

DAFTAR PUSTAKA

- [1] Ankit *et al.*, “Electronic waste and their leachates impact on human health and environment: Global ecological threat and management,” *Environ Technol Innov*, vol. 24, Nov. 2021, doi: 10.1016/j.eti.2021.102049.
- [2] “Statistik Lingkungan Hidup Indonesia 2020.” [Online]. Available: <https://www.bps.go.id/id/publication/2020/11/27/5a798b6b8a86079696540452/statistik-lingkungan-hidup-indonesia-2020.html>
- [3] H. Wijaya, S. Jubaidah, and R. Rukayyah, “Perbandingan Metode Esktraksi Terhadap Rendemen Ekstrak Batang Turi (*Sesbania Grandiflora* L.) Dengan Menggunakan Metode Maserasi Dan Sokhletasi,” *Indonesian Journal of Pharmacy and Natural Product*, vol. 5, no. 1, 2022, doi: 10.35473/ijpnp.v5i1.1469.
- [4] R. Putri, “STUDI PERBANDINGAN PENGGUNAAN KULIT JERUK NIPIS (*Citrus aurantifolia*), KULIT PISANG (*Musa paradisiaca*), DAN KULIT MANGGIS (*Garcinia mangostana*) SEBAGAI PENGKELAT DAN PEREDUKSI UNTUK FABRIKASI ELEKTRODA SUPERKAPASITOR,” Telkom University, 2022.
- [5] M. Dhelipan, A. Arunchander, A. K. Sahu, and D. Kalpana, “Activated carbon from orange peels as supercapacitor electrode and catalyst support for oxygen reduction reaction in proton exchange membrane fuel cell,” *Journal of Saudi Chemical Society*, vol. 21, no. 4, pp. 487–494, May 2017, doi: 10.1016/j.jscs.2016.12.003.
- [6] A. Utami, “STUDI PENGGUNAAN BIJI KETUMBAR (*CORIANDRUM SATIVUM*), DAUN PEPAYA (*CARICA PAPAYA*), DAN KULIT PISANG (*MUSA PARADISIACA*) SEBAGAI PENGKELAT UNTUK FABRIKASI ELEKTRODA SUPERKAPASITOR,” Telkom University, 2020.
- [7] H. Ajeng Supartiwi and I. Wahyudin Fathonah, “STUDI PENGGUNAAN DAUN KEMBANG SEPATU (*HIBISCUS ROSA SINENSIS*), JAHE (*ZINGIBER OFFICINALE*), DAN DAUN NANAS (*ANANAS COMOSUS*) SEBAGAI PEREDUKSI DAN PENGKELAT UNTUK

FABRIKASI ELEKTRODA PADA SUPERKAPASITOR STUDY OF THE USE OF HIBISCUS LEAF (HIBISCUS ROSA SINENSIS), GINGER (ZINGIBER OFFICINALE), AND PINEAPPLE LEAF (ANANAS COMOSUS) AS A REDUCE AND CHELATING AGENT FOR ELECTRODE FABRICATION OF SUPERCAPACITOR.”

- [8] A. Sasongko, “STUDI PENGGUNAAN RUMPUT LAUT *Turbinaria* sp., *Gracilaria* sp. dan *Sargassum* sp. SEBAGAI PENGKELAT DAN PEREDUKSI UNTUK FABRIKASI ELEKTRODA SUPERKAPASITOR,” Telkom University, 2022.
- [9] H. Setyo Wibowo *et al.*, “SUMBER ENERGI LISTRIK DARI SARI BUAH BELIMBING WULUH (*AVVERHOA BILIMBI*),” 2020.
- [10] Chunbo Zhu, Rengui Lu, Likun Tian, and Qi Wang, *The Development of an Electric Bus with Super-Capacitors as Unique Energy Storage*. I E E E, 2006.
- [11] A. Burke and H. Zhao, “Applications of Supercapacitors in Electric and Hybrid Vehicles,” 2015. [Online]. Available: www.its.ucdavis.edu
- [12] P. Forouzandeh, V. Kumaravel, and S. C. Pillai, “Electrode materials for supercapacitors: A review of recent advances,” Sep. 01, 2020, *MDPI*. doi: 10.3390/catal10090969.
- [13] B. Conway, *Electrochemical Supercapacitors: Scientific Fundamentals and Technological ...* - B. E. Conway - Google Books. 1999.
- [14] A. Burke and H. Zhao, “Applications of Supercapacitors in Electric and Hybrid Vehicles,” 2015. [Online]. Available: www.its.ucdavis.edu
- [15] R. Kö Tz and M. Carlen, “Principles and applications of electrochemical capacitors,” 2000. [Online]. Available: www.elsevier.nl/locate/electacta
- [16] Conway,
“B._E._Conway_Electrochemical_Supercapacitors_ScBookZZ.org,” 1999.

- [17] E. S. Appiah *et al.*, “Biopolymers-Derived Materials for Supercapacitors: Recent Trends, Challenges, and Future Prospects,” Oct. 01, 2022, *MDPI*. doi: 10.3390/molecules27196556.
- [18] S. Unknown, P. Chand, and A. Joshi, “Biomass derived carbon for supercapacitor applications: Review,” Jul. 01, 2021, *Elsevier Ltd.* doi: 10.1016/j.est.2021.102646.
- [19] A. Sasongko, “STUDI PENGGUNAAN RUMPUT LAUT *Turbinaria* sp., *Gracilaria* sp. dan *Sargassum* sp. SEBAGAI PENGKELAT DAN PEREDUKSI UNTUK FABRIKASI ELEKTRODA SUPERKAPASITOR,” Telkom University, 2022.
- [20] “Sigma-Aldrich.” Accessed: Aug. 11, 2025. [Online]. Available: https://www.sigmaaldrich.com/ID/en?utm_source=google&utm_medium=cpc&utm_campaign=9110859043&utm_content=94995963547&gad_source=1&gad_campaignid=9110859043&gbraid=0AAAAAD8kLQRKIgjuGtRsQFavh8NmRKvq3&gclid=CjwKCAjwhuHEBhBHEiwAZrvdcmRZ38ETXDPzdynACst6z85A1PhoEghKrOY5eCNzmCDja5RSxxp6LRoCFeoQAvD_BwE
- [21] A. F. Rahmanda K.W, S. Sukardi, and W. Warkoyo, “Karakterisasi Sifat Fisikokimia Pektin Kulit Jeruk Keprok Batu 55 (*Citrus reticulata* B), Jeruk Siam (*Citrus nobilis* var. *microcarpa*), Jeruk Manis Pacitan (*Citrus sinensis* L, Jeruk Nipis (*Citrus aurantifolia* swingle), dan Jeruk Lemon (*Citrus limon* L) yang Tumbuh di Kota Batu,” *Food Technology and Halal Science Journal*, vol. 4, no. 2, pp. 124–141, Jun. 2021, doi: 10.22219/fths.v4i2.15643.
- [22] D. Yanti, “Jurnal Ayurveda Medistra PERBANDINGAN AKTIVITAS ANTIOKSIDAN DAN TOKSISITAS ANTARA DAGING BUAH, KULIT BAGIAN DALAM DAN KULIT BAGIAN LUAR BUAH MANGGIS (*GARCINIA MANGOSTANA* L.).” [Online]. Available: <http://ojs.stikesmedistra-indonesia.ac.id/>
- [23] M. Fadhil Safari, V. Maharani Patricia, L. Syafnir Prodi Farmasi, and F. Matematika dan Ilmu Pengetahuan Alam, “Penelusuran Pustaka Kandungan Senyawa dari Ekstrak Kulit Pisang Raja (*Musa paradisiaca*

var raja) dan Kulit Pisang Cavendish (*Musa cavendishii*) dalam Beberapa Aktivitas Farmakologi”, doi: 10.29313/bcsp.v2i2.ID.

- [24] M. H. P. Kusuma, A. N. Rakhmatullah, and A. Yunarti, “Uji Aktivitas Antioksidan Ekstrak Etanol 70% Buah Belimbing Wuluh (*Averrhoa bilimbi* L.) Menggunakan Metode DPPH,” *Jurnal Surya Medika*, vol. 9, no. 1, pp. 27–33, Apr. 2023, doi: 10.33084/jsm.v9i1.5130.
- [25] I. Stoilova, A. Krastanov, A. Stoyanova, P. Denev, and S. Gargova, “Antioxidant activity of a ginger extract (*Zingiber officinale*),” *Food Chem*, vol. 102, no. 3, pp. 764–770, 2007, doi: 10.1016/j.foodchem.2006.06.023.
- [26] A. Rohim and T. Estiasih, “Bioactive Compounds on *Sargassum* sp. Brown Seaweed: A Review.”
- [27] I. Boulaares, S. Derouiche, and J. Niemann, “Greenly Synthesized Manganese Oxide Nanoparticles (MnO NPs) In Tumor Therapy: A Narrative Review,” 2024, *Razi Vaccine and Serum Research Institute*. doi: 10.32592/ARI.2024.79.6.1135.
- [28] C. M. Julien and A. Mauger, “Nanostructured MnO₂ as electrode materials for energy storage,” Nov. 17, 2017, *MDPI AG*. doi: 10.3390/nano7110396.
- [29] M. S. P. Mahardika and I. K. E. Wiratnyana Putera, “Kajian Pengembangan Metode Ekstraksi Soxhletasi Terhadap Kadar Antioksidan Ekstrak Daun Matoa (*Pomitea pinnata*) Menggunakan Spektrofotometer UV VIS,” *JURNAL REKAYASA DAN MANAJEMEN AGROINDUSTRI*, vol. 11, no. 2, 2023, doi: 10.24843/jrma.2023.v11.i02.p13.
- [30] I. W. Fathona and A. Yabuki, “Mesh-like thin-film electrodes of manganese oxide with high specific capacitance synthesized via thermal decomposition of manganese formate-amine complexed ink,” *Mater Res Bull*, vol. 112, pp. 346–353, Apr. 2019, doi: 10.1016/j.materresbull.2019.01.004.
- [31] C. A. Peptu, E. S. Băcăiță, C. L. S. Logigan, M. Luțcanu, and M. Agop, “Hydrogels based on alginates and carboxymethyl cellulose with

- modulated drug release—an experimental and theoretical study,” *Polymers (Basel)*, vol. 13, no. 24, Dec. 2021, doi: 10.3390/polym13244461.
- [32] M. Alhijazi, B. Safaei, Q. Zeeshan, M. Asmael, A. Eyvazian, and Z. Qin, “Recent developments in Luffa natural fiber composites: Review,” Sep. 01, 2020, *MDPI*. doi: 10.3390/su12187683.
- [33] Y. Luan *et al.*, “A hierarchical porous carbon material from a *loofah* sponge network for high performance supercapacitors,” *RSC Adv*, vol. 5, no. 53, pp. 42430–42437, 2015, doi: 10.1039/c5ra05688h.
- [34] T. Kato *et al.*, “A comprehensive and quantitative SEM–EDS analytical process applied to lithium-ion battery electrodes,” *Sci Rep*, vol. 15, no. 1, Dec. 2025, doi: 10.1038/s41598-025-89362-w.
- [35] “What is EDS/EDX? Introducing Energy Dispersive X-Ray Spectroscopy,” bruker. [Online]. Available: https://www.bruker.com/en/landingpages/bna/technology/what-is-eds.html?utm_source=chatgpt.com
- [36] “How to interpret EDX Spectra? And difference between Element Wt% and Atom %?” Accessed: Aug. 11, 2025. [Online]. Available: <https://www.researchgate.net/post/How-to-interpret-EDX-Spectra-And-difference-between-Element-Wt-and-Atom>
- [37] “Aplikasi CMC Binder Pada Baterai.” [Online]. Available: <https://www.ihpmc.com/id/news/application-of-cmc-binder-in-batteries/>
- [38] A. B. D. Nandiyanto, R. Oktiani, and R. Ragadhita, “How to read and interpret ftir spectroscope of organic material,” *Indonesian Journal of Science and Technology*, vol. 4, no. 1, pp. 97–118, 2019, doi: 10.17509/ijost.v4i1.15806.
- [39] V. Sannasi and K. Subbian, “Influence of Moringa oleifera gum on two polymorphs synthesis of MnO₂ and evaluation of the pseudo-capacitance activity,” *Journal of Materials Science: Materials in Electronics*, vol. 31, no. 19, pp. 17120–17132, Oct. 2020, doi: 10.1007/s10854-020-04272-z.