

DAFTAR PUSTAKA

- Anastopoulos, I., Karamesouti, M., Mitropoulos, A. C., & Kyzas, G. Z. (2017). A review for coffee adsorbents. *Journal of Molecular Liquids*, 229, 555–565. <https://doi.org/10.1016/j.molliq.2016.12.096>
- Anwana Abel, U., Rhoda Habor, G., & Innocent Oseribho, O. (2020). Adsorption Studies of Oil Spill Clean-up Using Coconut Coir Activated Carbon (CCAC). *American Journal of Chemical Engineering*, 8(2), 36. <https://doi.org/10.11648/j.ajche.20200802.11>
- Astuti, W. (2018). Adsorpsi Menggunakan Material Berbasis Lignoselulosa. In Unnes Press (Ed.), *Unnes Press* (Cetakan Pe). Unnes Press. [https://lib.unnes.ac.id/43616/1/buku lignoselulosa - Widi Astuti.pdf](https://lib.unnes.ac.id/43616/1/buku%20lignoselulosa%20-%20Widi%20Astuti.pdf)
- Ayinla, R. T., Dennis, J. O., Zaid, H. M., Sanusi, Y. K., Usman, F., & Adebayo, L. L. (2019). A review of technical advances of recent palm bio-waste conversion to activated carbon for energy storage. *Journal of Cleaner Production*, 229, 1427–1442. <https://doi.org/10.1016/j.jclepro.2019.04.116>
- Ballesteros, L. F., Teixeira, J. A., & Mussatto, S. I. (2014). Chemical, Functional, and Structural Properties of Spent Coffee Grounds and Coffee Silverskin. *Food and Bioprocess Technology*, 7(12), 3493–3503. <https://doi.org/10.1007/s11947-014-1349-z>
- Czerwinska, N., Giosu, C., Matos, I., Sabbatini, S., Ruello, L., & Bernardo, M. (2024). *Science of the Total Environment Development of activated carbons derived from wastes : coffee grounds and olive stones as potential porous materials for air depollution.* 914(October 2023). <https://doi.org/10.1016/j.scitotenv.2024.169898>

- Esquivel, P., & Jiménez, V. M. (2012). Functional properties of coffee and coffee by-products. *Food Research International*, 46(2), 488–495. <https://doi.org/10.1016/j.foodres.2011.05.028>
- Faical, M., Atmani, R., Talbi, M., & Amardo, N. (2018). Adsorption of methylene blue in solution on activated carbon based of banana peels residue Projet volubilis View project Phosphate fertilizer View project. *Article in International Journal of Scientific and Engineering Research*, October. <https://www.researchgate.net/publication/328783332>
- Gong, Y., Chen, X., & Wu, W. (2024). Application of Fourier Transform Infrared (FTIR) Spectroscopy in Sample Preparation : Material Characterization and Mechanism Investigation. *Advances in Sample Preparation*, 100122. <https://doi.org/10.1016/j.sampre.2024.100122>
- Hock, P. E., Abbas, M., & Zaini, A. (2018). *Activated carbons by zinc chloride activation for dye removal — a commentary*. 11(2), 99–106. <https://doi.org/10.2478/acs-2018-0015>
- Hossain, R., Nekouei, R. K., Mansuri, I., & Sahajwalla, V. (2021). In-situ O/N-heteroatom enriched activated carbon by sustainable thermal transformation of waste coffee grounds for supercapacitor material. *Journal of Energy Storage*, 33(November 2020), 102113. <https://doi.org/10.1016/j.est.2020.102113>
- Ioannidou, O., & Zabaniotou, A. (2007). Agricultural residues as precursors for activated carbon production-A review. *Renewable and Sustainable Energy Reviews*, 11(9), 1966–2005. <https://doi.org/10.1016/j.rser.2006.03.013>
- Jutakridsada, P., Prajaksud, C., Kuboonya-Aruk, L., Theerakulpisut, S., & Kamwilaisak, K. (2016). Adsorption characteristics of activated carbon prepared from spent ground coffee. *Clean Technologies and Environmental*

Policy, 18(3), 639–645. <https://doi.org/10.1007/s10098-015-1083-x>

Katheresan, V., Kansedo, J., & Lau, S. Y. (2018). *Journal of Environmental Chemical Engineering Efficiency of various recent wastewater dye removal methods : A review*. 6(June), 4676–4697. <https://doi.org/10.1016/j.jece.2018.06.060>

Khan, I., Saeed, K., Zekker, I., Zhang, B., Hendi, A. H., Ahmad, A., Ahmad, S., Zada, N., Ahmad, H., Shah, L. A., Shah, T., & Khan, I. (2022). Review on Methylene Blue: Its Properties, Uses, Toxicity and Photodegradation. *Water (Switzerland)*, 14(2). <https://doi.org/10.3390/w14020242>

Lafi, R., ben Fradj, A., Hafiane, A., & Hameed, B. H. (2014). Coffee waste as potential adsorbent for the removal of basic dyes from aqueous solution. *Korean Journal of Chemical Engineering*, 31(12), 2198–2206. <https://doi.org/10.1007/s11814-014-0171-7>

Laksaci, H., Kheli, A., Belhamdi, B., & Trari, M. (2017). *Journal of Environmental Chemical Engineering Valorization of coffee grounds into activated carbon using physic — chemical activation by KOH / CO₂*. 5(July), 5061–5066. <https://doi.org/10.1016/j.jece.2017.09.036>

Lee, K. T., Tsai, J. Y., Hoang, A. T., Chen, W. H., Gunarathne, D. S., Tran, K. Q., Selvarajoo, A., & Goodarzi, V. (2022). Energy-saving drying strategy of spent coffee grounds for co-firing fuel by adding biochar for carbon sequestration to approach net zero. *Fuel*, 326(June), 124984. <https://doi.org/10.1016/j.fuel.2022.124984>

Lessa, E. F., Nunes, M. L., & Fajardo, A. R. (2018). Chitosan/waste coffee-grounds composite: An efficient and eco-friendly adsorbent for removal of pharmaceutical contaminants from water. *Carbohydrate Polymers*, 189, 257–266. <https://doi.org/10.1016/j.carbpol.2018.02.018>

- Nadeem, M., Shabbir, M., Abdullah, M. A., Shah, S. S., & McKay, G. (2009). Sorption of cadmium from aqueous solution by surfactant-modified carbon adsorbents. *Chemical Engineering Journal*, 148(2–3), 365–370. <https://doi.org/10.1016/j.cej.2008.09.010>
- Negara, D. N. K. P., Nindhia, T. G. T., Surata, I. W., Hidajat, F., & Sucipta, M. (2020). Textural characteristics of activated carbons derived from tabah bamboo manufactured by using H₃PO₄ chemical activation. *Materials Today: Proceedings*, 22, 148–155. <https://doi.org/10.1016/j.matpr.2019.08.030>
- Nurmayasari. (2023). *The Effectiveness of Coffee Waste Ground by Simple Washing on the Adsorption of Methylene Blue*. 949, 103–109. <https://doi.org/10.4028/p-E5PAgL>
- Pallarés, J., González-Cencerrado, A., & Arauzo, I. (2018). Production and characterization of activated carbon from barley straw by physical activation with carbon dioxide and steam. *Biomass and Bioenergy*, 115(April), 64–73. <https://doi.org/10.1016/j.biombioe.2018.04.015>
- Pimentel, C. H., Díaz-Fernández, L., Gómez-Díaz, D., Freire, M. S., & González-Álvarez, J. (2023). Separation of CO₂ using biochar and KOH and ZnCl₂ activated carbons derived from pine sawdust. *Journal of Environmental Chemical Engineering*, 11(6). <https://doi.org/10.1016/j.jece.2023.111378>
- Pratiwi, R. A., & Nandiyanto, A. B. D. (2022). How to Read and Interpret UV-VIS Spectrophotometric Results in Determining the Structure of Chemical Compounds. *Indonesian Journal of Educational Research and Technology*, 2(1), 1–20. <https://doi.org/10.17509/ijert.v2i1.35171>
- Prof Dr.Ir La Ifa, S.T, M. ., Dr.Ir. Nurjannah, S.T, M. ., Dr. Ir. Takdir Syarif , S.T, M. ., & Ir. Darnengsih, S.T, M. . (2021). Bioadsorben Dan Aplikasinya. In N. M. Pratama (Ed.), *Yayasan Pendidikan Cendikia Muslim* (Cetakan Pe).

Yayasan Pendidikan Cendikia Muslim.

Saleh, T. A., Al-Ruwayshid, S. H., Sari, A., & Tuzen, M. (2020). Synthesis of silica nanoparticles grafted with copolymer of acrylic acrylamide for ultra-removal of methylene blue from aquatic solutions. *European Polymer Journal*, 130(April), 109698. <https://doi.org/10.1016/j.eurpolymj.2020.109698>

Septya, H., Engelen, D., Jaya, C., Illiyanasafa, N., Ikawati, L., Kurniasari, E., & Darmokoesoemo, H. (2024). Chemosphere A critical review and bibliometric analysis of methylene blue adsorption using leaves. *Chemosphere*, 356(September 2023), 141867. <https://doi.org/10.1016/j.chemosphere.2024.141867>

Stella, F., Fraterrigo Garofalo, S., Cavallini, N., Fino, D., & Deorsola, F. A. (2024). Closing the loop: Analysis of biotechnological processes for sustainable valorisation of textile waste from the fast fashion industry. *Sustainable Chemistry and Pharmacy*, 38, 101481. <https://doi.org/10.1016/j.scp.2024.101481>

Tran, T. K. N., Ngo, T. C. Q., Nguyen, Q. V., Do, T. S., & Hoang, N. B. (2022). Chemistry potential and application of activated carbon manufactured from coffee grounds in the treatment of wastewater: A review. *Materials Today: Proceedings*, 60, 1914–1919. <https://doi.org/10.1016/j.matpr.2022.01.020>

Tsarpali, M., Kuhn, J. N., & Philippidis, G. P. (2024). Activated carbon production from algal biochar: Chemical activation and feasibility analysis. *Fuel Communications*, 19(July 2023), 100115. <https://doi.org/10.1016/j.fueco.2024.100115>

Usman, Y., Bernama, A., & Nafisah, A. R. (2020). Synthesis and Characterization of Coffee Based-Activated Carbon with Different Activation Methods. *IOP Conference Series: Materials Science and Engineering*, 742(1).

<https://doi.org/10.1088/1757-899X/742/1/012036>

Varga, N. B. G., Kertész, N. H. S., & Hodúr, E. T. C. (2021). Pomegranate peel as a new low - cost adsorbent for ammonium removal. *International Journal of Environmental Science and Technology*, 18(3), 711–722.
<https://doi.org/10.1007/s13762-020-02863-1>

Wang, S., Nam, H., Lee, D., & Nam, H. (2022). Journal of Environmental Chemical Engineering H₂S gas adsorption study using copper impregnated on KOH activated carbon from coffee residue for indoor air purification. *Journal of Environmental Chemical Engineering*, 10(6), 108797.
<https://doi.org/10.1016/j.jece.2022.108797>

Yusufoğlu, B., Kezer, G., Wang, Y., Ziora, Z. M., & Esatbeyoglu, T. (2024). Bio-recycling of spent coffee grounds: Recent advances and potential applications. *Current Opinion in Food Science*, 55, 1–8.
<https://doi.org/10.1016/j.cofs.2023.101111>