

DAFTAR PUSTAKA

- Abbassi-Guendouz, A., Trably, E., Hamelin, J., Dumas, C., Steyer, J. P., Delgenès, J. P., & Escudié, R. (2013). Microbial community signature of high-solid content methanogenic ecosystems. *Bioresource Technology*, *133*, 256–262. <https://doi.org/10.1016/j.biortech.2013.01.121>
- Abdelhady, S. (2021). Performance and cost evaluation of solar dish power plant: sensitivity analysis of levelized cost of electricity (LCOE) and net present value (NPV). *Renewable Energy*, *168*, 332–342. <https://doi.org/10.1016/j.renene.2020.12.074>
- Abuk, G. M., & Rumbino, Y. (2020). Analisis Kelayakan Ekonomi Menggunakan Metode Net Present Value (NPV), Metode Internal Rate Of Return (IRR) Payback Period (PBP) Pada Unit Stone Crusher di CV. X Kab. Kupang Prov. NTT. *Jurnal Teknologi*, *14*(2), 68–75.
- Adedeji, J. A., Tetteh, E. K., Amo-Duodu, G., Armah, E. K., Rathilal, S., & Chetty, M. (2022). Central Composite Design Optimisation of Banana Peels/Magnetite for Anaerobic Biogas Production from Wastewater. *Applied Sciences*, *12*(23), 12037. <https://doi.org/10.3390/app122312037>
- Ahmed, S., & Kazda, M. (2017). Characteristics of on-demand biogas production by using sugar beet silage. *Anaerobe*, *46*, 114–121. <https://doi.org/10.1016/j.anaerobe.2017.04.016>
- Ahmed, T., Ahmad, B., & Ahmad, W. (2015). Why do farmers burn rice residue? Examining farmers' choices in Punjab, Pakistan. *Land Use Policy*, *47*, 448–458. <https://doi.org/10.1016/j.landusepol.2015.05.004>
- Akwaka, J. C., Kukwa, D. T., & Mwekaven, S. S. (2014). Preliminary Study on Co-Digestion of Cow Manure with Pretreated Sawdust for Production of Biogas and Biofertilizer. *International Journal of Science and Technology*, *3*(4), 222–228.
- Aminah, T. S., Salundik, & Suryani, A. (2011). *Potensi hasil samping produksi biogas dari limbah cair pabrik kelapa sawit dengan penambahan aktivator kotoran sapi potong sebagai pupuk organik.*

- Annur, M. S. M., Tan, I. K. P., Ibrahim, S., & Ramachandran, K. B. (2008). A kinetic model for growth and biosynthesis of medium-chain-length poly-(3 - hydroxyalkanoates) in *Pseudomonas putida*. *Brazilian Journal of Chemical Engineering*, 25(2), 217–228. <https://doi.org/10.1590/S0104-66322008000200001>
- Apiat, A., & Dinar, D. (2016). Analisis Kelayakan Usaha Pupuk Organik. *Agrivet: Jurnal Ilmu-Ilmu Pertanian Dan Peternakan (Journal of Agricultural Sciences and Veteriner)*, 4(2).
- Appels, L., Lauwers, J., Degreve, J., Helsen, L., Lievens, B., Willems, K., Van Impe, J., & Dewil, R. (2011). Anaerobic digestion in global bio-energy production: Potential and research challenges. *Renewable and Sustainable Energy Reviews*, 15(9), 4295–4301. <https://doi.org/10.1016/j.rser.2011.07.121>
- Arifiantari, P. N., Handajani, M., & Sembiring, T. (2012). Pengaruh Rasio C/N Terhadap Degradasi Material Organik Dalam Sampah Pasar Secara Anaerob.
- Bochmann, G., & Montgomery, L. F. R. (2013). Storage and pre-treatment of substrates for biogas production. *The Biogas Handbook: Science, Production and Applications*, 85–103. <https://doi.org/10.1533/9780857097415.1.85>
- Boontian, N. (2014). Conditions of the Anaerobic Digestion of Biomass. *International Journal of Biological, Biomolecular, Agricultural, Food and Biotechnological Engineering*, 8(9), 1036–1040. scholar.waset.org/1999.1/9999472
- BPPT. (2014). Pengembangan Energi untuk Mendukung Program Substitusi BBM. In *Outlook Energi Indonesia* (Vol. 1).
- Brown, D., & Li, Y. (2013). Solid state anaerobic co-digestion of yard waste and food waste for biogas production. *Bioresourc Technology*, 127, 275–280. <https://doi.org/10.1016/j.biortech.2012.09.081>
- Brown, D., Shi, J., & Li, Y. (2012). Comparison of solid-state to liquid anaerobic digestion of lignocellulosic feedstocks for biogas production. *Bioresourc Technology*, 124, 379–386. <https://doi.org/10.1016/j.biortech.2012.08.051>

- Bruni, E. (2010). Improved anaerobic digestion of energy crops and agricultural residues. In *Environmental engineering* (Issue June).
- Bruni, E., Jensen, A. P., & Angelidaki, I. (2010). Comparative study of mechanical, hydrothermal, chemical and enzymatic treatments of digested biofibers to improve biogas production. *Bioresource Technology*, *101*(22), 8713–8717. <https://doi.org/10.1016/j.biortech.2010.06.108>
- Budhy, T. I., Arundina, I., Surboyo, M. D. C., & Halimah, A. N. (2021). The Effects of Rice Husk Liquid Smoke in Porphyromonas gingivalis-Induced Periodontitis. *European Journal of Dentistry*, *15*(4), 653–659. <https://doi.org/10.1055/s-0041-1727554>
- Budiarto, H., Afriyadi, M. F., & Tuhuloula, A. (2014). Pemanfaatan Sludge Hasil Produksi Biogas Berbasis Limbah Cair Latex Menjadi Pupuk Kompos Cair. *Konversi*, *3*(1), 25. <https://doi.org/10.20527/k.v3i1.134>
- Budiyono, B., Riyanta, A. B., Sumardiono, S., Jos, B., & Syaichurrozi, I. (2021). Optimization of parameters for biogas production from bagasse using taguchi method. *Polish Journal of Environmental Studies*, *30*(5), 4453–4461. <https://doi.org/10.15244/pjoes/129914>
- Budiyono, Manthia, F., Amalin, N., Hawali Abdul Matin, H., & Sumardiono, S. (2018). Production of Biogas from Organic Fruit Waste in Anaerobic Digester using Ruminant as The Inoculum. *MATEC Web of Conferences*, *156*, 03053. <https://doi.org/10.1051/mateconf/201815603053>
- Budiyono, Syaichurrozi, I., & Sumardiono, S. (2013). Biogas production kinetic from vinasse waste in batch mode anaerobic digestion. *World Applied Sciences Journal*, *26*(11), 1464–1472. <https://doi.org/10.5829/idosi.wasj.2013.26.11.1405>
- Budiyono, Syaichurrozi, I., & Sumardiono, S. (2014). Effect of total solid content to biogas production rate from vinasse. *International Journal of Engineering, Transactions B: Applications*, *27*(2), 177–184. <https://doi.org/10.5829/idosi.ije.2014.27.02b.02>
- Chandra, R., Takeuchi, H., & Hasegawa, T. (2012). Hydrothermal pretreatment of rice straw biomass: A potential and promising method for enhanced methane

- production. *Applied Energy*, 94(January), 129–140.
<https://doi.org/10.1016/j.apenergy.2012.01.027>
- Chandra, R., Takeuchi, H., Hasegawa, T., & Kumar, R. (2012). Improving biodegradability and biogas production of wheat straw substrates using sodium hydroxide and hydrothermal pretreatments. *Energy*, 43(1), 273–282.
<https://doi.org/10.1016/j.energy.2012.04.029>
- Chattoraj, S., Sadhukhan, B., & Mondal, N. K. (2013). *Predictability by Box- Behnken model for carbaryl adsorption by soils of Indian origin*. 48(8), 626–636. <https://doi.org/https://doi.org/10.1080/03601234.2013.777283>
- Chen, X., Yan, W., Sheng, K., & Sanati, M. (2014). Comparison of high-solids to liquid anaerobic co-digestion of food waste and green waste. *Bioresource Technology*, 154, 215–221. <https://doi.org/10.1016/j.biortech.2013.12.054>
- Cheng, H., & Hu, Y. (2010). Municipal solid waste (MSW) as a renewable source of energy: Current and future practices in China. *Bioresource Technology*, 101(11), 3816–3824. <https://doi.org/10.1016/j.biortech.2010.01.040>
- Choi, Y., Ryu, J., & Lee, S. R. (2020). Influence of carbon type and carbon to nitrogen ratio on the biochemical methane potential, pH, and ammonia nitrogen in anaerobic digestion. *Journal of Animal Science and Technology*, 62(1), 74–83. <https://doi.org/10.5187/jast.2020.62.1.74>
- Chong, D. J. S., Chan, Y. J., Arumugasamy, S. K., Yazdi, S. K., & Lim, J. W. (2023). Optimisation and performance evaluation of response surface methodology (RSM), artificial neural network (ANN) and adaptive neuro-fuzzy inference system (ANFIS) in the prediction of biogas production from palm oil mill effluent (POME). *Energy*, 266, 126449. <https://doi.org/10.1016/j.energy.2022.126449>
- Damanhuri, E. (1990, January 11). Peranan Biodegradasi Sampah dalam Mempercepat Satabilitas Lahan Urug Saniter. *Jurnal Ilmiah Dalam Seminar PAU Bioteknologi ITB*.
- Deublein, D., & Steinhauser, A. (2008). *Biogas from Waste and Renewable Resources: An Introduction* (2nd ed.). Wiley-VCH Verlag GmbH & Co. KGaA. <https://doi.org/10.1002/9783527621705>

- Dhawane, S. H., Kumar, T., & Halder, G. (2016). Biodiesel synthesis from *Hevea brasiliensis* oil employing carbon supported heterogeneous catalyst: Optimization by Taguchi method. *Renewable Energy*, *89*, 506–514. <https://doi.org/10.1016/j.renene.2015.12.027>
- Dwi Nugraha, W., Syafrudin, Fadhila Keumala, C., Hawali Abdul Matin, H., & Budiyo. (2018). The Effect of Acid Pre-Treatment using Acetic Acid and Nitric Acid in The Production of Biogas from Rice Husk during Solid State Anaerobic Digestion (SS-AD). *E3S Web of Conferences*, *31*, 01006. <https://doi.org/10.1051/e3sconf/20183101006>
- Ezyan Badrul Hisham, N., & Hanuni Ramli, N. (2019). Effect of rice husk ash on the physicochemical properties of compost. *Indonesian Journal of Chemistry*, *19*(4), 967–974. <https://doi.org/10.22146/ijc.39704>
- F. Carrillo, M. J. Lis, X. Colom, M. López-Mesas, J. V. (2005). Effect of alkali pretreatment on cellulase hydrolysis of wheat straw: Kinetic study. *Process Biochemistry*, *40*(10), 3360–3364. <https://doi.org/10.1016/j.procbio.2005.03.003>
- Fezzani, B., & Cheikh, R. Ben. (2010). Two-phase anaerobic co-digestion of olive mill wastes in semi-continuous digesters at mesophilic temperature. *Bioresource Technology*, *101*(6), 1628–1634. <https://doi.org/10.1016/j.biortech.2009.09.067>
- Ge, X., Xu, F., & Li, Y. (2016). Solid-state anaerobic digestion of lignocellulosic biomass: Recent progress and perspectives. *Bioresource Technology*, *205*, 239–249. <https://doi.org/10.1016/j.biortech.2016.01.050>
- Glushankova, I., Ketov, A., Krasnovskikh, M., Rudakova, L., & Vaisman, I. (2018). Rice hulls as a renewable complex material resource. *Resources*, *7*(2), 1–11. <https://doi.org/10.3390/resources7020031>
- Gorshkov, A., Vatin, N., Rymkevich, P., & Kydrevich, O. (2018). Payback period of investments in energy saving. *Magazine of Civil Engineering*, *2*(78), 65–75.

- Gu, Y., Chen, X., Liu, Z., Zhou, X., & Zhang, Y. (2014). Effect of inoculum sources on the anaerobic digestion of rice straw. *Bioresource Technology*, *158*(2014), 149–155. <https://doi.org/10.1016/j.biortech.2014.02.011>
- Habchi, S., Lahboubi, N., Sallek, B., & El Bari, H. (2023). Response surface methodology for anaerobic digestion of waste from poultry slaughterhouse: Optimization of load and hydraulic retention time. *Results in Engineering*, *18*, 101215. <https://doi.org/10.1016/j.rineng.2023.101215>
- Hammitt, J. K. (2021). Accounting for the Distribution of Benefits and Costs in Benefit–Cost Analysis. *Journal of Benefit-Cost Analysis*, *12*(1), 64–84. <https://doi.org/10.1017/bca.2020.29>
- Harold, B. G. (1965). *Composting*. World Health Organization. Geneva. Haug. R. T. 1962. *Compost Engineering. Principle and Practice*.
- Haryanti, E. T., & Martuti, N. K. T. (2020). Analisis Cemaran Logam Berat Timbal (Pb) dan Kadmium (Cd) Dalam Daging Ikan Kakap Merah (*Lutjanus sp.*) Di TPI Kluwut Brebes. *Life Science*, *9*(2), 149–160.
- Hendriks, A. T. W. M., & Zeeman, G. (2009). Pretreatments to enhance the digestibility of lignocellulosic biomass. *Bioresource Technology*, *100*(1), 10–18. <https://doi.org/10.1016/j.biortech.2008.05.027>
- Hilkiah Igoni, A., Ayotamuno, M. J., Eze, C. L., Ogaji, S. O. T., & Probert, S. D. (2008). Designs of anaerobic digesters for producing biogas from municipal solid-waste. *Applied Energy*, *85*(6), 430–438. <https://doi.org/10.1016/j.apenergy.2007.07.013>
- Hozairi, Bakir, & Buhari. (2012). Pemanfaatan kotoran hewan menjadi energi biogas untuk mendukung pertumbuhan umkm di kabupaten pamekasan. *Prosiding InSINas*, 1361.
- Hu, Y., Yao, M., Liu, Y., & Zhao, B. (2020). Personal exposure to ambient PM_{2.5}, PM₁₀, O₃, NO₂, and SO₂ for different populations in 31 Chinese provinces. *Environment International*, *144*(2), 106018. <https://doi.org/10.1016/j.envint.2020.106018>
- I Ketut Ngawit, Bambang Budi Santoso, & Wayan Wangiyana. (2022). Efisiensi Usahatani Sayur-Sayuran Melalui Peningkatan Aplikasi Pupuk Organik dan

- Pengurangan Pupuk NPK di Desa Taman Ayu, Gerung, Lombok Barat, NTB. *Jurnal SIAR ILMUWAN TANI*, 3(1), 22–30. <https://doi.org/10.29303/jsit.v3i1.64>
- Ikawati, R. (2005). Optimasi Kondisi Ekstraksi Karotenoid wortel (*daucus carota* L.) menggunakan response Surface Methodology (RSM). *Teknologi Pertanian*, 1(1), 14–22.
- Irsayad, F., & Yanti, D. (2016). Evaluasi Tekno-Ekonomi Pemanfaatan Biogas Skala Rumah Tangga Sebagai Sumber Energi Alternatif Ramah Lingkungan. *Teknologi Pertanian Andalas*, 20(2), 73–79.
- Jha, A. K., Li, J., Nies, L., & Zhang, L. (2011). Research advances in dry anaerobic digestion process of solid organic wastes. *African Journal of Biotechnology*, 10(65), 14242–14253. <https://doi.org/10.5897/ajb11.1277>
- Junus, M. (1995). *Teknik Membuat Dan Memanfaatkan Unit Gas Bio*. Gadjah Mada University Press.
- Kabir, M. M., Castillo, M. D. P., Taherzadeh, M. J., & Horváth, I. S. (2013). Effect of the N-methylmorpholine-N-oxide (NMMO) pretreatment on anaerobic digestion of forest residues. *BioResources*, 8(4), 5409–5423. <https://doi.org/10.15376/biores.8.4.5409-5423>
- Kainthola, J., Kalamdhad, A. S., & Goud, V. V. (2020). Optimization of process parameters for accelerated methane yield from anaerobic co-digestion of rice straw and food waste. *Renewable Energy*, 149, 1352–1359. <https://doi.org/10.1016/j.renene.2019.10.124>
- Kangle, K. M., Kore, S. V., Kore, V. S., & Kulkarni, G. S. (2012). Recent Trends in Anaerobic Codigestion : A Review. *Universal Journal of Environmental Research and Technology*, 2(4), 210–219.
- Karabas, H. (2013). Biodiesel production from crude acorn (*Quercus frainetto* L.) kernel oil: An optimisation process using the Taguchi method. *Renewable Energy*, 53, 384–388. <https://doi.org/10.1016/j.renene.2012.12.002>
- Karthikeyan, O. P., & Visvanathan, C. (2013). Bio-energy recovery from high-solid organic substrates by dry anaerobic bio-conversion processes: a review. *Reviews in Environmental Science and Bio/Technology*, 12, 257–284.

- Kasisira, L. L., & Muiyiyi, N. D. (2009). Assessment of the Effect of Mixing Pig and Cow Dung on Biogas Yield. *CIGR Ejournal*, *XI*(2003), 1–7.
- Kasno, A. (2019). Perbaikan Tanah untuk Meningkatkan Efektivitas dan Efisiensi Pemupukan Berimbang dan Produktivitas Lahan Kering Masam. *Jurnal Sumberdaya Lahan*, *13*(1), 27–40.
- KESDM. (2006). Blueprint Pengelolaan Energi Nasional Tahun 2006-2025. *Kementerian Energi Dan Sumber Daya Mineral*, 1–78.
- Khalid, A., Arshad, M., Anjum, M., Mahmood, T., & Dawson, L. (2011). The anaerobic digestion of solid organic waste. *Waste Management*, *31*(8), 1737–1744. <https://doi.org/10.1016/j.wasman.2011.03.021>
- Khorshidi, N., & Arikan, B. (2008). *Experimental Practice in order to Increasing Efficiency of Biogas Production by Treating Digestate Sludge*. *3*, 1–39.
- Kissinger, K. (2022). Prioritas Tanaman Revegetasi Pascatambang Batubara Berdasarkan Nilai Kelayakan Ekologi. *Jurnal Hutan Tropis*, *10*(1), 64. <https://doi.org/10.20527/jht.v10i1.13089>
- Kıvık, T. (2014). Optimization of surface roughness and flank wear using the Taguchi method in milling of Hadfield steel with PVD and CVD coated inserts. *Measurement*, *50*, 19–28. <https://doi.org/10.1016/j.measurement.2013.12.017>
- Krátký, L., Jirout, T., & Nalezenc, J. (2012). Lab-scale technology for biogas production from lignocellulose wastes. *Acta Polytechnica*, *52*(3), 54–59. <https://doi.org/10.14311/1552>
- Li, Y., Park, S. Y., & Zhu, J. (2011). Solid-state anaerobic digestion for methane production from organic waste. *Renewable and Sustainable Energy Reviews*, *15*(1), 821–826. <https://doi.org/10.1016/j.rser.2010.07.042>
- Liew, L. N., Shi, J., & Li, Y. (2011). Enhancing the solid-state anaerobic digestion of fallen leaves through simultaneous alkaline treatment. *Bioresource Technology*, *102*(19), 8828–8834. <https://doi.org/10.1016/j.biortech.2011.07.005>
- Liu, G., Zhang, R., El-Mashad, H. M., & Dong, R. (2009). Effect of feed to inoculum ratios on biogas yields of food and green wastes. *Bioresource*

Technology, 100(21), 5103–5108.

<https://doi.org/10.1016/j.biortech.2009.03.081>

Logan, M., & Visvanathan, C. (2019). Management strategies for anaerobic digestate of organic fraction of municipal solid waste: Current status and future prospects. *Waste Management and Research*, 37(1_suppl), 27–39. <https://doi.org/10.1177/0734242X18816793>

Mardina, P., Talalangi, A. I., Sitingjak, J. F. M., Nugroho, A., & Fahrizal, M. R. (2013). PENGARUH PROSES DELIGNIFIKASI PADA PRODUKSI GLUKOSA DARI TONGKOL JAGUNG DENGAN HIDROLISIS ASAM ENCIER. *Konversi*, 2(2), 17. <https://doi.org/10.20527/k.v2i2.78>

Matin, H. H. A., & Hadiyanto, H. (2018). Optimization of biogas production from rice husk waste by solid state anaerobic digestion (SSAD) using response surface methodology. *Journal of Environmental Science and Technology*, 11(3), 147–156. <https://doi.org/10.3923/jest.2018.147.156>

Matin, H. H. A., Syafrudin, S., & Suherman, S. (2022). Effect of Cow Manure on Biogas Production Based on Rice Husk Waste in SSAD Conditions. *IOP Conference Series: Earth and Environmental Science*, 1098, 012075. <https://doi.org/10.1088/1755-1315/1098/1/012075>

Mirmohamadsadeghi, S., Karimi, K., Zamani, A., Amiri, H., & Horváth, I. S. (2014). Enhanced solid-state biogas production from lignocellulosic biomass by organosolv pretreatment. *BioMed Research International*, 2014. <https://doi.org/10.1155/2014/350414>

Motte, J. C., Escudié, R., Bernet, N., Delgenes, J. P., Steyer, J. P., & Dumas, C. (2013). Dynamic effect of total solid content, low substrate/inoculum ratio and particle size on solid-state anaerobic digestion. *Bioresource Technology*, 144, 141–148. <https://doi.org/10.1016/j.biortech.2013.06.057>

Muis, A. A., Sumarmi, S., & Astina, I. K. (2016). Strategi pengembangan ekowisata bahari sebagai sumber belajar geografi pariwisata. *Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan*, 1(11), 2178–2188.

Mulder, M. (1996). *Basic Principles of Membrane Technology* (2nd ed.). Springer Netherlands. <https://doi.org/10.1007/978-94-009-1766-8>

- Nopharatana, A., Pullammanappallil, P. C., & Clarke, W. P. (2007). Kinetics and dynamic modelling of batch anaerobic digestion of municipal solid waste in a stirred reactor. *Waste Management*, 27(5), 595–603. <https://doi.org/10.1016/j.wasman.2006.04.010>
- Nuzula, N. F., & Nurlaily, F. (2020). *Dasar-Dasar Manajemen Investasi*. UB Press.
- Okeh, O. C., Onwosi, C. O., & Odibo, F. J. C. (2014). Biogas production from rice husks generated from various rice mills in Ebonyi State, Nigeria. *Renewable Energy*, 62, 204–208. <https://doi.org/10.1016/j.renene.2013.07.006>
- Oluwoye, I., Altarawneh, M., Gore, J., & Dlugogorski, B. Z. (2020). Products of incomplete combustion from biomass reburning. *Fuel*, 274(September 2019). <https://doi.org/10.1016/j.fuel.2020.117805>
- Padmono, D. (2007). KEMAMPUAN ALKALINITAS KAPASITAS PENYANGGAN (Buffer Capacity) DALAM SISTEM. 8(2), 119–127.
- Papacz, W. (2011). Biogas as Vehicle Fuel. *Journal of KONES Powertrain and Transport*, 18(1).
- Pardani, C., & Sutriana, D. (2018). ANALISIS KELAYAKAN USAHA PUPUK ORGANIK (PO) CURAH. *MIMBAR AGRIBISNIS: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*, 1(3), 203. <https://doi.org/10.25157/ma.v1i3.40>
- Peirce, J. J., Vesilind, P. A., & Weiner, R. (1997). *Environmental Pollution and Control* (4th Editio). Butterworth-Heinemann.
- Pertanian, K. (2020a). *Outlook Komoditas Pertanian Tanaman Pangan Jagung*. Pusat Data dan Sistem Informasi Pertanian, Sekretariat Jenderal Kementerian Pertanian.
- Pertanian, K. (2020b). *Outlook Komoditas Pertanian Tanaman Pangan Kedelai*. Pusat Data dan Sistem Informasi Pertanian, Sekretariat Jenderal Kementerian Pertanian.
- Petersson, A., Thomsen, M. H., Hauggaard-Nielsen, H., & Thomsen, A. B. (2007). Potential bioethanol and biogas production using lignocellulosic

- biomass from winter rye, oilseed rape and faba bean. *Biomass and Bioenergy*, 31(11–12), 812–819.
<https://doi.org/10.1016/j.biombioe.2007.06.001>
- Pratama, R. (2019). Efek Rumah Kaca Terhadap Bumi. *Buletin Utama Teknik*, 14(2), 120–126.
- Putro, G. M., & Prijoto, P. (2021). Study of Investment in the Organic Fertilizer Industry to Improve Community Economists. *RSF Conference Series: Engineering and Technology*, 1(1), 652–660.
<https://doi.org/10.31098/cset.v1i1.441>
- Radjaram, B., & Saravanane, R. (2011). Assessment of optimum dilution ratio for biohydrogen production by anaerobic co-digestion of press mud with sewage and water. *Bioresource Technology*, 102(3), 2773–2780.
<https://doi.org/10.1016/j.biortech.2010.11.075>
- Risberg, K., Sun, L., Levén, L., Horn, S. J., & Schnürer, A. (2013). Biogas production from wheat straw and manure - Impact of pretreatment and process operating parameters. *Bioresource Technology*, 149, 232–237.
<https://doi.org/10.1016/j.biortech.2013.09.054>
- Roberts, S., Mathaka, N., Zeleke, M. A., & Nwaigwe, K. N. (2023). Comparative Analysis of Five Kinetic Models for Prediction of Methane Yield. *Journal of The Institution of Engineers (India): Series A*, 104(2), 335–342.
<https://doi.org/10.1007/s40030-023-00715-y>
- Sadhukhan, B., Mondal, N. K., & Chatteraj, S. (2016). Optimisation using central composite design (CCD) and the desirability function for sorption of methylene blue from aqueous solution onto Lemna major. *Karbala International Journal of Modern Science*, 2(3), 145–155.
<https://doi.org/10.1016/j.kijoms.2016.03.005>
- Sahirman, S., Irawadi, Said, E. G., & Basith, A. (1995). KAJIAN PEMANFAATAN LIM BAH PABRIK KELAPA SAWIT UNTUK PRODUKSI GAS BIO. *Forum Pascasarjana*, 18(1), 25–34.

- Salehian, P., Karimi, K., Zilouei, H., & Jeihanipour, A. (2013). Improvement of biogas production from pine wood by alkali pretreatment. *Fuel*, *106*, 484–489. <https://doi.org/10.1016/j.fuel.2012.12.092>
- Saragih, B. R. (2010). *Analisis Potensi Biogas Untuk Menghasilkan Energi Listrik Dan Termal Pada Gedung Komersil Di Daerah Perkotaan (Studi Kasus Pada Mal Metropolitan Bekasi)*.
- Sarrai, A. E., Hanini, S., Merzouk, N. K., Tassalit, D., Szabó, T., Hernádi, K., & Nagy, L. (2016). Using central composite experimental design to optimize the degradation of Tylosin from aqueous solution by Photo-Fenton reaction. *Materials*, *9*(6). <https://doi.org/10.3390/ma9060428>
- Sawasdee, V., & Pisutpaisal, N. (2014). Feasibility of Biogas Production from Napier Grass. *Energy Procedia*, *61*, 1229–1233. <https://doi.org/10.1016/j.egypro.2014.11.1064>
- Schimpf, U., Hanreich, A., Mähnert, P., Unmack, T., Junne, S., Renpenning, J., & Lopez-Ulibarri, R. (2013). Improving the Efficiency of Large-Scale Biogas Processes: Pectinolytic Enzymes Accelerate the Lignocellulose Degradation. *Journal of Sustainable Energy & Environment*, *4*(2), 53–60. <http://www.forum.tci-thaijo.org/index.php/JSEE/article/view/9830>
- Schnürer, A., & Jarvis, Å. (2010). *Microbiological Handbook for Biogas Plants*. Swedish Waste Management and Swedish Gas Centre Report.
- Seadi, T. Al, Rutz, D., Prassl, H., Kottner, M., Finsterwalder, T., Volk, S., & Janssen, R. (2008). *Biogas Handbook*.
- See, J. J., Jamaian, S. S., Salleh, R. M., Nor, M. E., & Aman, F. (2018). Parameter estimation of Monod model by the Least-Squares method for microalgae *Botryococcus Braunii* sp. *Journal of Physics: Conference Series*, *995*(1). <https://doi.org/10.1088/1742-6596/995/1/012026>
- Shitophyta, L. M., Salsabila, A., Anggraini, F., & Jamilatun, S. (2021). Development of Kinetic Models For Biogas Production From Tofu Liquid Waste. *Elkawanie*, *7*(1), 107. <https://doi.org/10.22373/ekw.v7i1.8296>
- Shou, T. (2022). A Literature Review on the Net Present Value (NPV) Valuation Method. *2nd International Conference on Enterprise Management and*

- Economic Development (ICEMED 2022).*
<https://doi.org/10.2991/aebmr.k.220603.135>
- Song, Z., Yang, G., Guo, Y., & Zhang, T. (2012). Comparison of two chemical pretreatments of rice straw for biogas production by anaerobic digestion. *BioResources*, 7(3), 3223–3236.
- Statistik, B. P. (2022). *Statistics Official News: Vol. 74/10/Th.X.*
- Sugandi, W. K., & Wahyu, A. (2019). Analisis Kelayakan Ekonomi Mesin Pencacah Rumput Gajah Tipe Reel. *Agrikultura*, 29(3), 144.
<https://doi.org/10.24198/agrikultura.v29i3.22727>
- Sunarsih, E., Suheryanto, Mutahar, R., & Garmini, R. (2019). Risk assesment of air pollution exposure (NO₂, SO₂, total suspended particulate, and particulate matter 10 micron) and smoking habits on the lung function of bus drivers in Palembang City. *Kesmas*, 13(4), 202–206.
<https://doi.org/10.21109/kesmas.v13i4.1923>
- Suyitno, Sujono, A., & Dharmanto. (2010). *Teknologi biogas : pembuatan, operasional dan pemanfaatan.* Graha Ilmu.
- Suzuki, K., Watanabe, T., & Lam, V. (2001). Concentrations and Crystallization of Phosphate, Ammonium and Minerals in the Effluents of Bio-Gas Digesters in the Mekong Delta, Vietnam. *Japan Agricultural Research Quarterly*, 35(4), 271–276. <https://doi.org/10.6090/jarq.35.271>
- Syafrudin, Dwi Nugraha, W., Bahrani, A., Hawali Abdul Matin, H., & Budiyo. (2020). The Effect of Grinding on Biogas Production from Rice Husk Waste during Solid State Anaerobic Digestion (SS-AD). *E3S Web of Conferences*, 202, 1–9. <https://doi.org/10.1051/e3sconf/202020208004>
- Syafrudin, Dwi Nugraha, W., Hawali Abdul Matin, H., & Budiyo. (2017). The effect of enzymatic pretreatment and c/n ratio to biogas production from rice husk waste during solid state anaerobic digestion (SS-AD). *MATEC Web of Conferences*, 101, 02016. <https://doi.org/10.1051/matecconf/201710102016>
- Syafrudin, Dwi Nugraha, W., Sarima Agnesia, S., Hawali Abdul Matin, H., & Budiyo. (2018). Enhancement of Biogas Production from Rice Husk by

- NaOH and Enzyme Pretreatment. *E3S Web of Conferences*, 31(December 2016), 02002. <https://doi.org/10.1051/e3sconf/20183102002>
- Syafrudin, Nugraha, W. D., Ardinata, Indra Hukama Kencanawardhani, L. G., Matin, H. H. A., & Budiyo. (2017). The Influence of Total Solid (TS) Content to Biogas Production from Rice Husk Waste During Solid State Anaerobic Digestion (SS-AD). *Advanced Science Letters*, 23(3), 2204–2206. <https://doi.org/10.1166/asl.2017.8685>
- Syafrudin, Nugraha, W. D., Matin, H. H. A., Kencanawardhani, L. G., & Budiyo. (2017). The Influence of Enzymatic Pretreatment and Food to Microorganism (F/M) Ratio to Biogas Production from Rice Husk Waste During Solid State Anaerobic Digestion (SS-AD). *Advanced Science Letters*, 23(6), 5687–5690. <https://doi.org/10.1166/asl.2017.8803>
- Taherdanak, M., & Zilouei, H. (2014). Improving biogas production from wheat plant using alkaline pretreatment. *Fuel*, 115, 714–719. <https://doi.org/10.1016/j.fuel.2013.07.094>
- Taherzadeh, M. J., & Karimi, K. (2008). Pretreatment of lignocellulosic wastes to improve ethanol and biogas production: A review. In *International Journal of Molecular Sciences* (Vol. 9, Issue 9). <https://doi.org/10.3390/ijms9091621>
- Taniguchi, M., Suzuki, H., Watanabe, D., Sakai, K., Hoshino, K., & Tanaka, T. (2005). Evaluation of pretreatment with *Pleurotus ostreatus* for enzymatic hydrolysis of rice straw. *Journal of Bioscience and Bioengineering*, 100(6), 637–643. <https://doi.org/10.1263/jbb.100.637>
- Teghammar, A., Karimi, K., Sárvári Horváth, I., & Taherzadeh, M. J. (2012). Enhanced biogas production from rice straw, triticale straw and softwood spruce by NMMO pretreatment. *Biomass and Bioenergy*, 36, 116–120. <https://doi.org/10.1016/j.biombioe.2011.10.019>
- Teghammar, A., Yngvesson, J., Lundin, M., Taherzadeh, M. J., & Horváth, I. S. (2010). Pretreatment of paper tube residuals for improved biogas production. *Bioresource Technology*, 101(4), 1206–1212. <https://doi.org/10.1016/j.biortech.2009.09.029>

- Toscano, G., Ausiello, A., Micoli, L., Zuccaro, G., & Pirozzi, D. (2013). Anaerobic digestion of residual lignocellulosic materials to biogas and biohydrogen. *Chemical Engineering Transactions*, 32, 487–492. <https://doi.org/10.3303/CET1332082>
- Trisnawati, A. (2022). Analisis Status Kesuburan Tanah Pada Kebun Petani Desa Ladogahar Kecamatan Nita Kabupaten Sikka. *Jurnal Locus Penelitian Dan Pengabdian*, 1(2), 68–80. <https://doi.org/10.58344/locus.v1i2.11>
- Tuesorn, S., Wongwilaiwalin, S., Champreda, V., Leethochawalit, M., Nopharatana, A., Techkarnjanaruk, S., & Chaiprasert, P. (2013). Enhancement of biogas production from swine manure by a lignocellulolytic microbial consortium. *Bioresource Technology*, 144, 579–586. <https://doi.org/10.1016/j.biortech.2013.07.013>
- Ullah Khan, I., Hafiz Dzarfan Othman, M., Hashim, H., Matsuura, T., Ismail, A. F., Rezaei-DashtArzhandi, M., & Wan Azelee, I. (2017). Biogas as a renewable energy fuel – A review of biogas upgrading, utilisation and storage. *Energy Conversion and Management*, 150, 277–294. <https://doi.org/10.1016/J.ENCONMAN.2017.08.035>
- Wahyuni, S. (2009). *Biogas*. Penebar Swadaya.
- Wahyuni, S. (2011). Biogas Energi Terbarukan Ramah Lingkungan dan Berkelanjutan. *Kongres Ilmu Pengetahuan Nasional (KIPNAS) Ke 10, November*, 8–10.
- Wahyuni, S., Suryahadi, S., & Saleh, A. (2011). Analisis Kelayakan Pengembangan Biogas Sebagai Energi Alternatif Berbasis Individu dan Kelompok Peternak. *Manajemen IKM: Jurnal Manajemen Pengembangan Industri Kecil Menengah*, 4(2), 217–224.
- Wang, H., Pu, Y., Ragauskas, A., & Yang, B. (2019). From lignin to valuable products—strategies, challenges, and prospects. *Bioresource Technology*, 271(July 2018), 449–461. <https://doi.org/10.1016/j.biortech.2018.09.072>
- Weiland, P. (2010). Biogas production: current state and perspectives. *Applied Microbiology and Biotechnology*, 85, 849–860. <https://link.springer.com/article/10.1007/s00253-009-2246-7>

- Widihati, I. A. G., Simpen, I. N., & Puspawati, N. M. (2013). Produksi bioenergi alternatif dalam biodigester mobile melalui pemanfaatan limbah ternak sapi bali untuk menunjang peternakan berkelanjutan. *Udayana Mengabdikan, 12*(2), 84–86.
- Wisnu H, A., Wisaksono P, E., Juliastuti, S. R., & Hendrianie, N. (2011). *Pengaruh Mikroorganisme Azotobacter Chroococcum dan Bacillus Megaterium Terhadap Pembuatan Kompos Limbah Padat Digester Biogas dari Enceng Gondok (Eichornia Crassipes)*. Institut Teknologi Sepuluh Nopember.
- Wu, X., Yao, W., Zhu, J., & Miller, C. (2010). Biogas and CH₄ productivity by co-digesting swine manure with three crop residues as an external carbon source. *Bioresource Technology, 101*(11), 4042–4047. <https://doi.org/10.1016/j.biortech.2010.01.052>
- Xu, F., & Li, Y. (2012). Solid-state co-digestion of expired dog food and corn stover for methane production. *Bioresource Technology, 118*, 219–226. <https://doi.org/10.1016/j.biortech.2012.04.102>
- Xu, F., Shi, J., Lv, W., Yu, Z., & Li, Y. (2013). Comparison of different liquid anaerobic digestion effluents as inocula and nitrogen sources for solid-state batch anaerobic digestion of corn stover. *Waste Management, 33*(1), 26–32. <https://doi.org/10.1016/j.wasman.2012.08.006>
- Yang, L., Xu, F., Ge, X., & Li, Y. (2015). Challenges and strategies for solid-state anaerobic digestion of lignocellulosic biomass. In *Renewable and Sustainable Energy Reviews* (Vol. 44). <https://doi.org/10.1016/j.rser.2015.01.002>
- Yu, L., & Wensel, P. C. (2013). Mathematical Modeling in Anaerobic Digestion (AD). *Journal of Bioremediation & Biodegradation, 4*(4). <https://doi.org/10.4172/2155-6199.s4-003>
- Yuan, X., Cao, Y., Li, J., Wen, B., Zhu, W., Wang, X., & Cui, Z. (2012). Effect of pretreatment by a microbial consortium on methane production of waste paper and cardboard. *Bioresource Technology, 118*, 281–288. <https://doi.org/10.1016/j.biortech.2012.05.058>

- Yurian, S. R., Manik, T., & Adel, J. F. (2020). Analisis Revenue Cost Ratio, Payback Period Dan Break Even Point Untuk Menilai Kelayakan Usaha Pada Usaha Kerupuk Diwilayah Kelurahan Sei. Lekop Kecamatan Bintan Timur Kabupaten Bintan. *Student Online Journal (SOJ) UMRAH-Ekonomi*, 1(2), 342–349.
- Zainol, N., & Ismail, S. N. (2019). Evaluation of enzyme kinetic parameters to produce methanol using Michaelis-Menten equation. *Bulletin of Chemical Reaction Engineering & Catalysis*, 14(2), 436–442. <https://doi.org/10.9767/bcrec.14.2.3317.436-442>
- Zhang, Q., He, J., Tian, M., Mao, Z., Tang, L., Zhang, J., & Zhang, H. (2011). Enhancement of methane production from cassava residues by biological pretreatment using a constructed microbial consortium. *Bioresource Technology*, 102(19), 8899–8906. <https://doi.org/10.1016/j.biortech.2011.06.061>
- Zheng, Y., Zhao, J., Xu, F., & Li, Y. (2014). Pretreatment of lignocellulosic biomass for enhanced biogas production. *Progress in Energy and Combustion Science*, 42(1), 35–53. <https://doi.org/10.1016/j.pecs.2014.01.001>
- Zhong, W., Zhang, Z., Luo, Y., Sun, S., Qiao, W., & Xiao, M. (2011). Effect of biological pretreatments in enhancing corn straw biogas production. *Bioresource Technology*, 102(24), 11177–11182. <https://doi.org/10.1016/j.biortech.2011.09.077>
- Zhu, J., Wan, C., & Li, Y. (2010). Enhanced solid-state anaerobic digestion of corn stover by alkaline pretreatment. *Bioresource Technology*, 101(19), 7523–7528. <https://doi.org/10.1016/j.biortech.2010.04.060>

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