



### DAFTAR PUSTAKA

- Abbas, M. Trari, M. 2024, "Adsorption behavior of Methylene Blue on to Activated Coconut Shells: Kinetics, thermodynamic, Mechanism, and Regeneration of the Adsorbent", *Sage Journals*, hh. 1-18
- Akbar, L, 2022, *Kinetika Hidrolisis Selulosa Bagas Sorgum Menjadi Seluloas Mikrokrystal Menggunakan Katalis Asam Sulfat*, Universitas Pertamina Press, Jakarta
- Andini, D. S. Prasetyani, Y. Mumtahinah, F. A. Astika, B. dan Yudha, C. S. 2023, The Conversion of Sorghum (*Sorghum bicolor* (L.) Moench) Stem Waste into Activated Carbon by Pyrolysis Method using  $\text{ZnCl}_2$  Activator, *Equilibrium Journal of Chemical Engineering*, Vol. 7, No. 2, hh. 107-115
- Chaisit 2020, "Preparation, Characterization, and Electrochemical Properties of KOH Activated Carbon from Cassava Root", *Materials Research Express*, Vol. 07, No. 10
- Ekawati, C, 2023, *Alternatif Bahan Baku Arang Aktif*, Rena Cipta Mandiri, Malang
- El-Bery, H. M. Saleh, M. El-Gendy, R. Saleh, M. R. dan Thabet, S. M. 2022, "High Adsorption Capacity of Phenol and Methylene Blue using Activated Carbon Derivated from Lignocellulosic Agriculture Wastes", *Scientific Reports*, Vol. 12, hh. 1-17
- Emrich, M, & Oppper, D, 2011, *X-Ray Powder Diffraction*, PANalytical B.V., Netherland
- Fatriasari, W, dkk 2019, *Selulosa Karakteristik dan Pemanfaatannya*, LIPI Press, Jakarta
- Fadlurrahman, M, dkk, 2024, "Pengaruh Variasi Massa Tempurung Kelapa dan Waktu Karbonisasi Terhadap Kualitas Arang", *Jurnal Online Universitas PGRI Palembang*, Vol.09, No.02, hh 205-210
- Hu, Y., Li, Z., Wang, X., & Chen, H, 2021, "Pore structure and adsorption behavior of activated carbon with ink-bottle mesopores for dye removal", *Journal of Environmental Chemical Engineering*, 9(6), 106743
-



- Ifa, L, dkk. 2021, *Bioadsorben dan Aplikasinya*, Cendekia Muslim Press, Sumatra Barat
- Harahap, N, dkk, 2024, "Karakterisasi Karbon Aktif Dari Limbah Padat Nilam Dengan Variasi Konsentrasi Aktivator", *Chemical Engineering Journal Storage*, Vol.4, No.3, hh 299-308
- Heidarinejad, Z. dkk 2020, "Methods for Preparation and Activation of Activated Carbon: a Review", *Environmental Chemistry Letters*, 18:393–415
- Jaber, Lubna et all 2024, "Recent Trends in Surface Impregnation Techniques on Activated Carbon for Efficient Pollutant Removal from Wastewater", *Desalination and Water Treatment*, Vol. 319
- Ioannidou, O., & Zabaniotou, A. 2021, "A Review on Biomass Pyrolysis for the Production of Activated Carbon", *Renewable and Sustainable Energy Reviews*, 145, 111030.
- Kautsar, S, et al, 2024, "Mesoporous Materials: Synthesis and electrochemical applications", Elsevier
- Klemm, D., Heublein, B., Fink, H. P., & Bohn, A. 2020, *Cellulose: Fascinating Biopolymer and Sustainable Raw Material*, Angewandte Chemie International Edition, United Nation
- Li, Bowen Hu, Juncheng Xiong, He dan Xiao, Yang 2020, "Application and Properties of Microporous Carbons Activated by  $\text{ZnCl}_2$ : Adsorption Behavior and Activation Mechanism", *American Chemical Society Publications*, Vol. 5, hh. 9398-9407
- Lin, H. dan dkk 2023, "Structure Regulation and Application of Bagasse-Based Porous Carbon Material Based on  $\text{H}_2\text{O}_2$ -Assisted Hydrothermal Treatment", *American Chemical Society*, Vol. 37, 11342–11354
- Liu, Dongdong et. all 2020, "Preparation of Highly Porous Graphitic Activated Carbon as Electrode Materials for Supercapacitors by Hydrothermal Pretreatment-Assisted Chemical Activation", *American Chemical Society Publications*, Vol.5, hh. 11058-11067
-



- Liu, Q., Zhang, Y., & Zhao, J., 2022, "Textural properties of mesoporous carbons derived from biomass and their adsorption capacity for methylene blue", *Microporous and Mesoporous Materials*, 341, 112048.
- Lowell, S., 2004, *Characterization of Porous Solids and Powders: Surface Area, Pore Size and Density*, Kluwer Academic Publishers, Netherland
- Masta, M., 2020, *Buku Materi Pembelajaran Scanning Electron Microscopy*, Universitas Kristen Indonesia, Jakarta
- Montesino 2020, "Activated Carbon by Potassium Carbonate Activation from Pine Sawdust (*Pinus montezumae* Lamb.)", *Chemical Engineering Technology*, <https://doi.org/10.1002/ceat.202000051>
- Murtini, E. dan Salsabila N., 2021, *Sorgum dan Pemanfaatannya dalam Industri Pangan*, UB Press, Malang
- Noerhartati, E. 2019, *Bahan Pangan Alternatif Sorgum*, UWKS Press, Surabaya
- Nurcholis, M. dan Puspitaningrum, D. A. 2019, *Pengembangan sorgum (*Sorghum bicolor* L.) sebagai Produk Potensi Penyangga Energi*, LPPM Universitas Pembangunan Nasional "Veteran" Yogyakarta, Yogyakarta, ISBN 978-623-7594-24-6
- Prakoso, T. 2024, *Teknologi Kemurgi Kunci untuk Mencapai Industri Kimia Keberlanjutan*, ITB Press, Bandung
- Rahman, M. A., Sarker, M., & Hasan, M. 2022, "Adsorptive removal of methylene blue by mesoporous activated carbons: Effect of pore size distribution", *Environmental Nanotechnology, Monitoring & Management*, 18, 100691
- Ray, S., 2022, *Radiation technologies and Application in Materials Science*, CRC Press, England
- Ridhuan, K. dan Irawan, D. 2020, *Energi Terbarukan Pirolisis*, CV. Laduny Alifatama, Lampung
- Roziafanto, A. N. Lazuardi, D. R. Ghozali, M. Sofyan, N. Chalid, M. 2023, "Hydrothermal Treatment of Shorgum (*Shorgum bicolor* (L.) Moench)
-



- Stalks for Enchanted Microfibrillated Cellulose Production”, *Materials Research Express*, Vol. 10
- Smith, B, 2011, *Fundamentals of Fourier Transform Infrared Spectroscopy*, CRC Press, America
- Sufoun, N. Yeddou, A. R. Nouri, L. H. Khalfi, I 2024, “Parametric and Equilibrium Studies of Methylene Blue Removal by Adsorbents : Crude and Modified Sorghum Stems-Based”, *Algerian Journal of Chemical Engineering*, Vol. 02, 47-59
- Sujiono, E, 2022, *Material Karbon Berbahan Dasar Limbah Tempurung Kelapa*, Badan Penerbit UNM, Makassar
- Sulaiman, N, dkk, 2021, *Kinetics, Thermodynamics, and Isotherms of Methylene Blue Adsorption Study onto Cassava Stem Activated Carbon*, MDPI Journal, vol 13 hh 4-5.
- Suprihatin, I. E. Suat, R. M., Negara, I. M. S. 2022, “Fotodegradasi Zat Warna Methylene Blue dengan Sinar UV dan Fotokatalis Nanopartikel Perak”, *Jurnal Kimia (Journal of Chemistry)*, 16(2), 168-173
- Sutiawan, J. dkk 2020, “Pemanfaatan Maltodextrin Singkong untuk Perekat Ramah Lingkungan dalam Pembuatan Papan Partikel dari Bagas Sorgum”, *Jurnal Sylva Lestari*, Vol. 8 No. 2
- Swiatkowski, Andrzej et. all 2024, “The Influence of thermal Treatment of Activated Carbon on its Electrochemical, Corrosion, and Adsorption Characteristics”, *Molecules*, Vol. 29, No. 4930, hh. 1-18
- Tani, D. 2023, *Pembuatan dan Karakterisasi Karbon Aktif*, Nasya Expanding Management, Pekalongan
- Tarisma, R. Fitria, B. Muslim, A. Munawar, E. 2023, “Efisiensi Penyerapan Ion Logam Cu(II) Menggunakan Karbon Aktif Dari Limbah Sagu”, *Jurnal Inovasi Ramah Lingkungan*, Vol. 04, No. 01
- Wei, S. Qin, Q. Dan Liu,Z, 2024, “Thermal Behavior Analysis And Reaction Mechanism In The Preparation Of Activated Carbon By ZnCl<sub>2</sub> Activation Of Bamboo Fibers”, *Journal Of Analytical And Applied Pyrolysis*, Vol. 179
-



- Winata, B. Y. Erliyanti, N. K. Yogaswara, R. R. Saputro, E. A. 2020, “Pra Perancangan Pabrik Karbon Aktif dari Tempurung Kelapa dengan Proses Aktivasi Kimia pada Kapasitas 20.000 ton/tahun”, *Jurnal Teknik ITS*, Vol. 9, No. 2
- Yudono, B, 2017, *Spektometri*, Simetri, Palembang
- Zhang, T., Huang, C., & Wu, J. ,2023, “Correlation between pore structure and adsorption of organic pollutants on hierarchical activated carbon”, *Chemical Engineering Journal*, 451, 138491