

DAFTAR PUSTAKA

- Acharjee, T. C., 2010, *Thermal Pretreatment Options for Lignocellulosic Biomass*, Thesis: University of Nevada.
- Akiya, N. and Savage, P. E., 2002, *Roles of Water for Chemical Reactions in High-Temperature Water*, *Chemical Reviews*, 102, 2725.
- Areprasert, C., Scala, F., Coppola, A., Urciuolo, M., Chirone, R., Chanyavanich, P., and Yoshikawa, K., 2016, *Fluidized Bed Co-combustion of Hydrothermally Treated Paper Sludge with Two Coals of Different Rank*, *Fuel Processing Technology*, Vol 144, pp 230-238.
- Arvanitoyannis, I.S., Kassaveti, A., and Stefanatos, S., 2007, *Current and Potential Uses of Thermally Treated Olive Oil Waste*, *International Journal of Food Science & Technology*, 42, 852–867.
- Bahri, S., 2008, *Pemanfaatan Limbah Industri Pengolahan Kayu untuk Pembuatan Briket Arang dalam Mengurangi Pencemaran Lingkungan di Nangroe Aceh Darussalam*, Skripsi: Departemen Kehutanan, Fakultas Pertanian, Universitas Sumatera Utara, Medan.
- Behrendt, F., Neubauer, Y., Oevermann, M., Wilmes, B., and Zobe, N., 2008, *Direct Liquefaction of Biomass (Review)*, *Chemical Engineering & Technology*, 31, 667.
- Bobleter, O., 1994, *Hydrothermal Degradation of Polymers Derived from Plants*, *Progress in Polymer Science* 19 (5), 797-841, DOI:10.1016/0079-6700 (94) 90033-7.



- Bruun, S., Jensen, E.S., and Jensen, L.S., 2008, *Microbial Mineralization and Assimilation of Black Carbon: Dependency on Degree of Thermal Alteration*, *Organic Geochemistry* 39, 839-845.
- Buekens, A., 2006, *Introduction to Feedstock Recycling of Plastics*, UK: John Wiley and Sons, Ltd.
- Burhanuddin, V., 2006, *Sifat Fisika dan Kimia Briket Arang Limbah Tunggak Bambu Betung (Dendrocalamus asper Schult) dari desa Loksado Kabupaten Hulu Sungai Selatan*, Prosiding Seminar Nasional Mapeki IX Im 400, Banjarbaru, Kalimantan Selatan.
- Chornet, E. and Overend, R.P., 1985, *Biomass Liquefaction: An Overview*, *Fundamentals of Thermochemical Biomass Conversion* (edited by Overend, R.P.; Milne, T.A.; Mudge, L.K.), Elsevier Applied Science, pp. 967.
- Earl, D. E., and Meyer, A., 1974, *Charcoal*, Food and Agricultural Organization of United Nations, Rome.
- Fatimah, I., 2004, *Pengaruh Laju Pemanasan terhadap Komposisi Biofuel Hasil Pirolisis Serbuk Kayu*, *Jurnal Logika* Vol. I No. I, 46-52.
- Fengel, D., and G. Wegener, 1989, *Wood: Chemistry, Ultrastructure, Reactions*, Walter de Gruyter, Berlin.
- Fengel, D., dan Wegener, G., Penerjemah Sastrohamidjoyo, 1995, *Kayu: Kimia, Ultrastruktur, Reaksi-Reaksi*, Gadjah Mada University Press, Yogyakarta.
- Funke, A., and Ziegler, F., 2010, *Hydrothermal Carbonization of Biomass: A Summary and Discussion of Chemical Mechanisms for Process Engineering*, *Biofuels, Bioproducts & Biorefining* 4(2), 160-177. DOI: 10.1002/bbb.198.



Guo, S., Dong, X., Liu, K., Yu, H., and Zhu, C, 2015, *Chemical, Energetic, and Structural Characteristics of Hydrothermal Carbonization Solid Products for Lawn Grass*, *Bioresources* 10(3), 4613-4625.

Hendra, D., 2011, *Pemanfaatan Eceng Gondok (Eichornia Crassipes) untuk Bahan Baku Briket sebagai Bahan Bakar Alternatif*, *Jurnal Penelitian Hasil Hutan*, Vol. 29, No. 2, Halaman 189-210, Bogor.

Hendra, D., dan Pari, G., 2000, *Penyempurnaan Teknologi Pengolahan Arang*, Laporan Hasil Penelitian, Lembaga Penelitian Hasil Hutan, Bogor.

Holman, J. P., 1986, *Heat Transfer* (6th edition), McGraw-Hill Book Company, New York.

Huber, G. W., Iborra, S., and Corma, A., 2006, *Synthesis of Transportation Fuels from Biomass: Chemistry, Catalysts, and Engineering*, *Chemical Reviews*, 106, 4044-4098.

Ibrahim, M., 1999, *Clean Fraction of Biomass-Steam Explosion and Extraction*, Thesis: Virginia Tech University.

Janssen, L. P. B. M., Girisuta, B., and Heeres, H. J., 2006, *Green Chemicals: A Kinetic Study on the Conversion of Glucose to Levulinic Acid*, *Chemical Engineering Research and Design*, 84(5), 339-349.

Kalinichev, A. G. and Churakov, S. V., 1999, *Size and Topology of Molecular Clusters in Supercritical Water: a Molecular Dynamics Simulation*, *Chemical Physics Letters*, 302, 411-417.



Karagoz, S., Bhaskar, T., Muto, A., Sakata, Y., and Uddin, M. A., 2004, *Low-Temperature Hydrothermal of Biomass: Effect of Reaction Parameters on Products and Boiling Point Distributions*, Energy & Fuels, 18, 234-241.

Knežević, D., Kersten, S.R.A., and Van Swaaij, W.P.M, 2009, *Hydrothermal Conversion of Biomass*, Thesis: University of Belgrade, Serbia. ISBN 978-90-365-2871-9.

Kritzer, P., 2004, *Corrosion in High-Temperature and Supercritical Water and Aqueous Solutions: A Review*, Journal of Supercritical Fluids, 29, 1.

Kritzer, P. and Dinjus, E., 2001, *An Assessment of Supercritical Water Oxidation (SWO). Existing Problems, Possible Solutions and New Reactor Concepts*. Chemical Engineering Journal (Amsterdam, Netherlands), 83, (3), 207-214.

Kruse, A., 2009, *Hydrothermal Biomass Gasification*, The Journal of Supercritical Fluids, 47, 391–399.

Kruse, A. and Gawlik, A., 2003, *Biomass Conversion in Water at 330-410 °C and 30-50 MPa: Identification of Key Compounds for Indicating Different Chemical Reaction Pathways*, Industrial & Engineering Chemistry Research, 42, 267-269.

Kumar, S., 2010, *Hydrothermal Treatment for Biofuels: Lignocellulosic Biomass to Bioethanol, Biocrude, and Biochar*, PhD Dissertation: Auburn University.

Lachke, A, 2002, *Biofuel from D-xylose the Second Most Abundant Sugar*, <http://111.93.135.171/Volumes/07/05/0050-0058.pdf> (diakses tanggal 14 Agustus 2016).

Libra, J.A., Ro, K.S., Kammann, C., Funke, A., Berge, N.D., Neubauer, Y., Titirici, M. M., Fühner, C., Bens, O., Kern, J., and Emmerich, K.H., 2011, *Hydrothermal*

- Carbonization of Biomass Residuals: A Comparative Review of the Chemistry, Processes and Applications of Wet and Dry Pyrolysis*, Biofuels, 2, 89-124.
- Masturin, A., 2002, *Sifat Fisik dan Kimia Briket Arang dari Campuran Arang Limbah Gergajian Kayu*, Sripsi: Fakultas Kehutanan, Institut Pertanian Bogor.
- McKendry, P., 2002, *Energy Production from Biomass (Part 2): Conversion Technologies*, Bioresource Technology, 83, 47-54.
- Melissari, B., 2014, *Ash Related Problems with High Alkali Biomass and Its Mitigation - Experimental Evaluation*, Mem. Invest. Eng. (Memoria Investigaciones en Ingeniería), 31–44.
- Mochidzuki, K., Lloyd S., Paredes, and Michael J. Antal, Jr., 2002, *Flash Carbonization of Biomass*, http://www.hnei.hawaii.edu/flash_carb_biomass.pdf (diakses tanggal 13 Agustus 2016).
- Mohan D., Pittman Jr C.U., and Steele P.H., 2006, *Pyrolysis of Wood/Biomass for Bio-oil: A Critical Review*, Energy Fuels, 20, 848-889. doi:[10.1021/ef0502397](https://doi.org/10.1021/ef0502397).
- Novianti, S., Nurdiawati, A., Zaini, I. N., Prawisudha, P., Sumida, H., and Yoshikawa, K., 2015, *Low-potassium Fuel Production from Empty Fruit Bunches by Hydrothermal Treatment Processing and Water Leaching*, Energy Procedia, Vol. 75, pp. 584-589.
- O' Sullivan, A.C., 1997, *Cellulose: The Structure Slowly Unravels*, Cellulose, 4, 173-207.
- Pari, G., 2002, *Teknologi Alternatif Pemanfaatan Limbah Industri Pengolahan Kayu*, Makalah Falsafah Sains (PPS 702), Program Pasca Sarjana IPB, Bogor.



- Parikh, J., Channiwala, S.A., and Ghosal, G.K., 2004, *A Correlation for Calculating HHV from Proximate Analysis of Solid Fuels*, Fuel 84 (2005), pp 487-494.
- Pastircakova, K., 2004, *Determination of Trace Metal Concentrations in Ashes from Various Biomass Materials*, Energy Education Science & Technology, 13, 97-104.
- Perry, R. H., 1997, *Perry's Chemical Engineers' Handbook (7th Edition)*, McGraw-Hill, New York.
- Peterson, A. A., 2008, *Thermochemical Biofuel Production in Hydrothermal Media: A Review of Sub- and Supercritical Water Technologies*, Energy & Environmental Science, 1(1), pp. 32-65.
- Ramke, H. G., 2009, *Hydrothermal Carbonization of Organic Waste*, Sardinia: Twelfth International Waste Management and Landfill Symposium.
- Reza, M. T., 2011, *Hydrothermal Carbonization of Lignocellulosic Biomass*, Thesis: University of Nevada, Reno.
- Robbiani, Z., 2013, *Hydrothermal Carbonization of Biowaste/Fecal Sludge: Conception and Construction of a HTC Prototype Research Unit for Developing Countries*, Thesis: Swiss Federal Institute of Technology Zurich, Zurich.
- Román, S., Nabais, J., Laginhas, C., Ledesma, B., and González, J., 2012, *Hydrothermal Carbonization as an Effective Way of Densifying the Energy Content of Biomass*, Fuel Process. Technology, 103, 78-83.
- Ruiz, H. A., Rodriguez-Jasso, R. M., Fernandes, B. D., Vicente A. A., and Teixeira, J. A., 2013, *Hydrothermal Processing as an Alternative for Upgrading Agriculture Residues and Marine Biomass According to the Biorefinery*

Concept: A Review, Renewable & Sustainable Energy Reviews, vol. 21, pp. 35–51.

Sasaki, M., Adschiri, T., and Arai, K., 2003, *Fractionation of Sugarcane Bagasse by Hydrothermal Treatment*, *Bioresource Technology*, 86, 301-304.

Sevilla, M., Macia-Agullo, J. A., and Fuertes, A. B., 2011, *Hydrothermal Carbonization of Biomass as a Route for the Sequestration of CO₂: Chemical and Structural Properties of the Carbonized Products*, *Biomass Bioenergy*, 35, 3152–3159.

Shafizadeh, F., 1975, *Pyrolytic Reactions and Products of Biomass*, Wood Chemistry Laboratory, University of Montana, USA.

Siahaan, S., H. Melvha., dan H. Rosdaneli, 2013, *Penentuan Kondisi Optimum Suhu dan Waktu Karbonisasi Pada Pembuatan Arang Dari Sekam Padi*, *Jurnal Teknik Kimia USU*, Vol.2, Medan, <http://download.portalgaruda.org/article.php?article=58763&val=4138>.

Diakses 11 Maret 2016.

Sudradjat, R, 2004, *The Potential of Biomass Energy Resources in Indonesia for the Possible Development of Clean Technology Process (CTP)*, Proceedings (Complete Version) International Workshop on Biomass & Clean Fossil Fuel Power Plant Technology: Sustainable Energy Development & CDM, pp. 36–59.

Sun, Q., Yu, S., Wang, F., and Wang, J., (2011), *Decomposition and Gasification Pyrolysis Volatiles from Pine Wood Through A Bed of Hot Char*, *Fuel* 90 (3), 1041-1048.

Tester, J. W., Holgate, H. R., Armellini, F. J., Webley, P. A., Killilea, W. R., Hong, G. T., and Barner, H. E, 1993, *Supercritical Water Oxidation Technology –*

Process Development and Fundamental Research, In Emerging Technologies in Hazardous Waste Management III, Washington D.C., American Chemical Society: Washington D.C., 35-76.

Titirici, Maria-Magdalena, Thomas, Arne et Antoniotti, and Markus, 2007, *Back in the Black: Hydrothermal Carbonization of Plant Material as an Efficient Chemical to Treat the CO₂ Problem?:* New Journal of Chemistry, 31, 787-789.

Volk, T.A., Abrahamson, L.P., White, E.H., Neuhauser, E., Gray, E., Demeter, C., Lindsey, C., Jarnefeld, J., Aneshansley, D.J., Pellerin, R., and Edick, S., 2000, *Developing a Willow Biomass Crop Enterprise for Bioenergy and Bioproducts in the United States*”, Proceedings of Bioenergy 2000, Adam’s Mark Hotel, Buffalo, New York, USA: North East Regional Biomass Program. OCLC 45275154. Retrieved on 2006-12-16.

Wan Azlina Wan Ab Karim Ghani, 2014, *Sawdust-Derived Biochar: Characterization and CO₂ Adsorption/Desorption Study*, Journal of Applied Sciences, 14, 1450-1454.

Wang, Y., Yao, G., and Jin, F., 2014, *Application of Hydrothermal Reactions to Biomass Conversion*, Green Chemistry and Sustainable technology, DOI: 10.1007/978-3-642-54458-3_2

Yu, Y.; Lou, X.; and Wu, H., 2008, *Some Recent Advances in Hydrolysis of Biomass in Hot-Compressed Water and Its Comparisons with Other Hydrolysis Methods*, Energy & Fuels, 22, 46–60.



Yuliansyah, A.T., Hirajima, T., Kumagai, S., and Sasaki, K., 2010, *Production of Solid Biofuel from Agricultural Wastes of the Palm Oil Industry by Hydrothermal Treatment*, Waste and Biomass Valorization, vol. 1, pp. 395–405.

Zhang, L.H., Xu, C.B., and Champagne, P., 2010, *Overview of Recent Advances in Thermo-Chemical Conversion of Biomass*, Energy Conversion Management, 51, 969–982.