

DAFTAR PUSTAKA

- Adamiak, K., dan Sionkowska, A. (2020). Current methods of collagen cross-linking: Review. *International Journal of Biological Macromolecules*, 161, 550–560. <https://doi.org/10.1016/j.ijbiomac.2020.06.075>
- Admadi H, B., dan Arnata, I. W. (2015). *Teknologi Polimer*. 1–46.
- Alamsyah, M., Kalla, R., dan La Ifa, L. I. (2017). Pemurnian Minyak Jelantah Dengan Proses Adsorbsi. *Journal Of Chemical Process Engineering*, 2(2), 22. <https://doi.org/10.33536/jcpe.v2i2.162>
- Arita, S., Dara, M. B., dan Irawan, J. (2008). Pembuatan Metil Ester Asam Lemak Dari Cpo Off Grade Dengan Metode Esterifikasi-Transesterifikasi. *Jurnal Teknik Kimia*, 15(2), 34–43. <https://doi.org/52-150-1-PB>
- Aslam, M., Kalyar, M. A., dan Raza, Z. A. (2018). Polyvinyl alcohol: A review of research status and use of polyvinyl alcohol based nanocomposites. *Polymer Engineering and Science*, 58(12), 2119–2132. <https://doi.org/10.1002/pen.24855>
- Asthasari, R., Teknologi, D., Pertanian, I., dan Pertanian, F. T. (2008). Kajian Proses Pembuatan Biodiesel Dari Minyak. *Skripsi*.
- Atikah, W. S. (2017). Potensi Zeolit Alam Gunung Kidul Teraktivasi Sebagai Media Adsorben Pewarna Tekstil the Potentiality of Activated Natural Zeolite From Gunung Kidul As Adsorben To Textile Dyes. *Arena Tekstil*, 32, 17–24. <https://media.neliti.com/media/publications/217434-karakterisasi-zeolit-alam-gunung-kidul-t.pdf>
- Auerbach, S., Carrado, K., Dutta, P. (2003). *Zeolite Science and Technology*.
- Aziz, I., Nurbayti, S., dan Rahman, A. (2012). Penggunaan Zeolit Alam sebagai Katalis dalam Pembuatan Biodiesel. *Jurnal Kimia VALENSI*, 2(4), 511–515. <https://doi.org/10.15408/jkv.v2i4.268>
- Busyairi, M., Muttaqin, A. Z., Meicahyanti, I., dan Saryadi, S. (2020). Potensi Minyak Jelantah Sebagai Biodiesel dan Pengaruh Katalis Serta Waktu Reaksi Terhadap Kualitas Biodiesel Melalui Proses Transesterifikasi. *Jurnal Serambi Engineering*, 5(2), 933–940. <https://doi.org/10.32672/jse.v5i2.1920>
- Byrne, B., Beattie, J. W., Song, C. L., dan Kazarian, S. G. (2020). ATR-FTIR spectroscopy and spectroscopic imaging of proteins. In *Vibrational Spectroscopy in Protein Research*. INC. <https://doi.org/10.1016/b978-0-12-818610-7.00001-3>
- Caro, C. A. De. (2017). *Penentuan Air oleh Titrasi Karl Fischer*. November.
- Catarino, M., Ferreira, E., Soares Dias, A. P., dan Gomes, J. (2020). Dry washing biodiesel purification using fumed silica sorbent. *Chemical Engineering Journal*, 386(November2019), 123930. <https://doi.org/10.1016/j.cej.2019.123930>
- Cholifah S. (2009). Penggunaan Metode Ftir (Fourier Transform Infra Red) Untuk Studi Analisis Gugus Fungsi Sampel Minyak Goreng. *Jurusan Fisika FMIPA UNDIP*, 1–5.
- Conference, I. (2010). *SYNTHESIS OF COMPOSITE PVA ZEOLITE CLAY AND ITS ADSORPTION DESORPTION STUDY WITH RESPECT TO*

- ETHANOL/WATER MIXTURE: EFFECT OF NaOH CONCENTRATION TO THE QUALITY OF COMPOSITE.* 1410, 341–344.
- Cooke, et all. (2005). *Purification Of Biodiesel With Adsorbent Materials* (hal. 12). Bryan Betram,Brian S.Cooke and Christopher Abrams.
- da Cunha, C. C. R. F., dan da Costa, G. M. (2016). Water determination in iron oxyhydroxides and iron ores by Karl Fischer titration. *Physics and Chemistry of Minerals*, 43(10), 739–748. <https://doi.org/10.1007/s00269-016-0830-9>
- Đặng, T. H., Nguyễn, X. H., Chou, C. L., dan Chen, B. H. (2021). Preparation of cancrinite-type zeolite from diatomaceous earth as transesterification catalysts for biodiesel production. *Renewable Energy*, 174, 347–358. <https://doi.org/10.1016/j.renene.2021.04.068>
- Díaz-Ballote, L., Maldonado, L., Genesca, J., Hoil-Canul, E. R., dan Vega-Lizama, T. (2020). Electrochemical impedance: A new alternative to assess the soap removal from biodiesel in the washing process. *Fuel*, 265(July 2019), 116880. <https://doi.org/10.1016/j.fuel.2019.116880>
- Efendi, R., Aulia, H., Faiz, N., dan Firduus, E. R. (2012). Pembuatan Biodiesel Minyak Jelantah Menggunakan Metode Esterifikasi-Transesterifikasi Berdasarkan Jumlah Pemakaian Minyak Jelantah Biodiesel Production From Waste Cooking Oil By Esterification-Transesterification Methods Based on Amount of Used Cooking Oil. *Industrial Research*, 7182, 2,4.
- Fadhlullah, M., Widiyanto, S. N. B., dan Restiawaty, E. (2015). The potential of nyamplung (*Calophyllum inophyllum* L.) seed oil as biodiesel feedstock: Effect of seed moisture content and particle size on oil yield. *Energy Procedia*, 68, 177–185. <https://doi.org/10.1016/j.egypro.2015.03.246>
- Fatimah, P., Jumalia, R., Novianti, E. R., dan Zainul, R. (2018). *A REVIEW Teknik Blended : Prinsip dan Dasar-Dasar*.
- GAPKI. (2019). *Gabungan Pengusaha Kelapa Sawit*. gapki. <https://gapki.id/>
- Gocen, T., Bayari, S. H., dan Guven, M. H. (2018). Conformational and vibrational studies of arachidonic acid, light and temperature effects on ATR-FTIR spectra. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, 203(2017), 263–272. <https://doi.org/10.1016/j.saa.2018.05.100>
- González-Guisasola, C., dan Ribes-Greus, A. (2018). Dielectric relaxations and conductivity of cross-linked PVA/SSA/GO composite membranes for fuel cells. *Polymer Testing*, 67, 55–67. <https://doi.org/10.1016/j.polymertesting.2018.01.024>
- Hendriansyah, R. (2016). *Teknologi membran sebagai proses alternatif produksi biodiesel*. May.
- Irmaya, R. (2018). Karakteristik Polivinil Alkohol Yang Dimodifikasi Dengan Asam Adipat. *Universitas Sumatera Utara*, 1–36.
- Jaggy, F., Zinelis, S., Polychronis, G., Patcas, R., Schätzle, M., Eliades, G., dan Eliades, T. (2020). ATR-FTIR analysis and one-week stress relaxation of four orthodontic aligner materials. *Materials*, 13(8), 1–10. <https://doi.org/10.3390/MA13081868>
- Jamaluddin, N. A. M., Riyat syah, T. M. I., Silitonga, A. S., Mofijur, M., Shamsuddin, A. H., Ong, H. C., Mahlia, T. M. I., dan Rahman, S. M. A. (2019). Techno-economic analysis and physicochemical properties of

- Ceiba pentandra as second-generation biodiesel based on ASTM D6751 and EN 14214. *Processes*, 7(9), 1–21. <https://doi.org/10.3390/pr7090636>
- Jokar, F., Khorram, M., Karimi, G., dan Hataf, N. (2019). Experimental investigation of mechanical properties of crumbed rubber concrete containing natural zeolite. *Construction and Building Materials*, 208, 651–658. <https://doi.org/10.1016/j.conbuildmat.2019.03.063>
- Jung, M. R., Horgen, F. D., Orski, S. V., Rodriguez C., V., Beers, K. L., Balazs, G. H., Jones, T. T., Work, T. M., Brignac, K. C., Royer, S. J., Hyrenbach, K. D., Jensen, B. A., dan Lynch, J. M. (2018). Validation of ATR FT-IR to identify polymers of plastic marine debris, including those ingested by marine organisms. *Marine Pollution Bulletin*, 127(November 2017), 704–716. <https://doi.org/10.1016/j.marpolbul.2017.12.061>
- KBBI. (2022). *Kamus Besar Bahasa Indonesia*. KBBI Online. <https://www.kbbi.web.id/spektrum>
- Król, M. (2020). Natural vs. Synthetic zeolites. *Crystals*, 10(7), 1–8. <https://doi.org/10.3390/crust10070622>
- Kurniasih, E. (2020). *Merancang Energi Masa Depan dengan Biodiesel - Eka Kurniasih, S.T., M.T. - Google Buku*. Perpustakaan Nasional. https://books.google.co.id/books?hl=id&lr=&id=lBoDEAAAQBAJ&oi=fnd&pg=PP1&dq=energi+terbarukan+biodiesel&ots=7mRSaWcheG&si=g=r7cc9nQHI7b2Klj45mfY0WO0kA4&redir_esc=y#v=onepage&q=energi+terbarukan+biodiesel&f=false
- Laksmono, J. A., Sudibandriyo, M., Saputra, A. H., dan Haryono, A. (2019). Structured polyvinyl alcohol/zeolite/carbon composites prepared using supercritical fluid extraction techniques as adsorbent for bioethanol dehydration. *International Journal of Chemical Engineering*, 2019. <https://doi.org/10.1155/2019/6036479>
- Lawan, I., Garba, Z. N., Zhou, W., Zhang, M., dan Yuan, Z. (2020). Synergies between the microwave reactor and CaO/zeolite catalyst in waste lard biodiesel production. *Renewable Energy*, 145, 2550–2560. <https://doi.org/10.1016/j.renene.2019.08.008>
- Lestari, D. Y. (2010). Kajian Modifikasi dan Karakterisasi Zeolit Alam dari Berbagai Negara. *Prosiding Seminar Nasional Kimia dan Pendidikan Kimia 2010*, 6.
- Liang, J., dan Chen, R. (2018). Impact of cross-linking mode on the physical properties of zein/PVA composite films. *Food Packaging and Shelf Life*, 18(January), 101–106. <https://doi.org/10.1016/j.fpsl.2018.10.003>
- Marliana, N. (2016). PEMBUATAN BIODIESEL DARI CRUDE PALM OIL (CPO) MELALUI REAKSI DUA TAHAP DENGAN MENGGUNAKAN KATALIS H₂SO₄ DAN K₂O DARI ABU TANDAN KOSONG KELAPA SAWIT (ATKKS). *Jurnal Kimia*, 107.
- Mészáros, L., Kara, Y., Fekete, T., dan Molnár, K. (2020). Development of self-reinforced low-density polyethylene using γ -irradiation cross-linked polyethylene fibres. *Radiation Physics and Chemistry*, 170(September 2019), 108655. <https://doi.org/10.1016/j.radphyschem.2019.108655>
- Mok, C. F., Ching, Y. C., Muhamad, F., Abu Osman, N. A., Hai, N. D., dan Che Hassan, C. R. (2020). Adsorption of Dyes Using Poly(vinyl alcohol) (PVA) and PVA-Based Polymer Composite Adsorbents: A Review.

- Journal of Polymers and the Environment*, 28(3), 775–793.
<https://doi.org/10.1007/s10924-020-01656-4>
- Nayiroh, N. (2020). Material komposit handbook. *Jurnal Penelitian Ilmu Teknik*, 1(1), 16–22.
- Prasetyo, J., Teknologi, P., Energi, S., dan Unpam, J. I. T. K. (2018). *STUDI PEMANFAATAN MINYAK JELANTAH SEBAGAI BAHAN BAKU PEMBUATAN BIODIESEL Studi On The Utilization of Used Oil As Raw Material For Biodiesel PENDAHULUAN Sumber energi minyak bumi saat ini mulai menipis seiring meningkatnya pembangunan dan penggunaannya di . 2(2).*
- Pratama, R. (2016). *F1C111025 sitedi NUR MALIANA*.
- Putri.M dkk. (2022). *Pembuatan Alat Penjernihan Minyak Jelantah dengan Otomasi Laju alir*. 11(1), 1–9.
- Ramos, L. P., Cordeiro, C. S., Cesar-Oliveira, M. A. F., Wypych, F., dan Nakagaki, S. (2014). Applications of Heterogeneous Catalysts in the Production of Biodiesel by Esterification and Transesterification. In *Bioenergy Research: Advances and Applications*. Elsevier.
<https://doi.org/10.1016/B978-0-444-59561-4.00016-4>
- Rudiyanto, B., Andrianto, M., Susmiati, Y., Pambudi, N. A., dan Riyanto. (2019). Optimization and validation of hydrated magnesium silicate on dry washing purification biodiesel using response surface methodology. *Energy Procedia*, 158, 333–338.
<https://doi.org/10.1016/j.egypro.2019.01.098>
- Sargent, M. T., Daddi, E., Chong, X., dan Shang, S. (2017). *Development of porous structured polyvinyl alcohol / zeolite / carbon composites as adsorbent Development of porous structured polyvinyl alcohol / zeolite / carbon composites as adsorbent*. <https://doi.org/10.1088/1757-899X>
- Setyawati, H., Hermansyah, M., dan Arifin, S. (2016). *Kajian Lanjut Penggunaan Magnesol dan Zeloit Alam Sebagai Adsorben Pada Pemurnian Biodiesel*. 04, 39–45.
- Sparks, Beth; Rice, E. (2018). Polymer-Matrix Composites Materials, Mechanics and Applications. In *News.Ge*.
- Suleman, N., Abas, dan Paputungan, M. (2019). Esterifikasi dan Transesterifikasi Stearin Sawit untuk Pembuatan Biodiesel. *Jurnal Teknik*, 17(1), 66–77.
<https://doi.org/10.37031/jt.v17i1.54>
- Susilo, B., Sumarlan, S. H., Feminda Nurirenia, D., Keteknikan, J., Teknologi, P.-F., Brawijaya, P.-U., Veteran, J., dan Korespondensi, P. (2017). Pemurnian Bioetanol Menggunakan Proses Distilasi Dan Adsorpsi Dengan Penambahan Asam Sulfat (H₂SO₄) Pada Aktivasi Zeolit Alam Sebagai Adsorben. *Jurnal Keteknikan Pertanian Tropis dan Biosistem*, 5(1), 19–26.
- Suzihaque, M. U. H., Alwi, H., Kalthum, U., Abdullah, S., dan Haron, N. (2022). Materials Today : Proceedings Biodiesel production from waste cooking oil: A brief review. *Materials Today: Proceedings*, xxxx.
<https://doi.org/10.1016/j.matpr.2022.04.527>
- Tien, C. (2019). Front Matter. In *Introduction to Adsorption*.
<https://doi.org/10.1016/b978-0-12-816446-4.09991-7>
- Udyani, K., dan Wulandari, Y. (2014). Aktivasi Zeolit Alam untuk Peningkatan

- Kemampuan sebagai Adsorben pada Pemurnian Biodiesel. In *Seminar Nasional Sains dan Teknologi Terapan II*.
- Wahono, S. K. (2015). *Kajian : Pemanfaatan Zeolit Lokal Gunungkidul – Yogyakarta untuk Optimasi Sistem Biogas Kajian : Pemanfaatan Zeolit Lokal Gunungkidul – Yogyakarta Untuk Optimasi Sistem Biogas*. November 2008.
- Yuarini, D. A. A., Putra, G. . G., Wrasati, L. P., dan Suryawan, A. A. P. . (2018). Karakteristik Minyak Goreng Bekas Yang Dihasilkan Di Kota Denpasar. *Media Ilmiah Teknologi Pangan*, 5(1), 49–55. https://simdos.unud.ac.id/uploads/file_penelitian_1_dir/3ef55cc44066b557b1ec0466ddaf644f.pdf

