SUBJECT INDEX

Additives

effect of, on anodic behaviour of Cd in KOH solutions, 33

examination of graphite, to electrodes, 305

Aerospace

Ni-Cd cell performance, investigation of long term storage effects on, 191 Ni-Cd cell separator qualification

program, 147

Alkaline batteries

thermodynamic framework for estimating efficiencies of, 1

Alkaline fuel cells

development of low cost, 317

Ammonium bromides

selection of quaternary, for use in Zn/Br cells, 349

Batteries

alkaline, thermodynamic framework for estimating efficiencies of, 1 identified fractal objects, 51 incinerated Li-SO₂, effect of water on, 371

Battery

lithium molybdenum disulfide, 65 A h rechargeable, 117

Battery cell design

advanced Ni-Cd, 155

Battery management system high reliability, 223

Battery packs

safety considerations for fabricating lithium, 101

Battery plate formation

lead-acid, mass transport during, 337

Battery system

new high energy density, 376

Bromine

selection of quaternary ammonium bromides for use in Zn/Br cells, 349

Cadmium

advanced Ni-Cd battery cell design, 155 aerospace Ni-Cd cell separator qualification program, 147 effect of additives on anodic behaviour of, in KOH solutions, 33

flooded-starved design for Ni-Cd cells, 161

qualification testing of General Electric 50 A h Ni-Cd cells with new separator and new positive-plate processing, 135

review of recent literature, 43

Cathode materials

lead oxides as, for voltage-compatible lithium cells, 63

Design options

examination of, for 35 A h ambient temperature Li-TiS₂ cells, 127

Electrode(s)

examination of graphite additives to, 305

Electrode processes

at lithium-polymer electrolyte interface, 75

Flooded-starved design

for Ni-Cd cells, 161

Fuel cells

development of low cost alkaline, 317

Goddard battery model

planned alterations to, modeling Ni-Cd performance, 179

Graphite additives

examination of, to electrodes, 305

Heat dissipation

of high rate Li-SOCl₂ primary cells, 109

Incinerated Li-SO₂ batteries effect of water on, 371

Lead-acid battery plate formation mass transport during, 337

Lead oxides

as cathode materials for voltagecompatible lithium cells, 63

LEO characterization test NOAA 26.5 A h, 209

Lithium ambient temperature Li-TiS₂ cells, examination of design options for 35 Ah, 127 electrode processes at lithium-polymer electrolyte interface, 75 heat dissipation of high rate Li-SOCl₂ primary cells, 109 rechargeable lithium molybdenum disulfide battery, 65 A h, 117 safety hazards associated with charging of Li/SO₂ cells, 89 Lithium battery packs safety considerations for fabricating, 101 Lithium cells lead oxides as cathode materials for voltage-compatible, 63 Lithium-sulfur dioxide batteries effect of water on incinerated, 371 Long term storage effects on aerospace Ni-Cd cell performance, investigation of, 191 Molybdenum lithium molybdenum disulfide battery, 65 A h rechargeable, 117 Nickel-cadmium cells advanced Ni-Cd battery cell design, 155 aerospace Ni-Cd cell separator qualification program, 147 flooded-starved design for, 161 qualification testing of General Electric 50 A h, with new separator and new positive-plate processing, 135 self-discharge characteristics of spacecraft, at elevated temperatures, 169 voltage-temperature charge verification testing of 34 ampere hour, 197 Nickel-cadmium cell performance investigation of long term storage effects on aerospace, 191 modeling; planned alterations to Goddard battery model, 179 Nickel-hydrogen technology impact of Shuttle environment on prelaunch handling of Ni-H batteries 275 investigation of Ni-H battery technology for RADARSAT spacecraft, 259 IPV Ni-H cell development program, 4.5 inch diameter, 279 lightweight, direct-radiating Ni-H batteries, 245

low-earth-orbit test program, 265
parametric tests of 40 A h bipolar Ni-H
battery, 283
recent advances in, at NASA Lewis
Research Center, 235

Parametric tests of 40 A h bipolar Ni-H battery, 283

Polymer electrolyte electrode processes at lithium-polymer electrolyte interface, 75

Qualification program
aerospace Ni-Cd cell separator, 147
Qualification testing
of General Electric 50 A h Ni-Cd
cells with new separator and new

Safety considerations for fabricating lithium battery packs, 101

positive-plate processing, 135

Safety hazards associated with charging of Li/SO₂ cells, 89

Space applications overview of solar dynamic systems for, 293

Spacecraft Ni-Cd cells, self-dis

Ni-Cd cells, self-discharge characteristics of, at elevated temperatures, 169

Self-discharge characteristics of spacecraft Ni-Cd cells at elevated temperatures, 169

Solar dynamic systems overview of, for space applications, 293 Sulfur dioxide

safety hazards associated with charging of Li/SO_2 cells, 89

Thermodynamic framework for estimating efficiencies of alkaline batteries, 1

Titanium

examination of design options for 35 A h ambient temperature Li-TiS₂ cells, 127

Voltage-temperature charge verification testing of 34 ampere hour Ni-Cd cells, 197

Zinc/bromine cells selection of quaternary ammonium bromides for use in, 349