

REFERENCES

- Afroozi, M. A., Gramifar, M., Hazratifar, B., Keshvari, M. M., & Razavian, S. B. (2025). Optimization of Lithium-Ion Battery Circular Economy in Electric Vehicles in Sustainable Supply Chain. *Battery Energy*, 4(2), e20240057. <https://doi.org/10.1002/bte2.20240057>
- Agustiar, D. (2024, January 16). *Jumlah Kendaraan Listrik di Indonesia Tembus 85 Ribu!* <https://www.idntimes.com/automotive/motorbike/jumlah-kendaraan-listrik-di-indonesia-tembus-85-ribu-00-jpd28-gfqz11>
- Ahmed, A. A., Nazzal, M. A., Darras, B. M., & Deiab, I. M. (2023). A Comprehensive Sustainability Assessment of Battery Electric Vehicles, Fuel Cell Electric Vehicles, and Internal Combustion Engine Vehicles through a Comparative Circular Economy Assessment Approach. *Sustainability (Switzerland)*, 15(1). <https://doi.org/10.3390/su15010171>
- Ahuja, J., Dawson, L., & Lee, R. (2020). A circular economy for electric vehicle batteries: Driving the change. *Journal of Property, Planning and Environmental Law*, 12(3), 235–250. <https://doi.org/10.1108/JPEL-02-2020-0011>
- Alamerew, Y. A., & Brissaud, D. (2020). Modelling reverse supply chain through system dynamics for realizing the transition towards the circular economy: A case study on electric vehicle batteries. *Journal of Cleaner Production*, 254. <https://doi.org/10.1016/j.jclepro.2020.120025>
- Albertsen, L., Richter, J. L., Peck, P., Dalhammar, C., & Plepys, A. (2021). Circular business models for electric vehicle lithium-ion batteries: An analysis of current practices of vehicle manufacturers and policies in the EU. *Resources, Conservation and Recycling*, 172. <https://doi.org/10.1016/j.resconrec.2021.105658>
- Ali, H., Khan, H. A., & Pecht, M. G. (2021, August). Circular economy of Li Batteries: Technologies and trends. In *Journal of Energy Storage* (Vol. 40). Elsevier Ltd. <https://doi.org/10.1016/j.est.2021.102690>
- Altay, M. C., Sivri, N., Onat, B., Ahin, Ü., Zoraa, M., & Altay, H. F. (2011). Recycle of metals for end-of-life vehicles (ELVs) and relation to Kyoto protocol. In *Renewable and Sustainable Energy Reviews* (Vol. 15, Issue 5, pp. 2447–2451). Elsevier Ltd. <https://doi.org/10.1016/j.rser.2011.02.017>
- Álvarez Fernández, R., & Castillo Campo, O. (2025). A Method Based on Circular Economy to Improve the Economic Performance of Second-Life Batteries. *Sustainability*, 17(4), 1765. <https://doi.org/10.3390/su17041765>

- Ambituuni, A., Oyinlola, M., Ajala, O., Helen, S., Esfahbodi, A., & Darrow, D. (2025). Mechanic Village Business Networks and Circular Economy Practices in the Automotive Industry. *Business Strategy and the Environment*, 34(3), 3027–3044. <https://doi.org/10.1002/bse.4122>
- Andersen, O. (2013). Towards the Use of Electric Cars. *Green Energy and Technology*, 140, 71–80. https://doi.org/10.1007/978-1-4471-5532-4_6
- Atmo, G. U. (2023, August 18). *Energy Transition in Indonesia and Future Mobility*. Utilization of Renewable Energy Towards Net Zero Emission in 2060. https://www.gaikindo.or.id/wp-content/uploads/2023/08/02.-EBTKE_Seminar-GIIAS_18-Augt_2023_0818-GAIKINDO-R2.pdf
- Azadnia, A. H., Onofrei, G., & Ghadimi, P. (2021). Electric vehicles lithium-ion batteries reverse logistics implementation barriers analysis: A TISM-MICMAC approach. *Resources, Conservation and Recycling*, 174. <https://doi.org/10.1016/j.resconrec.2021.105751>
- Baars, J., Domenech, T., Bleischwitz, R., Melin, H. E., & Heidrich, O. (2021). Circular economy strategies for electric vehicle batteries reduce reliance on raw materials. *Nature Sustainability*, 4(1), 71–79. <https://doi.org/10.1038/s41893-020-00607-0>
- Baazouzi, S., Rist, F. P., Weeber, M., & Birke, K. P. (2021). Optimization of disassembly strategies for electric vehicle batteries. *Batteries*, 7(4). <https://doi.org/10.3390/batteries7040074>
- Balakrishnan, A. S., Ramanathan, R., Ramanathan, U., & Srinivasan, R. (Ramki). (2025). Responsible battery disposal management practices: An investigation in the electric vehicle industry from a circular economy perspective. *Journal of Environmental Management*, 383, 125488. <https://doi.org/10.1016/j.jenvman.2025.125488>
- Beaudet, A., Larouche, F., Amouzegar, K., Bouchard, P., & Zaghbi, K. (2020, July). Key challenges and opportunities for recycling electric vehicle battery materials. In *Sustainability (Switzerland)* (Vol. 12, Issue 14). MDPI. <https://doi.org/10.3390/su12145837>
- Bhaskar, K., & Turaga, R. M. R. (2018). India's E-Waste Rules and Their Impact on E-Waste Management Practices: A Case Study. *Journal of Industrial Ecology*, 22(4), 930–942. <https://doi.org/10.1111/jiec.12619>
- Bruno, M., & Fiore, S. (2023). Material Flow Analysis of Lithium-Ion Battery Recycling in Europe: Environmental and Economic Implications †. *Batteries*, 9(4). <https://doi.org/10.3390/batteries9040231>

- Çakır, M. S., & Serdarasan, S. (2025). A multi-objective approach for designing a circular supply chain for electric vehicle batteries. *Journal of Cleaner Production*, 504, 145438. <https://doi.org/10.1016/j.jclepro.2025.145438>
- Campoverde-Pillco, J., Ochoa-Correa, D., Villa-ávila, E., & Astudillo-Salinas, P. (2024). Reuse of Electrical Vehicle Batteries for Second Life Applications in Power Systems with a High Penetration of Renewable Energy: A Systematic Literature Review | Reutilización de baterías de vehículos eléctricos para aplicaciones de segunda vida en sistem. *Ingenius*, 2024(31), 95–105. <https://doi.org/10.17163/ings.n31.2024.08>
- Chaianong, A., Pharino, C., Langkau, S., Limthongkul, P., & Kunanusont, N. (2024). Pathways for enhancing sustainable mobility in emerging markets: Cost-benefit analysis and policy recommendations for recycling of electric-vehicle batteries in Thailand. *Sustainable Production and Consumption*, 47, 1–16. <https://doi.org/10.1016/j.spc.2024.03.025>
- Chen, Q., Lai, X., Gu, H., Tang, X., Gao, F., Han, X., & Zheng, Y. (2022). Investigating carbon footprint and carbon reduction potential using a cradle-to-cradle LCA approach on lithium-ion batteries for electric vehicles in China. *Journal of Cleaner Production*, 369. <https://doi.org/10.1016/j.jclepro.2022.133342>
- Chiriță, D., Istrițeanu, S., Gheorghe, :, Gheorghe, I., & Băjenaru, V. (2021). Aspects related to current recycling methods and trends in implementing the principles of the circular economy for lithium-ion batteries. In *International Journal of Mechatronics and Applied Mechanics* (Vol. 10).
- Chirumalla, K., Kulkov, I., Parida, V., Dahlquist, E., Johansson, G., & Stefan, I. (2024). Enabling battery circularity: Unlocking circular business model archetypes and collaboration forms in the electric vehicle battery ecosystem. *Technological Forecasting and Social Change*, 199. <https://doi.org/10.1016/j.techfore.2023.123044>
- Colarullo, L., & Thakur, J. (2022). Second-life EV batteries for stationary storage applications in Local Energy Communities. *Renewable and Sustainable Energy Reviews*, 169. <https://doi.org/10.1016/j.rser.2022.112913>
- Cong, L., Liu, W., Kong, S., Li, H., Deng, Y., & Ma, H. (2021, October). End-of-Use Management of Spent Lithium-Ion Batteries From Sustainability Perspective: A Review. In *Journal of Manufacturing Science and Engineering, Transactions of the ASME* (Vol. 143, Issue 10). American Society of Mechanical Engineers (ASME). <https://doi.org/10.1115/1.4050925>

- CORE Indonesia. (2024). *Impact of Electric Vehicles Adoption and Development on Indonesia's Green Economy Progress*. PAGE. <https://admin.un-page.org/wp-content/uploads/2024/07/impact-report-of-electric-vehicle-adoption-and-development-on-igei.pdf>
- Council, A. C. (2024). *Chemistry and Automobiles Driving the Future*.
- Cusenza, M. A., Guarino, F., Longo, S., Ferraro, M., & Cellura, M. (2019). Energy and environmental benefits of circular economy strategies: The case study of reusing used batteries from electric vehicles. *Journal of Energy Storage*, 25. <https://doi.org/10.1016/j.est.2019.100845>
- D'Adamo, I., & Rosa, P. (2019, December). A structured literature review on obsolete electric vehicles management practices. In *Sustainability (Switzerland)* (Vol. 11, Issue 23). MDPI. <https://doi.org/10.3390/su11236876>
- David, R., & Alla, H. (1994). Petri nets for modeling of dynamic systems. A survey. *Automatica*, 30(2), 175–202. [https://doi.org/10.1016/0005-1098\(94\)90024-8](https://doi.org/10.1016/0005-1098(94)90024-8)
- Dawson, L., Ahuja, J., & Lee, R. (2021). Steering extended producer responsibility for electric vehicle batteries. *Environmental Law Review*, 23(2), 128–143. <https://doi.org/10.1177/14614529211006069>
- De Paola, S., Oliva, G., Cairone, S., Magrini, D., Cardona, G., Cimini, V., Zocchi, R., Zarra, T., Belgiorno, V., & Naddeo, V. (2025). Reimagining landfills as energy hubs: A new integrated approach for biomethane and green hydrogen production. *Energy Nexus*, 20, 100561. <https://doi.org/10.1016/j.nexus.2025.100561>
- Demartini, M., Ferrari, M., Govindan, K., & Tonelli, F. (2023). The transition to electric vehicles and a net zero economy: A model based on circular economy, stakeholder theory, and system thinking approach. *Journal of Cleaner Production*, 410. <https://doi.org/10.1016/j.jclepro.2023.137031>
- Deng, S., Kpodzro, E., Maani, T., Li, Z., Huang, A., Yih, Y., Zhao, F., & Sutherland, J. W. (2022). Planning a circular economy system for electric vehicles using network simulation. *Journal of Manufacturing Systems*, 63, 95–106. <https://doi.org/10.1016/j.jmsy.2022.03.003>
- D'Inverno, G., Carosi, L., & Romano, G. (2024). Meeting the challenges of the waste hierarchy: A performance evaluation of EU countries. *Ecological Indicators*, 160. <https://doi.org/10.1016/j.ecolind.2024.111641>
- Dominidiato, M., Hjelmgren, D., & Lind, F. (2025). Towards a circular economy through collaborative product development in business relationships: A case study in the

- denim industry. *Journal of Business & Industrial Marketing*, 40(13), 186–198.
<https://doi.org/10.1108/JBIM-11-2024-0879>
- Dong, H., Zhuang, W., Chen, B., Wang, Y., Lu, Y., Liu, Y., Xu, L., & Yin, G. (2022). A comparative study of energy-efficient driving strategy for connected internal combustion engine and electric vehicles at signalized intersections. *Applied Energy*, 310. <https://doi.org/10.1016/j.apenergy.2022.118524>
- Doose, S., Mayer, J. K., Michalowski, P., & Kwade, A. (2021, February). Challenges in ecofriendly battery recycling and closed material cycles: A perspective on future lithium battery generations. In *Metals* (Vol. 11, Issue 2, pp. 1–17). MDPI AG.
<https://doi.org/10.3390/met11020291>
- Duan, K., Pang, G., Lin, Y., & Lonsdale, C. (2025). Unlocking blockchain's potential in collaborative remanufacturing and data sharing: A case study on electric vehicle batteries. *Industrial Management & Data Systems*, 125(7), 2321–2347.
<https://doi.org/10.1108/IMDS-11-2024-1137>
- Dunn, J., Kendall, A., & Slattey, M. (2022). Electric vehicle lithium-ion battery recycled content standards for the US – targets, costs, and environmental impacts. *Resources, Conservation and Recycling*, 185.
<https://doi.org/10.1016/j.resconrec.2022.106488>
- EEA. (2021). *Greenhouse gas emissions from transport in Europe*.
- Eisenhardt, K. M. (1989). Building Theories from Case Study Research. In *Source: The Academy of Management Review* (Vol. 14, Issue 4, pp. 532–550).
<https://www.jstor.org/stable/258557>
- Ermolaeva, Y. V. (2025). A Multi-Level Perspective Analysis of Green Construction Development in Russian Cities. *Changing Societies & Personalities*, 9(4), 961–986. <https://doi.org/10.15826/csp.2025.9.4.361>
- European Commission (Ed.). (2020). *User guide to the SME definition*. Publications Office. <https://doi.org/10.2873/677467>
- Fajri, M. (2024, January 3). 62.409 Motor Listrik dan 12.248 Mobil Listrik Sudah Mengaspal di RI. <https://kumparan.com/kumparanbisnis/62-409-motor-listrik-dan-12-248-mobil-listrik-sudah-mengaspal-di-ri-22GYu4ZkdhY>
- Fallah, N., & Fitzpatrick, C. (2022). How will retired electric vehicle batteries perform in grid-based second-life applications? A comparative techno-economic evaluation of used batteries in different scenarios. *Journal of Cleaner Production*, 361.
<https://doi.org/10.1016/j.jclepro.2022.132281>

- Fallah, N., Fitzpatrick, C., Killian, S., & Johnson, M. (2021). End-of-Life Electric Vehicle Battery Stock Estimation in Ireland through Integrated Energy and Circular Economy Modelling. *Resources, Conservation and Recycling*, 174. <https://doi.org/10.1016/j.resconrec.2021.105753>
- Frank, M., Preussner, S., Cattani, N. S., Friege, M., Heimes, H. H., & Kampker, A. (2024). Understanding the Economics of Aged Traction Batteries: Market Value and Dynamics. *Batteries*, 10(5), 162. <https://doi.org/10.3390/batteries10050162>
- Fu, J., Chen, X., & Hu, Q. (2018). Subsidizing strategies in a sustainable supply chain. *Journal of the Operational Research Society*, 69(2), 283–295. <https://doi.org/10.1057/s41274-017-0199-2>
- Furtado, A., Iyer-Raniga, U., Shumon, R., & Gajanayake, A. (2024). Exploring key factors to achieve circularity for end-of-life electric vehicle lithium batteries in Australia. *IOP Conference Series: Earth and Environmental Science*, 1363(1), 012053. <https://doi.org/10.1088/1755-1315/1363/1/012053>
- Gahlaut, T., & Dwivedi, G. (2023). Policy recommendations to enhance circular economy of LIBs in an emerging economy. *Environment Systems and Decisions*. <https://doi.org/10.1007/s10669-023-09941-y>
- Garrido-Hidalgo, C., Ramirez, F. J., Olivares, T., & Roda-Sanchez, L. (2020). The adoption of Internet of Things in a Circular Supply Chain framework for the recovery of WEEE: The case of Lithium-ion electric vehicle battery packs. *Waste Management*, 103, 32–44. <https://doi.org/10.1016/j.wasman.2019.09.045>
- Gebhardt, M., Beck, J., Kopyto, M., & Spieske, A. (2022). Determining requirements and challenges for a sustainable and circular electric vehicle battery supply chain: A mixed-methods approach. *Sustainable Production and Consumption*, 33, 203–217. <https://doi.org/10.1016/j.spc.2022.06.024>
- GEM Indonesia. (2021, April 8). *The Government's Efforts to Make Indonesia become a Major Player in the Electric Vehicle Industry*. <https://www.ev-indonesia.net/read/the-governments-efforts-to-make-indonesia-become-a-major-player-in-the-electric-vehicle-industry>
- GEM Indonesia. (2026). *The 5th Indonesia International Electric Vehicle, Technology & Component Exhibition 2026*. <https://www.ev-indonesia.net/>
- Glöser-Chahoud, S., Huster, S., Rosenberg, S., Baazouzi, S., Kiemel, S., Singh, S., Schneider, C., Weeber, M., Miehe, R., & Schultmann, F. (2021). Industrial disassembling as a key enabler of circular economy solutions for obsolete electric

- vehicle battery systems. *Resources, Conservation and Recycling*, 174. <https://doi.org/10.1016/j.resconrec.2021.105735>
- Gomes, L. A. D. V., Faria, A. M. D., Braz, A. C., Mello, A. M. D., Borini, F. M., & Ometto, A. R. (2023). Circular ecosystem management: Orchestrating ecosystem value proposition and configuration. *International Journal of Production Economics*, 256, 108725. <https://doi.org/10.1016/j.ijpe.2022.108725>
- Grandjean, T. R. B., Groenewald, J., McGordon, A., Widanage, W. D., & Marco, J. (2018). Accelerated internal resistance measurements of lithium-ion cells to support future end-of-life strategies for electric vehicles. *Batteries*, 4(4). <https://doi.org/10.3390/batteries4040049>
- Gu, X., Ieromonachou, P., Zhou, L., & Tseng, M. L. (2018). Optimising quantity of manufacturing and remanufacturing in an electric vehicle battery closed-loop supply chain. *Industrial Management and Data Systems*, 118(1), 283–302. <https://doi.org/10.1108/IMDS-04-2017-0132>
- Guo, M., & Huang, W. (2023). Consumer Willingness to Recycle The Wasted Batteries of Electric Vehicles in the Era of Circular Economy. *Sustainability (Switzerland)*, 15(3). <https://doi.org/10.3390/su15032630>
- Guzzo, D., Pigosso, D. C. A., Videira, N., & Mascarenhas, J. (2022). A system dynamics-based framework for examining Circular Economy transitions. *Journal of Cleaner Production*, 333. <https://doi.org/10.1016/j.jclepro.2021.129933>
- Habiburrahman, M., Tri Setyoko, A., Nurcahyo, R., Daulay, H., & Natsuda, K. (2025). Circular economy strategy for waste management companies of electric vehicle batteries in Indonesia. *International Journal of Productivity and Performance Management*, 74(11), 21–45. <https://doi.org/10.1108/IJPPM-01-2024-0015>
- Hartwell, I., & Marco, J. (2016). Management of intellectual property uncertainty in a remanufacturing strategy for automotive energy storage systems. *Journal of Remanufacturing*, 6(1). <https://doi.org/10.1186/s13243-016-0025-z>
- Hathaway, J., Contreras, C. A., Asif, M. E., Stolkin, R., & Rastegarpanah, A. (2024). Technoeconomic Assessment of Electric Vehicle Battery Disassembly—Challenges and Opportunities from a Robotics Perspective. *IEEE Access*. <https://doi.org/10.1109/ACCESS.2024.3520414>
- He, Z., Sun, X., Nakajima, K., Murakami, S., Hijioka, Y., Fujii, M., & Sun, L. (2025). Rapid vehicle electrification reduces carbon benefits but increases resource savings in circular automobile transitions. *Environmental Research: Infrastructure and Sustainability*, 5(1), 015010. <https://doi.org/10.1088/2634-4505/adaf52>

- Hong, G., & Choi, W. (2025). Utilizing Ensemble Models Under Various Discharge Conditions for Static Capacity Estimation to Promote the Reuse of Retired EV Batteries. *International Journal of Precision Engineering and Manufacturing-Green Technology*. <https://doi.org/10.1007/s40684-025-00701-8>
- Hou, R., Lei, L., Jin, K., Lin, X., & Xiao, L. (2022). Introducing electric vehicles? Impact of network effect on profits and social welfare. *Energy*, 243. <https://doi.org/10.1016/j.energy.2021.123002>
- Hu, X., Yan, W., Zhang, X., Feng, Z., Wang, Y., Ying, B., & Zhang, H. (2022). LRP-Based Design of Sustainable Recycling Network for Electric Vehicle Batteries. *Processes*, 10(2). <https://doi.org/10.3390/pr10020273>
- Huster, S., Glöser-Chahoud, S., Rosenberg, S., & Schultmann, F. (2022). A simulation model for assessing the potential of remanufacturing electric vehicle batteries as spare parts. *Journal of Cleaner Production*, 363. <https://doi.org/10.1016/j.jclepro.2022.132225>
- Huster, S., Rosenberg, S., Hufnagel, S., Rudi, A., & Schultmann, F. (2024). Do consumers want reconditioned electric vehicle batteries? – A discrete choice experiment. *Sustainable Production and Consumption*, 48, 446–459. <https://doi.org/10.1016/j.spc.2024.05.027>
- Intergovernmental Panel On Climate Change (Ippc). (2023). *Climate Change 2021 – The Physical Science Basis: Working Group I Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (1st ed.). Cambridge University Press. <https://doi.org/10.1017/9781009157896>
- International Energy Agency. (2022). *An Energy Sector Roadmap to Net Zero Emissions in Indonesia*. <https://www.iea.org/reports/an-energy-sector-roadmap-to-net-zero-emissions-in-indonesia/executive-summary>
- International Energy Agency. (2023). *Sustainable and Responsible Critical Mineral Supply Chains*.
- International Energy Agency. (2025). *Global Critical Minerals Outlook 2025*.
- Islam, M. T., & Iyer-Raniga, U. (2022, June). Lithium-Ion Battery Recycling in the Circular Economy: A Review. In *Recycling* (Vol. 7, Issue 3). MDPI. <https://doi.org/10.3390/recycling7030033>
- Istrițeanu, S., Băjenaru, V., & Badea, F. (2024). The automotive industry's transition to the circular economy through digital transformation. In *International Journal of Mechatronics and Applied Mechanics* (p. 15). <https://www.oliverwyman.com/our->

- Izquierdo-Montfort, J. O., & De Rongé, Y. (2025). Circular business model innovation: Uncovering practices and patterns to retain the value of resources. *Sustainable Production and Consumption*, 58, 188–202. <https://doi.org/10.1016/j.spc.2025.06.009>
- Kaiyandra, D. R., F, F., & Rakoto, N. (2023). Petri Nets Application for Supply Chain Management: A Review of Recent Literature. *2023 9th International Conference on Control, Decision and Information Technologies (CoDIT)*, 1391–1396. <https://doi.org/10.1109/CoDIT58514.2023.10284505>
- Kamalina, A. R. (2025, October 24). *Kemhub: Jumlah Kendaraan Listrik 207.478 Unit, Sepeda Motor Paling Banyak*. <https://otomotif.bisnis.com/read/20251024/275/1923129/kemhub-jumlah-kendaraan-listrik-207478-unit-sepeda-motor-paling-banyak>
- Kastanaki, E., & Giannis, A. (2023). Dynamic estimation of end-of-life electric vehicle batteries in the EU-27 considering reuse, remanufacturing and recycling options. *Journal of Cleaner Production*, 393. <https://doi.org/10.1016/j.jclepro.2023.136349>
- Klein, M., & Spsychalska-Wojtkiewicz, M. (2020). Cross-Sector Partnerships for Innovation and Growth: Can Creative Industries Support Traditional Sector Innovations? *Sustainability*, 12(23), 10122. <https://doi.org/10.3390/su122310122>
- Kotak, Y., Fernández, C. M., Casals, L. C., Kotak, B. S., Koch, D., Geisbauer, C., Trilla, L., Gómez-Núñez, A., & Schweiger, H. G. (2021, April). End of electric vehicle batteries: Reuse vs. Recycle. In *Energies* (Vol. 14, Issue 8). MDPI AG. <https://doi.org/10.3390/en14082217>
- Kumar, P., Singh, R. K., Paul, J., & Sinha, O. (2021). Analyzing challenges for sustainable supply chain of electric vehicle batteries using a hybrid approach of Delphi and Best-Worst Method. *Resources, Conservation and Recycling*, 175. <https://doi.org/10.1016/j.resconrec.2021.105879>
- Kumar, S., & Yamaoka, T. (2007). System dynamics study of the Japanese automotive industry closed loop supply chain. *Journal of Manufacturing Technology Management*, 18(2), 115–138. <https://doi.org/10.1108/17410380710722854>
- Kurdve, M., Zackrisson, M., Johansson, M. I., Ebin, B., & Harlin, U. (2019). Considerations when modelling ev battery circularity systems. *Batteries*, 5(2). <https://doi.org/10.3390/batteries5020040>
- Lampón, J. F. (2022). Efficiency in design and production to achieve sustainable development challenges in the automobile industry: Modular electric vehicle platforms. *Sustainable Development*. <https://doi.org/10.1002/sd.2370>

- Lander, L., Tagnon, C., Nguyen-Tien, V., Kendrick, E., Elliott, R. J. R., Abbott, A. P., Edge, J. S., & Offer, G. J. (2023). Breaking it down: A techno-economic assessment of the impact of battery pack design on disassembly costs. *Applied Energy*, 331. <https://doi.org/10.1016/j.apenergy.2022.120437>
- Li, H., Cong, L., Ma, H., Liu, W., Deng, Y., & Kong, S. (2022). Screening of Retired Lithium-Ion Batteries Using Incremental Capacity Charging Curve-Based Residual Capacity Estimation Method for Facilitating Sustainable Circular Lithium-Ion Battery System. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, 144(2). <https://doi.org/10.1115/1.4051677>
- Li, K., Qin, Y., Zhu, D., & Zhang, S. (2023). Upgrading waste electrical and electronic equipment recycling through extended producer responsibility: A case study. *Circular Economy*, 2(1), 100025. <https://doi.org/10.1016/j.cec.2023.100025>
- Li, L., Dababneh, F., & Zhao, J. (2018). Cost-effective supply chain for electric vehicle battery remanufacturing. *Applied Energy*, 226, 277–286. <https://doi.org/10.1016/j.apenergy.2018.05.115>
- Li, X. (2022). Collection mode choice of spent electric vehicle batteries: Considering collection competition and third-party economies of scale. *Scientific Reports*, 12(1). <https://doi.org/10.1038/s41598-022-10433-3>
- Li, Z., & Wei, J. (2025). Policy optimization and practical applications in blockchain-enabled electric vehicle battery recycling system. *Computers & Industrial Engineering*, 204, 111119. <https://doi.org/10.1016/j.cie.2025.111119>
- Lima, M. C. C., Pontes, L. P., Vasconcelos, A. S. M., Junior, W. de A. S., & Wu, K. (2022). Economic Aspects for Recycling of Used Lithium-Ion Batteries from Electric Vehicles. *Energies*, 15(6). <https://doi.org/10.3390/en15062203>
- Liu, L., Pu, Y., Liu, Z., & Liu, J. (2023). Analysis of Green Closed-Loop Supply Chain Efficiency under Generalized Stochastic Petri Nets. *Sustainability (Switzerland)*, 15(17). <https://doi.org/10.3390/su151713181>
- Loon, P. van, & Wassenhove, L. N. V. (2018). Assessing the economic and environmental impact of remanufacturing: A decision support tool for OEM suppliers. *International Journal of Production Research*, 56(4), 1662–1674. <https://doi.org/10.1080/00207543.2017.1367107>
- Ma, P., Meng, Y., Gong, Y., & Li, M. (2022). Optimal models for sustainable supply chain finance: Evidence from electric vehicle industry. *International Journal of Production Research*. <https://doi.org/10.1080/00207543.2022.2093142>

- Macarthur, E. (2012). *Founding Partners of the TOWARDS THE CIRCULAR ECONOMY Economic and business rationale for an accelerated transition*.
<https://apki.net/wp-content/uploads/2012/06/Toward-The-Circular-Economy.pdf>
- Malinauskaite, J., Anguilano, L., & Rivera, X. S. (2021). Circular waste management of electric vehicle batteries: Legal and technical perspectives from the EU and the UK post Brexit. *International Journal of Thermofluids*, 10.
<https://doi.org/10.1016/j.ijft.2021.100078>
- Mallari, C. B., San Juan, J. L., & Li, R. (2025). Policy design for the circular economy rebound: A system dynamics approach to green transitions in product life extension models. *Journal of Cleaner Production*, 521, 146165.
<https://doi.org/10.1016/j.jclepro.2025.146165>
- Martins, A. V., Godina, R., Azevedo, S. G., & Carvalho, H. (2021). Towards the development of a model for circularity: The circular car as a case study. *Sustainable Energy Technologies and Assessments*, 45.
<https://doi.org/10.1016/j.seta.2021.101215>
- Martins, L. S., Guimarães, L. F., Junior, A. B. B., Tenório, J. A. S., & Espinosa, D. C. R. (2021, October). Electric car battery: An overview on global demand, recycling and future approaches towards sustainability. In *Journal of Environmental Management* (Vol. 295). Academic Press.
<https://doi.org/10.1016/j.jenvman.2021.113091>
- Mathew, G., Teoh, W. H., Rahman, W. M. A. W. A., & Abdullah, N. (2023). Survey on actions and willingness towards the disposal, collection, and recycling of spent lithium-ion batteries in Malaysia. *Journal of Cleaner Production*, 421.
<https://doi.org/10.1016/j.jclepro.2023.138394>
- McCullum, L. B., Karagoz, A., Dede, C., Garcia, R., Nosrat, F., Hemmati, M., Hosseinian, S., Schaefer, A. J., Fuller, C. D., the Rice/MD Anderson Center for Operations Research in Cancer (CORC), & MD Anderson Head and Neck Cancer Symptom Working Group. (2024). Markov models for clinical decision-making in radiation oncology: A systematic review. *Journal of Medical Imaging and Radiation Oncology*, 68(5), 610–623. <https://doi.org/10.1111/1754-9485.13656>
- Meiers, J., & Frey, G. (2023). A Case Study of the Use of Smart EV Charging for Peak Shaving in Local Area Grids. *Energies*, 17(1), 47.
<https://doi.org/10.3390/en17010047>
- Meng, K., Xu, G., Peng, X., Youcef-Toumi, K., & Li, J. (2022, July). Intelligent disassembly of electric-vehicle batteries: A forward-looking overview. In

- Resources, Conservation and Recycling* (Vol. 182). Elsevier B.V.
<https://doi.org/10.1016/j.resconrec.2022.106207>
- Mengist, W., Soromessa, T., & Legese, G. (2020, February). Ecosystem services research in mountainous regions: A systematic literature review on current knowledge and research gaps. In *Science of the Total Environment* (Vol. 702). Elsevier B.V.
<https://doi.org/10.1016/j.scitotenv.2019.134581>
- Meraj, A., Shoa, T., Fard, F. S. N., & Mina, H. (2024). A comprehensive bi-objective optimization model to design circular supply chain networks for sustainable electric vehicle batteries. *AIMS Environmental Science*, 11(2), 279–303.
<https://doi.org/10.3934/environsci.2024013>
- Micheline, E., Höschle, P., Ratz, F., Stadlbauer, M., Rom, W., Ellersdorfer, C., & Moser, J. (2023). Potential and Most Promising Second-Life Applications for Automotive Lithium-Ion Batteries Considering Technical, Economic and Legal Aspects. *Energies*, 16(6). <https://doi.org/10.3390/en16062830>
- Mignacca, B., Filippelli, S., Strazzullo, S., Tiburzi, L., Urbinati, A., & Kirchherr, J. (2025). Building circular economy theories: A practical-oriented perspective and a way forward. *Journal of Industrial Ecology*, 29(2), 418–428.
<https://doi.org/10.1111/jiec.13622>
- Moore, E. A., Russell, J. D., Babbitt, C. W., Tomaszewski, B., & Clark, S. S. (2020). Spatial modeling of a second-use strategy for electric vehicle batteries to improve disaster resilience and circular economy. *Resources, Conservation and Recycling*, 160. <https://doi.org/10.1016/j.resconrec.2020.104889>
- Murata, T. (1989). Petri Nets: Properties, Analysis and Applications. *Proceedings of the IEEE*, 77(4), 541–580. <https://doi.org/10.1109/5.24143>
- Murtiningrum, A. D., Darmawan, A., & Wong, H. (2022). The adoption of electric motorcycles: A survey of public perception in Indonesia. *Journal of Cleaner Production*, 379. <https://doi.org/10.1016/j.jclepro.2022.134737>
- Nechita, R.-M., Deselnicu, D.-C., Istrițeanu, S.-E., & Băjenaru, V.-D. (2025). Analyzing Critical Factors for the Automotive Industry's Transition to a Circular Economy: A Multi-Attribute Decision-Making Analysis Approach. *Applied System Innovation*, 8(5), 150. <https://doi.org/10.3390/asi8050150>
- Neumann, J., Petranikova, M., Meeus, M., Gamarra, J. D., Younesi, R., Winter, M., & Nowak, S. (2022, May). Recycling of Lithium-Ion Batteries—Current State of the Art, Circular Economy, and Next Generation Recycling. In *Advanced Energy*

- Materials* (Vol. 12, Issue 17). John Wiley and Sons Inc.
<https://doi.org/10.1002/aenm.202102917>
- Nguyen-Tien, V., Dai, Q., Harper, G. D. J., Anderson, P. A., & Elliott, R. J. R. (2022). Optimising the geospatial configuration of a future lithium ion battery recycling industry in the transition to electric vehicles and a circular economy. *Applied Energy*, 321. <https://doi.org/10.1016/j.apenergy.2022.119230>
- Norris, J. R. (1998). *Markov chains* (1st pbk. ed). Cambridge University Press.
- Novanto, R. F. (2023, August 4). 56.988 Kendaraan Listrik Wira-wiri di Indonesia, Ini Rinciannya. <https://kumparan.com/kumparanoto/56-988-kendaraan-listrik-wira-wiri-di-indonesia-ini-rinciannya-20AYCOJ41Iu/full>
- Nurdiawati, A., & Agrawal, T. K. (2022). Creating a circular EV battery value chain: End-of-life strategies and future perspective. *Resources, Conservation and Recycling*, 185. <https://doi.org/10.1016/j.resconrec.2022.106484>
- Nyffenegger, R., Baldassarre, B., Bocken, N., & Groesser, S. N. (2025). Circular Economy Policies and Business Models in the EU Renewable Energy Sector: The Case of Solar Photovoltaic Industry. *Business Strategy and the Environment*, bse.70188. <https://doi.org/10.1002/bse.70188>
- Obrecht, M., Singh, R., & Zorman, T. (2022). Conceptualizing a new circular economy feature – storing renewable electricity in batteries beyond EV end-of-life: The case of Slovenia. *International Journal of Productivity and Performance Management*, 71(3), 896–911. <https://doi.org/10.1108/IJPPM-01-2021-0029>
- OECD. (2024). *Extended Producer Responsibility: Basic facts and key principles* (OECD Environment Policy Papers No. 41; OECD Environment Policy Papers, Vol. 41). <https://doi.org/10.1787/67587b0b-en>
- Olsson, L., Fallahi, S., Schnurr, M., Diener, D., & Loon, P. van. (2018). Circular business models for extended ev battery life. *Batteries*, 4(4). <https://doi.org/10.3390/batteries4040057>
- Ostermann, C. M., Nascimento, L. D. S., & Zen, A. C. (2021). Business Model Innovation for Circular Economy in Fashion Industry: A Startups' Perspective. *Frontiers in Sustainability*, 2, 766614. <https://doi.org/10.3389/frsus.2021.766614>
- Ouaneche, T., Stievano, L., Rabuel, F., Jamali, A., Guéry, C., Monconduit, L., Sougrati, M. T., & Recham, N. (2025). Revitalize LFP! Ascorbic Acid-Assisted Direct Regeneration of Spent LiFePO₄ for Li-Ion Batteries. *Batteries & Supercaps*, 2400765. <https://doi.org/10.1002/batt.202400765>

- Pagliaro, M., & Meneguzzo, F. (2019, June). Lithium battery reusing and recycling: A circular economy insight. In *Heliyon* (Vol. 5, Issue 6). Elsevier Ltd. <https://doi.org/10.1016/j.heliyon.2019.e01866>
- Pantelatos, L., Ahmed, S., Boks, C., & Verhulst, E. (2025). Repurposing Electric Vehicle Lithium-ion Batteries for the Household Context: A Delphi Study. *Journal of Circular Economy*, 4(1). <https://doi.org/10.55845/TEFD6721>
- Parchomenko, A., Nelen, D., Gillabel, J., Vrancken, K. C., & Rechberger, H. (2021). Resource effectiveness of the European automotive sector – a statistical entropy analysis over time. *Resources, Conservation and Recycling*, 169. <https://doi.org/10.1016/j.resconrec.2021.105558>
- Pietrulla, F. (2022). Circular ecosystems: A review. *Cleaner and Circular Bioeconomy*, 3, 100031. <https://doi.org/10.1016/j.clcb.2022.100031>
- Pitoko, R. A. (2025, October 24). *Kemhub Ungkap Jumlah Kendaraan Listrik Ada 207.488 Unit*. <https://www.idntimes.com/business/economy/kemhub-ungkap-jumlah-kendaraan-listrik-ada-207-488-unit-00-brqf5-692bhh>
- Pohlmann, A., Popowicz, M., Schöggel, J.-P., & Baumgartner, R. J. (2025). Digital product passports for electric vehicle batteries: Stakeholder requirements for sustainability and circularity. *Cleaner Production Letters*, 8. <https://doi.org/10.1016/j.clpl.2024.100090>
- Pollard, J., Osmani, M., Cole, C., Grubnic, S., & Colwill, J. (2021). A circular economy business model innovation process for the electrical and electronic equipment sector. *Journal of Cleaner Production*, 305, 127211. <https://doi.org/10.1016/j.jclepro.2021.127211>
- Pollard, J., Osmani, M., Grubnic, S., Díaz, A. I., Grobe, K., Kaba, A., Ünlüer, Ö., & Panchal, R. (2023). Implementing a circular economy business model canvas in the electrical and electronic manufacturing sector: A case study approach. *Sustainable Production and Consumption*, 36, 17–31. <https://doi.org/10.1016/j.spc.2022.12.009>
- Pratap, B., Mohan, T. V. K., Amit, R. K., & Venugopal, S. (2024). Evaluating circular economy strategies for raw material recovery from end-of-life lithium-ion batteries: A system dynamics model. *Sustainable Production and Consumption*, 50, 191–204. <https://doi.org/10.1016/j.spc.2024.07.027>
- Prates, L., Karthe, D., Zhang, L., Wang, L., O'Connor, J., Lee, H., & Dornack, C. (2023). Sustainability for all? The challenges of predicting and managing the potential risks of end-of-life electric vehicles and their batteries in the Global South.

- Environmental Earth Sciences*, 82(6). <https://doi.org/10.1007/s12665-023-10806-5>
- Prause, G., & Gerlitz, L. (2024). NFT-based life cycle management for batteries of e-cars. *Transport and Telecommunication*, 25(4), 378–391. <https://doi.org/10.2478/ttj-2024-0028>
- Prenner, S., Part, F., Jung-Waclik, S., Bordes, A., Leonhardt, R., Jandric, A., Schmidt, A., & Huber-Humer, M. (2024). Barriers and framework conditions for the market entry of second-life lithium-ion batteries from electric vehicles. *Heliyon*, 10(18). <https://doi.org/10.1016/j.heliyon.2024.e37423>
- Quinteros-Condoretty, A. R., Laukkanen, M., Kainiemi, L., Pinto, S. M., Lourenço, E. J., Oliveira, L., Albareda, L., & Barbiellini, B. (2025). Conceptual model for extending electric vehicle battery lifetime. *Resources, Conservation and Recycling*, 212. <https://doi.org/10.1016/j.resconrec.2024.107943>
- Rajaeifar, M. A., Ghadimi, P., Raugei, M., Wu, Y., & Heidrich, O. (2022, May). Challenges and recent developments in supply and value chains of electric vehicle batteries: A sustainability perspective. In *Resources, Conservation and Recycling* (Vol. 180). Elsevier B.V. <https://doi.org/10.1016/j.resconrec.2021.106144>
- Rastegarpanah, A., Mineo, C., Contreras, C. A., Aflakian, A., Paragliola, G., & Stolkin, R. (2024). Electric Vehicle Battery Disassembly Using Interfacing Toolbox for Robotic Arms. *Batteries*, 10(5). <https://doi.org/10.3390/batteries10050147>
- Raung, R. Z., Sutopo, W., Hisjam, M., & Hartono, D. (2025). Scenario analysis of subsidy policies on electric motorcycle market in Indonesia using system dynamics simulation. *Transportation Research Interdisciplinary Perspectives*, 32, 101487. <https://doi.org/10.1016/j.trip.2025.101487>
- Ren, G., & Eveleigh, T. (2025). A quantitative assessment of policy-driven impacts on circular economy of electric vehicle batteries in the United States. *Environment Systems and Decisions*, 45(1). <https://doi.org/10.1007/s10669-024-09995-6>
- Richa, K., Babbitt, C. W., & Gaustad, G. (2017). Eco-Efficiency Analysis of a Lithium-Ion Battery Waste Hierarchy Inspired by Circular Economy. *Journal of Industrial Ecology*, 21(3), 715–730. <https://doi.org/10.1111/jiec.12607>
- Rizos, V., & Urban, P. (2024). Barriers and policy challenges in developing circularity approaches in the EU battery sector: An assessment. *Resources, Conservation and Recycling*, 209. <https://doi.org/10.1016/j.resconrec.2024.107800>

- Rönkkö, P., Majava, J., Hyvärinen, T., Oksanen, I., Tervonen, P., & Lassi, U. (2023). The circular economy of electric vehicle batteries: A Finnish case study. *Environment Systems and Decisions*. <https://doi.org/10.1007/s10669-023-09916-z>
- Rosenberg, S., Huster, S., Rudi, A., & Schultmann, F. (2025). Assessing economic uncertainty in dynamic reverse logistics networks – A stochastic modeling approach for planning circular battery treatment. *Computers & Industrial Engineering*, 201, 110900. <https://doi.org/10.1016/j.cie.2025.110900>
- Rosenboom, J. G., Langer, R., & Traverso, G. (2022, February). Bioplastics for a circular economy. In *Nature Reviews Materials* (Vol. 7, Issue 2, pp. 117–137). Nature Research. <https://doi.org/10.1038/s41578-021-00407-8>
- Roy, T., Garza-Reyes, J. A., Kumar, V., Kumar, A., & Agrawal, R. (2022). Redesigning traditional linear supply chains into circular supply chains—A study into its challenges. *Sustainable Production and Consumption*, 31, 113–126. <https://doi.org/10.1016/j.spc.2022.02.004>
- Sanguesa, J. A., Torres-Sanz, V., Garrido, P., Martinez, F. J., & Marquez-Barja, J. M. (2021, March). A review on electric vehicles: Technologies and challenges. In *Smart Cities* (Vol. 4, Issue 1, pp. 372–404). MDPI. <https://doi.org/10.3390/smartcities4010022>
- Sarker, Md. T., Haram, M. H. S. M., Shern, S. J., Ramasamy, G., & Al Farid, F. (2024). Second-Life Electric Vehicle Batteries for Home Photovoltaic Systems: Transforming Energy Storage and Sustainability. *Energies*, 17(10), 2345. <https://doi.org/10.3390/en17102345>
- Sasongko, T. W., Ciptomulyono, U., Wirjodirdjo, B., & Prastawa, A. (2024). Identification of electric vehicle adoption and production factors based on an ecosystem perspective in Indonesia. *Cogent Business & Management*, 11(1), 2332497. <https://doi.org/10.1080/23311975.2024.2332497>
- Sedlmaier, A., & Dietl, T. (2018). 3D roll forming center for automotive applications. *Procedia Manufacturing*, 15, 767–774. <https://doi.org/10.1016/j.promfg.2018.07.319>
- Sehgal, S., Bali, S., Gunasekaran, A., Roy, M. H., & Gugnani, R. (2025). Leveraging Circular Economy Transition to Achieve Resilient and Sustainable Supply Chains of the Future: A study of EEE Industry. *Sustainable Futures*, 10, 101053. <https://doi.org/10.1016/j.sftr.2025.101053>

- Seika, J., & Kubli, M. (2024). Repurpose or recycle? Simulating end-of-life scenarios for electric vehicle batteries under the EU battery regulation. *Sustainable Production and Consumption*, 51, 644–656. <https://doi.org/10.1016/j.spc.2024.09.023>
- Sengupta, D., Ilankoon, I. M. S. K., Dean Kang, K., & Nan Chong, M. (2022). Circular economy and household e-waste management in India: Integration of formal and informal sectors. *Minerals Engineering*, 184, 107661. <https://doi.org/10.1016/j.mineng.2022.107661>
- Shafique, M., Azam, A., Rafiq, M., & Luo, X. (2022). Life cycle assessment of electric vehicles and internal combustion engine vehicles: A case study of Hong Kong. *Research in Transportation Economics*, 91. <https://doi.org/10.1016/j.retrec.2021.101112>
- Sharma, S. (2024). Role of street-level policy entrepreneurs in sustainability transition: Evidence from India's transition to LED lighting. *Energy Research & Social Science*, 118, 103745. <https://doi.org/10.1016/j.erss.2024.103745>
- Shqairat, A., Liarte, S., Marange, P., Nuur, C., & Chagnes, A. (2024). Implications of European Union regulation on the circular economy and stakeholder strategies in the electric vehicle lithium-ion battery sector. *Management of Environmental Quality*. <https://doi.org/10.1108/MEQ-04-2024-0163>
- Silva, E. R. da, Lohmer, J., Rohla, M., & Angelis, J. (2023). Unleashing the circular economy in the electric vehicle battery supply chain: A case study on data sharing and blockchain potential. *Resources, Conservation and Recycling*, 193. <https://doi.org/10.1016/j.resconrec.2023.106969>
- Slattery, M., Dunn, J., & Kendall, A. (2021). Transportation of electric vehicle lithium-ion batteries at end-of-life: A literature review. *Resources, Conservation and Recycling*, 174. <https://doi.org/10.1016/j.resconrec.2021.105755>
- Sopha, B. M., Purnamasari, D. M., & Ma'mun, S. (2022). Barriers and Enablers of Circular Economy Implementation for Electric-Vehicle Batteries: From Systematic Literature Review to Conceptual Framework. *Sustainability*, 14(10), 6359. <https://doi.org/10.3390/su14106359>
- Sorooshian, S., Khiavi, S. F., Karimi, F., & Mina, H. (2024). Link between sustainable circular supply chain and Internet of Things technology in electric vehicle battery manufacturing industry: A business strategy optimization for pickup and delivery. *Business Strategy and the Environment*, 33(8), 8211–8232. <https://doi.org/10.1002/bse.3905>

- Sterman, J. (2000). *Business dynamics: Systems thinking and modeling for a complex world*. Irwin/McGraw-Hill.
- Strupeit, L., Bocken, N., & Van Opstal, W. (2024). Towards a Circular Solar Power Sector: Experience with a Support Framework for Business Model Innovation. *Circular Economy and Sustainability*, 4(3), 2093–2118. <https://doi.org/10.1007/s43615-024-00377-3>
- Subaidi, A. (2025, February 18). *Jumlah kendaraan bermotor listrik berbasis baterai*. <https://mataram.antaranews.com/berita/425733/jumlah-kendaraan-bermotor-listrik-berbasis-baterai>
- Suman, D., & Rajak, S. (2024). Analysis of barriers to the implementation of circular economy in an Indian electric vehicle batteries manufacturer. *Environment, Development and Sustainability*. <https://doi.org/10.1007/s10668-024-05055-w>
- Suman, D., & Rajak, S. (2025). Assessing the key enablers for circular economy adoption for industrial symbiosis: Evidence from an Indian automotive component manufacturing industry. *Environment, Development and Sustainability*. <https://doi.org/10.1007/s10668-024-05920-8>
- Suriyanon, W., Jakrawatana, N., & Suriyanon, N. (2022). Material flow of nickel in nickel metal hydride batteries waste and possible circularity improvement in Thailand. *Clean Technologies and Environmental Policy*, 24(3), 887–899. <https://doi.org/10.1007/s10098-021-02229-2>
- Syahputri, J., Hall, D., Miller, J., Mahalana, A., & Posada, F. (2026). *Roadmap to zero: Policies to accelerate the electric vehicle transition in Indonesia*. https://theicct.org/wp-content/uploads/2026/04/ID-514-%E2%80%93IDN-roadmap-2026_working-paper_final.pdf
- Tan, J., Su, X., & Yao, S. (2025). An evolutionary game modeling to develop recycling strategy of used batteries of new energy vehicles: Implications for circular economy. *Journal of Environmental Management*, 383, 125293. <https://doi.org/10.1016/j.jenvman.2025.125293>
- Tavana, M., Sohrabi, M., Rezaei, H., Sorooshian, S., & Mina, H. (2023). A sustainable circular supply chain network design model for electric vehicle battery production using internet of things and big data. *Expert Systems*. <https://doi.org/10.1111/exsy.13395>
- Teigiserova, D. A., Hamelin, L., & Thomsen, M. (2020). Towards transparent valorization of food surplus, waste and loss: Clarifying definitions, food waste hierarchy, and

- role in the circular economy. *Science of the Total Environment*, 706. <https://doi.org/10.1016/j.scitotenv.2019.136033>
- Teslarati. (2013). *Tesla Model S Weight Distribution*. <https://www.teslarati.com/tesla-model-s-weight/>
- Thakur, J., Almeida, C. M. L. de, & Baskar, A. G. (2022). Electric vehicle batteries for a circular economy: Second life batteries as residential stationary storage. *Journal of Cleaner Production*, 375. <https://doi.org/10.1016/j.jclepro.2022.134066>
- Tiwari, D., Miscandlon, J., Tiwari, A., & Jewell, G. W. (2021). A review of circular economy research for electric motors and the role of industry 4.0 technologies. *Sustainability (Switzerland)*, 13(17). <https://doi.org/10.3390/su13179668>
- Toorajipour, R., Chirumalla, K., Parida, V., Johansson, G., Dahlquist, E., & Wallin, F. (2022). Preconditions of Circular Business Model Innovation for the Electric Vehicle Battery Second Life: An Ecosystem Perspective. In A. H. C. Ng, A. Syberfeldt, D. Högberg, & M. Holm (Eds.), *Advances in Transdisciplinary Engineering*. IOS Press. <https://doi.org/10.3233/ATDE220147>
- Tripathy, A., Bhuyan, A., Padhy, R., & Corazza, L. (2022). Technological, Organizational, and Environmental Factors Affecting the Adoption of Electric Vehicle Battery Recycling. *IEEE Transactions on Engineering Management*. <https://doi.org/10.1109/TEM.2022.3164288>
- Turaga, R. M. R., Bhaskar, K., Sinha, S., Hinchliffe, D., Hemkhaus, M., Arora, R., Chatterjee, S., Khatriwal, D. S., Radulovic, V., Singhal, P., & Sharma, H. (2019). E-Waste Management in India: Issues and Strategies. *Vikalpa: The Journal for Decision Makers*, 44(3), 127–162. <https://doi.org/10.1177/0256090919880655>
- UK PACT. (2025). *Road map and timetable of two-wheelers electrification in Greater Jakarta*. <https://www.ukpact.co.uk/case-studies/two-wheelers-electrification-in-greater-jakarta>
- Van Gaalen, J. M., & Chris Slootweg, J. (2025). From Critical Raw Materials to Circular Raw Materials. *ChemSusChem*, 18(2), e202401170. <https://doi.org/10.1002/cssc.202401170>
- Verma, S., Dwivedi, G., & Verma, P. (2021). Life cycle assessment of electric vehicles in comparison to combustion engine vehicles: A review. *Materials Today: Proceedings*, 49, 217–222. <https://doi.org/10.1016/j.matpr.2021.01.666>
- Watari, T., Nansai, K., Nakajima, K., McLellan, B. C., Dominish, E., & Giurco, D. (2019). Integrating Circular Economy Strategies with Low-Carbon Scenarios: Lithium Use

- in Electric Vehicles. *Environmental Science and Technology*, 53(20), 11657–11665. <https://doi.org/10.1021/acs.est.9b02872>
- Wei, X., & Dou, X. (2022). Application of sustainable supply chain finance in end-of-life electric vehicle battery management: A literature review. *Management of Environmental Quality: An International Journal*. <https://doi.org/10.1108/MEQ-02-2022-0031>
- Wewer, A., Bilge, P., & Dietrich, F. (2021). Advances of 2nd life applications for lithium ion batteries from electric vehicles based on energy demand. *Sustainability (Switzerland)*, 13(10). <https://doi.org/10.3390/su13105726>
- Widiawati, K., Sopha, B. M., & Rakoto, N. (2023). Electric Vehicle Adoption Modeling in France: A Systematic Literature Review. *2023 IEEE International Conference on Industrial Engineering and Engineering Management, IEEM 2023*, 68–72. <https://doi.org/10.1109/IEEM58616.2023.10406907>
- Widiawati, K., Sopha, B. M., Tjahjono, B., & Rakoto, N. (2025). Circularity potentials, influential factors, modeling approach and policy interventions of circular supply chain for electric vehicles. *Cleaner Engineering and Technology*, 27, 101013. <https://doi.org/10.1016/j.clet.2025.101013>
- Wiechers, P., Hermann, A., Koob, S., Glaum, F., & Gleiß, M. (2024). Development of a Process for Direct Recycling of Negative Electrode Scrap from Lithium-Ion Battery Production on a Technical Scale and Its Influence on the Material Quality. *Batteries*, 10(7), 218. <https://doi.org/10.3390/batteries10070218>
- World Population Review. (2025). *Motorcycles by Country 2025*.
- Wrålsen, B., & O’Born, R. (2023). Use of life cycle assessment to evaluate circular economy business models in the case of Li-ion battery remanufacturing. *International Journal of Life Cycle Assessment*, 28(5), 554–565. <https://doi.org/10.1007/s11367-023-02154-0>
- Wrålsen, B., Prieto-Sandoval, V., Mejia-Villa, A., O’Born, R., Hellström, M., & Faessler, B. (2021). Circular business models for lithium-ion batteries—Stakeholders, barriers, and drivers. *Journal of Cleaner Production*, 317. <https://doi.org/10.1016/j.jclepro.2021.128393>
- Wurster, S., Heß, P., Nauruschat, M., & Jütting, M. (2020). Sustainable circular mobility: User-integrated innovation and specifics of electric vehicle owners. *Sustainability (Switzerland)*, 12(19). <https://doi.org/10.3390/SU12197900>
- Yang, D., Wang, M., Luo, F., Liu, W., Chen, L., & Li, X. (2024). Evaluating the recycling potential and economic benefits of end-of-life power batteries in China based on

- different scenarios. *Sustainable Production and Consumption*, 47, 145–155.
<https://doi.org/10.1016/j.spc.2024.04.001>
- Yin, R. K. (2018). *Case Study Research and Applications Sixth Edition* (Vol. 6).
- Zhang, J., & Azimi, G. (2022). Recycling of lithium, cobalt, nickel, and manganese from end-of-life lithium-ion battery of an electric vehicle using supercritical carbon dioxide. *Resources, Conservation and Recycling*, 187.
<https://doi.org/10.1016/j.resconrec.2022.106628>
- Zhang, X., Lu, Q., & Wu, T. (2011). Petri-net based applications for supply chain management: An overview. *International Journal of Production Research*, 49(13), 3939–3961. <https://doi.org/10.1080/00207543.2010.492800>
- Zhang, X., Zheng, H., Hang, T., & Meng, Q. (2024). How to Choose Recycling Mode between Monopoly and Competition by Considering Blockchain Technology? *Sustainability*, 16(15), 6296. <https://doi.org/10.3390/su16156296>
- Ziegler, D., & Abdelkafi, N. (2022, January). Business models for electric vehicles: Literature review and key insights. In *Journal of Cleaner Production* (Vol. 330). Elsevier Ltd. <https://doi.org/10.1016/j.jclepro.2021.129803>
- Zoka, M., & Korez Vide, R. (2025). Circular Economy Implementation in the Electric and Electronic Equipment Industry: Challenges and Opportunities. *Sustainability*, 17(17), 7700. <https://doi.org/10.3390/su17177700>