

DAFTAR PUSTAKA

- [1] E. Chemali, P. J. Kollmeyer, M. Preindl, R. Ahmed, and A. Emadi, "Long Short-Term Memory-Networks for Accurate State of Charge Estimation of Li-ion Batteries."
- [2] A. K. M. A. Habib, M. K. Hasan, G. F. Issa, D. Singh, S. Islam, and T. M. Ghazal, "Lithium-Ion Battery Management System for Electric Vehicles: Constraints, Challenges, and Recommendations," Mar. 01, 2023, *MDPI*. doi: 10.3390/batteries9030152.
- [3] M. Amer, J. Masri, A. Dababat, U. Sajjad, and K. Hamid, "Electric vehicles: Battery technologies, charging standards, AI communications, challenges, and future directions," *Energy Conversion and Management: X*, vol. 24, p. 100751, 2024, doi: <https://doi.org/10.1016/j.ecmx.2024.100751>.
- [4] Larminie James and Lowry John, *Electric Vehicle Technology Explained*, 2nd ed. Chichester: John Wiley & Sons, Ltd, 2012.
- [5] J. S. Menye, M. B. Camara, and B. Dakyo, "Lithium Battery Degradation and Failure Mechanisms: A State-of-the-Art Review," Jan. 01, 2025, *Multidisciplinary Digital Publishing Institute (MDPI)*. doi: 10.3390/en18020342.
- [6] A. Barré, B. Deguilhem, S. Grolleau, M. Gérard, F. Suard, and D. Riu, "A review on lithium-ion battery ageing mechanisms and estimations for automotive applications," *J. Power Sources*, vol. 241, pp. 680–689, 2013, doi: <https://doi.org/10.1016/j.jpowsour.2013.05.040>.
- [7] E. V. Beletskii, E. V. Alekseeva, D. V. Spiridonova, A. N. Yankin, and O. V. Levin, "Overcharge Cycling Effect on the Surface Layers and Capacity Fade of Lithium-Ion Batteries with LiFePO₄ Cathodes," *J. Electrochem. Soc.*, vol. 166, no. 6, pp. A1011–A1017, 2019.
- [8] S. Tang *et al.*, "Revisiting the overdischarge process as a novel accelerated aging method for LiFePO₄/Graphite batteries through the unveiling of SEI evolution mechanism," *Energy Storage Mater.*, vol. 74, p. 103916, 2025, doi: <https://doi.org/10.1016/j.ensm.2024.103916>.
- [9] B. Balasingam, M. Ahmed, and K. Pattipati, "Battery Management Systems - Challenges and Some Solutions," *Energies (MDPI)*, vol. 13, no. 15, p. 3853, 2020.
- [10] S. Yadav and Prof. A. K. Asthana, "Advancements in State-of-Charge (SOC) and State-of-Health (SOH) Estimation Techniques for Battery Management Systems," *SMART MOVES JOURNAL IJOSCIENCE*, pp. 14–18, Feb. 2025, doi: 10.24113/ijoscience.v11i2.543.
- [11] G. L. Plett, "Extended Kalman filtering for battery management systems of LiPB-based HEV battery packs: Part 1. Background," *J. Power Sources*, vol.

- 134, no. 2, pp. 252–261, 2004, doi: <https://doi.org/10.1016/j.jpowsour.2004.02.031>.
- [12] A. Aryal, M. J. Hossain, and K. Khalilpour, “A Comparative study on state of charge estimation techniques for Lithium-ion Batteries,” in *2021 IEEE PES Innovative Smart Grid Technologies - Asia (ISGT Asia)*, 2021, pp. 1–5. doi: 10.1109/ISGTAsia49270.2021.9715593.
- [13] Rashid Muhammad Ikram Mohd and Ranggi James Anak Johnny Osman, “Design and Implementation of Battery Management System for Electric Bicycle,” *Sustainable Energy & Power Electronics Research Group*, vol. 8, pp. 115662–115671, 2017, doi: <https://doi.org/10.1051/mateconf/20179701111>.
- [14] M. A. Nusatama, “VALIDASI MODEL RANGKAIAN EKUIVALEN UNTUK BATTERY PACK LiFePO₄ SISTEM PENYIMPANAN ENERGI 12V DAN 24V,” Padang, 2025.
- [15] M. Yazid, “ANALISA PERBANDINGAN PEMODELAN DAN PENGUJIAN BATTERY MANAGEMENT SYSTEM PADA MOBIL LISTRIK BERBASIS TEGANGAN DAN ARUS,” Padang, 2025.
- [16] International Energy Agency, “Global EV Outlook 2023,” Paris, 2023.
- [17] H. Li, M. Ouyang, and L. Lu, “Overview of Batteries and Battery Management for Electric Vehicles,” *Energy Reports*, vol. 7, no. Supplement 6, pp. 444–458, 2021, doi: 10.1016/j.egyr.2021.08.076.
- [18] B. Velez, B. Djudzhev, V. Dimitrov, and N. Hinov, “Comparative Analysis of Lithium-Ion Batteries for Urban Electric/Hybrid Electric Vehicles,” *Batteries*, vol. 10, no. 6, Jun. 2024, doi: 10.3390/batteries10060186.
- [19] A. Theuwis *et al.*, “12. 5. Picart and E. Genies,” John Wiley & Sons, Inc, 1997.
- [20] J. B. Goodenough dan K.-S. Park, “The Li-ion rechargeable battery: A perspective,” *J. Am. Chem. Soc.*, vol. 135, no. 4, pp. 1167–1176, 2013, doi: 10.1021/ja3091438.
- [21] H. M. Hussein, A. Aghmadi, M. S. Abdelrahman, S. M. S. H. Rafin, and O. Mohammed, “A review of battery state of charge estimation and management systems: Models and future prospective,” *Wiley Interdiscip. Rev. Energy Environ.*, vol. 13, no. 1, pp. 1–37, 2024, doi: 10.1002/wene.507.
- [22] K. Movassagh, A. Raihan, B. Balasingam, and K. Pattipati, “A critical look at coulomb counting approach for state of charge estimation in batteries,” *Energies (Basel)*, vol. 14, no. 14, Jul. 2021, doi: 10.3390/en14144074.
- [23] D. Salazar and M. Garcia, “Estimation and Comparison of SOC in Batteries Used in Electromobility Using the Thevenin Model and Coulomb Ampere Counting,” *Energies (Basel)*, vol. 15, no. 19, 2022, doi: 10.3390/en15197204.
- [24] M. Bercibar, I. Gandiaga, I. Villarreal, N. Omar, J. Van Mierlo, and P. Van den Bossche, “Critical review of state of health estimation methods of Li-ion

- batteries for real applications,” *Renewable and Sustainable Energy Reviews*, vol. 56, pp. 572–587, 2016, doi: <https://doi.org/10.1016/j.rser.2015.11.042>.
- [25] J. Lee and J. Won, “Enhanced Coulomb Counting Method for SoC and SoH Estimation Based on Coulombic Efficiency,” *IEEE Access*, vol. 11, pp. 15449–15459, 2023, doi: 10.1109/ACCESS.2023.3244801.
- [26] S. C. Chapra and R. P. Canale, *Numerical Methods for Engineers*, 8th ed. McGraw-Hill, 2020.
- [27] G. Wu, C. Zhu, and C. C. Chan, “Comparison of the First Order and the Second Order Equivalent Circuit Model Applied in State of Charge Estimation for Battery Used in Electric Vehicles,” 2010.
- [28] S. Jiang, “A parameter identification method for a battery equivalent circuit model,” in *SAE 2011 World Congress and Exhibition*, 2011. doi: 10.4271/2011-01-1367.
- [29] V. Behnamgol, M. Asadi, M. A. A. Mohamed, S. S. Aphale, and M. Faraji Niri, “Comprehensive Review of Lithium-Ion Battery State of Charge Estimation by Sliding Mode Observers,” Nov. 01, 2024, *Multidisciplinary Digital Publishing Institute (MDPI)*. doi: 10.3390/en17225754.
- [30] A. A. M. Isa, M. Z. A. Abidin, and R. Ahmad, “Design and Development of Embedded System Using STM32 Microcontroller for Real-Time Monitoring Applications,” *International Journal of Embedded Systems and Applications (IJESA)*, vol. 9, no. 2, pp. 1–8, 2019.
- [31] N. H. Alombah, A. Harrison, J. N. Mungwe, F. F. C. Vincelas, and H. F. Bertrand, “Trio-PV Monitor: A Smart IoT-Based Instrument for Continuous and Reliable Monitoring of Solar PV Installations,” *Engineering Proceedings*, vol. 56, no. 1, pp. 1–9, 2023, doi: 10.3390/ASEC2023-15291.
- [32] H. Satria, S. Nisworo, J. Windarta, and R. B. Y. Syah, “Performance of single axis tracker technology and automatic battery monitoring in solar hybrid systems,” *Bulletin of Electrical Engineering and Informatics*, vol. 12, no. 6, pp. 3247–3255, 2023, doi: 10.11591/eei.v12i6.5506.
- [33] T. R. Manual, “Technical Reference Manual”.
- [34] J. Gubbi, R. Buyya, S. Marusic, and M. Palaniswami, “Internet of Things (IoT): A vision, architectural elements, and future directions,” *Future Generation Computer Systems*, vol. 29, no. 7, pp. 1645–1660, 2013, doi: <https://doi.org/10.1016/j.future.2013.01.010>.