

DAFTAR PUSTAKA

- Adi, A. C., Lasnawatin, F., Prananto, A. B., Halim, L., Anutomo, I. G., Anggreani, D., . . . Yuanningrat, H. (2022). *Handbook of Energy & Economic Statistic of Indonesia 2021*. Indonesia: Minister of Energy and Mineral Resources Republic of Indonesia.
- Akbar, M. H. (2021). Kajian Eksperimental dan Simulasi Gasifikasi Sekam Padi Tipe Inverted Downdraft dengan Variasi Equivalence Ratio. *Thesis*.
- Al-Rahbi, A., & Williams, P. (2017). Hydrogen-rich syngas production and tar removal from biomass gasification using sacrificial tyre pyrolysis char. *Applied Energy*, 501-509.
- Aprianti, N., Faizal, M., Said, M., & Nasir, S. (2021). Catalytic Gasification of Oil Palm Empty Fruit Bunch by Using Indonesian Bentonite as The Catalyst. *Journal of Applied Engineering Science*, 334-343.
- Awais, M., Omar, M. M., Munir, A., Li, W., Ajmal, M., Hussain, S., . . . Ali, A. (2022). Co-gasification of different biomass feedstock in a pilot-scale (24kWe) downdraft gasifier: An experimental approach. *Energy* 238, 1-15.
- Balu, E., & Chung, J. (2012). System characteristics and performance evaluation of a trailer-scale downdraft gasifier with different feedstock. *Bioresource Technology*, 264-273.
- Basu, P. (2013). *Biomass Gasification, Pyrolysis and Torrefaction*. Greenfield: Elsevier.
- Batorshin, V., Suchkov, S., & Tugov, A. (2022). Integrated Gasification Combined Cycle (IGCC) Units: History, State-of-the Art, Development Prospects (Review). *Steam-Turbine, Gas-Turbine, And Combined-Cycle Power Plants And Their Auxiliary Equipment*, 418-429.
- Belonio, A. (2005). *Rice Husk Gas Stove Handbook*. Iloilo City, Philippines: Department of Agricultural Engineering and Environmental Management College of Agriculture.
- Boi, P., Huhnke, R., Kumar, A., Indrawan, N., & Thapa, S. (2018). Co-gasification of municipal solid waste and biomass in a commercial scale downdraft gasifier. *Energy*, 513-518.

- BRS. (2023). *Luas Panen dan Produksi Padi di Indonesia 2022 (Angka Tetap)*. Badan Pusat Statistik.
- Evans, R., & Milne, T. (1997). *Chemistry of tar formation and maturation in the thermochemical conversion of biomass*. United Kingdom: Springer.
- Fatimah. (2014). *Adsorpsi dan Katalisis menggunakan Material Berbasis Clay*. Yogyakarta: Graha Ilmu.
- Fil, B., Yilmaz, M., Bayar, S., & Elkoca, M. (2014). Investigation of adsorption of the dyestuff astrazon red violet 3rn (basic violet 16) on montmorillonite clay. *Brazilian Journal of Chemical Engineering*, 171-182.
- Gates, B. C. (1992). *Catalytic Chemistry*. Wiley.
- Goldfarb, J., & Dou, G. (2017). In situ upgrading of pyrolysis biofuels by bentonite clay with simultaneous production of heterogeneous adsorbents for water treatment. *Fuel*, 273-283.
- Gunasekaran, A. P., Chockalingam, M. P., Padmavathy, S. R., & Santhappan, J. S. (2021). Numerical and experimental investigation on the thermochemical gasification potential of Cocoa pod husk (*Theobroma Cacao*) in an open-core gasifier. *Clean Technologies and Environmental Policy*, 1603-1615.
- Haryadi. (2006). *Teknologi Pengolahan Beras*. Gadjah Mada University Press.
- Hernandez, J., Aranda-Almansa, G., & Bula, A. (2010). Gasification of biomass wastes in an entrained flow gasifier: Effect of the particle size and the residence time. *Fuel Processing Technology*, 681-692.
- Hidayat, A. (2013). Karakterisasi Proses Gasifikasi Biomassa pada Reaktor Downdraft Sistem Batch dengan Variasi Air –Fuel Ratio (AFR) dan Ukuran Biomassa. *Proposal*.
- Jackson, M. G. (1977). Review Article : The Alkali Treatment of Straws . *Animal Feed Science and Technology*, 105-130.
- Knoef, H. (2012). *Hanbook Biomass Gasification Second Edition*. BTG.
- Knoef, H., Buffinga, G.-J., Zielke, U., Sjöström, K., Brage, C., Hasler, P., . . . Greil, C. (2001). Guideline for sampling and analysis of tars and particles in biomass producer gases. *Technical Report*, 162-175.
- Kosivtsov, Y., Sulman, E., Lugovoy, Y., Kosivtsova, A., & Stepacheva, A. (2015). Experimental Investigation of the Biomass Catalytic Pyrolysis Process to Produce the Combustible Gases with the High Calorific Value. *Bulletin of Chemical Reaction Engineering & Catalysis*, 324-331.

- Kumar, H., Baredar, D., Agrawal, D., & Soni, D. (2014). Effect of Moisture Content on Gasification Efficiency in Down Draft Gasifier. *International Journal of Scientific Engineering and Technology*, 411-413.
- Li, R., Yang, Z., & Duan, Y. (2023). Energy, economic and environmental performance evaluation of co-gasification of coal and biomass negative-carbon emission system. *Applied Thermal Engineering*, 1-11.
- Ma, Z., Ye, J., Zhao, C., & Zhang, Q. (2015). Gasification of Rice Husk in a Downdraft Gasifier: The Effect of Equivalence Ratio on the Gasification Performance, Properties, and Utilization Analysis of Byproducts of Char and Tar. *Bioresources*, 2888-2902.
- Mahmoudi, A. H. (2015). Prediction of Heat-Up, Drying, and Gasification of Fixed and Moving Beds by the Discrete Particle Method (DPM). *Dissertation*.
- Milne, T., Evans, R., & Abatzoglou, N. (1998). *Biomass gasifier " tars": their nature, formation, and conversion*. Colorado: Golden, CO: National Renewable Energy Laboratory.
- Moilanen, A., & Nasrullah, M. (2011). *Gasification reactivity and ash sintering*. Finland: VTT.
- Patel, V., Upadhyay, D., & Patel, R. (2014). Gasification of lignite in a fixed bed reactor: Influence of particle size on performance of downdraft gasifier. *Energy*, 323-332.
- Pranolo, S. H., Waluyo, J., Prasetyo, J., & Hanif, M. I. (2019). Application of a Recycle System to Cocoa Pod Husk Gasification in a Fixed-Bed Downdraft Gasifier to Produce Low Tar Fuel Gas. *Journal of Chemical Engineering and Environment*, 120-129.
- PP. (2014). *Peraturan Pemerintah Republik Indonesia Nomor 79 tahun 2014 tentang Kebijakan Energi Nasional*.
- Prasad, L., Subbarao, P., & Subrahmanyam, J. (2015). Experimental investigation on gasification characteristic of high lignin biomass(Pongamia shells). *Renewable Energy*, 415-423.
- Ramzani, M. Y. (2018). Pengaruh Kadar Bentonit terhadap Hasil Gasifikasi Updraft Sampah Organik. *Skripsi*.
- Razvigorova, M., Goranova, M., Minkova, V., & Cerny, J. (1994). On the composition of volatiles evolved during the production of carbon adsorbents from vegetable wastes. *Fuel*, 1718-1722.
- Reed, T., & Das, A. (1988). *Handbook of Biomass Downdraft Gasifier Engine Systems*. United States: UC Company.

- Richardson, J. T. (1989). *Principles of Catalyst Development (Fundamental and Applied Catalysis)*. Springer.
- Saleh, A. R., Sudarmanta, B., Fansuri, H., & Muraza, O. (2020). Syngas production from municipal solid waste with a reduced tar yield by three-stages of air inlet to a downdraft gasifier. *Fuel*, 1-11.
- Salisu, J., Muhammad, MB., Atta, AY., Mukhtar, B., Yusuf, N., Waziri, SM., & Bugaje, IM., (2019). Theoretical and Experimental Studies of Rice Husk Gasification Using Air as Gasifying Agent in a Downdraft Gasifier. *Nigerian Research Journal of Engineering and Environmental Sciences*, 645-657.
- Shahbaz, M., Yusup, S., Inayat, A., & Patrick, D. O. (2017). The influence of catalysts in biomass steam gasification and catalytic potential of coal bottom ash in biomass steam gasification: A review. *Elsevier*, 468-476.
- Sheth, P., & Babu, B. (2009). Experimental studies on producer gas generation from wood waste in a downdraft biomass gasifier. *Bioresource Technology*, 3127-3133.
- Simell, P., Leppalahti, J. K., & Bredenberg, J.-s. (1992). Catalytic purification of tarry fuel gas with carbonate rocks and ferrous materials. *Elsevier*, 211-218.
- Sudrajat, A., & Arifin, M. (1996). Prospek Pengusahaan Bentonit di Indonesia. *PPTM Bandung*.
- Susastriawan, A., Saptoadi, H., & Purnomo. (2018). Effect of tuyer distance above grate on propagation front and performance of downdraft gasifier with the feedstock of rice husk. *Renewable Energy*, 1034-1041.
- Susastriawan, A., Saptoadi, H., & Purnomo. (2019). Comparison of the gasification performance in the downdraft fixed-bed gasifier fed by different feedstocks: Rice husk, sawdust, and their mixture. *Sustainable Energy Technologies and Assessments*, 27-34.
- Syarief, A., & Maidi. (2019). Studi Eksperimental Gasifikasi Updraft Sekam Padi dan Batubara Kualitas Rendah Berkatalis Bentonit Untuk Produksi Syngas. *Info Teknik*, 81-94.
- Uribe, D., Bohorquez, N. D., & Perez, J. (2023). Technoeconomic Analysis of a Small-Scale Downdraft Gasification-Based Cogeneration Power Plant Using Green Wastes. *Journal of Energy Resources Technology*, 1-13.
- Upadhyay, R. K., & Mishra, S. (2021). Review on biomass gasification: Gasifiers, gasifying mediums,. *Materials Science for Energy Technologies*, 329-340.

Zhou, F., Zhu, L., Yang, L., Hong, Y., & Xu, J. (2023). Analysis of a novel power plant based on tars from biomass gasifier as fuel gas. *Applied Thermal Engineering*, 1-12.

Zikrilah, B. (2017). *Pengaruh Bentonit Terhadap Gasifikasi Updraft Cangkang Kelapa Sawit Pada Temperatur 250oC, 350oC Dan 450oC*. Malang: Skripsi.