

DAFTAR PUSTAKA

- [1] Abraham, A., Mathew, A.K., Sindhu, R., Pandey, A. and Binod, P., 2016. Potential of rice straw for bio-refining: an overview. *Bioresource Technology*, 215, pp.29-36.
- [2] Makarim, A.K. and Sumarno, S., 2007. Jerami padi: pengelolaan dan pemanfaatan. *Pusat Penelitian dan Pengembangan Tanaman Pangan. Badan Penelitian dan Pengembangan Pertanian. Bogor.*
- [3] Sridach, W., 2010. The environmentally benign pulping process of non-wood fibers. *Suranaree Journal of Science & Technology*, 17(2).
- [4] Silalahi, K., 2018. Review artikel: aplikasi mikrokristalin selulosa dalam farmasetik. *Farmaka*, 16(1).
- [5] Ibrahim, M.M., El-Zawawy, W.K., Jüttke, Y., Koschella, A. and Heinze, T., 2013. Cellulose and microcrystalline cellulose from rice straw and banana plant waste: preparation and characterization. *Cellulose*, 20(5), pp.2403-2416.
- [6] Widia, I. and Wathoni, N., 2017. Selulosa mikrokristal: isolasi, karakterisasi, dan aplikasi dalam bidang farmasetik. *Farmaka*, 15(2), pp.127-143.
- [7] Singh, R., Shukla, A., Tiwari, S. and Srivastava, M., 2014. A review on delignification of lignocellulosic biomass for enhancement of ethanol production potential. *Renewable and Sustainable Energy Reviews*, 32, pp.713-728.
- [8] Devendra, L.P. and Pandey, A., 2016. Hydrotropic pretreatment on rice straw for bioethanol production. *Renewable energy*, 98, pp.2-8.



of birch wood into cellulose and lignin: a new step towards green biorefinery.

BioResources, 8(3), pp.3518-3531.

- [10] Biermann, C.J., 1996. *Handbook of pulping and papermaking*. Elsevier.
- [11] Andelin, J., Niblock, R.W. and Curlin, J.W., 1989. Technologies for reducing dioxin in the manufacture of bleached wood pulp. *Chap*, 2, p.17.
- [12] Badan Standarisasi Nasional, 2015. Pulp kraft putih kayudaun / Leaf Bleached Kraft Pulp (LBKP).
- [13] R. Hayes and A. Chetwynd, 2006. European patent application EP 1 707 669 A2.
- [14] Dhir, A., Prakash, N.T. and Sud, D., 2011. Studies on coupled biological and photochemical treatment of soda pulp bleaching effluents from agro residue based pulp and paper mill. *Journal of Chemical Technology & Biotechnology*, 86(12), pp.1508-1513.
- [15] Fuadi, A.M., Sediawan, W.B. and Purwono, S., 2007. Kinetic of pulp bleaching by hydrogen peroxide.
- [16] Retnaningtyas, S., 2013. Optimasi proses *bleaching* pada proses pembuatan pulp kering berbahan dasar serabut kelapa sawit (*elais guineensis*) (Kajian kadar H₂O₂ dan lama waktu *bleaching*) (Doctoral dissertation, Universitas Brawijaya).
- [17] Tutas, A., 2004. Bleaching of rice straw pulps with hydrogen peroxide. *Pakistan Journal of Biological Sciences*, 7(8), pp.1327-1329.
- [18] Abou El-Kheir, A., Haggag, K., Mowafi, S.I. and El-Sayed, H., 2015. Microwave-assisted bleaching of wool fabrics. *Journal of natural fibers*, 12(2), pp.97-107.



- Singh, R., Tiwari, S., Srivastava, M. and Shukla, A., 2014. Experimental study on the performance of microwave assisted hydrogen peroxide (H₂O₂) pretreatment of rice straw. *Agricultural Engineering International: CIGR Journal*, 16(1), pp.173-181.
- [20] Fuadi, A.M. and Sulistya, H., 2008. Pemutihan pulp dengan hidrogen peroksida. *Reaktor*, 12(2), pp.123-128.
- [21] Gabov, K., 2018. Hydrotropic process for green biorefinery applications.
- [22] Elhelece, W.A., 2020. Rice straw as a raw material for pulp and paper production.
- [23] Mussatto, S.I. ed., 2016. *Biomass fractionation technologies for a lignocellulosic feedstock based biorefinery*. Elsevier.
- [24] Harmsen, P.F.H., Huijgen, W., Bermudez, L. and Bakker, R., 2010. Literature review of physical and chemical pretreatment processes for lignocellulosic biomass.
- [25] Carlton, W., Dence, R. and Tappi, 1996. Pulp bleaching: principles and practice. *Reeve Editors*. Tappi.
- [26] Sixta, H. ed., 2006. *Handbook of pulp*. Wiley-vch.
- [27] I. D. Schaible, N. Y. Us, B. Sherwood, and N. Y. Us., 2005. patent application publication. Pub. No.: US 2005 / 0145351A1," vol. 1, no. 09.
- [28] Kaur, D., Bhardwaj, N.K. and Lohchab, R.K., 2017. Prospects of rice straw as a raw material for paper making. *Waste Management*, 60, pp.127-139.
- [29] Fan, G.Z., Wang, Y.X., Song, G.S., Yan, J.T. and Li, J.F., 2017. Preparation of microcrystalline cellulose from rice straw under microwave irradiation. *Journal of Applied Polymer Science*, 134(22).



- [30] Artati, E.K., Effendi, A. and Haryanto, T., 2009. Pengaruh konsentrasi larutan pemasak pada proses delignifikasi eceng gondok dengan proses organosolv. *Ekuilibrium*, 8(1), pp.25-28.
- [31] Jahan, M.S., 2006. Formic acid pulping of bagasse. *Bangladesh Journal of Scientific and Industrial Research*, 41(3), pp.245-250.
- [32] Zhou, Z., Cheng, Y., Zhang, W., Jiang, J. and Lei, F., 2016. Characterization of lignins from sugarcane bagasse pretreated with green liquor combined with ethanol and hydrogen peroxide. *BioResources*, 11(2), pp.3191-3203.
- [33] Ansari, K.B. and Gaikar, V.G., 2014. Green hydrotropic extraction technology for delignification of sugarcane bagasse by using alkybenzene sulfonates as hydrotropes. *Chemical Engineering Science*, 115, pp.157-166.
- [34] Dhapte, V. and Mehta, P., 2015. Advances in hydrotropic solutions: an updated review. *St. Petersburg Polytechnical University Journal: Physics and Mathematics*, 1(4), pp.424-435.
- [35] Hartati, I., Kurniasari, L., Arum, D.P. and Sudarmiseh, S., 2019. Proses delignifikasi hidrotropi rami (*boehmeria nivea gaud*). *Jurnal Inovasi Teknik Kimia*, 4(1).
- [36] Devendra, L.P. and Pandey, A., 2016. Hydrotropic pretreatment on rice straw for bioethanol production. *Renewable energy*, 98, pp.2-8.
- [37] Tutus, A. and Usta, M., 2004. Bleaching of chemithermomechanical pulp (CTMP) using environmentally friendly chemicals. *Journal of environmental biology*, 25(2), pp.141-145.
- [38] G. U. G. Oor, D. Ag, R. G. Lenneberg, and D. Ag., 2000. Hydrogen peroxide.
- [39] Ramos, E., Calatrava, S.F. and Jiménez, L., 2008. Bleaching with hydrogen peroxide. A review. *Afinidad*, 65(537).



- Ziae-Shirkolae, Y., 2009. Comparative study on hydrogen peroxide bleaching of soda-organosolv and kraft rice straw pulps. *Indian J. Chem. Technol.*, vol. 16, no. 2, pp. 181–187.
- [41] Rämö, J., 2003. Hydrogen peroxide-metals-chelating agents: interactions and analytical techniques. Oulun yliopisto.
- [42] Li, Z., Dou, H., Fu, Y. and Qin, M., 2015. Improving the hydrogen peroxide bleaching efficiency of aspen chemithermomechanical pulp by using chitosan. *Carbohydrate polymers*, 132, pp.430-436.
- [43] Abrantes, S., Amaral, E., Costa, A.P., Shatalov, A.A. and Duarte, A.P., 2007. Hydrogen peroxide bleaching of Arundo donax L. kraft-anthraquinone pulp—Effect of a chelating stage. *Industrial Crops and Products*, 25(3), pp.288-293.
- [44] Fuadi, A.M., 2010. Optimasi Chelating Untuk Meningkatkan Efisiensi Bleaching Dengan H_2O_2 Pada Pulp Soft-Wood.
- [45] Lidström, P., Tierney, J., Watheyb, B. and Westmana, J., 2001. Microwave assisted organic synthesis-review. *Tetrahedron*, 57, pp.9225-9283.
- [46] CEM. Microwave Heating - Mechanism and Theory. [Online]. Available: <https://cem.com/de/microwave-heating-mechanism-and-theory>.
- [47] Jufrinaldi, J., 2018. Isolasi selulosa dari bagas tebu melalui pemanasan iradiasi gelombang mikro. *Jurnal Ilmiah Teknik Kimia*, 2(2), pp.83-93.
- [48] Singh, R., Tiwari, S., Srivastava, M. and Mina, U., 2013. Effect of combination of microwave and hydrogen peroxide (H_2O_2) pretreatment on enzymatic saccharification of rice straw. *Int J Environ Eng Manage*, 4, pp.529-542.
- [49] Wu, C.J., Zhao, C.S., Li, J. and Chen, K.F., 2011. The effect of microwave treatment on the hydrogen peroxide bleaching of soda-AQ wheat straw pulp. In



UNIVERSITAS
GADJAH MADA

PEMUTIHAN PULP JERAMI PADI DENGAN HIDROGEN PEROKSIDA BERBANTU GELOMBANG
MIKRO: STUDI KINETIKA DAN
OPTIMASI

RARA AYU LESTARY, Prof. Ir. Wahyudi Budi Sediawan, SU., Ph.D

Universitas Gadjah Mada, 2021 | Diunduh dari <http://etd.repository.ugm.ac.id/>

Advanced Materials Research (Vol. 236, pp. 1307-1312). Trans Tech

Publications Ltd.

- [50] Zhang, H., Shi, R., Gao, X., Chen, K. and Peng, L., 2017. Effect of Microwave-Involved ClO₂ Bleaching on the Characteristics of Lipophilic Extractives of Bleached Eucalyptus globulus Pulps. *BioResources*, 12(4), pp.7756-7773.
- [51] Hobbs, G.C., 1994. *The role of radical species in peroxide bleaching processes* (Doctoral dissertation, University of Tasmania).
- [52] Fuadi, A.M., 2009. Pemakaian hidrogen peroksida sebagai bahan pemutih pulp.
- [53] Datta, R., 1981. Acidogenic fermentation of lignocellulose-acid yield and conversion of components. *Biotechnol. Bioeng.:(United States)*, 23(9).
- [54] Fitriana, N.E., Suwanto, A., Jatmiko, T.H., Mursiti, S. and Prasetyo, D.J., 2020, March. Cellulose extraction from sugar palm (*Arenga pinnata*) fibre by alkaline and peroxide treatments. In *IOP Conference Series: Earth and Environmental Science* (Vol. 462, No. 1, p. 012053). IOP Publishing.
- [55] Zeronian, S.H. and Inglesby, M.K., 1995. Bleaching of cellulose by hydrogen peroxide. *Cellulose*, 2(4), pp.265-272.
- [56] Yudi, M., 2008. Kinetika Katalitik Ion-Ion Logam Transisi Pada Reaksi Penguraian Hidrogen Peroksida. *Chemica: Jurnal Ilmiah Kimia dan Pendidikan Kimia*, 9(2), pp.43-48.
- [57] Li, L., Lee, S., Lee, H. and Youn, H., 2011. Hydrogen peroxide bleaching of hardwood kraft pulp with adsorbed birch xylan and its effect on paper properties. *BioResources*, 6(1), pp.721-736.