

DAFTAR PUSTAKA

- Abdul, F., Pintowantoro, S. and Hidayat, M.I.P. 2020. Proses Pembuatan Besi Menggunakan Injeksi Gas Hidrogen ke Dalam Blast Furnace: Sebuah Alternatif untuk Mengurangi Emisi CO₂. *JURNAL TEKNIK ITS*, 9(2), F386–F392.
- Abe, K., Kurniawan, A., Ohashi, K., Nomura, T., Akiyama, T. 2018. Ultrafast Iron-Making Method: Carbon Combustion Synthesis from Carbon-Infiltrated Goethite Ore. *ACS Omega*, 3, 6151–6157.
- Basu, P. 2010. Biomass Gasification and Pyrolysis-Practical Design and Theory. Elsevier, Burlington MA.
- Bridgwater, A. V. 2012. Review of fast pyrolysis of biomass and product upgrading. *Elsevier Ltd*, 38, 68–94.
- Cahyono, R. B.(a), Rozhan, A. N., Yasuda, N., Nomura, T., Hosokai, S., Kashiwaya, Y., & Akiyama, T. 2013. Catalytic coal-tar decomposition to enhance reactivity of low-grade iron ore. *Fuel Processing Technology*, 113, 84–89.
- Cahyono, R. B. (b), Rozhan, A. N., Yasuda, N., Nomura, T., Purwanto, H., Akiyama, T. 2013. Carbon Deposition Using Various Solid Fuels for Ironmaking Applications, *Energy&Fuel*, 27, 2687-2692.
- Cahyono, R. B., Yasuda, N., Nomura, T., Akiyama, T. 2015. Utilization of Low Grade Iron Ore (FeOOH) and Biomass Through Integrated Pyrolysis-tar Decomposition (CVI process) in Ironmaking Industry: Exergy Analysis and its Application, *ISIJ International*, 55, 2, 428-435.
- Cahyono, R.B., Hidayat, M., Yasuda, N., Nomura, T., Akiyama, T. 2018. Tar Decomposition over a Porous Iron Ore Catalyst: Experiment and Kinetic Analysis, *Energy&Fuels*, 32, 7046–7053.
- Chen, H., Zheng, Z., & Shi, W. 2015. Investigation on the Kinetics of Iron Ore Fines Reduction by CO in a Micro-fluidized Bed. *Procedia Engineering*, 102, 1726–1735.
- Chen, Z. et al. 2018. Reduction kinetics of hematite powder in hydrogen atmosphere at moderate temperatures. *Metals*, 8(10).
- Cheng, Z.; Yang, J.; Zhou, L.; Liu, Y.; Guo, Z.; Wang, Q. 2016. Experimental study of commercial charcoal as alternative fuel for coke breeze in iron ore sintering process. *Energy Conversion and Management*, 125, 254–263.
- Devi, L., Ptasiński, K.J. and Janssen, F.J.J.G. 2003. A review of the primary measures for tar elimination in biomass gasification processes, *Biomass and Bioenergy*.mil
- Diji, C.J. 2013. Electricity production from biomass in Nigeria: Options, prospects and challenges, in *Advanced Materials Research*, 444–450.
- Guo, D., Hu, M., Pu, C., Xiao, B., Hu, Z., Liu, S., Zhu, X. 2015. Kinetics and mechanisms of direct reduction of iron ore-biomass composite pellets with hydrogen gas. *International Journal of Hydrogen Energy*, 40(14), 4733–4740.
- Guo, D., Zhu, L., Guo, S., Cui, B., Luo, S., Laghari, M., Chen, Z., Ma, C., Zhou, Y., Chen, J., Xiao, B, Hu, M., Luo, S. 2016. Direct reduction of oxidized iron ore pellets using biomass syngas as the reducer. *Fuel Processing Technology*, 148, 276–281.
- Hammam, A., Cao, Y., El-Geassy, A.A., El-Sadek, M.H., Li, Y., Wei, H., Omran, M., Yu, Y. 2021. Non-Isothermal Reduction Kinetics of Iron Ore Fines with Carbon-Bearing Materials. *Metals*, 11, 1137.

Han, Y. 2014. Theoretical Study of Thermal Analysis Kinetics. *Theses and Dissertations-Mechanical Engineering*, (35).

- Hatta, Y., Purwanto, H., Hosokai, S., Hayashi, J., Kashiwaya, Y., Akiyama, T. 2009. Biotar Ironmaking Using Wooden Biomass and Nanoporous Iron Ore, *Energy& Fuel*, 23, 1128-1131.
- He, L., Hui, H., Li, S., & Lin, W. 2018. Production of light aromatic hydrocarbons by catalytic cracking of coal pyrolysis vapors over natural iron ores, *Fuel*, 216, 227–232.
- Hosokai, S., Matsui, K., Okinaka, N., Ohno, K., Shimizu, M., Akiyama, T. 2012. Kinetic Study on the Reduction Reaction of Biomass-Tar-Infiltrated Iron, *Energy&Fuel*, 26, 7274-7279.
- Kurniawan, A., Abe, K., Nomura, T., Akiyama, T. 2017. Integrated Pyrolysis–Tar Decomposition over Low-Grade Iron Ore for Ironmaking Applications: Effects of Coal–Biomass Fuel Blending, *Energy&Fuel*, 32, 395-405.
- Kurniawan, A., Abe, K., Ohashi, K., Nomura, T., Akiyama, T. 2018. Reduction of mild-dehydrated, low-grade iron ore by ethanol. *Fuel Processing Technology*. 178, 156–165.
- Lin, Y. C., Cho, J., Tompsett, G.A., Westmoreland, P.R. and Huber, G.W. 2009. Kinetics and Mechanism of Cellulose Pyrolysis, *Journal of Physical Chemistry. C*, 113, 20097-20107.
- Luo, S., Yi, C., & Zhou, Y. 2011. Direct reduction of mixed biomass-Fe₂O₃ briquettes using biomass-generated syngas. *Renewable Energy*, 36(12), 3332–3336.
- Meisrilestari, Y., Khomaini, R., & Wijayanti, H. 2013. Pembuatan arang aktif dari cangkang kelapa sawit dengan aktivasi secara fisika, kimia dan fisika-kimia. *Konversi*, 2(1), 46–51.
- Milne, T.A., Evans, R.J. and Abatzoglou, N. (1998) Biomass Gasifier “Tars”: Their Nature, Formation, and Conversion. Available at: <http://www.doe.gov/bridge/home.html>.
- Miura, K.; Kawase, M.; Nakagawa, H.; Ashida, R.; Nakai, T.; Ishikawa, T. 2003. Conversion of tar in hot coke oven gas by pyrolysis and steam reforming. *Journal of Chemical Engineering of Japan*, 36(7), 735-741.
- Mochizuki, Y., Nishio, M., Tsubouchi, N., Akiyama, T. 2016. Preparation of Carbon-containing Iron Ore with Enhanced Crushing Strength from Limonite by Impregnation and Vapor Deposition of Tar Recovered from Coke Oven Gas, *Energy&Fuel*, 30, 6233–6239.
- Moraes, S.L., de Lima, J.R.B., Ribeiro, J.L. 2018. Iron Ore Pelletizing Process: An Overview. *Book chapter: Iron Ores and Iron Oxide Materials*. Intechopen. 41-59.
- Myrén, C. et al. 2002. Catalytic tar decomposition of biomass pyrolysis gas with a combination of dolomite and silica, *Biomass and Bioenergy*, 23(3), 217–227.
- Putra, H. P. et al. 2013. Studi kualitas briket dari tandan kosong kelapa sawit dengan perekat limbah nasi, *Jurnal Sains dan Teknologi Lingkungan*, 5(1), 27–35.
- Rozhan, A.N., Cahyono, R.B., Yasuda, N., Nomura, T., Hosokai, S., Purwanto, H., Akiyama, T. 2012. Carbon Deposition from Biotar by Fast Pyrolysis Using the Chemical Vapor Infiltration Process within Porous Low-Grade Iron Ore for Iron-Making. *Energy&Fuel*, 26, 7340-7346.
- Saito, G.; Nomura, T.; Sakaguchi, N.; Akiyama, T. 2016. Optimization of the dehydration temperature of goethite to control pore morphology. *ISIJ International*, 56(9), 1598–1605.
- Slopiecka, K., Bartocci, P. and Fantozzi, F. 2011. Thermogravimetric analysis and Kinetic study of poplar wood pyrolysis. (May), 1687–1698.
- Tahir, M. 2009. Rancang Bangun Sistem Pengering Energi Surya dan Biomassa dengan Kontrol Suhu untuk Pengeringan Jagung Tongkol, *JIAT*, 4(1), 011–016.

- Tam, C. and Tanaka, K. 2007. IEA. Tracking Industrial Energy Efficiency and CO2 Emissions. Available at: www.iea.org/w/bookshop/pricing.html.
- The Indonesian Iron & Steel Industry Association. 2021. Produksi Baja Nasional Tahun 2020 Meningkat | Update Konsumsi Baja Tahun 2020 dan Outlook 2021, Produksi Baja Nasional Tahun 2020 Meningkat | Update Konsumsi Baja Tahun 2020 dan Outlook 2021 | IISIA
- Tsubouchi, N., Mochizuki, Y., Byambajav, E., Takahashi, S., Hanaoka, Y., Ohtsuka, Y. 2017. Catalytic Performance of Limonite Ores in the Decomposition of Model Compounds of Biomass-Derived Tar, *Energy Fuels*, 31, 3898–3904.
- Vyazovkin, S. 2006. Thermal analysis. *Analytical Chemistry*, 78(12), 3875-3886.
- Wei, R., Feng, S., Long, H., Li, J., Yuan, Z., Cang, D., & Charles, C. 2017. Coupled biomass (lignin) gasification and iron ore reduction : A novel approach for biomass conversion and application. *Energy*, 140, 406–414.
- Wei, R. et al. 2020. Reduction of iron oxide by lignin: Characteristics, kinetics and superiority. *Energy*, 197.
- Wicakso, D. R., & Budiman, A. 2017. Study of Catalytic Upgrading of Biomass Tars using Indonesian Iron Ore, 020094.
- World Steel Association. 2019. Word Steel in Figures 2019. Westfield World Trade Center, New York, USA.
- Zhao, H.; Li, Y.; Song, Q.; Liu, S.; Ma, Q.; Ma, L. 2019. Catalytic reforming of volatiles from co-pyrolysis of lignite blended with corn straw over three different structures of iron ores. *Journal of Analytical and Applied Pyrolysis*, 144, 104714.
- Zhao, H., Li, Y., Song, Q, Liu, S., Ma, Ma, L., Shu, X. 2021. Catalytic reforming of volatiles from co-pyrolysis of lignite blended with corn straw over three iron ores: Effect of iron ore types on the product distribution, carbon-deposited iron ore reactivity and its mechanism, *Fuel*, 286, 119398.
- Zhou, L., Enakonda, L. R., Li, S., Gary, D., Del-Gallo, P., Mennemann, C., & Basset, J. M. 2018. Iron ore catalysts for methane decomposition to make COx free hydrogen and carbon nano material. *Journal of the Taiwan Institute of Chemical Engineers*, 87, 54–63.