

DAFTAR PUSTAKA

- Aditiya, H.B., Mahlia, T.M.I., Chong, W.T., Nur, H., and Sebayang, A.H., 2016, Second generation bioethanol production: A critical review. *Renew. Sustain. Energy Rev.* ,66, 631–653.
- Anindyawati, T., 2009, Prospek Enzim dan Limbah Lignoselulosa Untuk Produksi Bioetanol. *BS* ,44, 49–56.
- Arumingtyas, E.L., 2015, Kenaf : It's Prospect in Indonesia. A Review. *J. Biol. Res.* ,20, 21–26.
- Baharuddin, M. and Fitriyani, J., 2016, Produksi Bioetanol Dari Jerami Padi (*Oryza Sativa* L .) Dan Kulit Pohon Dao (*Dracontamelon*) Melalui Proses Sakarifikasi Dan Fermentasi Serentak (SFS).
- Bajpai, P., 2013, Advances in bioethanol. In, *SpringerBriefs in Applied Sciences and Technology*.
- Binod, P., Janu, K.U., and Sindhu, R., 2011, Hydrolysis of Lignocellulosic Biomass for Bioethanol Production 1st ed. Elsevier Inc.
- Binod, P., Satyanagalakshmi, K., Sindhu, R., Janu, K.U., Sukumaran, R.K., and Pandey, A., 2012, Short duration microwave assisted pretreatment enhances the enzymatic saccharification and fermentable sugar yield from sugarcane bagasse. *Renew. Energy* ,37, 109–116.
- Budberg, E., Rastogi, M., Puettmann, M.E., Caputo, J., Balogh, S., Volk, T.A., et al., 2012, Life-Cycle Assessment for the Production of Bioethanol from Willow Biomass Crops via Biochemical Conversion*. *For. Prod. J.* ,62, 305–313.
- Cragg, S.M., Beckham, G.T., Bruce, N.C., Bugg, T.D.H., Distel, D.L., Dupree, P., et al., 2015, Lignocellulose degradation mechanisms across the Tree of Life. *Curr. Opin. Chem. Biol.* ,29, 108–119.
- Fachry, A.R., Astuti, P., and Puspitasari, T.G., 2013, Pembuatan Bioetanol dari Limbah Tongkol Jagung dengan Variasi Konsentrasi Asam Klorida dan Waktu Fermentasi. *J. Tek. Kim.* ,19, 60–69.
- Ge, S., Chen, X., Li, D., Liu, Z., Ouyang, H., Peng, W., and Zhang, Z., 2018,

- Hemicellulose structural changes during steam pretreatment and biogradation of *Lentinus edodes*. *Arab. J. Chem.* ,11, 771–781.
- Giri, D., 2015, High Performance Liquid Chromatography (HPLC): Principle, Types, Instrumentation and Applications. *LaboratoryInfo.com*.
- Gunam, I.B.W., Wartini, N.M., Anggreni, A.A.M.D., and Suparyana, P.M., 2011, Delignifikasi Ampas Tebu dengan Larutan Natrium Hidroksida Sebelum Proses Sakarifikasi secara Enzimatis menggunakan Enzim Selulase Kasar dari *Aspergillus niger* FNU 6018. *LIPi Press* ,34, 24–32.
- Hambali, E., 2008, Teknologi Bionergi 2nd 2nd ed. AgroMedia Pustaka.
- Harmsen, P. and Huijgen, W., 2010, Literature Review of Physical and Chemical Pretreatment Processes for Lignocellulosic Biomass. *Food Biobased Res. Energy Res. Cent. Netherl.* 8–12.
- Hermiati, E., Magunwidjaja, D., Sunarti, T.C., Ono, S., and Prasetya, B., 2010, Pemanfaatan biomassa lignoselulosa ampas tebu untuk produksi bioetanol. *J. Litbang Pertan.* ,29(4), 121–130.
- Higuchi, T., 2004, Microbial degradation of lignin: Role of lignin peroxidase, manganese peroxidase, and laccase. *Proc. Japan Acad. Ser. B-Physical Biol. Sci.* ,80, 204–214.
- Hu, G., Heitmann, J.A., and Rojas, O.J., 2008, Feedstock Pretreatment Strategies for Producing. *Fuel* ,3, 270–294.
- Jan, E., 2009, Enviromental Benefits of Natural Fibre Production and Use. *Proc. Symp. Nat. Fibres*.
- Jeun, J., Lee, B., Lee, J., Kang, P., and Park, J., 2015, An irradiation-alkaline pretreatment of kenaf core for improving the sugar yield. *Renew. Energy* ,79, 51–55.
- Kamireddy, S.R., Degenstein, J., Berti, M., and Ji, Y., 2013, Preatreatment and Enzymatic Hydrolysis of Kenaf as a Potential Source for Lignocellulosic Biofuel and Green Chemicals. *Curr. Org. Chem.* ,17, 1624–1632.
- Kristiani, A., Effendi, N., Aristiawan, Y., Aulia, F., and Sudiyani, Y., 2015, Effect of combining chemical and irradiation pretreatment process to characteristic of oil palm's empty fruit bunches as raw material for second generation

- bioethanol. *Energy Procedia* ,68, 195–204.
- Kristiani, A., Effendi, N., Styarini, D., Aulia, F., and Sudiyani, Y., 2016, The Effect of Pretreatment by using Electron Beam Irradiation On Oil Palm Empty Fruit Bunch. *Atom Indones.* ,42, 9–12.
- Kumar, R., Mago, G., Balan, V., and Wyman, C.E., 2009, Bioresource Technology Physical and chemical characterizations of corn stover and poplar solids resulting from leading pretreatment technologies. *Bioresour. Technol.* ,100, 3948–3962.
- Limayem, A. and Ricke, S.C., 2012, Lignocellulosic biomass for bioethanol production: Current perspectives, potential issues and future prospects. *Prog. Energy Combust. Sci.* ,38, 449–467.
- Mahdi, D., 2016, Timpangnya Produksi dan Konsumsi Minyak Mentah Indonesia.
- Menon, V. and Rao, M., 2012, Trends in bioconversion of lignocellulose: Biofuels, platform chemicals & biorefinery concept. *Prog. Energy Combust. Sci.*
- Mills, G.A. and Ecklund, E.E., 1987, Alcohols As Components of Transportation Fuels. *Ann. Rev. Energy.*
- Modenbach, A.A. and Nokes, S.E., 2013, Enzymatic hydrolysis of biomass at high-solids loadings e A review. *Biomass and Bioenergy* ,56, 526–544.
- Monteil-rivera, F., Phuong, M., Ye, M., Halasz, A., and Hawari, J., 2013, Isolation and characterization of herbaceous lignins for applications in biomaterials. *Ind. Crop. Prod.* ,41, 356–364.
- Mutturi, S. and Lide, G., 2013, Effect of Temperature on Simultaneous Saccharification and Fermentation of Pretreated Spruce and Arundo. *Ind. Chem. Res* ,52, 1244–1251.
- Nababan, D.A., 2013, Hidrolisis Enzimatik Untuk Meningkatkan Produksi Bioetanol Dari Mikroalga.
- Ni'mah, L., Ardiyanto, A., and Zainuddin, M., 2015, Pembuatan Bioetanol Dari Limbah Serat Kelapa Sawit Melalui Proses Pretreatment , Hidrolisis Asam Dan Fermentasi Menggunakan Ragi Tempe. *Info Tek.* ,16, 227–242.
- Novia, Khairunnas, G.T.P., 2015, Pengaruh Konsentrasi Natrium Hidroksida Saat Pretreatment Dan Waktu Fermentasi Terhadap Kadar Bioetanol Dari Daun

- Nanas. *Tek. Kim.* ,21, 16–26.
- Octavia, S., Soerawidjaja, T.H., Purwadi, R., and Putrawan, I.D.G.A., 2011, Review : Pengolahan Awal Lignoselulosa Menggunakan Amoniak Untuk Meningkatkan Perolehan Gula Fermentasi.
- Onda, A., Ochi, T., and Yanagisawa, K., 2008, Selective hydrolysis of cellulose into glucose over solid acid catalysts †. 1033–1037.
- Oswaldo, Z.S., S, P.P., and Faizal, M., 2012, Proses Hidrolisis Dan Fermentasi Pembuatan Bioetanol. *J. Tek. Kim.* ,18,.
- Ouyang, X., Chen, L., Zhang, S., and Yuan, Q., 2018, Effect of Simultaneous Steam Explosion and Alkaline Depolymerization on Corncob Lignin and Cellulose Structure. ,32, 177–189.
- Palonen, H., 2004, Role of Lignin in The Enzymatic Hydrolysis of Lignocellulose.
- Pelczar, M. and Chan, E.C., 2013, Dasar-dasar Mikrobiologi Jilid 1 UI-Press, Jakarta.
- Pérez, J., Muñoz-Dorado, J., De La Rubia, T., and Martínez, J., 2002, Biodegradation and biological treatments of cellulose, hemicellulose and lignin: An overview. *Int. Microbiol.* ,5, 53–63.
- Pickett, J., Anderson, D., Bowles, D., Bridgwater, T., Jarvis, P., and Mortimer, N., 2008, Sustainable biofuels : prospect and challenges London.
- Poletto, M., Junior, H.L.O., and Zattera, A.J., 2014, Native Cellulose: Structure, Characterization and Thermal Properties. *Materials (Basel)*. ,7, 6105–6119.
- Pretreatment, N. and Sumarti, M., 2014, Pembuatan Bioetanol Dari Lignoselulosa Tandan Kosong Kelapa Sawit Menggunakan Perlakuan Awal Iradiasi Berkas Elektron Dan NaOH. 245–252.
- Saba, N., Jawaid, M., Hakeem, K.R., Paridah, M.T., Khalina, A., and Alothman, O.Y., 2015, Potential of bioenergy production from industrial kenaf (*Hibiscus cannabinus* L.) based on Malaysian perspective. *Renew. Sustain. Energy Rev.* ,42, 446–459.
- Saini, J.K., Saini, R., and Tewari, L., 2015, Lignocellulosic agriculture wastes as biomass feedstocks for second-generation bioethanol production: concepts and recent developments. *3 Biotech* ,5, 337–353.

- Samsuri, M., Gozan, M., Prasetya, B., and Nasikin, M., 2009, Enzymatic hydrolysis of lignocellulosic bagasse for bioethanol production. *J. Appl Ind. Biotech Trop. Reg.* 2 ,2, 1–5.
- Sari, I.M., Yulneriwarni, and Noverita, 2008, Pemanfaatan Jerami Padi dan Alang-alang Dalam Fermentasi Etanol Menggunakan Kapang *Trichoderma Viride* Dan Khamir *Saccharomyces cerevisiae*. ,01,.
- Sari, R.M., 2016, Optimasi Produksi Bioetanol dari Tandan Kosong Kelapa Sawit Menggunakan Metode Sakarifikasi dan Fermentasi Serentak.
- Silverstein, R.A., Chen, Y., Sharma-Shivappa, R.R., Boyette, M.D., and Osborne, J., 2007, A comparison of chemical pretreatment methods for improving saccharification of cotton stalks. *Bioresour. Technol.*
- Singh, J., Suhag, M., and Dhaka, A., 2015, Augmented digestion of lignocellulose by steam explosion, acid and alkaline pretreatment methods: A review. *Carbohydr. Polym.* ,117, 624–631.
- Singh, P. and Singh, A., 2011, Production of liquid biofuels from renewable resources. *Prog. Energy Combust. Sci.* ,37, 52–68.
- Siramon, P., Punsuvon, V., and Vaithanomsat, P., 2017, Production of Bioethanol from Oil Palm Empty Fruit Bunch via Acid Impregnation-Steam Explosion Pretreatment. *Waste and Biomass Valorization* ,0, 0.
- Sluiter, A., Hames, B., Ruiz, R., Scarlata, C., Sluiter, J., Templeton, D., and Nrel, D.C., 2012, Determination of structural carbohydrates and lignin.
- Sudiyani, Y., 2014, Pengembangan Teknologi Pengolahan Biomassa Limbah Lignoselulosa Untuk Pembuatan Bioetanol Generasi Kedua Lembaga Ilmu Pengetahuan Indonesia, Jakarta.
- Sudiyani, Y. and Hermiati, E., 2010, Review Utilization Of Oil Palm Empty Fruit Bunch (OPEFB) For Bioethanol Production Through Alkali And Dilute Acid Pretreatment And Simultaneous Saccharification And Fermentation. ,10, 261–267.
- Sudiyani, Y., Triwahyuni, E., Burhani, D., Waluyo, J., Sulaswatty, A., and Abimanyu, H., 2016, Alkaline Pretreatment of Sweet Sorghum Bagasse for Bioethanol Production. *Int J. Renew. Energy Dev.* ,5, 113–118.

- Sudiyani, Y., Waluyo, J., Riandy, A.P., Primandaru, P., and Novia, 2011, Pengaruh Temperatur dan Waktu Tinggal pada Perlakuan Awal Bagas Sorgum dengan Metode Steam Explosion. *J. Tek. Kim.* ,21, 47–56.
- Sudiyani, Y., Waluyo, J., Triwahyuni, E., and Burhani, D., 2017, Optimization Pretreatment Condition of Sweet Sorghum Bagasse for Production of Second Generation Bioethanol. *AIP Conf. Proc.* ,020015,.
- Suhas, Gupta, V.K., Carrott, P.J.M., Singh, R., Chaudhary, M., and Kushwaha, S., 2016, Cellulose: A review as natural, modified and activated carbon adsorbent. *Bioresour. Technol.* ,216, 1066–1076.
- Taherzadeh, M.J. and Karimi, K., 2008, Pretreatment of lignocellulosic wastes to improve ethanol and biogas production: A review. *Int. J. Mol. Sci.*
- Triwahyuni, E., Hariyanti, S., Dahnum, D., Nurdin, M., and Abimanyu, H., 2015, Optimization of Saccharification and Fermentation Process in Bioethanol Production from Oil Palm Fronds. *Procedia Chem.* ,16, 141–148.
- Triwahyuni, E., Sudiyani, Y., and Abimanyu, H., 2015, The effect of substrate loading on simultaneous saccharification and fermentation process for bioethanol production from oil palm empty fruit bunches. *Energy Procedia* ,68, 138–146.
- Vivekanand, V., Olsen, E.F., Eijsink, V.G.H., and Horn, S.J., 2013, Effect of different steam explosion conditions on methane potential and enzymatic saccharification of birch. *Bioresour. Technol.* ,127, 343–349.
- Xu, F., Yu, J., Tesso, T., Dowell, F., and Wang, D., 2013, Qualitative and quantitative analysis of lignocellulosic biomass using infrared techniques : A mini-review. *Appl. Energy* ,104, 801–809.
- Yamashita, Y., Shono, M., Sasaki, C., and Nakamura, Y., 2010, Alkaline peroxide pretreatment for efficient enzymatic saccharification of bamboo. *Carbohydr. Polym.* ,79, 914–920.
- Yang, M., Li, W., Liu, B., Li, Q., and Xing, J., 2010, High-concentration sugars production from corn stover based on combined pretreatments and fed-batch process. *Bioresour. Technol.*
- Ying, Y., Teong, K., Nadiah, W., Abdullah, W., and Peng, C., 2016, Optimization

of various pretreatments condition of kenaf core (*Hibiscus cannabinus*) fi bre for sugar production : Effect of chemical compositions of pretreated fi bre on enzymatic hydrolysability. *Renew. Energy* ,99, 205–215.

Zabed, H., Sahu, J.N., Suely, A., Boyce, A.N., and Faruq, G., 2016, Bioethanol production from renewable sources : Current perspectives and technological progress. *Renew. Sustain. Energy Rev.* 1–27.