference held at Santa Monica, California, September 25-28, 1962."
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	""Cover""; ""Title""; ""Copyright""; ""Power Systems Committee""; ""Preface""; ""Acknowledgements"; ""Contents""; ""A. Selection of Power Systems""; ""Survey of Space Power Requirementsa€?1962 to 1976""; "The NASA Nuclear Electric Power Program"; ""Powerplant Consideration for an Arc-Jet Space Propulsion System"; ""Fuel Cell, Solar Cell, and Chemical Dynamic Power Systems Comparison""; ""Power Supplies for Mobile Lunar Vehicles""; ""B. Chemical Power Systems""; ""Dynamic""; ""High Performance, Short Time Duration, MHD Generator System"" ""Piston Engine Development Demonstrates Advantages for Space Power Applications"""Hydrogen-Oxygen Fuel Cell System for Space Vehicles"; ""Development of Catalytic Hydrogen-Oxygen Reaction Chambers for Space Power Systems"; "Static""; "Sealed Nickel- Cadmium, Silver-Cadmium, and Silver-Zinc Batteries""; ""Hermetically Sealed Nickel-Cadmium Batteries for the Orbiting Astronomical Observatory Satellite""; ""Use of a Sealed Silver Cadmium Battery on Explorer XIII"; ""The Battery for the International Ionosphere Satellite Ariel I""; ""Electrically Regenerative Hydrogen-Oxygen Fuel Cell""

1.

""Factors Involved in the Use of a High-Temperature Fuel Cell as a Space Power Source""""Capability of the Cadmium-Silver Oxide System"; ""C. Solar Power Systems"; ""Solar Cells""; ""Telstar Satellite Power System"; ""Development of a Concentrating Photovoltaic Power Generator"; ""Thin Film CdS Front Wall Solar Cells""; ""Modular Solar Thermoelectric Power Supply System""; ""Flat Plate Solar Thermoelectric Generator System Concept""; ""D. Heat Transfer, Storage, and Rejection""; ""Heat Transfer Parameters""; ""Alkali Metal Two-Phase Heat Transfer for Space Power: Present Status""

""Emittance of Materials Suitable for Use as Spacecraft Radiator Coatings"""Spectral and Directional Thermal Radiation Characteristics of Surfaces for Heat Rejection by Radiation""; ""Energy Storage Systems""; ""Lithium Hydride Storage Unit Development for the Sunflower System""; ""Energy Storage in Superconducting Magnetic Coils""; ""Radiator Design Parameters""; ""Analysis of a Megawatt Level Direct Condenser-Radiator""; ""Spur High-Temperature Space Radiator""; ""Thermionic Radiator System""; ""Meteoroid Protection for Space Radiators""

""Preliminary Results on Effects of Hypervelocity Impact on Space Radiator Tubes""""Materials Problems Associated with the Design of Radiators for Space Powerplants""; ""E. High-Temperature Power Systems""; ""Solar Concentrators""; ""Status of Solar Energy Collector Technology""; ""Calibration of Solar Concentrator for Power System Research""; ""Inflatable Foam-Rigidized Approach to Solar Concentrators""; ""Materials and Construction Techniques for Space Solar Reflectors""; ""Solar Thermionic""; ""Cesium Thermionic Converters and Generators for Solar Space Power Systems""

""Performance Test of a Cubical Cavity Solar Thermionic Generator""