



DAFTAR PUSTAKA

- Abdolzadeh, H., and Doosthoseini, K., 2009, *Evaluation of Old corrugated Container and Wood Fiber Application on Surface Roughness of Three Layer Particleboard*, Bioresources, 4(3): 970-978.
- Ahmad, N., Kasim, J., Muhammad, S.Z., Yamani, S.A.K., Mokhtar, A., and Yunus, N.Y.M., 2011, *Manufacture and Properties of Oil Palm Particleboard*, Proceeding International Symposium & Exhibition in Sustainable Energy & Environment 3rd, Melaka, Malaysia.
- Anwar, K., 1998, *Kajian Kelayakan Pendirian Industri Papan Partikel Berbahan Baku Limbah Industri Kayu Lapis di Kabupaten Barito Kuala, Kalimantan Selatan*, Skripsi : Institut Pertanian Bogor, Bogor.
- Arancon, R.N. Jr., 1997, *Asia-Pacific Forestry Sector Outlook Study : Focus on Coconut Wood*, Asia-Pacific Forestry Sector Outlook Study Working Paper Series, Forestry Policy and Planning Division, Regional Office for Asia and the Pacific, Working Paper No: APFSOS/WP/23, Bangkok.
- Asian and Pasific Coconut Community, 1998, *Coconut Statistical Yearbook 1997*, (Jakarta: APCC).
- Baharoglu, M., Nemli, G., Sari, B., Bardak, S., and Ayrilmis, N., 2012, *The influence of moisture content of raw material on the physical and mechanical properties, surface roughness, wettability, and formaldehyde emission of particleboard composite*, Composites: Part B, 43: 2448–2451.
- Balfas, J., 1995, *Beberapa aspek teknologi pada kayu hasil pengembangan hutan tanaman industri (HTI) di Indonesia*, Seminar Hasil Penelitian Balai Penelitian Kehutanan Pematang Siantar, Prapat 27-29 November 1995, Balai Penelitian Kehutanan Pematang Siantar, hlm 37-48.
- Bertaud, F., Lingu, S.T., Pizzi, A., Navarrete, P., and Conil, M.P., 2012, *Development of green adhesives for fibreboard manufacturing, using tannins and lignin from pulp mill residues*, Cellulose Chem. Technol., 46 (7-8): 449-455.
- Bowyer, J.L., Shmulsky, R., and Haygreen, J.G., 2003, *Forest Products and Wood Science An Introduction*, Fourth edition, Iowa State University Press, USA.



Butterfield, B., and Meylan, B., 1979, *The structure of coconut wood*. International Association of Wood Anatomists (IAWA) Bulletin, 2(3): 35-36.

Departemen Pertanian, 2005, *Prospek dan Arah Pengembangan Agribisnis Kelapa*, Badan Penelitian dan Pengembangan Pertanian Departemen Pertanian Republik Indonesia, Jakarta

Departemen Pertanian, 2007, *Prospek dan Arah Pengembangan Agribisnis Kelapa (Edisi Kedua)*, Badan Penelitian dan Pengembangan Pertanian Departemen Pertanian Republik Indonesia, Jakarta.

Despot, R., Hasan, M., Jug, M., and Sefc, B., 2008, *Biological durability of wood modified by citric acid*, DRVNA INDUSTRIJA, 59(2): 55-59.

Dhamodaran, T.K., Gnanaharan, R., and Thulasidas, P.K., 1989, *Calorific value variation in coconut stem wood*, Wood Science and Technology Journal, 23(1): 21-26.

Escolano, J.O., and Bawagan, P.V., 1988, *Pulp, paper, fiberboard and chemical products. In coconut wood utilization research and development: The Philippine experience Forest Products Research and Development Institute (FPDRI) and International Development Research Centre (IDRC)*, 87-99.

Fathi, L., 2014, *Structural and mechanical properties of the wood from coconut palms, oil palms and date palms*, Dissertation: University of Hamburg, Germany.

Fernando, Widyorini, R., Sulistyo, J., dan Santoso, M., 2015, *Pengaruh Penambahan Perekat dan Suhu Kempa terhadap Sifat Papan Komposit dari Serat Sabut Kelapa (Cocos nucifera) dengan Asam Sitrat sebagai Perekat*, Prosiding Nasional (MAPEKI) XVIII 4-5 November 2015, Bandung.

Food and Agriculture Organization (FAO), 2009, *State of the world's Forest: Global Demand wood Products*, Electronict Publishing Policy and Support Branch, Communication Division, FAO, Rome, Italy.

Fuller, H.J., and Tippo, O., 1954, *College Botany Revised Edition*, New York.

Hashim, R., Hamid, S.H.A., Sulaiman, O., Ismail, N., Ibrahim, M.H., and Jais, H., 2009, *Extractable formaldehyde from waste medium density fibreboard*, J. Trop.For. Sci, 21: 25-33.



Haygreen, J.G., dan Bowyer, J.L., 1996, *Hasil Hutan dan Ilmu Kayu Suatu Pengantar*, Diterjemahkan oleh Sutjipto A.Hadikusumo, Gadjah Mada University Press, Yogyakarta.

Hiziroglu, S., and Suzuki, S., 2007, *Evaluation of surface roughness of commercially manufactured particleboard and medium density fiberboard in Japan*, J. Mater Process Tech, 184(1-3): 436-440.

Iskandar, M., 2009, *Proses Pembuatan Papan Partikel*, Pusat Penelitian dan Pengembangan Hasil Hutan, Bogor.

Japanese Standart Association, 2003, *Japanese Industrial standards Particleboard (JIS A 5908-2003)*, Japanese Standards Association, Japan.

Kanjana, A., 2014, *A Feasibility Study of Using Extracted Tea Leaves From Beverage Industry For Particle Board Production Instead of Wood Chip*, Thesis : Prince of Songkla University, Thailand.

Karlaganis, G., 2001, *Citric Acid – SIDS Initial Assessment Report*, UNEP Publications Swiss Agency for the Environment, Forests and Landscape.

Kementerian Kehutanan, 2013, *Statistik Kementerian Kehutanan 2012*, Kementerian Kehutanan Republik Indonesia, Jakarta.

Kementerian Pertanian, 2014, *Statistik Perkebunan Indonesia Komoditas Kelapa 2013-2015*, Kementerian Pertanian Republik Indonesia, Jakarta.

Killmann, W., 1983, *Some physical properties of the coconut palm stem*, Wood Science and Technology Journal, 17(3): 167-815.

Kim, M.H., and Song, H.B., 2014, *Analysis of the global warming potential for wood waste recycling systems*, J Clean Prod, 69:199–207.

Kollmann, F.F.P., Kuwnzi, E.W., and Stamm, A.J., 1975, *Principle of Wood Science and Technology*, Vol II : Wood Based Material, Springer-Verlag, Berlin Hedelberg Newyork.

Kusumah, S.S, Umemura, K., Yoshioka, K., Miyafuji, H., and Kanayama, K., 2016, *Utilization of sweet sorghum bagasse and citric acid for manufacturing of particleboard I: Effects of pre-drying treatment and citric acid content on the board properties*, Industrial Crops and Products, 84 : 34-42.

Lumintang, R.C.M., Soenoko, R., dan Wahyudi, S., 2012, *Komposit Hibrid Polyester Berpenguat Serbuk Batang dan Serat Sabut Kelapa*, J. Rekayasa Mesin, 2: 145-153.



Maloney, T.M., 1977, *Modern Particle Board and Dry Process Fiberboard Manufacturing*, Miller Freeman Publication, San Francisco, USA.

Martono, D, 2015, *Kontribusi Penyediaan Kayu Perumahan Dari Bahan Baku Kayu Kelapa* (internet), Pusat Penelitian dan Pengembangan Hasil Hutan <http://www.pustekolah.org/index.php/detail/870/KONTRIBUSI_PENYEDIAAN-KAYU-PERUMAHAN-DARI-BAHAN-BAKU-KAYU-KELAPA#.V5zF39J95dh> (diakses tanggal 30 Juli 2016).

Max, B., Salgado, J.M., Rodriguez, N., Cortez, S., Converti, A., ana Dominguez, J. M., 2010, *Biotechnological Production of Citric Acid*, Braz. J. Microbiol, 41(4): 862-875.

McSweeney, J.D., Rowell, R.M., and Min, S.H., 2006, *Effect of Citric Acid Modification of Aspen Wood on Sorption of Copper Ion*, Journal of Natural Fibers, 3(1): 43-58.

Myers, G.E., 1983, *Formaldehyde emission from particleboard and plywood paneling: measurement, mechanism, and product standards*, Forest Prod. J. 33(5): 27-37.

Ndazi, B., Techa, J.V., Bisanda, E.T.N., 2006, *Some opportunities and challenges of producing bio-composites from non-wood residues*, J. Mat Sci, 41: 6984-6990.

Nemli, G., 2003, *Effects of Some Manufacturing Factors on the Properties of Particleboard Manufactured from Alder (*Alnus Glutinosa* subsp. *Barbata*)*, Turk J. Agric.For, 26: 31-36.

Okuda, N., Hori, K., and Sato, M., 2006, *Chemical changes of kenaf core binderless boards during hot pressing (I): influence of the pressing temperature condition*, J Wood Sci, 52:244.

Paridah, M.T., Juliana, A.H., Zaidon, A., and Abdulkhalil, H.P.S., 2015, *Nonwood-Based Composites*, Current Forestry Reports, 1(4): 221-238.

Penchah, H.K., Sharif, M., Mousazadeh, H., and Hosseinabadi, H.Z., 2014, *Life cycle assessment of particleboard manufacturing: A case study*, Conference on Emerging Trends in Energy Conservation (ETEC) 4^{ed}.

Prayitno, T. A., 1994, *Perekatan Kayu*, Bagian Penerbitan Yayasan Pembina Fakultas Kehutanan, Universitas Gadjah Mada, Yogyakarta.

Prayitno, T. A., 1995, *Teknologi Papan Majemuk*, Fakultas Kehutanan, Universitas Gadjah Mada, Yogyakarta.



Poyoh, C.F., A.Rauf, F., Lumintang, R., 2013, *Pengaruh Variasi Ukuran Butiran Filler Serbuk Gergaji Batang Kelapa Terhadap Sifat Mekanik Komposit*, J.Online Poros Teknik Mesin (internet), 2(1): 2013. <<http://ejournal.unsrat.ac.id/index.php/poros/article/view/2395>> (diakses tanggal 20 Februari 2016).

Poulter, R., and Hopewell, G., 2010, *Secondary cocowood products*, Potting mix. (DEEDI), Brisbane, Australia.

Purnomo, T.E., 2007, *Pengaruh konsentrasi bahan pengaktif asam klorida (HCl) terhadap mutu arang aktif limbah serbuk gergaji kayu kelapa (Cocos Nucifera) sebagai penurun kadar warna jenis reaktif dingin antasol (B.KNR) limbah cair industri batik*, Tesis: Universitas Gadjah Mada, Yogyakarta.

Rahayu, Istie S., 2001, *Sifat Dasar Vascular Bandle dan Perenkim Batang Kelapa Sawit (Elaeis Guineensis Jacq.) dalam Kaitannya Sifat Fisis, Mekanis serta keawatan*, Thesis : Institut pertanian Bogor, Bogor.

Rojo, J.P., Tesore, F.O., Lopez, S. K. S., and Dy, M.E., 1988, *Coconut wood utilization research and development: the Philippine experience*, Forest Products Research and Development Institute, Philippines.

Rydholm, S.A., 1965, *Pulping processes*, Interscience Publishers, John Wiley and Sons Inc, New York-London-Sydney.

Samosir, Y. M. S., Foale, M. A., and Adkins, S.W., 2006, *Coconut world: an opportunity for northern Queensland*, Coconut Revival : New Possibilities for the 'Tree of Life' : Proceedings of the International Coconut Forum held in Cairns, Australia.

Sefc, B., Trajkovic, J., Hasan, M., Katovic, D., Vukusic, S.B., and Martina, F., 2009, Dimensional stability of wood modified by citric acid using different catalysts, *DRVNA INDUSTRIJA*, 60 (1): 23-26.

Shmulsky, R., and Jones, P.D., 2011, *Forest Product and Wood Science An Introduction*, 6 edition, Wiley-Blackwell Publication, United Kingdom.

Siagian, R.M., 1983, *Pengaruh Suhu dan Tekanan Kempa Terhadap Sifat Papan Serat yang dibuat dari Limbah Industri Perkayuan*, Laporan PPPHH , Bogor.



SNI, 2006, *Papan Partikel SNI 03-2105-2006*, Badan Standarisasi Nasional, Indonesia.

Stark, N.M., Cai, Z., and Carll, C., 2010, *Wood-Based Composite Materials*, In: Wood Handbook: Wood as an Engineering Material, Forest Product Laboratory.

Sulc, V.K., 1983, *Grading Rules for Coconut Palm Wood*, Report Prepared for the Philippine Government by FAO-UNDP, Regional Coconut Wood Training Programme RAS/81/110, Zamboanga City, Philippines.

Sutigno, P., 1994, *Mutu Produk papan partikel*, Pusat Penelitian dan Pengembangan Hasil Hutan dan Sosial Ekonomi Kehutanan, Bogor.

Tajuddin, 2013, *Karakteristik Papan Partikel Pelapah Kelapa Sawit Tanpa Perekat Sintetik*, Thesis : UGM, Yogyakarta.

Tatang, 1996, *Studi hubungan modulus patah (MOR) dengan modulus elastisitas (MOE) dan berat jenis (BJ) kayu kelapa (Cocos nucifera L.) dari contoh kayu konstruksi*, skripsi: Institut Pertanian Bogor, Bogor.

Umemura, K., Ueda, T., Munawar, S.S., and Kawai, S., 2012a, *Application of citric acid as natural adhesive for wood*, J.Appl. Polym. Sci, 123(4): 1991-1996.

Umemura, K., Ueda, T., and Kawai, S., 2012b, *Characterization of Wood-Based Molding Bonded With citric acid*, J.Wood Sci, 58: 38-45.

Umemura, K., Ueda, T., and Kawai, S., 2012c, *Effects of Molding Temperature on the Physical Properties of Wood-Based Molding Bonded with Citric Acid*, Forest Products J, 62(1): 63-68.

Umemura, K., Sugihara, O., and Kawai, S., 2013, *Investigation of a New Natural Adhesive Composed of Citric Acid and Sucrose for Particleboard*, J. Wood Sci, 59: 203-208.

Umemura, K., Sugihara, O., and Kawai, S., 2015, *Investigation of a New Natural Adhesive Composed of Citric Acid and Sucrose for Particleboard II :Effect of Board density and Pressing Temperature*, J.Wood Sci, 61: 40-44.

Valzano, F., Jackson, M., and Campbell, A., 2001, *Greenhouse Gas Emission from Composting Facilities*, The University of New South Wales, Australia.



Vick, C.B., 1999, *Adhesive Bonding of Wood Material*, In: Wood Handbook: Wood as an Engineering Material, Forest Product Laboratory, USDA Forestt Service.

Wardhani, Y., Surjokusumo, S., Hadi, S.Y., dan Nugroho, N., 2004, *Distribusi Kandungan Kimia Kayu Kelapa (Cocos nucifera)*, Jurnal Ilmu dan Teknologi Kayu Tropis, Samarinda.

Widsten, P., Doolay, N., Parr, R., Capricho, J., and Suckling, I., 2014, *Citric acid crosslinking of paper products for improved high-humidity performance*, J. Carbo, 101: (998–1004).

Widyorini, R., dan Puspitasari, F.E., 2011, *Pengaruh Perlakuan Ekstraksi dan Waktu Kempa Terhadap Sifat Papan Partikel Tanpa Perekat Dari Limbah Serbus Gergajian Kayu Mahoni*, Prosiding Seminar Nasional Masyarakat Peneliti Kayu Indonesia (MAPEKI) XIV, Fakultas Kehutanan UGM, Yogyakarta.

Widyorini, R., Prayitno, T.A., Yudha, A.P., Settiawan, B.A., dan Wicaksono, B.H., 2012a, *Pengaruh Konsentrasi Asam Sitrat dan Suhu Pengempaan terhadap Kualitas Papan Partikel dari Pelepah Nipah*, Jurnal Ilmu Kehutanan, 6(1): 61-70.

Widyorini, R., Yudha, A.P., Ngadianto, A., Umemura, K., and Kawai, S., 2012b, *Development of Bio-based Composite Made from Bamboo and Oil Palm Frond*, Proceedings of BIOCOMP 2012 (11th Pasific Rim Bio-Based Composite Symposium), Shizuoka, Japan.

Widyorini, R., Yudha, A.P., Isnaini, R., Awaludin, A., Prayitno, T.A., Ngadianto, A., and Umemura, K., 2014, *Improving the physico-mechanical properties of eco-friendly composite made from bamboo*, Advanced Material Research, 896 : 562-565.

Widyorini, R., Yudha, A.P., Lukmandaru, G., dan Prayitno, T.A., 2015, *Sifat Fisika Mekanika dan Ketahanan Papan Partikel Bambu dengan Perekat Asam Sitrat Terhadap Serangan Rayap Kayu Kering*, Jurnal Ilmu Kehutanan, 9(1) : 12-22.

Widyorini, R., Umemura, K., Isnaini, R., Putra, D.R., Awaludin, A., and Prayitno, T.A., 2016, *Manufacture and Properties of Citric Acid-Bonded Particleboard Made from Bambu Materials*, Eur.J.Wood Prod, 74: 57–65.

Wijaya, A., 2001, *Pengaruh Variasi Kerapatan Papan Dan Jenis Perekat Terhadap Keteguhan Rekat Dan Presentase Kerusakan Papan Laminasi Kayu Kelapa*, Skripsi: Institut Pertanian Bogor, Bogor.



Wong, K.K., 2012, *Optimizing Resin Consumption, Pressing Time and Density of Particleboard Made of Mixes of Hardwood Sawmill Residue and Custom Flaked Softwood*, Dissertation : RMIT University, Australia.

Xu, J., Sugawara, R., Widyorini, R., Han, G., and Kawai, S., 2004, *Manufacture and properties of low-density binderless particle board from kenaf core*, J. Wood Science, 50: 62-67.

Zhang, D., Zhang, A., Xue, L., 2015, *A review of preparation of binderless fiberboards and its self-bonding mechanism*, J. Wood Sci Technol, 49: 661-679.