

DAFTAR PUSTAKA

- Agrawal, M., & Yadav, S. (2025). Two-phase bio-oil formation with hot vapor residence time variation during fast pyrolysis of mixed food waste. *Journal of Environmental Chemical Engineering*, 13(2). <https://doi.org/10.1016/j.jece.2025.116111>
- Alfani, T. ., Razak, A., & Rismawati, D. (2021). ANALISIS PERPINDAHAN PANAS PADA KONDENSOR DENGAN KAPASITAS AIR PENDINGIN 35860 m3/JAM. *SINERGI POLMED: Jurnal Ilmiah Teknik Mesin*, 2(2), 62–70. <https://doi.org/10.51510/sinergipolmed.v2i2.30>
- Bridgwater, A. V. 2021. “Review of fast pyrolysis of biomass and product upgrading.” *Biomass and Bioenergy* 38:68–94. doi:10.1016/j.biombioe.2011.01.048.
- Fanani, Z., Rachmat, A., Hasanudin, H., & Said, M. (2020). Optimization of Bio-Oil Pyrolysis Product from Palm Empty Fruit Bunches over H-Zeolite Catalyst using Response Surface Methodology (RSM). *Indonesian Journal of Fundamental and Applied Chemistry*, 6(3), 122–129. <https://doi.org/10.24845/ijfac.v6.i3.122>
- Febriyanti, F., Fadila, N., Sanjaya, A. S., Bindar, Y., & Irawan, A. (2019). Pemanfaatan Limbah Tandan Kosong Kelapa Sawit Menjadi Bio-Char, Bio-Oil Dan Gas Dengan Metode Pirolisis. *Jurnal Chemurgy*, 3(2), 12. <https://doi.org/10.30872/cmg.v3i2.3578>
- Febriyanti, F., Fadila, N., Susandy, A., Yazid Bindar, S., Irawan, A., Limbah, P., Kosong, T., Menjadi, K. S., Sanjaya, A. S., & Bindar, Y. (2019). Utilization of Empty Fruit Bunches Waste Into Bio-Char, Bio-Oil and Gases With Pyrolysis Method. *JurnalChemurgy*, 03(2), 12–17.
- Jamilatun, S., Hakika, D. C., Sarah, D., & Puspitasari, A. (2024). Generation and Characterization of Bio-Oil Obtained From The Slow Pyrolysis of Oil Palm Empty Fruit Bunches at Various Temperatures. *Elkawanie*, 10(1), 103. <https://doi.org/10.22373/ekw.v10i1.17844>
- Kholidani, A. F. R., Puspitasari, D. I., Dharmawati, A., & Qur'ana, T. W. (2025). Rancang Bangun Reaktor Pirolisis Plastik Berbasis Internet of Things (Iot). *Technologia : Jurnal Ilmiah*, 16(4), 736. <https://doi.org/10.31602/tji.v16i4.20428>

- Ko, H., Lee, M., Sen, R., Choi, J., & Oh, S. (2025). Pyrolysis Characteristics of Empty Fruit Bunches at Different Temperatures and Heating Rates. *Energies*, 18(6). <https://doi.org/10.3390/en18061404>
- Kusworo, T. D., Widayat, W., Mahadita, A. F., Firizqina, D., & Utomo, D. P. (2020). Bio-oil and fuel gas production from agricultural waste via pyrolysis: A comparative study of oil palm empty fruit bunches (OPEFB) and rice husk. *Periodica Polytechnica Chemical Engineering*, 64(2), 179–191. <https://doi.org/10.3311/PPch.14553>
- Lubis, D. A., Arifin, A., & Fitrianiingsih, Y. (2022). Pengolahan Sampah Plastik HDPE (High Density Polyethylene) dan PET (Polyethylene Terephtalate) Sebagai Bahan Bakar Alternatif dengan Proses Pirolisis. *Jurnal Ilmu Lingkungan*, 20(4), 735–742. <https://doi.org/10.14710/jil.20.4.735-742>
- Marathe, P. S., Westerhof, R. J. M., & Kersten, S. R. A. (2020). Effect of Pressure and Hot Vapor Residence Time on the Fast Pyrolysis of Biomass: Experiments and Modeling. *Energy and Fuels*, 34(2), 1773–1780. <https://doi.org/10.1021/acs.energyfuels.9b03193>
- Maulinda, L., Husin, H., Arahman, N., Rosnelly, C. M., Syukri, M., Nurhazanah, Nasution, F., & Ahmadi. (2023). The Influence of Pyrolysis Time and Temperature on the Composition and Properties of Bio-Oil Prepared from Tanjung Leaves (*Mimusops elengi*). *Sustainability (Switzerland)*, 15(18). <https://doi.org/10.3390/su151813851>
- Qolbi, N. R., Safiq, D., & Mahmudi, K. (2025). Analisis Konsep Fisika pada Teknologi “PIROLISIS” untuk Pengolahan Limbah Tandan Kosong Kelapa Sawit sebagai Sumber Energi Terbarukan. *Jurnal Ilmiah Wahana Pendidikan*, Oktober, 2025(D), 124–130.
- Rahimi, H. A., Haidary, A. J., & Omari, A. (2024). Production and Characterization of Bio-oil Derived from Empty Fruit Bunch (EFB) using Fast Pyrolysis. *Asian Journal of Chemical Sciences*, 14(5), 83–88. <https://doi.org/10.9734/ajocs/2024/v14i5325>
- Rahmad, H., Khalida, Z., & Arif, S. (2022). ANALISA TRANSFER PANAS PADA KONDENSASI LUAR DENGAN MENGGUNAKAN REFRIGERANT R-134a. *Jurnal Rekayasa Mesin*, 13(2), 383–391. <https://doi.org/10.21776/jrm.v13i2.998>
- Rezki, A. S., Wulandari, Y. R., Alvita, L. R., & Sari, N. P. (2023). Potensi Limbah Tandan Kosong Kelapa Sawit (TKKS) sebagai Bioenergi pada Produksi Bio-Oil dengan Metode Pirolisis: Efek Temperatur. *Rekayasa Bahan Alam dan Energi Berkelanjutan*, 7(1), 22–29.

<https://rbaet.ub.ac.id/index.php/rbaet/article/view/2930>

- Talwar, P., Agudelo, M. A., & Nanda, S. (2025). Pyrolysis Process, Reactors, Products, and Applications: A Review. *Energies*, 18(11). <https://doi.org/10.3390/en18112979>
- Unsomsri, N., Chunyok, K., Pakdee, W., Muncharoenporn, P., Koedthong, P., Tawkaew, S., Wiriyasart, S., & Kaewluan, S. (2025). Fuel potential of bio-oil from co-pyrolysis of fresh palm fruit bunches and waste cooking oil sludge: composition, fuel properties, and carbon distribution analysis. *Case Studies in Chemical and Environmental Engineering*, 12. <https://doi.org/10.1016/j.csee.2025.101265>
- Utomo, D. P., Andri Cahyo Kumoro, & Muhammad Haqqiyuddin Robbani. (2025). Process Simulation of Oil Palm Empty Fruit Bunch (OPEFB) Pyrolysis using Open-Source DWSIM: Analysis of Temperature-Dependent Product Rendemens. *Jurnal Bahan Alam Terbarukan*, 14(1), 45–58. <https://doi.org/10.15294/jbat.v14i1.28723>
- Valentino, N., Farobie, O., Sugeng, D. A., Masfuri, I., Rahmawati, N., Anindita, H. N., Anggoro, T., Rini, T. P., Dwiratna, B., & Rosyadi, E. (2025). Co-pyrolysis of oil palm empty fruit bunch and polypropylene: synergistic effects on blending ratios and product quality. *BIO Web of Conferences*, 171. <https://doi.org/10.1051/bioconf/202517102002>
- Vilas-Boas, A. C. M., Tarelho, L. A. C., Oliveira, H. S. M., Silva, F. G. C. S., Pio, D. T., & Matos, M. A. A. (2023). Valorisation of residual biomass by pyrolysis: influence of process conditions on products. *Sustainable Energy and Fuels*, 8(2), 379–396. <https://doi.org/10.1039/d3se01216f>