

## DAFTAR PUSTAKA

- [1] S. Nikmatin, A. Syafiuddin, and D. A. Y. Irwanto, "Properties of oil palm empty fruit bunch-filled recycled acrylonitrile butadiene styrene composites: Effect of shapes and filler loadings with random orientation," *BioResources*, vol. 12, no. 1, pp. 1090–1101, 2017, doi: 10.15376/biores.12.1.1090-1101.
- [2] D. E. Natanael Siagian and M. H. Sedo Putra, "Serat Alam Sebagai Bahan Komposit Ramah Lingkungan," *CIVeng: Jurnal Teknik Sipil dan Lingkungan*, vol. 5, no. 1, p. 55, 2024, doi: 10.30595/civeng.v5i1.17879.
- [3] J. P. Susanto, A. D. Santoso, and N. Suwedi, "Perhitungan Potensi Limbah Padat Kelapa Sawit untuk Sumber Energi Terbaharukan dengan Metode LCA," *Jurnal Teknologi Lingkungan*, vol. 18, no. 2, p. 165, 2017, doi: 10.29122/jtl.v18i2.2046.
- [4] BDPKS Sawit, "Tankos Sawit Bahan Bakar Alternatif untuk Rumah Tangga." Accessed: Mar. 30, 2024. [Online]. Available: <https://www.bpdp.or.id/tankos-sawit-bahan-bakar-alternatif-untuk-rumah-tangga>
- [5] S. Purna Yudha, R. Ramadhan Latief, and I. Sutisna Aziz, "Pengaruh Penggunaan Serat Tandan Kosong Kelapa Sawit Sebagai Penguat Terhadap Sifat Mekanik Komposit," pp. 336–339, 2023.
- [6] N. A. Nordin, "Preparation And Characterisation Of Heat-Treated Oil Palm-Empty Fruit Bunch/High Density Polyethylene Composites," vol. 1, pp. 1982–2004, 2020.
- [7] S. Nikmatin, A. Syafiuddin, and A. Yedi, "Sifat Komposit Akrilonitril Butadiena Styrene Daur Ulang Isi Tandan Kosong Kelapa Sawit : Pengaruh Bentuk dan Pemuatan Bahan Pengisi dengan Orientasi Acak," vol. 12, no. 2010, pp. 1090–1101, 2017.
- [8] J. S. Z. Oghly, "Physico-Chemical Properties of Polymer Composites," *American Journal of Applied Science and Technology*, vol. 3, no. 10, pp. 25–33, 2023, doi: 10.37547/ajast/volume03issue10-06.
- [9] P. C. Hiemenz and Timothy. Lodge, "Polymer chemistry (2nd edition)," p. 587, 2007.
- [10] L. J. Tan, W. Zhu, and K. Zhou, "Recent Progress on Polymer Materials for Additive Manufacturing," *Advanced Functional Materials*, vol. 30, no. 43, 2020, doi: 10.1002/adfm.202003062.
- [11] R. F. Gibson, *Principles of Composite Material Mechanics. Department of Mechanical Engineering Wayne State Univ ersity Detroit*. 2016.

- [12] I. O. Oladele, T. F. Omotosho, and A. A. Adediran, "Polymer-Based Composites: An Indispensable Material for Present and Future Applications," *International Journal of Polymer Science*, vol. 2020, 2020, doi: 10.1155/2020/8834518.
- [13] R. Hsissou, R. Seghiri, Z. Benzekri, M. Hilali, M. Rafik, and A. Elharfi, "Polymer composite materials: A comprehensive review," *Composite Structures*, vol. 262, no. November 2020, pp. 0–3, 2021, doi: 10.1016/j.compstruct.2021.113640.
- [14] N. M. Nurazzi *et al.*, "A review on mechanical performance of hybrid natural fiber polymer composites for structural applications," *Polymers*, vol. 13, no. 13, pp. 1–47, 2021, doi: 10.3390/polym13132170.
- [15] A. Restasari, N. Hamid, L. Marpaung, A. Rusnaenah, and A. Sukma, "Structure Relaxation Disruption on Temperature- dependence of Polymerization of HTPB-based Polyurethane," vol. 19, no. 2, pp. 193–200, 2021.
- [16] C. E. Carraher Jr., "Free-Radical Chain Polymerization (Addition Polymerization)," *Carraher's Polymer Chemistry*, pp. 219–254, 2020, doi: 10.1201/b15405-10.
- [17] G. R. Meira, C. V. Luciani, and D. A. Estenoz, "Continuous Bulk Process for the Production of High-Impact Polystyrene: Recent Developments in Modeling and Control," *Macromolecular Reaction Engineering*, vol. 1, no. 1, pp. 25–39, 2007, doi: 10.1002/mren.200600010.
- [18] A. M. Yayshahri, S. Jamaledin Peighambaroust, and A. Shenavar, "Impact, thermal and biodegradation properties of high impact polystyrene/corn starch blends processed via melt extrusion," *Polyolefins Journal*, vol. 6, no. 2, 2019, doi: 10.22063/poj.2019.2390.1130.
- [19] L. Hýlová, A. Mizera, M. Mizera, R. Grund, and M. Ovsík, "Mechanical Properties Study of High Impact Polystyrene under Impact and Static Tests," *IOP Conference Series: Materials Science and Engineering*, vol. 448, no. 1, 2018, doi: 10.1088/1757-899X/448/1/012044.
- [20] D. S. Achilias and E. V. Antonakou, "Chemical and Thermochemical Recycling of Polymers from Waste Electrical and Electronic Equipment," *Recycling Materials Based on Environmentally Friendly Techniques*, no. July 2015, 2015, doi: 10.5772/59960.
- [21] AAE Intec, "Information about Polystyrene." Accessed: Mar. 30, 2024. [Online]. Available: [http://wiki.zero-emissions.at/index.php?title=Information\\_about\\_polystyrene](http://wiki.zero-emissions.at/index.php?title=Information_about_polystyrene)

- [22] J. Goff, T. Whelan, and D. DeLaney, "The Dynisco extrusion processors handbook," *Edition*, vol. 2, p. 284, 2000.
- [23] T. Applications *et al.*, "High Impact Polystyrene," pp. 1–3.
- [24] I. Nata, C. Irawan, M. Putra, H. Wijayanti, P. Mardina, and ..., *Tandan Kosong Kelapa Sawit: Potensi dan Aplikasi*. 2022.
- [25] Kurnia and S. S. Fatimah, "Bab 4 - Pengolahan Minyak Kelapa Sawit," *PERANGKAT PERKULIAHAN (Satuan Acara perkuliahan, Bahan Ajar dan Bahan Presentasi) Kimia Industri*, pp. 44–59, 2008.
- [26] Dirjen Perkebunan Kemenpan RI, "Statistik Perkebunan Non Unggulan Nasional 2020-2022," *Sekretariat Direktorat Jendral Perkebunan*, pp. 1–572, 2020.
- [27] I. N. Mohammad, C. M. Ongkudon, and M. Misson, "Physicochemical properties and lignin degradation of thermal-pretreated oil palm empty fruit bunch," *Energies*, vol. 13, no. 22, 2020, doi: 10.3390/en13225966.
- [28] L. Ni`mah, S. R. Juliastuti, and M. Mahfud, "Journal of Fibers and Polymer Composites," *Journal of Fibers and Polymer Composites*, vol. 1, no. 2, pp. 148–163, 2022.
- [29] A. Pramana, M. N. Cahyanto, H. Adhianata, and Y. Zalfiatri, "Karakteristik Fisik Lignin pada Serat Tandan Kosong Kelapa Sawit PT. Tunggal Perkasa Plantataions Provinsi Riau Menggunakan Metode Organosolv," *Jurnal Pengendalian Pencemaran Lingkungan (JPPL)*, vol. 2, no. 1, pp. 43–49, 2020, doi: 10.35970/jppl.v2i1.153.
- [30] J. Saputra and C. T. Stevanus, "Aplikasi Kompos Tandan Kosong Kelapa Sawit Pada Tanaman Karet Menghasilkan," *Warta Per karetan*, vol. 1, no. 1, pp. 1–10, 2019, doi: 10.22302/ppk.wp.v1i1.587.
- [31] M. E. Rahmasita, M. Farid, and H. Ardhyananta, "Komponen Selulosa," vol. 6, no. 2, 2017.
- [32] N. S. Zulnazri, R. Dewi, "Modification of Recycled HDPE Composite with OPEFB Microfibers Though The Melt Blend Extruder Process," pp. 105–112, 2020, doi: 10.31284/j.iptek.2020.v24i2.92.
- [33] Ridat, "QC-601A Manual Thermos Press Forming Machine," vol. 6777, no. 62, pp. 21–22, 2023.
- [34] P. M. Negeri and B. Belitung, "ANALISIS PENGUJIAN IMPAK METODE CHARPY MENGGUNAKAN MATERIAL PLA + PADA PROSES Test Analysis TEKNOLOGI 3D

PRINTING On Fused Deposition Modeling ( FDM ) 3D Printing Processes MODELLING ( FDM ) ANALISIS PENGUJIAN IMPAK METODE CHARPY MENGGUNAKAN MATERIAL PLA ”.

- [35] S. Ahsan and I. N. Apriani, “Modul praktik karakterisasi dan uji polimer,” 2021.
- [36] D. W. Hoffman, *Polymer Morphology*. New Jersey: Jhon Wiley & Sons, Inc., Hoboken, New Jersey, 2016.
- [37] N. L. Indrayani, R. H. Rahmanto, and R. Sadiana, “Analisis Pengaruh Variasi Waktu Sintering dan Komposisi Terhadap Sifat Mekanik dan Morfologi Komposit Eceng Gondok-PVC-LDPE,” vol. 6, no. 0, pp. 1–23, 2021.
- [38] P. Purniawan, “Komposit Serat Braids Tandan Kosong Kelapa Sawit ( Tkks ) / Polylactic Acid ( Pla ),” 2023.
- [39] M. T. Cadavi, R. A. Wicaksono, and E. Kurniawan, “Rekayasa Material Filament Biocomposite Tandan Kosong Kelapa Sawit Dan Plastik High Density Polyethylene Untuk 3D Printing Berbasis Fused Deposition Modeling,” vol. 3, no. 1, pp. 32–40, 2022.
- [40] S. Nikmatin, B. Hermawan, I. Irmansyah, M. N. Indro, A. B. H. Kueh, and A. Syafiuddin, “Evaluation of the performance of helmet prototypes fabricated from acrylonitrile butadiene styrene composites filled with natural resource,” *Materials*, vol. 12, no. 1, 2018, doi: 10.3390/ma12010034.
- [41] B. I. Poetra, “Pengaruh Fraksi Berat Terhadap Sifat Fisik dan Mekanik Komposit Bahan Akustik Polypropylene/Serat Tandan Kosong Kelapa Sawit Pada Aplikasi Door Panel Mobil,” *Jurnal Material dan Proses Manufaktur*, vol. 1, no. 1, pp. 41–45, 2017.
- [42] Safrijal, S. Ali, and H. Susanto, “Pengujian Papan Komposit Diperkuat Serat Tandan Kosong Kelapa Sawit (TKKS) Dengan Menggunakan Alat Uji Impact Charpy,” *Jurnal Mekanova*, vol. 3, no. 5, pp. 1–10, 2017.
- [43] D. Syafei and W. Prendika, “The Preparation and Characterization of Thermoplastic Elastomer Natural Rubber-Polypropylene Waste with Oil Palm Empty Bunches as Filler,” vol. 13, no. 1, pp. 52–57, 2021.
- [44] E. Kustiyah, I. Wicaksono, L. A. Wardani, S. S. Meilani, and H. Hasaya, “Pembuatan komposit dari serat tandan kosong kelapa sawit dengan matrik polipropilen serta penambahan grafting agent PP-g-MA,” vol. 16, no. 3, pp. 367–372, 2022, doi: 10.21107/agrointek.v16i3.13005.

- [45] O. Riza, S. Nikmatin, H. Hardhienata, and F. A. Syamani, "Analisa Sifat Mekanik pada Bahan Anti Peluru dari Adisi Berpenguat Serat Panjang Tandan Kosong Kelapa Sawit ( TKKS )," no. Gambar 1, 2022.
- [46] S. Darmo and A. Zainuri, "Karakteristik Kekuatan Tarik dan Morfologi Material Komposit Berpenguat Serat Pohon Pisang Saba Dengan Perlakuan Kimia," *Jurnal Mekanik Terapan*, vol. 2, no. 1, pp. 16–25, 2021, doi: 10.32722/jmt.v2i1.3773.
- [47] C. Gleissner, T. Bechtold, and T. Pham, "Enhancing the Wettability of Fibre Surface: A Comparative Experimental Study of Different Surface Activation Principles on Single Polyamide Fibre," *Fibers and Polymers*, vol. 24, no. 12, pp. 4241–4252, 2023, doi: 10.1007/s12221-023-00402-6.