

DAFTAR PUSTAKA

- Agus S Ginting, Armansyah H Tambunan dan Radite P A Setiawan, 2015, Karakteristik Gas-Gas Hasil Pirolisis Tandan Kosong Kelapa Sawit, *Journal of Agroindustrial Technology* 25 (2): 158–63.
- Ahring et al. 2014, Liquid–Liquid Extraction of Biomass Pyrolysis Bio-oil, *Energy & Fuels* 28 (2): 1207-1212, DOI: 10.1021/ef402490s.
- Anwar, M. C., 2021, <https://money.kompas.com/read/2021/12/02/105347226/daftar-umk-riau-2022-umk-pekanbaru-2022-dan-11-daerah-sekitarnya>, diakses pada tanggal 8 Juni 2022.
- Aramideh, Soroush, Qingang Xiong, Song Charng Kong, and Robert C. Brown, 2015, Numerical Simulation of Biomass Fast Pyrolysis in an Auger Reactor, *Fuel* 156: 234–42, <https://doi.org/10.1016/j.fuel.2015.04.038>.
- Aries, R. S. dan Newton, R. D., 1955, Chemical Engineering Cost Estimation, McGraw-Hill, New York.
- Azemi, et al., 1994, Komposisi Tandan Kosong Kelapa Sawit, Pusat Penelitian Kelapa Sawit Medan.
- Badger, P.C, 2002, Ethanol From Cellulose : A General Review, Alexandria : ASHS Press.
- Bank Indonesia, 2022, <https://www.bi.go.id/id/publikasi/lain/Pages/Suku-Bunga-Obligasi-Pemerintah-RI-Yang-Akan-Jatuh-Waktu-Tanggal-25-Juli-2022.aspx>, diakses pada tanggal 8 Juni 2022.
- Bank Indonesia, 2022, “Statistik Ekonomi dan Keuangan Indonesia - Suku Bunga Pinjaman Rupiah yang Diberikan Menurut Kelompok Bank dan Jenis Pinjaman”, Tabel I26, BI, Jakarta.
- BNPB, 2021, Indeks Risiko Bencana Indonesia (IRBI) Tahun 2020, *Bnpb*, 78.
- BPS Kabupaten Kampar, 2020, Kabupaten Kampar Dalam Angka, Badan Pusat Statistik Kabupaten Kampar.

BPS-RI, 2020, Buletin Statistik Perdagangan Luar Negeri Juli 2020, *Badan Pusat Statistik Indonesia*.

Bridgewater, Anthony, 2004, Biomass Fast Pyrolysis, *Thermal Science* 8 (2): 21–50, <https://doi.org/10.2298/tsci0402021b>.

Brown, G.G., Katz, D., Foust, A. S., and Schneidewind, C, 1950, Unit Operation, John Wiley and Sons, Inc.: New York.

Brownell, L.E. and Young, E.H, 1959, Process Equipment Design”, John Wiley and Sons, Inc.: New York.

Coulson, J.M. and Richardson, J.F, 1983, Chemical Engineering Volume 6, Pergamon Press: Oxford.

Crowl, D.A, Louvar, J.F., 2002, Chemical Process Safety, Prentice Hall, New Jersey.

Dharyati, E., Utomo, A.D., Adjie, S., Wijaya, A.D., Subroto, G., Busrol, Ismeywati, D., Harmilia, E.D., Ridho, R., Putranto, D., and Sukimin, 2009, Pendugaan Stratifikasi *Tropogenic Layer* (Fotik, Afotik, Epilimnion, Hypolimnion) dan *Carrying Capacity* Beban Pakan dari KJA di Waduk Kedung Ombo dan Gajah Mungkur, Jawa Tengah, Balai Riset Perikanan Perairan Umum, Pusat Riset Perikanan Tangkap, Badan Riset Kelautan Dan Perikanan, Departemen Kelautan Dan Perikanan.

Dinas Perkebunan Provinsi Riau, 2020, Statistik Perkebunan Provinsi Riau, Dinas Perkebunan Provinsi Riau.

Direktorat Jenderal Perkebunan, 2021, Statistik Perkebunan Unggulan Nasional, *Angewandte Chemie International Edition*, 6(11), 951–952.

Direktorat Jendral Perkebunan, 2019, Statistik Perkebunan Indonesia 2018-2020, *Secretariate of Directorate General of Estates*, 1–82.

Erwin Junary, Julham Prasetya Pane, and Netti Herlina, 2015, PENGARUH SUHU DAN WAKTU KARBONISASI TERHADAP NILAI KALOR DAN KARAKTERISTIK PADA PEMBUATAN BIOARANG BERBAHAN

BAKU PELEPAH AREN (Arenga Pinnata), *Jurnal Teknik Kimia USU* 4 (2): 46–52, <https://doi.org/10.32734/jtk.v4i2.1470>.

Evans, Jr. F. L., 1980, Equipment Design Handbook for Refineries and Chemical Plants 2nd ed., Volume 2, Gulf Publishing Company: Houston.

Fardyanti, D. S., Megawati, Istanto, H., Anajib, M. K., Prayogo, & Habibah, U., 2018, Extraction of phenol from bio-oil produced by pyrolysis of coconut shell. *Journal of Physical Science*, 29, 195–202. <https://doi.org/10.21315/jps2018.29.s2.15>

Fardhyanti, Dewi Selvia, Siti Hardiyanti Pradana, Lia Setyani, Cepi Kurniawan, Retno Ambarwati, Sigit Lestari, E Gedung, *et al.*, 2018, Pemungutan Senyawa Fenol Dari Bio-Oil Hasil Pirolisis Tempurung Kelapa Dengan Metode Ekstraksi Cair-Cair, no. September: 1–8.

Fengel, D, Wegener G., 1995, Kayu, Kimia, Ultrastruktur, Reaksi-Reaksi. Yogyakarta: Gadjah Mada University Press.

Global Asset Protection Services LLC, 2015, GAPS Guidelines: Oil and Chemical Plant Layout and Spacing, 1–13.

Hasibuan, I.F., Hariyadi, S., and Adiwilaga, E.M, 2017, Status Kualitas Air dan Kesuburan Perairan Waduk PLTA Koto Panjang, Provinsi Riau, *Jurnal Ilmu Pertanian Indonesia*, 22(3), 147 – 155. DOI: 10.18343/jipi.22.3.147.

Huang, Hua Jun, and Xing Zhong Yuan, 2015, Recent Progress in the Direct Liquefaction of Typical Biomass, *Progress in Energy and Combustion Science* 49 (October 2017): 59–80. <https://doi.org/10.1016/j.pecs.2015.01.003>.

Istanto, Heri dan Muhammad Khusni Anajib, 2017, Eksperimen Dan Pemodelan Keseimbangan Termodinamika pada Ekstraksi Fenol dari Bio-oil Hasil Pirolisis Tempurung Kelapa, Skripsi : Jurusan Teknik Kimia, Fakultas Teknik, Universitas Negeri Semarang

Kawser, M.D., and Farid Nash, 2000, Oil Palm Shell as a Source of Phenol, *Journal of Oil Palm Research* 12 (I): 86–94.

- Kern, D.Q., 1983, Process Heat Transfer, McGraw Hill Book Company Inc.: New York.
- Kirk – Othmer, 1968, Encyclopedia of Chemical Technology, John Wiley and Sons Inc. : New York.
- Kunii, D., dan Levenspiel, O., 1969, Fluidization Engineering, Oxford: Butterworth Heinemann.
- Lachos-Perez, Daniel, Paulo César Torres-Mayanga, Ederson R. Abaide, Giovani L. Zabot, and Fernanda de Castilhos, 2022, Hydrothermal Carbonization and Liquefaction: Differences, Progress, Challenges, and Opportunities, *Bioresource Technology* 343 (October 2021). <https://doi.org/10.1016/j.biortech.2021.126084>.
- Levenspiel, O., 1962, Chemical Reaction Engineering Third Edition, New York: JohnWiley & Sons Ltd.
- Matches, 2014, <http://www.matche.com/equipcost/EquipmentIndex.html>, diakses pada tanggal 5 Juni 2022.
- McGraw-Hill Higher Ed, 2002, <http://www.mhhe.com/engcs/chemical/peters/data/ce.html>, diakses pada tanggal 5 Juni 2022.
- Mohan, Dinesh, Charles U. Pittman, and Philip H. Steele, 2006, Pyrolysis of Wood/Biomass for Bio-Oil: A Critical Review, *Energy and Fuels* 20 (3): 848–89. <https://doi.org/10.1021/ef0502397>.
- Novia Yanti, Rina, and Ika Lestari Hutasuhut, 2020, Potensi Limbah Padat Perkebunan Kelapa Sawit Di Provinsi Riau, *Wahana Forestra: Jurnal Kehutanan* 15 (2): 1–11. <https://doi.org/10.31849/forestra.v15i2.4696>.
- Novita, S., Fauzi, M., and Suprayogi, I., 2020, Analisis Kebutuhan Air Kabupaten Kampar, *Jurnal Selodang Mayang*, 6(3), 209 – 220.
- Occupational Safety and Health Act, 2000, Process Safety Management, U.S. Department of Labor.

- Perry, R. H., & Green, D. W., 1997, Perry's Chemical Engineers' Handbook, New York: McGraw-Hill
- Powell, S.T., 1954, Water Conditioning for Industry, 1st ed. Mc Graw Hill Book Company, Inc.: Tokyo.
- Peters, M. S. dan Timmerhaus, K. D., 1991, Plant Design and Economics for Chemical Engineers, 4th ed, McGraw-Hill, Singapura.
- Plant Cost Index, 2020, <https://www.chemengonline.com/site/plant-cost-index/>.
- Rase, H.F. and Barrow, M.H, 1977, Chemical Reactor Design for Process Plant, 1st ed. Mc Graw Hill Book Company, Inc.: New York.
- Shah, Zeaban, Renato CV, Marco AC, and Rosangela DS, 2017, Separation of Phenol from Bio-Oil Produced from Pyrolysis of Agricultural Wastes, *Modern Chemistry & Applications* 05 (01): 1–8. <https://doi.org/10.4172/2329-6798.1000199>.
- Sinnot, R. K., Coulson J.M., and Richardson, J.F., 1999, Chemical Engineering Design 4th ed., Volume 6, Oxford: Elsevier Butterworth-Heineman.
- Solomons, T.W. Graham, Craig B. Fryhle, 2011, Organic Chemistry Tenth Edition, John Wiley and Sons Inc. : New York.
- Speight, James G, 2017, Industrial Organic Chemistry, Jurnal Environmental Organic Chemistry for Engineers, 87-151.
- Thu, K., Reungpeerakul, T., Yamsaengsung, R., & Sangwichien, C., 2021, Modeling and optimization of operating parameters on fast pyrolysis of palm oil biomass wastes based on different kinetics schemes. *Environmental Progress and Sustainable Energy*, July, 1– 11. <https://doi.org/10.1002/ep.13717>
- Treybal, R.E., 1981, Mass-Transfer Operations, Int.ed. Mc Graw Hill Book Company, Inc.: Singapore.
- Ullmann, F., 2005, Encyclopedia of Industrial Chemistry, John Wiley & Sons Inc. : New York.

- Ulrich, Gael D., 1984, A Guide to Chemical Engineering Process Design and Economics, John Wiley & Sons, Inc.: New York.
- U.S. Department of Labor, 2021, <http://www.dol.gov/agencies/whd/minimum-wage/state>, diakses pada tanggal 8 Juni 2022.
- Walas, Stanley M., 1988, Chemical Process Equipment: Selection and Design, Butterworth-Heinemman: Washington.
- Wang, S., 2013, High-Efficiency Bio-Oil Serbuk Gergaji Sengon (*Paraserianthes Falcataria* L. Nielsen) Menggunakan Proses Pirolisis Lambat, Jurnal Penelitian Hasil Hutan, Vol. 31 (4).
- Wardani, Aditya Putri Kusuma, and Dian Widiawati, 2014, Pemanfaatan Tandan Kosong Kelapa Sawit Sebagai Material Tekstil Dengan Pewarna Alam Untuk Produk Kriya, *Jurnal Tingkat Sarjana Bidang Senirupa Dan Desain* 3 (1): 1–10. <https://www.neliti.com/publications/243069/pemanfaatan-tandan-kosong-kelapa-sawit-sebagai-material-tekstil-dengan-pewarna-a#cite>.
- Yaws, C, L, 1999, Chemical Properties Handbook, Mc.Graw-Hill: New York.