

DAFTAR PUSTAKA

- Abdelrahman, E. A., Hegazey, R. M., & El-Azabawy, R. E. (2019). Efficient removal of methylene blue dye from aqueous media using Fe/Si, Cr/Si, Ni/Si, and Zn/Si amorphous novel adsorbents. *Journal of Materials Research and Technology*, 8(6), 5301–5313. <https://doi.org/10.1016/j.jmrt.2019.08.051>
- Abin-Bazaine, A., Campos Trujillo, A., & Olmos-Marquez, M. (2022). Adsorption Isotherms: Enlightenment of the Phenomenon of Adsorption. *Wastewater Treatment*, 22(6) <https://doi.org/10.5772/intechopen.104260>
- Affandy, M., Mariah, A., Rovina, K., Vonnie, J. M., & Erna, K. H. (2023). South African Journal of Chemical Engineering Characterization of activated carbon from waste tea (Camellia sinensis) using chemical activation for removal of methylene blue and cadmium ions. *South African Journal of Chemical Engineering*, 44(22), 113–122. <https://doi.org/10.1016/j.sajce.2023.01.007>
- Ali, D. A., Sadek, M. A., & Al-Mansi, N. M. (2021). Isotherm and Kinetics Study for the Adsorption of Nitrate and Phosphate Ions From Aqueous Solutions Using Fume Dust From Electric Arc Furnace. *ARPJ Journal of Engineering and Applied Sciences*, 16(20), 2083–2093.
- Allou, N. B., Tigori, M. A., Koffi, A. A., Halidou, M., Eroi, N. S., Atheba, P., & Trokourey, A. (2023). Methylene blue magnetic adsorption separation process from aqueous solution using corn cob. *Scientific African*, 21(8), 1–12. <https://doi.org/10.1016/j.sciaf.2023.e01828>
- Ba-Abbad, M. M., Benamour, A., Ewis, D., Mohammad, A. W., & Mahmoudi, E. (2022). Synthesis of Fe₃O₄ Nanoparticles with Different Shapes Through a Co-Precipitation Method and Their Application. *Jom*, 74(9), 3531–3539. <https://doi.org/10.1007/s11837-022-05380-3>
- Beasley, M. M., Bartelink, E. J., Taylor, L., & Miller, R. M. (2014). Comparison of transmission FTIR, ATR, and DRIFT spectra: implications for assessment of bone bioapatite diagenesis. *Journal of Archaeological Science*, 46, 16–22. <https://doi.org/10.1016/j.jas.2014.03.008>
- Benkhaya, S., M' rabet, S., & El Harfi, A. (2020). A review on classifications, recent synthesis and applications of textile dyes. *Inorganic Chemistry Communications*, 115, 107891. <https://doi.org/10.1016/j.inoche.2020.107891>
- Boumediene, M., Benaïssa, H., George, B., Molina, S., & Merlin, A. (2018). Effects of pH and ionic strength on methylene blue removal from synthetic aqueous solutions by sorption onto orange peel and desorption study. *Journal of Materials and*

Environmental Sciences, 9(6), 1700–1711.
<https://doi.org/10.26872/jmes.2018.9.6.190!http://www.jmaterenvironsci.com>

Chan, K. T., & Ong, S. T. (2022). Optimization of Methylene Blue Dye Removal By Peanut Husk Using Plackett-Burman Design and Response Surface Methodology. *Studia Universitatis Babes-Bolyai Chemia*, 67(4), 121–139.
<https://doi.org/10.24193/subbchem.2022.4.08>

Choi, H.-J., & Yu, S.-W. (2019). Biosorption of methylene blue from aqueous solution by agricultural bioadsorbent corncob. *Environmental Engineering Research*, 24(1), 99–106. <https://doi.org/10.4491/eer.2018.107>

Choudhury, N. D., Bhuyan, N., Narzari, R., Saikia, R., Seth, D., Saha, N., & Kataki, R. (2021). Various conversion techniques for the recovery of value-added products from tea waste. In *Valorization of Agri-Food Wastes and By-Products*, 237–265. Elsevier.
<https://doi.org/10.1016/B978-0-12-824044-1.00015-5>

Crini, G., & Lichtfouse, E. (2019). Advantages and disadvantages of techniques used for wastewater treatment. *Environmental Chemistry Letters*, 17(1), 145–155.
<https://doi.org/10.1007/s10311-018-0785-9>

Daéid, N. N. (2005). FORENSIC SCIENCES | Systematic Drug Identification. In *Encyclopedia of Analytical Science*, 471–480. Elsevier. <https://doi.org/10.1016/B0-12-369397-7/00197-7>

Erkey, C., & Türk, M. (2021). *Thermodynamics and kinetics of adsorption of metal complexes on surfaces from supercritical solutions*, 73–127.
<https://doi.org/10.1016/B978-0-444-64089-5.00047-0>

Farnane, M., Machrouhi, A., Elhalil, A., Abdennouri, M., Qourzal, S., Tounsiadi, H., & Barka, N. (2018). New Sustainable Biosorbent Based on Recycled Deoiled Carob Seeds: Optimization of Heavy Metals Remediation. *Journal of Chemistry*, 2018, 1–16. <https://doi.org/10.1155/2018/5748493>

Fu, J., Chen, Z., Wang, M., Liu, S., Zhang, J., Zhang, J., Han, R., & Xu, Q. (2015). Adsorption of methylene blue by a high-efficiency adsorbent (polydopamine microspheres): Kinetics, isotherm, thermodynamics and mechanism analysis. *Chemical Engineering Journal*, 259, 53–61.
<https://doi.org/10.1016/j.cej.2014.07.101>

Gawande, S. M., Belwalkar, N. S., & Mane, A. A. (2017). Adsorption and its Isotherm – Theory. *International Journal of Engineering Research*, 6(6), 312.
<https://doi.org/10.5958/2319-6890.2017.00026.5>

- Givianrad, M. H., Rabani, M., Saber-Tehrani, M., Aberoomand-Azar, P., & Hosseini Sabzevari, M. (2013). Preparation and characterization of nanocomposite, silica aerogel, activated carbon and its adsorption properties for Cd (II) ions from aqueous solution. *Journal of Saudi Chemical Society*, 17(3), 329–335. <https://doi.org/10.1016/j.jscs.2011.07.006>
- Gulzar, T., Farooq, T., Kiran, S., Ahmad, I., & Hameed, A. (2019). Green chemistry in the wet processing of textiles. In *The Impact and Prospects of Green Chemistry for Textile Technology* (pp. 1–20). Elsevier. <https://doi.org/10.1016/B978-0-08-102491-1.00001-0>
- Guo, S., Kumar Awasthi, M., Wang, Y., & Xu, P. (2021). Current understanding in conversion and application of tea waste biomass: A review. *Bioresource Technology*, 33(8), 125530. <https://doi.org/10.1016/j.biortech.2021.125530>
- Gupta, V. K., & Ali, I. (2013). Water Treatment for Inorganic Pollutants by Adsorption Technology. In *Environmental Water* 29–91. Elsevier. <https://doi.org/10.1016/B978-0-444-59399-3.00002-7>
- Han, R., Zhang, J., Han, P., Wang, Y., Zhao, Z., & Tang, M. (2009). Study of equilibrium, kinetic and thermodynamic parameters about methylene blue adsorption onto natural zeolite. *Chemical Engineering Journal*, 145(3), 496–504. <https://doi.org/10.1016/j.cej.2008.05.003>
- Hui, M., Shengyan, P., Yaqi, H., Rongxin, Z., Anatoly, Z., & Wei, C. (2018). A highly efficient magnetic chitosan “fluid” adsorbent with a high capacity and fast adsorption kinetics for dyeing wastewater purification. *Chemical Engineering Journal*, 345(25–27), 556–565. <https://doi.org/10.1016/j.cej.2018.03.115>
- Hussain, S., Anjali, K. P., Hassan, S. T., & Dwivedi, P. B. (2018). Waste tea as a novel adsorbent: a review. *Applied Water Science*, 8(6), 1–16. <https://doi.org/10.1007/s13201-018-0824-5>
- Inkson, B. J. (2016). Scanning electron microscopy (SEM) and transmission electron microscopy (TEM) for materials characterization. In *Materials Characterization Using Nondestructive Evaluation (NDE) Methods*, 17–43. Elsevier. <https://doi.org/10.1016/B978-0-08-100040-3.00002-X>
- Jain, S. N., Tamboli, S. R., Sutar, D. S., Jadhav, S. R., Marathe, J. V., Shaikh, A. A., & Prajapati, A. A. (2020). Batch and continuous studies for adsorption of anionic dye onto waste tea residue: Kinetic, equilibrium, breakthrough and reusability studies. *Journal of Cleaner Production*, 252, 119778. <https://doi.org/10.1016/j.jclepro.2019.119778>

- Jha, S., Gaur, R., Shahabuddin, S., & Tyagi, I. (2023). Biochar as Sustainable Alternative and Green Adsorbent for the Remediation of Noxious Pollutants: A Comprehensive Review. *Toxics*, 11(2), 117. <https://doi.org/10.3390/toxics11020117>
- Jagwe, J., Olupot, P. W., Menya, E., & Kalibbala, H. M. (2021). Synthesis and Application of Granular Activated Carbon from Biomass Waste Materials for Water Treatment: A Review. *Journal of Bioresources and Bioproducts*, 6(4), 292–322. <https://doi.org/10.1016/j.jobab.2021.03.003>
- Joshi, S., Garg, V. K., Kataria, N., & Kadirvelu, K. (2019). Applications of Fe₃O₄@AC nanoparticles for dye removal from simulated wastewater. *Chemosphere*, 236, 124280. <https://doi.org/10.1016/j.chemosphere.2019.07.011>
- Kane, S. N., Mishra, A., & Dutta, A. K. (2016). Preface: International Conference on Recent Trends in Physics (ICRTP 2016). *Journal of Physics: Conference Series*, 755(1). <https://doi.org/10.1088/1742-6596/755/1/011001>
- Karimifard, S., & Alavi Moghaddam, M. R. (2018). Application of response surface methodology in physicochemical removal of dyes from wastewater: A critical review. *Science of The Total Environment*, 640–641, 772–797. <https://doi.org/10.1016/j.scitotenv.2018.05.355>
- Lazim, Z. M., Mazuin, E., Hadibarata, T., & Yusop, Z. (2015). The removal of methylene blue and remazol brilliant blue r dyes by using orange peel and spent tea leaves. *Jurnal Teknologi*, 74(11), 129–135. <https://doi.org/10.11113/jt.v74.4882>
- Li, H., Xiong, J., Zhang, G., Liang, A., Long, J., Xiao, T., Chen, Y., Zhang, P., Liao, D., Lin, L., & Zhang, H. (2020). Enhanced thallium(I) removal from wastewater using hypochlorite oxidation coupled with magnetite-based biochar adsorption. *Science of the Total Environment*, 698, 134166. <https://doi.org/10.1016/j.scitotenv.2019.134166>
- López-Luna, J., Ramírez-Montes, L. E., Martínez-Vargas, S., Martínez, A. I., Mijangos-Ricardez, O. F., González-Chávez, M. del C. A., Carrillo-González, R., Solís-Domínguez, F. A., Cuevas-Díaz, M. del C., & Vázquez-Hipólito, V. (2019). Linear and nonlinear kinetic and isotherm adsorption models for arsenic removal by manganese ferrite nanoparticles. *SN Applied Sciences*, 1(8), 1–19. <https://doi.org/10.1007/s42452-019-0977-3>
- Mariah, M. A. A., Rovina, K., Vonnie, J. M., & Erna, K. H. (2023). Characterization of activated carbon from waste tea (*Camellia sinensis*) using chemical activation for removal of methylene blue and cadmium ions. *South African Journal of Chemical Engineering*, 44, 113–122. <https://doi.org/10.1016/j.sajce.2023.01.007>
- Masoumi, S., & Dalai, A. K. (2020). Optimized production and characterization of highly porous activated carbon from algal-derived hydrochar. *Journal of Cleaner*

Production, 263, 121427. <https://doi.org/10.1016/j.jclepro.2020.121427>

Mehta, D., Mazumdar, S., & Singh, S. K. (2015). Magnetic adsorbents for the treatment of water/wastewater-A review. *Journal of Water Process Engineering*, 7, 244–265. <https://doi.org/10.1016/j.jwpe.2015.07.001>

Miliotti, E., Rosi, L., Bettucci, L., Lotti, G., Rizzo, A. M., & Chiaramonti, D. (2020). Characterization of Chemically and Physically Activated Carbons from Lignocellulosic Ethanol Lignin-Rich Stream via Hydrothermal Carbonization and Slow Pyrolysis Pretreatment. *Energies*, 13(16), 4101. <https://doi.org/10.3390/en13164101>

Mugo, S., & Zhang, Q. (2019). Nano-Sized Structured Platforms for Facile Solid-Phase Nanoextraction for Molecular Capture and (Bio)Chemical Analysis, 153–195. <https://doi.org/10.1016/B978-0-12-814505-0.00005-9>

Munawer, M. H., Chee, H. L., & Kiew, P. L. (2020). Magnetized orange peel: A realistic approach for methylene blue removal. *Materials Today: Proceedings*, 47(8), 1287–1294. <https://doi.org/10.1016/j.matpr.2021.02.796>

Nandiyanto, A. B. D., Ragadhita, R., & Yunas, J. (2020). Adsorption isotherm of densed monoclinic tungsten trioxide nanoparticles. *Sains Malaysiana*, 49(12), 2881–2890. <https://doi.org/10.17576/jsm-2020-4912-01>

Nasrullah, A., Khan, H., Khan, A. S., Man, Z., Muhammad, N., Khan, M. I., & Abd El-Salam, N. M. (2015). Potential Biosorbent Derived from Calligonum polygonoides for Removal of Methylene Blue Dye from Aqueous Solution. *The Scientific World Journal*, 2015, 1–11. <https://doi.org/10.1155/2015/562693>

Ngu, L. H. B. T.-R. M. in E. S. and E. S. (2022). *Carbon Capture Technologies*. Elsevier. <https://doi.org/https://doi.org/10.1016/B978-0-323-90386-8.00028-0>

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, 64–73. <https://doi.org/10.1016/j.biombioe.2018.04.015>

Panneerselvam, P., Morad, N., & Tan, K. A. (2011). Magnetic nanoparticle (F₃O₄) impregnated onto tea waste for the removal of nickel(II) from aqueous solution. *Journal of Hazardous Materials*, 186(1), 160–168. <https://doi.org/10.1016/j.jhazmat.2010.10.102>

Phouthavong, V., Yan, R., Nijpanich, S., Hagio, T., Ichino, R., Kong, L., & Li, L. (2022). Magnetic Adsorbents for Wastewater Treatment: Advancements in Their Synthesis

Methods. Materials, 15(3), 1053. <https://doi.org/10.3390/ma15031053>

Pillai, S. B. (2020). *Adsorption in Water and Used Water Purification BT - Handbook of Water and Used Water Purification* (J. Lahnsteiner (ed.); pp. 1–22). Springer International Publishing. https://doi.org/10.1007/978-3-319-66382-1_4-1

Rajput, S. P., Jadhav, S. V., & Thorat, B. N. (2020). Methods to improve properties of fuel pellets obtained from different biomass sources: Effect of biomass blends and binders. *Fuel Processing Technology*, 199, 106255. <https://doi.org/10.1016/j.fuproc.2019.106255>

Salimi, A., & Roosta, A. (2019). Experimental solubility and thermodynamic aspects of methylene blue in different solvents. *Thermochimica Acta*, 675, 134–139. <https://doi.org/10.1016/j.tca.2019.03.024>

Senthil Kumar, P., Fernando, P. S. A., Ahmed, R. T., Srinath, R., Priyadarshini, M., Vignesh, A. M., & Thanjiappan, A. (2014). Effect of Temperature on the Adsorption of Methylene Blue Dye Onto Sulfuric Acid-Treated Orange Peel. *Chemical Engineering Communications*, 201(11), 1526–1547. <https://doi.org/10.1080/00986445.2013.819352>

Singh, G., & Yadav, P. K. S. (2022). Hazardous waste characteristics and standard management approaches. In *Hazardous Waste Management* 145–164. Elsevier. <https://doi.org/10.1016/B978-0-12-824344-2.00008-2>

Sri Sulasmri, E., Saptasari, M., Mawaddah, K., & Ama Zulfia, F. (2019). Tannin identification of 4 species pterydophyta from baluran national park. *Journal of Physics: Conference Series*, 1241(1). <https://doi.org/10.1088/1742-6596/1241/1/012002>

Tharaneedhar, V., Senthil Kumar, P., Saravanan, A., Ravikumar, C., & Jaikumar, V. (2017). Prediction and interpretation of adsorption parameters for the sequestration of methylene blue dye from aqueous solution using microwave assisted corncob activated carbon. *Sustainable Materials and Technologies*, 11, 1–11. <https://doi.org/10.1016/j.susmat.2016.11.001>

Tripathi, A. K., & , Nirmal Sudhir Kumar Harsh, N. G. (2007). Fungal treatment of industrial effluents : a mini-review. *Life Science Journal*, 4(2), 78 – 81.

Tuli, F. J., Hossain, A., Kibria, A. K. M. F., Tareq, A. R. M., Mamun, S. M. M. A., & Ullah, A. K. M. A. (2020). Removal of methylene blue from water by low-cost activated carbon prepared from tea waste: A study of adsorption isotherm and kinetics. *Environmental Nanotechnology, Monitoring & Management*, 14, 100354. <https://doi.org/https://doi.org/10.1016/j.enmm.2020.100354>

Vol, Zuorro, A., Lavecchia, R., Medici, F., & Piga, L. (2013). Spent Tea Leaves as a Potential Low-cost Adsorbent for the Removal of Azo Dyes from Wastewater. *Chemical Engineering Transactions*, 32, 19–24. <https://doi.org/10.3303/CET1332004>

Wijaya, I. K., Farra Yulia, Y., & Udyani, K. (2020). Pemanfaatan Daun Teh Sebagai Biosorben Logam Berat Dalam Air Limbah (Review). *Jurnal Envirotek*, 12(2), 25–33. <https://doi.org/10.33005/envirotek.v12i2.55>

Wijaya, R., Andersan, G., Permatasari Santoso, S., & Irawaty, W. (2020). Green Reduction of Graphene Oxide using Kaffir Lime Peel Extract (*Citrus hystrix*) and Its Application as Adsorbent for Methylene Blue. *Scientific Reports*, 10(1), 667. <https://doi.org/10.1038/s41598-020-57433-9>

Zhang, J., Lin, S., Han, M., Su, Q., Xia, L., & Hui, Z. (2020). Adsorption Properties of Magnetic Magnetite Nanoparticle for Coexistent Cr(VI) and Cu(II) in Mixed Solution. *Water*, 12(2), 446. <https://doi.org/10.3390/w12020446>

Zhang, P., Lo, I., O'Connor, D., Pehkonen, S., Cheng, H., & Hou, D. (2017). High efficiency removal of methylene blue using SDS surface-modified ZnFe₂O₄ nanoparticles. *Journal of Colloid and Interface Science*, 508, 39–48. <https://doi.org/10.1016/j.jcis.2017.08.025>

Zhao, X., Hua, Q., Wang, C., Wang, X., Zhang, H., Zhang, K., Zheng, B., Yang, J., & Niu, J. (2023). Study on adsorption performance and mechanism of peanut hull-derived magnetic biochar for removal of malachite green from water. *Materials Research Express*, 10(9). <https://doi.org/10.1088/2053-1591/acf756>