



ELSEVIER

Journal of Power Sources 91 (2000) 249–251

JOURNAL OF  
**POWER  
SOURCES**

www.elsevier.com/locate/jpowsour

## Subject Index of Volume 91

- Accumulated capacity  
Commercial Li ion batteries; LiCoO<sub>2</sub> cathode; Ragone plots; Polarization resistance (Moshtev, R. (91) 86)
- AC impedance  
Solid-state Mg/MnO<sub>2</sub> cell; Gel polymer electrolyte; Discharge capacity; Cycle-life (Kumar, G.G. (91) 157)
- Active material structure  
Lead-acid batteries; Charging regime; Cycle life (Chang, T.G. (91) 177)
- Air electrodes  
Manganese dioxide; Zinc-air batteries (Wei, Z. (91) 83)
- Alkali metal  
Heat losses; Efficiency; Geometry; Power degradation; AMTEC (Lodhi, M.A.K. (91) 99)
- Amorphous  
PbO<sub>2</sub>; Electrochemical activity; Hydrogen content; Lead oxide sulphate phase; X-ray diffraction (Pettersson, I. (91) 137)
- AMTEC  
Heat losses; Efficiency; Geometry; Power degradation; Alkali metal (Lodhi, M.A.K. (91) 99)
- Army systems  
Portable power; 21st Century forward area battlefield (Atwater, T.B. (91) 27)
- Batteries  
Silver; Silver-based couples (Karpinski, A.P. (91) 77)  
Energy-power relations; Capacitors; SMES (Christen, T. (91) 210)
- Battery technology survey  
Hybrid electric vehicle; Specific power; Duty cycle; Vehicle design; Partial-state-of-charge cycling; Cycle life (Nelson, R.F. (91) 2)
- Beam deflection technique  
Stresses generation/relaxation; Ni(OH)<sub>2</sub>/NiOOH film electrode; Quartz crystal microbalance (Pyun, S.-I. (91) 92)
- Capacitors  
Energy-power relations; Batteries; SMES (Christen, T. (91) 210)
- Capacity fade  
Lithium-ion battery; Electrochemical impedance spectroscopy; Surface film (Zhang, D. (91) 122)
- Carbon dioxide  
Primary batteries; Cathode; Manganese oxide; Decomposition; Propylene carbonate (Wolfenstine, J. (91) 118)
- Carbon electrode  
Lithium-ion battery; Mesocarbon microbeads; Electrochemical properties (Kim, J.-S. (91) 172)
- Cathode  
Primary batteries; Manganese oxide; Decomposition; Propylene carbonate; Carbon dioxide (Wolfenstine, J. (91) 118)
- 21st Century forward area battlefield  
Portable power; Army systems (Atwater, T.B. (91) 27)
- Charge condition  
Valve-regulated lead-acid battery; Energy efficiency; Electric vehicle; Multi-step constant current charging (Ikeya, T. (91) 130)
- Charge-discharge studies  
Prussian blue; Zinc hexacyanoferrate; Copper hexacyanoferrate; Solid state secondary cells (Jayalakshmi, M. (91) 217)
- Charging regime  
Lead-acid batteries; Active material structure; Cycle life (Chang, T.G. (91) 177)
- Commercial Li ion batteries  
LiCoO<sub>2</sub> cathode; Accumulated capacity; Ragone plots; Polarization resistance (Moshtev, R. (91) 86)
- Constant current charging  
Supercapacitor; Power cycling; Cyclic voltammetry; Impedance spectroscopy; Ragone plot (Mahon, P.J. (91) 68)
- Cooling  
MCFC, molten carbonate fuel cell; Stack model; Temperature distribution (Koh, J.-H. (91) 161)
- Copper hexacyanoferrate  
Prussian blue; Zinc hexacyanoferrate; Solid state secondary cells; Charge-discharge studies (Jayalakshmi, M. (91) 217)
- Cycle life  
Hybrid electric vehicle; Battery technology survey; Specific power; Duty cycle; Vehicle design; Partial-state-of-charge cycling (Nelson, R.F. (91) 2)  
Lead-acid batteries; Active material structure; Charging regime (Chang, T.G. (91) 177)
- Cycle-life  
Solid-state Mg/MnO<sub>2</sub> cell; Gel polymer electrolyte; AC impedance; Discharge capacity (Kumar, G.G. (91) 157)
- Cyclic voltammetry  
Supercapacitor; Power cycling; Constant current charging; Impedance spectroscopy; Ragone plot (Mahon, P.J. (91) 68)  
Lead-tin alloys; PbO reduction; Oxidation; Lead-acid battery (Pettersson, I. (91) 143)
- Decomposition  
Primary batteries; Cathode; Manganese oxide; Propylene carbonate; Carbon dioxide (Wolfenstine, J. (91) 118)
- Direct methanol  
Fuel cell; Process analysis; System (Andrian, S. (91) 193)
- Direct methanol fuel cells (DMFCs)  
Pt-Ru catalysts; Interdigitated flow fields; Mass-transport; Unsupported catalysts; Fuel cell performance (Aricò, A.S. (91) 202)
- Discharge capacity  
Solid-state Mg/MnO<sub>2</sub> cell; Gel polymer electrolyte; AC impedance; Cycle-life (Kumar, G.G. (91) 157)
- Dispersed palladium  
Nanoparticles; Irreversible capacity; Graphite; Lithium intercalation; Li-ion battery (Yu, P. (91) 107)
- Duty cycle  
Hybrid electric vehicle; Battery technology survey; Specific power; Vehicle design; Partial-state-of-charge cycling; Cycle life (Nelson, R.F. (91) 2)

- Efficiency**  
 Heat losses; Geometry; Power degradation; AMTEC; Alkali metal (Lodhi, M.A.K. (91) 99)
- Electrical energy storage**  
 Ultracapacitors; Hybrid capacitor (Burke, A. (91) 37)
- Electrical system voltage**  
*Inspira™*; Lead–acid batteries (Gruenstern, R.G. (91) 62)
- Electric vehicle**  
 Valve-regulated lead–acid battery; Charge condition; Energy efficiency; Multi-step constant current charging (Ikeya, T. (91) 130)
- Electrochemical activity**  
 $\text{PbO}_2$ ; Hydrogen content; Amorphous; Lead oxide sulphate phase; X-ray diffraction (Pettersson, I. (91) 137)
- Electrochemical impedance spectroscopy**  
 Lithium-ion battery; Capacity fade; Surface film (Zhang, D. (91) 122)
- Electrochemical properties**  
 Lithium-ion battery; Mesocarbon microbeads; Carbon electrode (Kim, J.-S. (91) 172)
- Energy efficiency**  
 Valve-regulated lead–acid battery; Charge condition; Electric vehicle; Multi-step constant current charging (Ikeya, T. (91) 130)
- Energy–power relations**  
 Batteries; Capacitors; SMES (Christen, T. (91) 210)
- Engine start**  
 Lead acid; High power; HEV; TMF; VRLA (Bhardwaj, R.C. (91) 51)
- Ethanol**  
 Solid polymer fuel cell; Reforming; Partial oxidation; Thermodynamic analysis (Ioannides, T. (91) 150)
- Fuel cell**  
 Direct methanol; Process analysis; System (Andrian, S. (91) 193)
- Fuel cell performance**  
 Direct methanol fuel cells (DMFCs); Pt–Ru catalysts; Interdigitated flow fields; Mass-transport; Unsupported catalysts (Aricò, A.S. (91) 202)
- Gel polymer electrolyte**  
 Solid-state  $\text{Mg}/\text{MnO}_2$  cell; AC impedance; Discharge capacity; Cycle-life (Kumar, G.G. (91) 157)
- Geometry**  
 Heat losses; Efficiency; Power degradation; AMTEC; Alkali metal (Lodhi, M.A.K. (91) 99)
- Graphite**  
 Nanoparticles; Dispersed palladium; Irreversible capacity; Lithium intercalation; Li-ion battery (Yu, P. (91) 107)
- Heat losses**  
 Efficiency; Geometry; Power degradation; AMTEC; Alkali metal (Lodhi, M.A.K. (91) 99)
- HEV**  
 Lead acid; High power; Engine start; TMF; VRLA (Bhardwaj, R.C. (91) 51)
- High power**  
 Lead acid; HEV; Engine start; TMF; VRLA (Bhardwaj, R.C. (91) 51)
- Hybrid capacitor**  
 Ultracapacitors; Electrical energy storage (Burke, A. (91) 37)
- Hybrid electric vehicle**  
 Battery technology survey; Specific power; Duty cycle; Vehicle design; Partial-state-of-charge cycling; Cycle life (Nelson, R.F. (91) 2)
- Hydrogen content**  
 $\text{PbO}_2$ ; Electrochemical activity; Amorphous; Lead oxide sulphate phase; X-ray diffraction (Pettersson, I. (91) 137)
- Impedance spectroscopy**  
 Supercapacitor; Power cycling; Constant current charging; Cyclic voltammetry; Ragone plot (Mahon, P.J. (91) 68)
- Inspira™**  
 Electrical system voltage; Lead–acid batteries (Gruenstern, R.G. (91) 62)
- Interdigitated flow fields**  
 Direct methanol fuel cells (DMFCs); Pt–Ru catalysts; Mass-transport; Unsupported catalysts; Fuel cell performance (Aricò, A.S. (91) 202)
- Irreversible capacity**  
 Nanoparticles; Dispersed palladium; Graphite; Lithium intercalation; Li-ion battery (Yu, P. (91) 107)
- Lead acid**  
 High power; HEV; Engine start; TMF; VRLA (Bhardwaj, R.C. (91) 51)
- Lead–acid batteries**  
*Inspira™*; Electrical system voltage (Gruenstern, R.G. (91) 62)
- Lead-acid batteries**  
 Active material structure; Charging regime; Cycle life (Chang, T.G. (91) 177)
- Lead–acid battery**  
 Lead–tin alloys;  $\text{PbO}$  reduction; Oxidation; Cyclic voltammetry (Pettersson, I. (91) 143)
- Lead oxide sulphate phase**  
 $\text{PbO}_2$ ; Electrochemical activity; Hydrogen content; Amorphous; X-ray diffraction (Pettersson, I. (91) 137)
- Lead–tin alloys**  
 $\text{PbO}$  reduction; Oxidation; Lead–acid battery; Cyclic voltammetry (Pettersson, I. (91) 143)
- LiCoO<sub>2</sub> cathode**  
 Commercial Li ion batteries; Accumulated capacity; Ragone plots; Polarization resistance (Moshtev, R. (91) 86)
- Li-ion battery**  
 Nanoparticles; Dispersed palladium; Irreversible capacity; Graphite; Lithium intercalation (Yu, P. (91) 107)
- Lithium intercalation**  
 Nanoparticles; Dispersed palladium; Irreversible capacity; Graphite; Li-ion battery (Yu, P. (91) 107)
- Lithium-ion battery**  
 Capacity fade; Electrochemical impedance spectroscopy; Surface film (Zhang, D. (91) 122)
- Mesocarbon microbeads**; Electrochemical properties; Carbon electrode (Kim, J.-S. (91) 172)
- Manganese dioxide**  
 Air electrodes; Zinc–air batteries (Wei, Z. (91) 83)
- Manganese oxide**  
 Primary batteries; Cathode; Decomposition; Propylene carbonate; Carbon dioxide (Wolfenstein, J. (91) 118)
- Mass-transport**  
 Direct methanol fuel cells (DMFCs); Pt–Ru catalysts; Interdigitated flow fields; Unsupported catalysts; Fuel cell performance (Aricò, A.S. (91) 202)
- MCFC, molten carbonate fuel cell**  
 Stack model; Temperature distribution; Cooling (Koh, J.-H. (91) 161)
- Mesocarbon microbeads**  
 Lithium-ion battery; Electrochemical properties; Carbon electrode (Kim, J.-S. (91) 172)
- Multi-step constant current charging**  
 Valve-regulated lead–acid battery; Charge condition; Energy efficiency; Electric vehicle (Ikeya, T. (91) 130)
- Nanoparticles**  
 Dispersed palladium; Irreversible capacity; Graphite; Lithium intercalation; Li-ion battery (Yu, P. (91) 107)
- Ni(OH)<sub>2</sub>/NiOOH film electrode**  
 Stresses generation/relaxation; Beam deflection technique; Quartz crystal microbalance (Pyun, S.-I. (91) 92)

- Oxidation**  
 Lead–tin alloys; PbO reduction; Lead–acid battery; Cyclic voltammetry (Petersson, I. (91) 143)
- Partial oxidation**  
 Ethanol; Solid polymer fuel cell; Reforming; Thermodynamic analysis (Ioannides, T. (91) 150)
- Partial-state-of-charge cycling**  
 Hybrid electric vehicle; Battery technology survey; Specific power; Duty cycle; Vehicle design; Cycle life (Nelson, R.F. (91) 2)
- PbO<sub>2</sub>**  
 Electrochemical activity; Hydrogen content; Amorphous; Lead oxide sulphate phase; X-ray diffraction (Petersson, I. (91) 137)
- PbO reduction**  
 Lead–tin alloys; Oxidation; Lead–acid battery; Cyclic voltammetry (Petersson, I. (91) 143)
- Polarization resistance**  
 Commercial Li ion batteries; LiCoO<sub>2</sub> cathode; Accumulated capacity; Ragone plots (Moshtev, R. (91) 86)
- Portable power**  
 Army systems; 21st Century forward area battlefield (Atwater, T.B. (91) 27)
- Power cycling**  
 Supercapacitor; Constant current charging; Cyclic voltammetry; Impedance spectroscopy; Ragone plot (Mahon, P.J. (91) 68)
- Power degradation**  
 Heat losses; Efficiency; Geometry; AMTEC; Alkali metal (Lodhi, M.A.K. (91) 99)
- Primary batteries**  
 Cathode; Manganese oxide; Decomposition; Propylene carbonate; Carbon dioxide (Wolfenstine, J. (91) 118)
- Process analysis**  
 Fuel cell; Direct methanol; System (Andrian, S. (91) 193)
- Propylene carbonate**  
 Primary batteries; Cathode; Manganese oxide; Decomposition; Carbon dioxide (Wolfenstine, J. (91) 118)
- Prussian blue**  
 Zinc hexacyanoferrate; Copper hexacyanoferrate; Solid state secondary cells; Charge–discharge studies (Jayalakshmi, M. (91) 217)
- Pt–Ru catalysts**  
 Direct methanol fuel cells (DMFCs); Interdigitated flow fields; Mass-transport; Unsupported catalysts; Fuel cell performance (Aricò, A.S. (91) 202)
- Quartz crystal microbalance**  
 Stresses generation/relaxation; Ni(OH)<sub>2</sub>/NiOOH film electrode; Beam deflection technique (Pyun, S.-I. (91) 92)
- Ragone plot**  
 Supercapacitor; Power cycling; Constant current charging; Cyclic voltammetry; Impedance spectroscopy (Mahon, P.J. (91) 68)
- Ragone plots**  
 Commercial Li ion batteries; LiCoO<sub>2</sub> cathode; Accumulated capacity; Polarization resistance (Moshtev, R. (91) 86)
- Reforming**  
 Ethanol; Solid polymer fuel cell; Partial oxidation; Thermodynamic analysis (Ioannides, T. (91) 150)
- Silver**  
 Batteries; Silver-based couples (Karpinski, A.P. (91) 77)
- Silver-based couples**  
 Silver; Batteries (Karpinski, A.P. (91) 77)
- SMES**  
 Energy–power relations; Batteries; Capacitors (Christen, T. (91) 210)
- Solid polymer fuel cell**  
 Ethanol; Reforming; Partial oxidation; Thermodynamic analysis (Ioannides, T. (91) 150)
- Solid-state Mg/MnO<sub>2</sub> cell**  
 Gel polymer electrolyte; AC impedance; Discharge capacity; Cycle-life (Kumar, G.G. (91) 157)
- Solid state secondary cells**  
 Prussian blue; Zinc hexacyanoferrate; Copper hexacyanoferrate; Charge–discharge studies (Jayalakshmi, M. (91) 217)
- Specific power**  
 Hybrid electric vehicle; Battery technology survey; Duty cycle; Vehicle design; Partial-state-of-charge cycling; Cycle life (Nelson, R.F. (91) 2)
- Stack model**  
 MCFC, molten carbonate fuel cell; Temperature distribution; Cooling (Koh, J.-H. (91) 161)
- Stresses generation/relaxation**  
 Ni(OH)<sub>2</sub>/NiOOH film electrode; Beam deflection technique; Quartz crystal microbalance (Pyun, S.-I. (91) 92)
- Supercapacitor**  
 Power cycling; Constant current charging; Cyclic voltammetry; Impedance spectroscopy; Ragone plot (Mahon, P.J. (91) 68)
- Surface film**  
 Lithium-ion battery; Capacity fade; Electrochemical impedance spectroscopy (Zhang, D. (91) 122)
- System**  
 Fuel cell; Direct methanol; Process analysis (Andrian, S. (91) 193)
- Temperature distribution**  
 MCFC, molten carbonate fuel cell; Stack model; Cooling (Koh, J.-H. (91) 161)
- Thermodynamic analysis**  
 Ethanol; Solid polymer fuel cell; Reforming; Partial oxidation (Ioannides, T. (91) 150)
- TMF**  
 Lead acid; High power; HEV; Engine start; VRLA (Bhardwaj, R.C. (91) 51)
- Ultracapacitors**  
 Hybrid capacitor; Electrical energy storage (Burke, A. (91) 37)
- Unsupported catalysts**  
 Direct methanol fuel cells (DMFCs); Pt–Ru catalysts; Interdigitated flow fields; Mass-transport; Fuel cell performance (Aricò, A.S. (91) 202)
- Valve-regulated lead–acid battery**  
 Charge condition; Energy efficiency; Electric vehicle; Multi-step constant current charging (Ikeya, T. (91) 130)
- Vehicle design**  
 Hybrid electric vehicle; Battery technology survey; Specific power; Duty cycle; Partial-state-of-charge cycling; Cycle life (Nelson, R.F. (91) 2)
- VRLA**  
 Lead acid; High power; HEV; Engine start; TMF (Bhardwaj, R.C. (91) 51)
- X-ray diffraction**  
 PbO<sub>2</sub>; Electrochemical activity; Hydrogen content; Amorphous; Lead oxide sulphate phase (Petersson, I. (91) 137)
- Zinc–air batteries**  
 Air electrodes; Manganese dioxide (Wei, Z. (91) 83)
- Zinc hexacyanoferrate**  
 Prussian blue; Copper hexacyanoferrate; Solid state secondary cells; Charge–discharge studies (Jayalakshmi, M. (91) 217)