

DAFTAR PUSTAKA

- Al-Hothaly, K. A., 2018, "An optimized method for the bio-harvesting of microalgae, *Botryococcus braunii*, using *Aspergillus* sp. in large-scale studies", *MethodsX*, 5, 788–794.
- Alalwan, H. A., Alminshid, A. H., and Aljaafari, H. A. S., 2019, "Promising evolution of biofuel generations. Subject review", *Renewable Energy Focus*, 28, 127–139.
- Ashokkumar, V., & Rengasamy, R., 2012, "Mass culture of *Botryococcus braunii* Kutz. under open raceway pond for biofuel production", *Bioresource Technology*, 104, 394–399.
- Banerjee, A., Sharma, R., Chisti, Y., and Banerjee, U. C., 2002, "*Botryococcus braunii*: A renewable source of hydrocarbons and other chemicals", *Critical Reviews in Biotechnology*, 22(3), 245–279.
- Barros AI, Gonçalves AL, Simões M, and Pires JCM., 2015, "Harvesting techniques applied to microalgae: a review", *Renewable and Sustainable Energy Reviews*, 41:1489–500.
- Badan Pusat Statistik Kabupaten Cilacap, 2021, "Keadaan Suhu Udara/Air Temperature 2018-2020." Diakses dari <https://cilacapkab.bps.go.id/indicator/151/327/keadaan-suhu-udara-air-temperature.html>
- Behera B, and Balasubramanian P., 2019, "Natural plant extracts as an economical and ecofriendly alternative for harvesting microalgae", *Bioresource Technology*, 283: 45–52.
- Bica, A., 2010, "Morphological, Biochemical and Molecular Markers In Identification Of Highly Hydrocarbon Producing Strains Of *Botryococcus braunii*", diakses dari http://doctorat.ubbcluj.ro/sustinerea_publica/
- Brennan, L., and Owende, P., 2010, "Biofuels from microalgae-A review of technologies for production, processing, and extractions of biofuels and co-products", *Renewable and Sustainable Energy Reviews*, 14(2), 557–577.
- Budiman, A., Suyono, E. A., Merdekawati, A., Pradana, Y. S., Sudibyo, H., and Seniorita, L., 2019, "Mikroalga : Kultivasi, Pemanenan, Ekstraksi, dan Konversi Energi", 1st ed., Yogyakarta : Gadjah Mada University Press.
- Brunneli, M., 2015, "Introduction to the analytic hierarchy process", *SpringerBriefs in Operations Research*, P. 83. 978-3-319-12502-2 (electronic).
- Chen, Y.C., Yeh, K.L., Aisyah, R., Lee, D.J., and Chang, J.S., 2011, "Cultivation, photobioreactor design and harvesting of microalgae for biodiesel production: A critical review", *Bioresource Technology*, 102, 71-81

- Christenson L, and Sims R., 2011, "Production and harvesting of microalgae for wastewater treatment, biofuels, and bioproducts", *Biotechnol Adv*, 29:686–702.
- Davis, R., Aden, A., and Pienkos, P. T., 2011, "Techno-economic analysis of autotrophic microalgae for fuel production", *Applied Energy*, 88(10), 3524–3531.
- Fasaei, F., Bitter, J. H., Slegers, P. M., and van Boxtel, A. J. B., 2018, "Techno-economic evaluation of microalgae harvesting and dewatering systems", *Algal Research*, 31, 347–362.
- Ferreira, J., de Assis, L. R., Oliveira, A. P. de S., Castro, J. de S., and Calijuri, M. L., 2020, "Innovative microalgae biomass harvesting methods: Technical feasibility and life cycle analysis", *Science of the Total Environment*, 746.
- Gatamaneni, B.L., Orsat, V., and Lefsrud, M., 2018, "Factors affecting growth of various microalgal species". *Environmental Engineering Science*, 35(10), 1037-1048.
- Gollakota, A. R. K., Kishore, N. and Gu, S., 2016, "A review on hydrothermal liquefaction of biomass", *Renewable and Sustainable Energy Reviews*, 1–15.
- Gouveia, J. D. Ruiz, J. and van de L.A., 2017, "*Botryococcus braunii* strains compared for biomass productivity, hydrocarbon dan carbohydrate content", *J.Biotechnol.*, 248, 77–86
- Grima, E.M., Belarbi, F.G.A., Medina, A.R., and Chisti, Y., 2003, "Recovery of microalgal biomass and metabolites : process options and economics", *Biotechnol. Adv.*, 20, 491-515
- Guiry, M. D., 2018, "Algae Base", *World-wide electronic publication*. Galway: National University of Ireland. Diakses dari <http://www.algaebase.org>.
- Hadi, K., 2012, "Kandungan DHA, EPA dan AA dalam Mikroalga Laut dari Spesies *Spirulina platensis*, *Botryococcus braunii*, *Chlorella aureus* dan *Porphyridium cruentum* yang Dikultivasi secara Heteretrof", *Skripsi. Fakultas Teknik*, Universitas Indonesia. 84 hal. UEN
- Harun, R., Singh, M., Forde, G.M., and Danquah, MK., 2010, "Bioprocess engineering of microalgae to produce a variety of consumer products", *Renewable and Sustainable Energy Reviews*, 14, 1037-1047
- Hemaiswarya, S., Raja, R., Ravikumar, R., and JinCarvalho, I. S., 2013, "Microalgae taxonomy and breeding" *Biofuel Crops: Production, Physiology and Genetics*, June, 44–53.
- Jin, J., Dupré, C., Yoneda, K., Watanabe, M. M., Legrand, J., and Grizeau, D., 2016, "Characteristics of extracellular hydrocarbon-rich microalga *Botryococcus braunii* for biofuels production: Recent advances and opportunities", *Process Biochemistry*, 51(11), 1866–1875.

- Kabinawa, I.N.K., 2008, “Biodiesel energi terbarukan dari mikroalga”, *Warta Pertamina*. (9): 31-35
- Khichi, S. S., Anis, A., and Ghosh, S., 2018, "Mathematical modeling of light energy flux balance in flat panel photobioreactor for *Botryococcus braunii* growth, CO₂ biofixation and lipid production under varying light regimes", *Biochemical Engineering Journal*, 134, 44–56
- Kim, S.K. 2015. “Springer Handbook of Marine Biotechnology”. *New York: Springer*.
- [KESDM-a] Kementerian Energi dan Sumber Daya Mineral, 2021, “Cadangan Minyak Indonesia Tersedia untuk 9,5 Tahun dan Cadangan Gas 19,9 Tahun”, Diakses dari <https://www.esdm.go.id/id/media-center/arsip-berita/menteri-esdm-cadangan-minyak-indonesia-tersedia-untuk-95-tahun-dan-cadangan-gas-199-tahun>.
- [KESDM-b] Kementerian Energi dan Sumber Daya Mineral, 2021, “Capaian Kinerja 2020 Dan Rencana Kerja 2021 Subsektor EBTKE”, Diakses dari <https://ebtke.esdm.go.id/post/2021/01/15/2767/capaian.kinerja.2020.dan.rencana.kerja.2021.subsektor.ebtke?lang=en>
- Kwon, H., Lu, M., Lee, E. Y., and Lee, J., 2014, “Harvesting of microalgae using flocculation combined with dissolved air flotation”, *Biotechnology and Bioprocess Engineering*, 19(1), 143–149.
- Laamanen, C. A., Ross, G. M., and Scott, J. A., 2016, “Flotation harvesting of microalgae”, *Renewable and Sustainable Energy Reviews*, 58, 75–86.
- Li, S., Hu, T., Xu, Y., Wang, J., Chu, R., Yin, Z., Mo, F., and Zhu, L., 2020, “A review on flocculation as an efficient method to harvest energy microalgae: Mechanisms, performances, influencing factors and perspectives”, *Renewable and Sustainable Energy Reviews*, 131(May).
- Lucakova, S., Branyikova, I., Kovacikova, S., Pivokonsky, M., Filipenska, M., Branyik, T., and Ruzicka, M. C., 2021, “Bioresource Technology Electrocoagulation reduces harvesting costs for microalgae”, *Bioresource Technology*, 323(November 2020), 124606.
- Mathimani T, and Mallick N., 2018, “A comprehensive review on harvesting of microalgae for biodiesel – key challenges and future directions”, *Renew Sustain Energy Rev*; 91:1103–20.
- Milledge JJ, and Heaven S., 2013, “A review of the harvesting of micro-algae for biofuel production”, *Rev Environ Sci Biotechnol*, 12: 165-178, 1037-1047.2010.
- Munthafa A.E., dan Mubarak H., 2017, “Penerapan Metode Analytical Hierarchy Process Dalam Sistem Pendukung Keputusan Penentuan Mahasiswa Berprestasi”, *Jurnal Siliwangi*, 3(2), 192-201.

- Nurdogan Y, and Oswald WJ., 1996, "Tube settling of high-rate pond algae", *Water Sci Technol*, 33:229–41.
- Nwokoagbara, E., Olaleye, A. K., and Wang, M., 2015, "Biodiesel from microalgae: The use of multi-criteria decision analysis for strain selection", *Fuel*, 159, 241–249.
- Ortiz, A., García-Galán, M. J., García, J., and Díez-Montero, R., 2021, "Optimization and operation of a demonstrative full scale microalgae harvesting unit based on coagulation, flocculation and sedimentation", *Separation and Purification Technology*, 259 (November 2020).
- Papazi A, Makridis P, and Divanach P., 2010, "Harvesting *Chlorella minutissima* using cell coagulants", *J Appl Phycol*, 22:349–55.
- Pratiwi, D.M., 2018, "Optimasi Pemanenan Mikroalga dengan Metode Filtrasi : Studi Kasus di IPAL ITDC Bali", *Thesis, Departemen Teknik Sipil dan Lingkungan*, Universitas Gadjah Mada.
- Qiu, F., 2013, "Algae architecture", *Thesis Master, Delft University of Technology*, Diakses dari <https://repository.tudelft.nl/islandora/object/uuid%3Ab0b6e05d-49d8-4cc0-9e28-f510b0a8b215>.
- Rai, U. N., S. Dwivedi., V. S. Baghel., R. D. Tripathi., O. P. Shukla and M. K. Shukla., 2007, "Morphology and Cultural Behavior of *Botryococcus protuberans* with Notes on the Genus. National Botanical Research Institute, Lucknow, India", *Journal of Environmental Biology*, 28 (2): 181-184.
- Richardson, J. W., Johnson, M. D., Zhang, X., Zemke, P., Chen, W., and Hu, Q., 2014, "A financial assessment of two alternative cultivation systems and their contributions to algae biofuel economic viability", *Algal Research*, 4(1), 96–104.
- Saaty, T. L., 2008, "Decision making with the analytic hierarchy process", *Int. J. Services Sciences*, 1(1), 83–98.
- Salim S, Bosman R, Vermue MH, and Wijffels RH., 2011, "Harvesting of microalgae by bio-flocculation", *J Appl Phycol*, 23 (2011) 849-855.
- Sari, A. M., H. E. Mayasari., Rachimoellah S., and Zullaikah, 2013, "Pertumbuhan dan Kandungan Lipida dari *Botryococcus braunii* dalam Media Air Laut", *Fakultas Teknologi Industri*, Institut Teknologi Sepuluh Nopember (ITS). 6 hal.
- Song, C. Liu, Q. Ji, N. and Deng, J., 2016, "Evaluation of hydrolysis-sterification biodiesel production from wet microalgae", *Bioresource Technology*. 214, 747–754.
- Tan, J., Low, K. Y., Sulaiman, N. M. N., Tan, R. R., & Promentilla, M. A. B., 2015, "Fuzzy analytical hierarchy process (AHP) for multi-criteria selection in drying and harvesting process of microalgae system", *Chemical Engineering Transactions*, 45, 829–834.

- Trivedi J, Aila M, Bangwal DP, Kaul S, and Garg MO., 2015, “Algae based biorefinery-how to make sense”, *Renew Sustain Energy Rev* ;47:295–307.
- Ubando, A. T., Cuello, J. L., Culaba, A. B., Promentilla, M. A. B., and Tan, R. R., 2014, “Multi-criterion evaluation of cultivation systems for sustainable algal biofuel production using analytic hierarchy process and Monte Carlo simulation”, *Energy Procedia*, 61, 389–392.
- Uduman N, Qi Y, Danquah MK, Forde GM, and Hoadley A., 2010, “Dewatering of microalgael cultures: a major bottleneck to algae-based fuels”, *Journal Renew Sustain Energy*, 2,012701. 2010.
- Unay, E., Ozkaya, B., and Yoruklu, H. C., 2021. “A multicriteria decision analysis for the evaluation of microalgal growth and harvesting”, *Chemosphere*, 279, 130561.
- Vasistha, S., Khanra, A., Clifford, M., and Rai, M. P., 2020, “Current advances in microalgae harvesting and lipid extraction processes for improved biodiesel production: A review”, *Renewable and Sustainable Energy Reviews*, 137(October 2020).
- Wijoseno, T., 2011, “Uji Pengaruh Variasi Media Kultur terhadap Tingkat Pertumbuhan dan Kandungan Protein, Lipid, Klorofil dan Karotenoid Pada Mikroalga *Chlorella vulgaris* Buitenzorg”, *Skripsi. Fakultas Teknik*, Universitas Indonesia. 88 hal.
- Yin, Z., Zhu, L., Li, S., Hu, T., Chu, R., Mo, F., Hu, D., Liu, C., and Li, B., 2020, “A comprehensive review on cultivation and harvesting of microalgae for biodiesel production: Environmental pollution control and future directions”, *Bioresource Technology*,301 (April2018), 1103–1120.
- Yoo, C., Jun, S. Y., Lee, J. Y., Ahn, C. Y., and Oh, H. M., 2010, “Selection of microalgae for lipid production under high levels carbon dioxide”, *Bioresource Technology*, 101(1 SUPPL.), S71–S74.

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