

Recent Publications on Lead/Acid Batteries and Related Phenomena: 1993, No. 2, B19–B36

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The aim of this abstracting service is to provide workers with a review of paper titles in the area of lead/acid batteries, and in particular to assist those workers who do not have ready access to citation facilities. The intention is to publish the compilation half-yearly and an author index for a given year will be provided when citations for that year are complete.

The publications are grouped under broad titles and, where possible, are numbered in chronological sequences that will be continued in each succeeding issue. Due to the unavoidable delay between the appearance and the citation of papers, the two issues of each year will necessarily include items published both during that year and during the previous year.

Contents

A. Battery components (lead(II) oxides, electrolyte, separators, etc.)	B20
B. Lead and lead alloys (including battery recycling)	B20
C. Positive plates (lead(IV) oxides)	B21
D. Negative plates	B23
E. Aspects of manufacture	B23
F. Charging and discharging	B23
G. Testing and performance	B24
H. Theoretical aspects and reviews	B26
I. Applications (traction, automotive, stationary, etc.)	B27
J. Author index 1991 (supplement)	B31
J. Author index 1992 (supplement)	B31
J. Author index 1993	B32

- A. Battery components (lead(II) oxides, electrolyte, separators, etc.)**
- A37. Performance characteristics of lead oxides in pasted lead/acid battery electrodes.
S.E. Afifi, A.E. Saba and A.Y. Shenouda
Electrometall. Lab., Central Metall. Res. Dev. Inst., Cairo, Egypt.
J. Power Sources, 46 (1993) 285-96.
CA: 120(8) 81476f.
- A38. Electrolyte stratification in lead/acid batteries: effect of grid antimony and relationship to capacity loss.
L. Apateanu, A.F. Hollenkamp and M.J. Koop
CSIRO, Div. Miner. Prod., Port Melbourne, Vic. 3207, Australia.
J. Power Sources, 46 (1993) 239-50.
CA: 120(8) 81472b.
- B. Lead and lead alloys (including battery recycling)**
- B192. Joining of lead-antimony and lead-calcium alloy lugs by a laboratory cast-on-strap process.
Z.W. Chen, J.B. See and W.F. Gillian
Pasminco Res. Centre, Boolaroo, NSW, Australia.
J. Power Sources, 46 (1993) 311-26.
CA: 120(12) 141167t.
- B193. Lead alloys for maintenance-free and sealed lead/acid batteries.
R. Cui and S. Wu
Chongqing WANLI Storage Battery Co. Ltd., China.
J. Power Sources, 46 (1993) 327-33.
CA: 120(8) 83190g.
- B194. Lead composite alloys as a better material for lead-calcium alloy battery grid.
R. Thirunavakarasan and D. Mukherjee
Cent. Electrochem. Res. Inst., Karaikudi, 623 006, India.
Indian Chem., 34 (1992) 146-8.
CA: 119(24) 253584n.
- B195. Preparation of lead-calcium alloys by molten salt electrolysis.
V.H. Vu and S.V. Nguyen
Inst. Physics, Inst. Science Vietnam, Vietnam.
Tap Chi Hoa Hoc, 31 (1993) 50-1.
CA: 122(18) 225157u.
- B196. Lead composite alloys as a better material for lead-calcium alloy battery grids.
D. Mukherjee and R. Thirunavukarasu
Cent. Electrochem. Res. Inst., Karaikudi, India.
Tool Alloy Steels, 27 (1993) 365-9.
- B197. Application of lead and lead alloys in storage battery industry.
H. Qin
Zhuzhou Smelter, Peop. Rep. China.
Dianchi, 23 (1993) 30-3.
CA: 120(24) 304536d.
- B198. Oxidation process of PbSO₄ composite in lead anode film in sulfuric acid solution.
G. Wei
Dept. Chem., Shanghai Univ. Sci. Technol., Shanghai, Peop. Rep. China.
Dianchi, 23 (1993) 258-61.
CA: 120(26) 327440g.

- B199. Pilot plant decreases the sulfate content. Four-fifths of the cleaned wastewater is recycled into the battery production.
- G. Einhaus
Germany.
- Energie, 45 (1993) 20-2.
- CA: 119(24) 255897r.
- B200. Environmental aspects and recycling problems of traction batteries.
- Ch. Fabjan and H. Kronberger
Austria.
- Oesterreichische Zeitschrift für Elektrizitätswirtschaft, 46 (1993) 451-9.
- B201. Small-sealed rechargeable batteries and the environment past, present and future.
- A.M. Mossbarger
Sanyo Energy (USA) Corp., San Diego, CA., USA.
- Proceedings of PCIM/POWER QUALITY International Conference, 24-29 Oct. 1993, Irvine, CA, USA, pp. 475-81.
- INSPEC: B9406-8140E-039.
- B202. Reduction kinetics of slags produced from recycling of lead batteries.
- S. Wright, S. Jahanshahi and W.J. Errington
CSIRO, Div. Miner. Proc. Eng., Clayton, Victoria 3169, Australia.
- In M. Nilmani, T. Lehner and W.J. Rankin (eds.), Pyrometall. Complex Mater. Wastes, Aust. Asian Pac. Course Conf., Miner. Met. Mater. Sci., Warrendale, Pa, USA, 1994, pp. 121-32.
- B203. Use of sodium carbonate solutions in processing of secondary raw material.
- A.G. Morachevskii, M.S. Kogan, A.I. Demidov and Z.I. Vaisgant
St. Petersburg Tekh. Univ., St. Petersburg, Russia.
- Zh. Prikl. Khim. (St. Petersburg), 66 (1993) 2099-100.
- B204. Recycling of lead batteries.
- N. Mani and S. Ambalavanan
Cent. Electrochem. Res. Inst., Karaikudi, India.
- Bull. Electrochem., 9 (1993) 386-90.
- CA: 122(16) 193043k.
- B205. Battery recycling and the law.
- R.W. Wittemann
Yuasa-Exide Inc., Reading, PA, USA.
- Power Quality '93. Official Proceedings of the Seventh International Power Quality Conference, 24-29 Oct. 1993, Irvine, CA, USA, Intertec Int, Ventura, CA, USA, 1993, pp. 526-6.
- INSPEC: A9417-8630F-017; B9409-8410E-017.
- C. Positive plates (lead(IV) oxides)**
- C138. Suppression of premature capacity loss by methods based on the gel-crystal concept of the PbO₂ electrode.
- D. Pavlov
Central Lab. Electrochem. Power Sources, Bulgarian Acad. Sci., Sofia, Bulgaria.
- J. Power Sources, 46 (1993) 171-90.
- CA: 120(8) 81386b.
- C139. Premature capacity loss in lead/acid batteries with antimony-free grids during cycling under constant-voltage-charging conditions. 1. Characterization and causes of the phenomenon.
- H. Dietz, H. Niepraschek, K. Wiesener, J. Garche and J. Bauer
Tech. Univ. Dresden, Germany.
- J. Power Sources, 46 (1993) 191-202.
- CA: 120(10) 111613t.

- C140. Location of the phenomenon of premature capacity loss during cycling of lead/acid batteries with lead grids.
M.K. Dimitrov and D. Pavlov
Central Lab. Electrochem. Power Sources, Bulgarian Acad. Sci., Sofia, Bulgaria.
J. Power Sources, 46 (1993) 203-10.
CA: 120(8) 81468e.
- C141. PbO₂ active material as an electrocrystalline network.
E. Bashtavelova and A. Winsel
Univ. Gesamthochschule Kassel, Germany.
J. Power Sources, 46 (1993) 219-30.
CA: 120(8) 81470z.
- C142. Influence of recharge potential and acid concentration on the discharge behaviour of PbO₂ electrodes.
E. Meissner
VARTA Batterie AG, Kelkheim am Taunus, Germany.
J. Power Sources, 46 (1993) 231-8.
CA: 120(8) 81471a.
- C143. Experimental study of the alkalization model for the PbSO₄ anodic layer on lead/acid positive-plate grids.
H. Hang
Dept. of Chem., Qingdao Univ., China.
J. Power Sources, 46 (1993) 263-7.
CA: 120(8) 81474d.
- C144. Effects of wet paste density and design of grid on the positive plate performance of lead-acid cell.
P.G. Balakrishnan, S. Sekar, P.V. Vasudeva-Rao and S. Narasimhavarman
Cent. Electrochem. Res. Inst., Karaikudi, 623 006, India.
Trans. SAEST, 28 (1993) 54-9.
CA: 119(26) 275043n.
- C145. Highly pure electrolytic PbO₂ as positive electrode active material.
S. Zhao
Zibo Storage Battery Fact., Shandong, Peop. Rep. China.
Dianchi, 23 (1993) 271-3.
- C146. General review of additives in PbO₂ electrode.
H. Wei, X. Zhang and H. Chen
Res. Inst., Guangzhou Storage Battery Fact., Peop. Rep. China.
Dianchi, 23 (1993) 284-6.
- C147. Possibility of percolation phenomena during discharge of lead-acid battery cathode.
M.G. Rudenko
Stavropol'sk Pedagog. Inst., Stavropol, Russia.
Elektrokhim., 29 (1993) 1163-5.
- C148. Simulation of quasi-equilibrium discharge of lead-acid battery cathode at constant current at cathode/electrolyte interface.
M.G. Rudenko
Inst. Khim. Fiz., Moscow, Russia.
Elektrokhim., 29 (1993) 1210-15.
CA: 121(16) 183476u.

- C149. Competing theories of premature capacity loss – running down a battery killer.
A.F. Hollenkamp and D.A.J. Rand
CSIRO, Div. Miner. Prod., Port Melbourne, Vic. 3207, Australia
R.F. Nelson
Int. Lead Zinc Res. Org. Inc., Research Triangle Park, NC, USA.
The Battery Man, 1993, pp. 16-18, 20-23.
- D. Negative plates**
- D47. Development of negative plate for lead-acid battery.
P.G. Balakrishnan, V.S. Muralidharan and G. Singh
Cent. Electrochem. Res. Inst., Karaikudi, India.
Trans. SAEST, 28 (1993) 97-102.
CA: 119(26) 275076a.
- D48. Effect of hydrogen and oxygen on stability of expanders and performance of lead/acid batteries.
D. Pavlov, S. Gancheva and P. Andreev
Central Lab. Electrochem. Power Sources, Bulgarian Acad. Sci., Sofia, Bulgaria.
J. Power Sources, 46 (1993) 349-59.
CA: 120(10) 111615v.
- E. Aspects of manufacture**
- E174. Processes during preparation of lead/acid battery positive plates from tetrabasic lead sulfate (4BS) pastes.
J.K. Vilhunen and J. Tummavuori
Sci. Services, Neste Oy, Porvoo, Finland.
J. Power Sources, 46 (1993) 269-83.
CA: 120(8) 81475e.
- E175. Processes in positive lead/acid battery plates during soaking prior to formation.
D. Pavlov, S. Rudevski and T. Rogachev
Central Lab. Electrochem. Power Sources, Bulgarian Acad. Sci., Sofia, Bulgaria.
J. Power Sources, 46 (1993) 337-48.
CA: 120(10) 111614u.
- E176. Measures to extend the lifetime of a lead-acid traction battery.
W. Geuer
Dept. Power Electron. & Electr. Drives, Aachen Univ. Technol., Germany.
Symp. Proc. EVS-11, The 11th Int. Electric Vehicle Symp., 27-30 Sept. 1992, Florence, Italy, Vol. 1, paper 6.02, 11 pp.
- E177. New technology for manufacture of electrodes for lead-acid batteries.
M.B. Konovalov and V.N. Demin
Aorod, Studen. Molod Tesentn. "praktika", Sursk, Russia.
Zh. Prikl. Khim. (St. Petersburg), 66 (1993) 1984-8.
- F. Charging and discharging**
- F99. Fast charging of lead/acid batteries.
D. Calasanzio, M. Maja and P. Spinelli
FIAMM SpA, Vicenza, Italy.
J. Power Sources, 46 (1993) 375-81.
CA: 120(10) 111616w.

- F100.** An efficient method of recharging the lead-acid batteries of electric vehicles.
- A. Buonarota and P. Menga
Italy.
- Symp. Proc. EVS-11, The 11th Int. Electric Vehicle Symp., 27-30 Sept. 1992, Florence, Italy, Vol. 2, paper 20.04, 11 pp.
- INSPEC: A9412-8630F; B9406-8520-226.
- F101.** Deterioration estimating method using pulse discharge and charge characteristics of lead-acid batteries.
- T. Ogata, K. Takano, M. Kohno and K. Yoshida
NTT Interdisciplinary Res. Labs., Mushashino, Japan.
- Transactions of the Institute of Electronics, Information and Communication Engineers B-I, J76B-I (1993) 719-26.
- F102.** Energy indices of rectifier converters for charging accumulator batteries.
- A.G. Zdrok, A.V. Shamarin and S.A. Zdrok
Russia.
- Elektrotehnika, 64 (1993) 61-4. Russian Electrical Engineering, 64 (1993) 89-93.
- F103.** Rapid charging of lead accumulators.
- S.A. Zdrok
Russia.
- Elektrotehnika, 64 (1993) 53-7.
- INSPEC: A9502-8630F-001; B9501-8410E-015.
- G.** **Testing and performance**
- G275.** Battery impedance-single cell capacity test vs. standard every cell capacity test.
- C.M. Gabriel and K.W. Uhler
T & D Operational Analysis Dept., Commonwealth Edison Co., Chicago, IL, USA.
- Proceedings of the American Power Conference, 13-15 April 1993, Chicago, IL, USA, pp. 38-43.
- CA: 120(2) 11639n.
- G276.** Field application of conductance measurements used to ascertain cell/battery and inter-cell connection state-of-health in electric power utility applications.
- M.J. Hlavac, D.O. Feder and D. Ogden
Midtronics Inc., Willowbrook, IL, USA.
- Proceedings of the American Power Conference, 13-15 April 1993, Chicago, IL, USA, pp. 44-57.
- CA: 120(2) 11640f.
- G277.** Field and laboratory studies to assess the state of health of valve-regulated lead/acid and other battery technologies using conductance testing.
- M.J. Hlavac, D.O. Feder, T.G. Croda and K.S. Champlin
Midtronics Inc., Willowbrook, IL, USA.
- Proc. INTELEC '93: 15th International Telecommunications Energy Conference, 27-30 Sept. 1993, Paris, France, Vol. 2, pp. 375-830.
- INSPEC: A9505-8630F-029; B9503-8410E-036.
- G278.** Evaluating the state-of-health of flooded and valve-regulated lead/acid batteries. A comparison of conductance testing with traditional methods.
- D.O. Feder, M.J. Hlavac and W. Koster
Electrochem. Energy Storage Syst. Inc., Madison, NJ, USA.
- J. Power Sources, 46 (1993) 391-415.
- CA: 120(10) 111618y.

- G279. System noise as a single source for impedance measurements on battery strings.
R.S. Robinson
Bellcore, Red Bank, NJ, USA.
Proc. INTELEC '93: 15th International Telecommunications Energy Conference, 27-30 Sept. 1993, Paris, France, Vol. 2, pp. 365-8.
INSPEC: A9505-8630F-027; B9503-8410E-034.
- G280. Use of AC impedance/conductance and DC resistance for determining the reliability of VRLA battery systems.
M.S. Sudhan, T.M. Noveske, L.S. Holden and S.L. Mraz
USA.
Proc. INTELEC '93: 15th International Telecommunications Energy Conference, 27-30 Sept. 1993, Paris, France, Vol. 2, pp. 384-91.
INSPEC: A9505-8630F-030; B9503-8410E-037.
- G281. Variables that influence results of impedance testing for valve-regulated cells.
G.J. Markle
AVO Biddle Instrum., Blue Bell, PA, USA.
Proc. INTELEC '93: 15th International Telecommunications Energy Conference, 27-30 Sept. 1993, Paris, France, Vol. 1 pp. 444-8.
INSPEC: A9505-8630F-016; B9503-8410E-021.
- G282. Performance analysis of parallel-processing UPS systems.
Y. Lin, G. Joos and J.F. Lindsay
Dept. Electr. & Comput. Eng., Concordia Univ., Montreal, Quebec, Canada.
APEC '93: Proceedings of IEEE Applied Power Electronics Conference, 7-11 March 1993, San Diego, CA, USA, pp 533-9.
- G283. Aging effects in valve-regulated lead/acid batteries.
D. Berndt, E. Meissner and W. Rusch
VARTA Batterie AG, Kelkheim am Taunus, Germany.
Proc. INTELEC '93: 15th International Telecommunications Energy Conference, 27-30 Sept. 1993, Paris, France, Vol. 2, pp. 139-45.
INSPEC: A9505-8630F-025; B9503-8410E-032.
- G284. Valve-regulated lead/acid battery condition monitoring.
A.I. Harrison and P.D. Taylor
Hawker Batteries, Manchester, Vic.
Proc. INTELEC '93: 15th International Telecommunications Energy Conference, 27-30 Sept. 1993, Paris, France, Vol. 1 pp. 449-50.
INSPEC: A9505-8630F-017; B9503-8410E-022.
- G285. Performance and characteristics of valve-regulated lead/acid batteries with a concentric square grid design.
P.K. Ng, T.V. Nguyen, M.C. Weeks, A.G. Cannone and K.R. Bullock
Battery Dev. Group, AT & T Bell Labs., Mesquite, TX, USA.
Proc. INTELEC '93: 15th International Telecommunications Energy Conference, 27-30 Sept. 1993, Paris, France, Vol. 2, pp. 115-22.
INSPEC: A9505-8630F-021; B9503-8410E-028.
- G286. Automated property monitoring system for lead/acid storage batteries.
T.-Y. Sheng
Inst. Energy and Nat. Resour., ITRI, Taichung, Taiwan.
Nengyuan Jikan, 23 (1993) 115-29.
CA: 121(4) 39061n.

- G287. New testing method for evaluation of the life of lead/acid batteries.
- P. Lenain
Oldham France SA, Arras, France.
- Proc. INTELEC '93: 15th International Telecommunications Energy Conference, 27-30 Sept. 1993, Paris, France, Vol. 2, pp. 135-8.
- INSPEC: A9505-8630F-024; B9503-8410E-031.
- G288. Computerized test equipment for stationary batteries.
- A. Lee and Z. Noworolski
Polytronics Eng. Ltd., Mississauga, Ont., Canada.
- Proc. INTELEC '93: 15th International Telecommunications Energy Conference, 27-30 Sept. 1993, Paris, France, Vol. 1, pp. 435-9.
- INSPEC: B9503-7210B-023; C9503-7410H-052.
- G289. Life cycle costing factors for large valve-regulated vs. flooded battery systems.
- R.R. Robbins
Acran Inc., Austin, TX, USA.
- Power Quality '93. Official Proceedings of the Seventh International Power Quality Conference, 24-29 Oct. 1993, Irvine, CA, USA, Intertec Int, Ventura, CA, USA, 1993, pp. 496-500.
- INSPEC: A9417-8630F-012; B9409-8410E-012.
- G290. Hydrogen sulfide and sulfur dioxide evolution from a valve-regulated lead-acid battery.
- R.S. Robinson, J.M. Tarascon and T. O'Sullivan
Belcore, Red Bank, NJ, USA.
- Proc. INTELEC '93: 15th International Telecommunications Energy Conference, 27-30 Sept. 1993, Paris, France, Vol. 1, pp. 440-3.
- INSPEC: A9505-8630F-015; B9503-8410E-020.
- H. Theoretical aspects and reviews**
- H155. A computer model for the determination of the residual capacity of (lead-acid) batteries.
- C.W. De Kreuk and P.J. Van Duin
TNO Environ. & Energy Res., Delft, Netherlands.
- Symp. Proc. EVS-11, The 11th Int. Electric Vehicle Symp., 27-30 Sept. 1992, Florence, Italy, Vol. 2, paper 11.01, 12 pp.
- H156. A lead/acid battery for the new millennium.
- R.F. Nelson
Int. Lead Zinc Res. Org. Inc., Research Triangle Park, NC, USA.
- J. Power Sources, 46 (1993) 159-68.
- CA: 120(8) 81385a.
- H157. The agglomerate-of-spheres model. Theoretical considerations.
- A. Winsel and E. Bashtavelova
Univ. Gesamthochschule Kassel, Germany.
- J. Power Sources, 46 (1993) 211-17.
- CA: 120(8) 81469f.
- H158. A simplified model of the lead/acid battery.
- P. Ekdunge
Dept. Appl. Electrochem. & Corrosion Sci., R. Inst. of Technol., Stockholm, Sweden.
- J. Power Sources, 46 (1993) 251-62.
- CA: 120(8) 81473c.
- H159. History of the accumulator battery.
- D. Berndt
Varta Batterie AG, Kelkheim am Taunus, Germany.
- Elektronik Praxis, Spec. Issue, 1993, pp. 62-70.

- H160. A modelling approach to the optimization of the lead-acid battery electrodes.
G. Maia, E.A. Ticianelli and E.R. Gonzales
Inst. de Fisica e Quimica, San Paulo Univ., Brazil.
J. Appl. Electrochem., 23 (1993) 1151-61.
CA: 120(4) 40449f.
- H161. Lead batteries and electric vehicles.
A. de Guibert
France.
Revue Generale de l'Electricite, 10 (1993) 13-18.
- H162. IEEE standards collection. Stationary battery. 1993 edition.
Inst. Electr. & Electron. Eng., New York, USA, 24 Sept. 1993, 193 pp.
- H163. A general battery model for PV system simulation.
J.B. Copetti, E. Lorenzo and F. Chenlo
Inst. de Energia Solar, Univ. Politecnica de Madrid, Spain.
Progress in Photovoltaics: Research and Applications, 1 (1993) 283-92.
CA: 120(14) 168711c.
- H164. Technological advancements in sealed-lead rechargeable batteries.
B.R. Essig
Industrial Battery Div., Gates Energy Products, Warrensburg, MO, USA.
Conf. Rec. WESCON/92, 17-19 Nov. 1992, Anaheim, CA, USA, pp. 590-8.
- H165. Modeling of lead/acid batteries for photovoltaic and wind power supply systems.
H. He, S. Yu, Z. Lou and Y. Jian
Energy Res. Inst., Hefei Univ. Technol., Hefei, Peop. Rep. China.
Taiyangueng Xuebao, 14 (1993) 300-5.
CA: 120(24) 303257b.
- H166. Towards battery power: the challenge to lead/acid.
D.A.J. Rand
CSIRO, Div. Miner. Prod., Port Melbourne, Vic. 3207, Australia.
ILZRO Annual Review, 1992, International Lead Zinc Research Organization, Inc., Research Triangle Park, NC, USA, 1993, pp. 60-80.
- I. Applications (automotive, stationary, traction, etc.)**
- I375. Development of 9-cell lead/acid battery including spare, "CR902", for automobile use.
M. Yamaguchi and A. Nanbu
Nippon Denchi K.K., Japan.
G S News Tech. Rep., 52 (1993) 7-13.
CA: 120(24) 303269g.
- I376. Valve-regulated lead/acid batteries: systems, properties and applications.
H. Tuphorn
Akkumulatorenfabrik Sonnenschein GmbH, Büdingen, Germany.
J. Power Sources, 46 (1993) 361-73.
CA: 120(8) 81387c.

- I377. Ten minutes-rechargeable, valve-regulated, lead/acid battery after deep discharge stand.
T. Yasaki, Y. Ehara, K. Asai, J. Takahashi, K. Matsumoto and S. Kubotani
Small Battery Div., Japan Storage Battery Co. Ltd., Kyoto, Japan.
J. Power Sources, 46 (1993) 383-90.
CA: 120(10) 111617x.
- I378. New valve-regulated lead-acid batteries with granulated silica as electrolyte retainer for EV application.
Y. Okada, K. Takahashi and M. Tsubota
Japan Storage Battery Co. Ltd., Kyoto, Japan.
Symp. Proc. EVS-11, The 11th Int. Electric Vehicle Symp., 27-30 Sept. 1992, Florence, Italy. Vol. 1, paper 6.01, 11 pp.
CA: 119(14) 142883q.
- I379. Study on maintenance-free sealed batteries.
H. Lu, C. Hu, J. Mao and S. Mong
Comput. Anal. Test. Cent., Guangxi Norm. Univ., Peop. Rep. China.
Guangxi Shifan Daxue Xuebao, Ziran Kexueban, 10 (1992) 86-9.
CA: 120(26) 327438n.
- I380. Gas-recombination sealed lead/acid batteries.
M. Maja
Dip. Sci. dei Mater. ed Ing. Chim., del Politec. di Torino, Italy.
Atti Accad. Sci. Torino, Cl. Sci. Fiz., Mat. Nat., 127 (1993) 51-62.
CA: 121(8) 87523m.
- I381. MF-VRLA batteries for electrochemical energy storage.
G. Sivaramaiah
Amara Raja Batteries, Ltd., Tirupati, India.
Bull. Electrochem., 9 (1993) 334-6.
CA: 122(16) 192356c.
- I382. Considerations in preparing a specification for stationary valve-regulated lead/acid batteries.
K.A. Lundqvist, E.K. Kristensen, S. Samuelsen and E. Lindstrom
Telecom Energy Dept., Swedish Telecom, Stockholm, Sweden.
Proc. INTELEC '93: 15th International Telecommunications Energy Conference, 27-30 Sept. 1993, Paris, France, Vol. 1, pp. 67-70.
INSPEC: A9505-8630F-032; B9503-8410E-039.
- I383. The maturing of a valve-regulated (VRLA) battery technology: ten years of experience.
J. Szymborski
GNB Ind. Battery, Lombard, IL, USA.
Proc. INTELEC '93: 15th International Telecommunications Energy Conference, 27-30 Sept. 1993, Paris, France, Vol. 2, pp. 123-9.
INSPEC: A9505-8630F-022; B9503-8410E-029.
- I384. Valve-regulated lead/acid batteries for telecommunications service.
G.J. May
Hawker Batteries Group, Market Harborough, Leicestershire, UK.
Proc. INTELEC '93: 15th International Telecommunications Energy Conference, 27-30 Sept. 1993, Paris, France, Vol. 2 pp. 112-14.
INSPEC: A9505-8630F-020; B9503-8410E-027.

- I385. Valve-regulated lead acid vs. flooded cell.
M.R. Moore
Yuasa-Exide Inc., Reading, PA, USA.
Power Quality '93. Official Proceedings of the Seventh International Power Quality Conference, 24-29 Oct. 1993, Irvine, CA, USA, Intertec Int, Ventura, CA, USA, 1993, pp. 825-7.
INSPEC: A9417-8630F-024; B9409-8410E-022.
- I386. Is there a difference in VRLA battery designs?
K.F. Wehmeyer
Gates Energy Products, Warrensburg, MO, USA.
Power Quality '93. Official Proceedings of the Seventh International Power Quality Conference, 24-29 Oct. 1993, Irvine, CA, USA, Intertec Int, Ventura, CA, USA, 1993, pp. 571-19.
INSPEC: A9417-8630F-014; B9409-8410E-014.
- I387. Stationary batteries – selected topics.
M.W. Migliaro
Nucl. Div., Florida Power and Light, Juno Beach, FL, USA.
Proc. Am. Power Conf., 55 (1993) 23-33.
CA: 119(24) 253527w.
- I388. How rechargeable battery characteristics impact uninterruptible power system design and overall cost.
C.W. Garstang and B. Hazen
Industrial Battery Div., Gates Energy Products, Warrensburg, MO, USA.
Conf. Rec. WESCON/92 17-19 Nov. 1992, Anaheim, CA, USA, pp. 576-84.
- I389. Ultrafast second generation IGBTs for SMPS and battery traction applications.
B.E. Taylor
Int. Rectifier Corp., El Segundo, CA, USA.
PCIM'93 Europe: Official Proceedings of the Twenty-sixth International Power Conversion Conference, 22-24 June 1993, Nuremberg, Germany, pp. 201-5.
- I390. Large-scale secondary batteries for power utility load levelling.
H. Yokoyama, H. Tokoi and K. Yokoi
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Marchese, A., B183.
Torazzo, A., B183.
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- Alagappan, A., I372.
Ambalavanan, S., B172, I372.
- Balakrishnan, P.G., G261, I372.
Burlatskii, S.F., C137, G273.
Champlin, K.S., G265.
Chen, R.Y., B189.
Chin, I.H., B189.
Croda, T.G., G265.
Devasahayan, M., G261, I372.
Feder, D.O., G265.
Forslund, B.L., B191.
Glasa, I., I370.
Han, B.C., B189.
Hashimoto, H., G274.
Hlavac, M.J., G265.
Huang, T.S., B189.
Janakiraman, R., G261.
Kamaraj, S., B172.
Liu, T., E166.
Mani, N., B172, I372.
Markle, G.J., G264.
McAndrews, M., G267.
Misra, S.S., G266.
Noveske, T.M., G266.
Rangarajan, S.K., I372.
Rao, P., B172.
Reid, D., I370.
Rudenko, M.G., C137, F93, G273.
Taylor, J.R., B191.
Thacker, H.D., F94.
Tullius, N., I370.
Udupa, H.V.K., G261.
Vasudeva Rao, P.V., B172, I372.
Venkatakrishnan, N., I372.
Venkatesan, G., I372.
Wada, O., G274.
Warrior, P.C., I372.
Williamson, A.W., G266.
Xu, X., E166.
Yamamoto, T., G274.
Yeh, Y.C., B189.

J. Author index 1993

- Afifi, S.E., A37.
Albert, L., B168.
Alekseev, S.O., E173.
Alminauskas, V., I393.
Ambalavanan, S., B204.
Andreev, P., D48.
Apateanu, L., A38.
Appel, P.W., H146, H147.
Arvia, A.J., B178.
Asai, K., F96, I377.
- Bakonyi, A., B187.
Balakrishnan, P.G., C144, D47.
Bashtavelova, E., C141, H157.
Baudino, R., B185.
Baudo, G., I401.
Bauer, J., C139.
Bekesi, J.G., E167, E169.
Beketaeva, L.A., C136.
Bernardi, D.M., H145.
Berndt, D., G283, H159.
Bied-Charreton, B., B182.
Bodoardo, S., B185.
Bohnstedt, W., A34.
Bonnet, J., I364.
Brinkmann, J., I400.
Bullock, K.R., G285.
Buonarota, A., F100.
- Caillerie, J.L., B168.
Calasanzio, D., F97, F99, I366, I401.
Cannone, A.G., G285.
Carr, G., G262.
Cecchinato, G., I366.
Champlin, K.S., G277.
Chaplin, R.I., H139, H141.
Chaumont, B., B168.
Chen, H., C146.
Chen, Z.W., B170, B192.
Chenlo, F., H163.
Claudel, J.L., H151.
Coe, C., I397.
Cooper, A., H152.
Copetti, J.B., H163.
Corsini, T., B186.
Cranswick, L.M.D., E164.
Croda, T.G., G277.
Cui, R., B193.
Culpin, B., G260.
- Dakhouché, A., C133.
Davis, W., B168.
de Feraudy, H., B190.
- de Guibert, A., B168, H161.
de Jong, A.M.C.P., G259.
De Kreuk, C.W., H155.
Demidov, A.I., B203.
Demin, V.N., E177.
Dewar, M.J., B171.
Dietz, H., C139, G263.
Dimitrov, M.K., C140.
Doring, H., G263.
Dyson, J.I., I403.
- Ebise, K., I391.
Edwards, D.B., H146, H147.
Ehara, Y., F96, I377.
Einhaus, G., B199.
Ekdunge, P., H158.
Errington, W.J., B202.
Essig, B.R., H164.
- Fabjan, Ch., B200.
Feder, D.O., G276, G277.
Fischbein, A., E167, E169.
Flanagan, W.F., B173.
Funato, T., I392.
- Gabriel, C.M., G275.
Gancheva, S., D48.
Garche, J., C139.
Garstang, C.W., I388.
Gerasimov, A.G., H153.
Geuer, W., E176.
Gillian, W.F., B170, B192.
Gonzales, E.R., H160.
Gorman, M.G., B188.
Grugel, R.N., B173.
Gu, H., H145.
Guitton, J., C132.
Guo, Y., D44.
Guy, J., I397.
- Hamaguchi, T., E168.
Hamdi, M.A., I371.
Hang, H., C143.
Harrison, A.I., G284.
Hawkins, P., B184.
Hazen, B., I388.
He, H., H165.
Hlavac, M.J., G276, G277, G278.
Hohn, R., B168.
Holden, L.S., G280.
Hollenkamp, A.F., A38, B176, C149.
Hoshihara, N., I405.
Hosking, D., I367.
Hosoda, K., E168.
Hu, C., I379.
Hua, S., D44.

- Iwamoto, K., I405.
Iwamura, A., I405.
Iwata, M., I392.
- Jahanshahi, S., B202.
Jana, K., H149.
Jay, B.E., I397.
Jian, Y., H165.
Jiang, J.D., E167.
Jindra, J., G269.
Jochim, D.M., F92.
Johnson, R.T., I365.
Joos, G., G282.
- Kalker, M., I402.
Khegai, L.D., E173.
Kim, S., B173.
Knorr, R., G268, I398
Kogan, M.S., B203.
Kohno, M., F101.
Konovalov, M.B., E177.
Koop, M.J., A38, G260.
Koster, W., G278.
Kristensen, E.K., I282.
Kronberger, H., B200.
Kubotani, S., F96, I377.
Kurisawa, I., I391.
Kwasnik, J., H150.
- Lallier, P., I394.
Lam, L.T., E164.
Lata, V.A., E172.
Leclercq, J., I404.
Lee, A.Y., B188.
Lee, A., G288.
Leiby, R.A., Jr., B181.
Lenain, P., G287.
Leonov, V.N., H153.
Lerda, D., E171.
Lichter, B.D., B173.
Ligtvoet, A.C.P., D46.
Lin, Y., G282.
Lindsay, J.F., G282.
Lindstrom, E., I382.
Lorenzo, E., H163.
Lou, J.C.J., E167, E169.
Lou, Z., H165.
Lu, H., I379.
Lundqvist, K.A., I382.
- Macchi, G., E172.
Maia, G., H160.
Maja, M., B185, F99, I380.
Mani, N., B204, I372.
Manwell, J.F., H143, H148.
Mao, J., I379.
- Marchetto, M., I366.
Markle, G.J., G281.
Matsumaru, Y., B174.
Matsumoto, K., F96, I377.
May, G.J., I373, I384.
McClelland, D., F97.
McDowall, J., F97.
McGowan, J.G., H143, H148.
Meissner, E., C135, C142, G283.
Menga, P., F100.
Migliaro, M.W., I387.
Milewski, J.D., H150.
Mong, S., I379.
Moore, M.R., I385.
Morachevskii, A.G., B203.
Moreau, G., H154.
Moseley, P.T., B176.
Mossbarger, A.M., B201.
Mousser, A., C132.
Mraz, S.L., G280.
Mukherjee, D., B194, B196.
Muralidharan, V.S., D47.
Musilova, M., G269.
- Nanbu, A., I375.
Narasimharman, S., C144.
Nauer, G.E., B177.
Neckel, A., B177.
Nelson, R.F., C149, H156, I396.
Ng, P.K., G285.
Nguyen, S.V., B195.
Nguyen, T.V., G285, H144.
Niepraschek, H., C139.
Nilson, R.R., H138, H139, H140, H141.
Noveske, T.M., G280.
Noworolski, Z., G288.
- Ogata, T., F101.
Ogden, D., G276.
Ohta, A., I405.
Okada, Y., I378.
Okamoto, H., G270.
Omae, K., E168.
Onoda, Y., I405.
Oskarsson, A., E170.
O'Sullivan, T., G290.
Ozgun, H., E164.
- Pagano, M., E172.
Pavlov, D., C133, C134, C138, C140,
D48, E175.
Peak, R., B176.
Pei-Hwei, C., G272.
Perone, S.P., G272, H142.
Peters, K., A36.
Pierson, J.R., I365.

- Prengaman, R.D., B169.
Prout, L., A35, D45, E160, E161,
E162, E163, E165.
Pukacka, T., H150.
Qin, H., B197.
Radwan, M., G263.
Ramus, K., B184.
Rand, D.A.J., B176, C149, E164,
G260, H166, I396.
Ribalka, K.V., C136.
Rice, D.M., B170.
Richter, G., G271.
Robbins, R.R., G289.
Robinson, R.S., G279, G290.
Roboz, J.P., E167.
Rogachev, T., C133, E175.
Rudenko, M.G., C147, C148, F95.
Ruetschi, P., H137.
Ruevski, S., E175.
Rusch, W., G283.
Rusin, A.I., E173, H153.
Saakes, M., D46.
Saba, A.E., A37.
Sakurai, H., E168.
Samuelsen, S., I382.
Santori, M., E172.
Satoh, T., E168.
Schmal, D., D46, G259.
Schoene, A.Y., H145.
See, J.B., B170, B192.
Sekar, S., C144.
Serracane, C., B185.
Shamarin, A.V., F102.
Sheng, T.-Y., G286.
Shenouda, A.Y., A37.
Sheppelman, T., I364.
Shimpo, M., B174.
Shiomi, M., I374.
Singh, G., D47.
Sivaramaiah, G., I381.
Sklarchuk, J., B171.
Spindler, W., G272.
Spinelli, P., F99.
Stalick, T., H147.
Stephany, J.M., I364.
Stevenson, J.M., I403.
Stout, M.E., B180.
Sudhan, M.S., G280.
Sugihara, M., I391.
Sundberg, J., E170.
Swaroop, R., I399.
Symons, P., H142.
Szczesniak, B., H150.
Szymborski, J., I383.
Tabuchi, J., I392.
Tagawa, Y., I391, I392.
Takahashi, J., F96.
Takahashi, K., G270, I274, I377,
I378, I392.
Takano, K., F101.
Takebayashi, T., E168.
Tarascon, J.M., G290.
Taylor, B.E., I389.
Taylor, P.D., G284.
Tedjar, F., C132.
Thirunavakarasam, R., B194, B196.
Ticianelli, E.A., H160.
Tiravanti, G., E172.
Tokoi, H., I390.
Tolson, P., F91.
Tomlinson, R., F91.
Toyoda, M., I405.
Trettenhahn, G.L.J., B177.
Tsang, P., E167, E169.
Tsubota, M., I374, I378, I392, I395.
Tummavuori, J., E174.
Tuphorn, H., I376.
Ueberschaer, A., B168.
Uhlir, K.W., G275.
Vaisgant, Z.I., B203.
Valeriotte, E.M., B171, F92.
Van Duin, P.J., D46, H155.
Varela, F.E., B178.
Vasudeva-Rao, P.V., C144.
Vela, M.E., B178.
Venugopalan, S., B175.
Vihunen, J.K., E174.
Vilche, J.R., B178.
Vincze, A.M., B171.
Volinkin, V.T., H153.
Vu, V.H., B195.
Vutetakis, D.G., F98.
Wang, Z., D44.
Weeks, M.C., G285.
Wehmeyer, K.F., I386.
Wei, G., B198.
Wei, H., C146.
Weighall, M.J., B168.
Wethington, A.M., B188.
Whyte, R.E., H144.
Wiesener, K., C139, G263.
Willer, B., G268, I398.
Wilson, D.N., B179.
Winsel, A., C141, H157.
Witehira, P., I363.
Wittemann, R.W., B205.
Wright, S., B202.

Wu, H., F98.
Wu, S., B193.

Yamaguchi, M., I375.
Yamaguchi, Y., B174.
Yamasaka, K., I405.
Yasaki, T., F96, I377.
Yasuda, H., G270.
Yokoi, K., I390.
Yokoyama, H., I390.

Yonezu, K., G270.
Yoshida, K., F101.
Yoshida, T., B174.
Yu, S., H165.

Zdrok, A.G., F102.
Zdrok, S.A., F102, F103.
Zerroual, L., C132.
Zhang, X., C146.
Zhao, S., C145.