

Reference

- [1] C. Li and K. Suzuki, “Tar property, analysis, reforming mechanism and model for biomass gasification-An overview,” *Renew. Sustain. Energy Rev.*, vol. 13, no. 3, pp. 594–604, 2009, doi: 10.1016/j.rser.2008.01.009.
- [2] A. M. Salem, I. N. Zaini, M. C. Paul, and W. Yang, “The evolution and formation of tar species in a downdraft gasifier: Numerical modelling and experimental validation,” *Biomass and Bioenergy*, vol. 130, no. March, p. 105377, 2019, doi: 10.1016/j.biombioe.2019.105377.
- [3] A. Dufour, B. Quartassi, R. Bounaceur, and A. Zoulaian, “Modelling intra-particle phenomena of biomass pyrolysis,” *Chem. Eng. Res. Des.*, vol. 89, no. 10, pp. 2136–2146, 2011, doi: 10.1016/j.cherd.2011.01.005.
- [4] S. Safarian, R. Unnþórsson, and C. Richter, “A review of biomass gasification modelling,” *Renew. Sustain. Energy Rev.*, vol. 110, no. November 2018, pp. 378–391, 2019, doi: 10.1016/j.rser.2019.05.003.
- [5] C. Font Palma, “Modelling of tar formation and evolution for biomass gasification: A review,” *Appl. Energy*, vol. 111, pp. 129–141, 2013, doi: 10.1016/j.apenergy.2013.04.082.
- [6] M. L. Valderrama Rios, A. M. González, E. E. S. Lora, and O. A. Almazán del Olmo, “Reduction of tar generated during biomass gasification: A review,” *Biomass and Bioenergy*, vol. 108, no. November 2017, pp. 345–370, 2018, doi: 10.1016/j.biombioe.2017.12.002.
- [7] P. I. Dr. Akepati S. Reddy School of Energy and Environment Thapar University, “Biomass Gasification,” 2016. [Online]. Available: https://www.slideshare.net/reddyas/biomass-gasification-58749293?qid=b166d6a4-771b-4b1a-9ee3-25f2873c97fa&v=&b=&from_search=1. [Accessed: 26-Feb-2016].
- [8] M. L. Valderrama Rios, A. M. González, E. E. S. Lora, and O. A. Almazán del Olmo, “Reduction of tar generated during biomass gasification: A review,” *Biomass and*

Bioenergy, vol. 108, no. December 2017, pp. 345–370, 2018, doi:
10.1016/j.biombioe.2017.12.002.

- [9] U. Wolfesberger, I. Aigner, and H. Hofbauer, “Tar content and composition in producer gas of fluidized bed gasification of wood-influence of temperature and pressure,” *Environ. Prog. Sustain. Energy*, vol. 28, no. 3, pp. 372–379, 2009, doi: 10.1002/ep.10387.
- [10] C. F. Palma, “Model for biomass gasification including tar formation and evolution,” *Energy and Fuels*, vol. 27, no. 5, pp. 2693–2702, 2013, doi: 10.1021/ef4004297.
- [11] W. Jin, K. Singh, J. W. Zondlo, J. Wang, and J. S. Brar, “Pyrolysis kinetics of physical and chemical components of wood using isoconversion method,” *Am. Soc. Agric. Biol. Eng. Annu. Int. Meet. 2012, ASABE 2012*, vol. 4, no. January 2012, pp. 3573–3578, 2012, doi: 10.13031/2013.42189.
- [12] S. H. de Jong W, Ünal Ö, Andries J, Hein KRG, “Thermochemical conversion of brown coal and biomass in a pressurised fluidised bed gasifier with hot gas filtration using ceramic channel filters: measurements and gasifier modelling.,” *Appl Energy* .
- [13] B. C. Corella J, Caballero MA, Aznar MP, “Two advanced models for the kinetics of the variation of the tar composition in its catalytic elimination in biomass gasification.,” *Ind Eng Chem Res*.
- [14] K. Norinaga, O. Deutschmann, N. Saegusa, and J. ichiro Hayashi, “Analysis of pyrolysis products from light hydrocarbons and kinetic modeling for growth of polycyclic aromatic hydrocarbons with detailed chemistry,” *J. Anal. Appl. Pyrolysis*, vol. 86, no. 1, pp. 148–160, 2009, doi: 10.1016/j.jaat.2009.05.001.
- [15] R. E. Faravelli T, Frassoldati A, Migliavacca G, “Detailed kinetic modeling of the thermal degradation of lignins. Biomass Bioenerg,” 2010.
- [16] J. A., “Mechanisms and kinetics of thermal reactions of aromatic hydrocarbons from pyrolysis of solid fuels.,” *Fuel*, 1996.
- [17] H. J. Norinaga K, Shoji T, Kudo S, “Detailed chemical kinetic modelling of vapour-phase cracking of multi-component molecular mixtures derived from the fast pyrolysis of

cellulose.,” *Fuel*, 2013.

- [18] Aspen Technology Inc., “Aspen Plus ® The Challenge : Understanding and Predicting Process The Opportunity : Maximizing Plant Performance and The Solution : Aspen Plus,” 2004.
- [19] A. M. A. Ahmed, A. Salmiaton, T. S. Y. Choong, and W. A. K. G. Wan Azlina, “Review of kinetic and equilibrium concepts for biomass tar modeling by using Aspen Plus,” *Renew. Sustain. Energy Rev.*, vol. 52, pp. 1623–1644, 2015, doi: 10.1016/j.rser.2015.07.125.
- [20] Z. A. Damartzis T, Michailos S, “Energetic assessment of a combined heat and power integrated biomass gasification–internal combustion engine system by using Aspen Plus. *Fuel Process Technol.*,” 2012.
- [21] K. E. Panopoulos K, Fryda L, Karl J, Poulou S, “High temperature solid oxide fuel cell integrated with novel allothermal biomass gasification: Part I: Modelling and feasibility study. *J Power Sources*,” 2006.
- [22] B. N. Sadhukhan J, Zhao Y, Shah N, “Performance analysis of integrated biomass gasification fuel cell (BGFC) and biomass gasification combined cycle (BGCC) systems. *Chem Eng Sci*,” 2010.
- [23] T. D. De Kam MJ, Vance Morey R, “Biomass integrated gasification combined cycle for heat and power at ethanol plants. *Energy Convers Manage*,” 2009.
- [24] et al. François J, Abdelouahed L, Mauviel G, Patisson F, Mirgaux O, Rogaume C, “Detailed process modeling of a wood gasification combined heat and power plant. *Biomass Bioenergy*,” 2013.
- [25] K. E. A. Hannula I, “parametric modelling study for pressurised steam/O₂- blown fluidised-bed gasification of wood with catalytic reforming. *Biomass Bioenergy*,” 2012.
- [26] O. P. Nilsson S, Gómez-Barea A, Fuentes-Cano D, . “Gasification of biomass and waste in a staged fluidized bed gasifier: modeling and comparison with one-stage units. *Fuel*,” 2012.

- [27] P. Dorrestijn, E.; Mulder, “The radical-induced decomposition of 2-methoxyphenol. J. Chem. Soc., Perkin Trans. 2 1999, (4), 777-780.,” vol. □, no. 5, p. 2012, 2013.
- [28] J. Kluska and M. Ochnio, “Characteristic of tar content and syngas composition during beech wood updraft gasification Characteristic of tar content and syngas composition during beech wood updraft gasification,” no. February 2019, 2018.
- [29] J. Yu and J. D. Smith, “SC,” 2018.