

DAFTAR PUSTAKA

- Adam, Judit, 2005, 'Catalytic Conversion of Biomass to Produce Higher Quality Liquid Bio-fuels', *PhD thesis*, Faculty of Engineering Science and Technology, Department of Energy and Process Engineering Norwegian University of Science and Technology, Trondheim.
- Adjaye, J.D. and Bakhshi, N.N., 1995, Production of hydrocarbons by catalytic upgrading of a fast pyrolysis bio-oil. Conversion over various catalysts, *Fuel Processing Technology*, 45 (3): 161–183.
- Anonymous, 2007, *A Research Roadmap for Making Lignocellulosic Biofuels a Practical Reality, Breaking the Chemical and Engineering Barriers to Lignocellulosic Biofuels: Next Generation Hydrocarbon Biorefineries*, Base on June 25-26 Workshop, Washington,D.C.
- Anonymous, 2008, Keputusan Direktur Jenderal Minyak dan Gas Bumi Nomor 14496 14/D..IM 2008 Tanggal 21 Agustus 2008, STANDAR DAN MUTU (SPESIFIKASI) BAHAN BAKAR MINYAK JENIS MINYAK BAKAR YANG DIPASARKAN DI DALAM NEGERI
- Anonymous, [http://www.chemicalbook.com/ChemicalProductProperty_EN_CB4362168](http://www.chemicalbook.com/ChemicalProductProperty_EN_CB4362168.htm) .htm , akses 20 Oktober 2013.
- Baker, E. G. dan Elliott, D. C., 1988, Catalytic upgrading of biomass pyrolytic oils. In Research in *Thermochemical Biomass Conversion*, ed. A V. Bridgwater & J. L Kuester, Elsevier Applied Science, London, pp. 883-95.
- Boucher, M.E. A., Chaalab, C., Roy, 2000, Bio-oils obtained by vacuum pyrolysis of softwood bark as a liquid fuel for gas turbines. Part I: Properties of bio-oil and its blends with methanol and a pyrolytic aqueous phase; *Biomass and Bioenergy* 19, 337-350.
- Brebu, M. dan Vasile, C., 2010, Thermal Degradation of Lignin – A Review, *Cellulose Chem. Technol.*, 44 (9), 353-363.
- Bridgwater, A.V., 1996, Production of high grade fuels and chemicals from catalytic pyrolysis of biomass, *Catalysis Today*, 29(1–4): 285–295.
- Bridgwater A.V., 2003, Renewable fuels and chemicals by thermal processing of biomass, *Chemical Engineering Journal* 91, 87–102.
- Bridgwater A. V., 2004, Biomass Fast Pyrolysis, *Thermal Science*, 8(2): 21-49.
- Cagnon Benoît , Xavier Py, André Guillot , Fritz Stoeckli, Gérard Chambat, 2009, Contributions of hemicellulose, cellulose and lignin to the mass and the porous properties of chars and steam activated carbons from various

lignocellulosic precursors , Published in *Bioresource Technology* 100, issue 1, 292-298.

- Czernik and A. V. Bridgwater, 2004, 'Overview of Applications of Biomass Fast Pyrolysis Oil', *Energy & Fuels*, 18, 590-598.
- Czernik, S., Johnson, D. K. & Black, S., 1994, Stability of wood pyrolysis liquid. *Biomass and Bioenergy*, Vol. 7, No1-6, 187-192.
- Cagnon, B., Xavier, PY., and Guilliot, A., 2004, Carbonization Kinetics of coconut shell and plum stone, Institut de Science et Génie des Matériaux et Procédés, *Rambla de la Thermodynamique*, France.
- Chang Sub Ku dan Sung Phil Mun, 2006, Characterization of Pyrolysis Tar Derived from Lignocellulosic Biomass, *J. Ind. Eng. Chem.*, Vol. 12, No. 6, 853-861.
- Chen, N. Y., Walsh, D. E. dan Koenig, L R., 1988, Fluidized bed upgrading of wood pyrolytic liquids & related compounds. In *Pyrolysis Oils from Biomass*, ed. E. J. Soltes & T. A. Milne. ACS Symposium Series 376, Washington, DC, pp. 277-89.
- Chhiti, Y., Marine P., Salvador S., 2013, "Soot formation and oxidation during bio-oil gasification: experiments and modeling", *Journal of Energy Chemistry*, Vol. 22 No. 5.
- Demirbas A., 2001, Biomass resource facilities and biomass conversion processing for fuel and chemicals. *Energy Conversion Management*, 42(13): 57-78.
- Demirbas, A., 2004, Combustion characteristics of different biomass fuels, *Progress in Energy and Combustion Science*, 30: 219-230.
- Demirbas, A., 2009, Biorefineries: Current activities and future developments Energy Conversion and Management, *Energy Conversion and Management* 50, 2782-2801.
- Diebold, J.P. & Bridgwater, A.V., 1997, Overview of fast pyrolysis of biomass for the production of liquid fuels. In: Bridgwater, A.V. & Boocock, D. G. B.(eds.). *Developments in thermochemical biomass conversion*. London: Blackie Academic & professional. Pp. 5-26.
- Diebold, J. P., Milne, T., Czernik, S., Oasmaa, A., Bridgwater, A. V., Cuevas, A., Gust, S., Huffman, D. & Piskorz, J., 1997, Proposed specifications for various grades of pyrolysis oils. In: Bridgwater, A. V. & Boocock, D. G. B. (eds.). *Developments in Thermochemical Biomass Conversion*, Banff, 20-24 May 1996. Glasgow: Blackie Academic & Professional. Vol. 1, pp. 433-447.

- Diebold, J. P., 2000, Review of the Chemical and Physical Mechanisms of the Storage Stability of Fast Pyrolysis Bio-Oils. *National Renewable Energy Laboratory*, (January 2000). NREL/SR-570-27613.
- Diebold, J., Scahill, J., Bain, R., Chum, H., Black, S., Milne, T., Evans, R. & Rejai, B. 1992. Biomass liquefaction at SERI. In *Biomass Thermal Processing*, ed. E. Hogan, J. Robert, G. Grassi & A. V. Bridgwater. CPL Press, London, pp. 101-8.
- Evans R.J., Milne T.A. 1987, Molecular Characterization of the Pyrolysis of Biomass II, Applications, *Energy and Fuels*, Vol. 1, No 4, July/August 1987, p. 311-319.
- Fengel, D., and Wegener, G., 1995, *Kayu; Kimia, Ultrastruktur, Reaksi-reaksi*, Hardjono Sostrohamijoyo (Penterjemah), Gadjah Mada University Press. p 78, 126, 165, Yogyakarta.
- Fjellerup, J., Jesper Ahrenfeldt, Ulrik Henriksen, Benny Gøbel, 2005, *Formation, Decomposition and Cracking of Biomass Tars in Gasification*, Department of Mechanical Engineering Technical University of Denmark, Biomass Gasification Group, ISBN nr.: 87-7475-326-62.
- Frenklach, M., 2002, Reaction mechanism of soot formation in flames, *Phys. Chem. Chem. Phys.*, 4: 2028–2037.
- Garcia, M., 2008, *The Formation of Polyaromatic Hydrocarbons and Dioxins During Pyrolysis: A Review of the Literature with Descriptions of Biomass Composition, Fast Pyrolysis Technologies and Thermochemical Reactions*. Washington State University.
- Ganapathy Sundaram E. and E. Natarajan, 2009, Pyrolysis of Coconut Shell: An Experimental Investigation, *The Journal of Engineering Research* 6(2): 33-39.
- Harjono, A. 2000, *Teknologi Minyak Bumi*, Edisi pertama, Gadjah Mada University Press, Yogyakarta.
- Holladay, JE , Bozell JJ, White JF and D Johnson, 2007, *Top Value-Added Chemicals from Biomass Volume II—Results of Screening for Potential Candidates from Biorefinery Lignin*, Pacific Northwest National Laboratory Pacific Northwest National Laboratory operated by Battelle for the United States Department of Energy.
- Kamulyan, Budi, 2008, Isolasi Bahan Bakar (Biofuel) dari Tar-Asap Cair Hasil Pirolisis Tempurung Kelapa, *Tesis*, Program Pascasarjana Fakultas Matematika dan Pengetahuan Alam Universitas Gajah Mada Yogyakarta.

- Lopes, M. S., M. Savioli Lopes, R. Maciel Filho, M. R. Wolf Maciel, L.C. Medina, 2012, 'Extension of the TBP curve of petroleum using the correlation DESTMOL', *Procedia Engineering* 42 726 – 732.
- Maggi, R. and Delmon, B., 1997, A review of catalytic hydrotreating processes for the upgrading of liquids produced by flash pyrolysis, Hydrotreatment and Hydrocracking of Oil Fractions, *Studies in Surface Science and Catalysis*, 106:99–113.
- McLafferty, F.W., 1988, *Interpretasi Spektra Massa*, Edisi ketiga, diterjemahkan oleh Satroamidjojo, H., Gadjah Mada University Press, Yogyakarta.
- Mohan, Dinesh, Charles U. Pittman, Jr., and Philip H. Steele, 2006, Pyrolysis of Wood/Biomass for Bio-oil: A Critical Review, *Energy & Fuels*, 20: 848-889.
- Mortimer, Robert G., 2008, Phase Equilibrium, *Physical Chemistry*, Third Edition, Elsevier Inc. Amsterdam • Boston • Tokyo.
- Oasmaa, A. & Cordner Peacocke, 2010, Properties and fuel use of biomass derived fast pyrolysis liquids, A guide, VTT Publications, Finland 731.
- Oasmaa, A. and Czernik, S., 1999, Fuel Oil Quality of Biomass Pyrolysis Oils, State of the Art for the End Users, *Energy & Fuels*, 13, 914-921.
- Oasmaa, A. & C. Peacocke, 2001, A Guide to Physical Property Characterisation of Biomass-derived Fast Pyrolysis Liquids, *VTT Publications*, Technical Research Centre of Finland, p 7-12.
- Oasmaa, A., Leppämäki, E., Koponen, P., Levander, J. & Tapola, E. 1997. Physical characterisation of biomass-based pyrolysis liquids. Application of standard fuel oil analyses. Espoo, *VTT Publications* 306. ISBN 951-38-5051-X.
- Olah and Molnar, 2003, *Hydrocarbon Chemistry*, Second edition, John Wiley & Sons, Inc. ISBN: 0-471-41782-3.
- Patwardhan, P.R., 2010. "Understanding the product distribution from biomass fast pyrolysis" *Graduate Theses and Dissertations*. Chemical Engineering, Iowa State University, Paper 11767.
- Peacocke, G. V. C., Russell, P. K., Jenkins, J. D. & Bridgwater, A. V. 1994, Physical properties of flash pyrolysis liquids, *Biomass & Bioenergy*. vol. 7. no. 16. Pp 169-177.
- Sharma, R.K. & Bakhshi, N. N., 1993, Conversion of Non-Phenolic Fraction of Biomass Driven Pyrolysis Oil to Hydrocarbon Fuels Over HZSM-5 Using a Dual Reactor System, *Bioresour. Technology* 45 195-203.

- Sharma, R. K. & Bakhshi, N. N. 1991. Upgrading of woodderived bio-oils over HZSM-5. *Bioresource Technol.*, 35, 57-66.
- Shen, D.K, Gu, S., Bridgwater, A.V.,2010, Study on the pyrolytic behaviour of xylan-based hemicellulose using TG–FTIR and Py–GC–FTIR, *J. Anal. Appl. Pyrolysis*, 87, 199–206.
- Shen, D.K., Rui Xiao, Sai Gu dan Huiyan Zhang, 2013, The Overview of Thermal Decomposition of Cellulose in Lignocellulosic, *Biomass, Cellulose – Biomass Conversion*, chapter 9, licensee InTech., (<http://creativecommons.org/licenses/by/3.0>).
- Tsamba, A.J., Weihong Yang, Wlodzimierz Blasiak, 2006, Pyrolysis characteristics and global kinetics of coconut and cashew nut shells, *Fuel Processing Technology* 87 , 523–530.
- Wild, De, PJ, Reith H, Heeres, HJ, 2011, Biomass pyrolysis for chemicals. *Biofuels*. 2 (2), 185 – 208.
- Wen-Tien Tsai, Hsiao-Hsuan Mi, Yuan-Ming Chang, Shyh-Yu Yang, Jeng-Hung Chang, 2006, “Polycyclic aromatic hydrocarbons (PAHs) in bio-crudes from induction-heating pyrolysis of biomass wastes”, *Bioresource Technology*, Science Direct, Elsevier. 98 1133–1137.
- Xi-feng Zhu and Qiang Lu, 2010, ‘*Production of Chemicals from Selective Fast Pyrolysis of Biomass*, Source: *Biomass*, Book edited by: Maggie Momba and Faizal Bux, ISBN 978-953-307-113-8, pp. 202, Sciyo, Croatia.
- Yaman S., 2004, “Pyrolysis of biomass to produce fuels and chemical feedstocks”, *Energy Conversion and Management*, 45, 651–671.
- Zhang, Q., Jie Chang, Tiejun Wang, Ying Xu, 2007, “Review of biomass pyrolysis oil properties and upgrading research”, *Energy Conversion and Management*, Science Direct, Elsevier, Volume 48, Issue 1, Pages 87–92.