

DAFTAR PUSTAKA

- Abd El-baky, M. A., Attia, M. A., Abdelhaleem, M. M., & Hassan, M. A. (2020). Mechanical characterization of hybrid composites based on flax, basalt and glass fibers. *Journal of Composite Materials*, 54(27), 4185–4205. <https://doi.org/10.1177/0021998320928509>
- Abdal-Hay, A., Suardana, N. P. G., Jung, D. Y., Choi, K. S., & Lim, J. K. (2012). Effect of diameters and alkali treatment on the tensile properties of date palm fiber reinforced epoxy composites. *International Journal of Precision Engineering and Manufacturing*, 13(7), 1199–1206. <https://doi.org/10.1007/s12541-012-0159-3>
- Adel, A. M., Abd El-Wahab, Z. H., Ibrahim, A. A., & Al-Shemy, M. T. (2011). Characterization of microcrystalline cellulose prepared from lignocellulosic materials. Part II: Physicochemical properties. *Carbohydrate Polymers*, 83(2), 676–687. <https://doi.org/10.1016/j.carbpol.2010.08.039>
- Ahmed, K. S., & Vijayarangan, S. (2008). Tensile, flexural and interlaminar shear properties of woven jute and jute-glass fabric reinforced polyester composites. *Journal of Materials Processing Technology*, 207(1–3), 330–335. <https://doi.org/10.1016/j.jmatprotec.2008.06.038>
- Al-Maadeed, M. A., & Labidi, S. (2013). Recycled polymers in natural fibre-reinforced polymer composites. In *Natural Fibre Composites: Materials, Processes and Applications*. Woodhead Publishing Limited. <https://doi.org/10.1533/9780857099228.1.103>
- Alshaghel, A., Parveen, S., Rana, S., & Fanguero, R. (2018). Effect of multiscale reinforcement on the mechanical properties and microstructure of microcrystalline cellulose-carbon nanotube reinforced cementitious composites. *Composites Part B: Engineering*, 149(February), 122–134. <https://doi.org/10.1016/j.compositesb.2018.05.024>

- Arjmandi, R., Hassan, A., Haafiz, M. K. M., Zakaria, Z., & Inuwa, I. M. (2014). Characterization of polylactic acid/microcrystalline cellulose/montmorillonite hybrid composites | Pencirian komposit polilaktik asid/selulosa mikrohablur/hibrid montmorilonit. *Malaysian Journal of Analytical Sciences*, 18(3). <https://www.researchgate.net/publication/272494669>
- Ashik, K. P., & Sharma, R. S. (2015). *A Review on Mechanical Properties of Natural Fiber Reinforced Hybrid Polymer Composites*. September, 420–426.
- Ashori, A., & Sheshmani, S. (2010). Hybrid composites made from recycled materials: Moisture absorption and thickness swelling behavior. *Bioresource Technology*, 101(12), 4717–4720. <https://doi.org/10.1016/j.biortech.2010.01.060>
- Athawale, A. A., & Pandit, J. A. (2019). Unsaturated polyester resins, blends, interpenetrating polymer networks, composites, and nanocomposites: State of the art and new challenges. In *Unsaturated Polyester Resins: Fundamentals, Design, Fabrication, and Applications*. Elsevier Inc. <https://doi.org/10.1016/B978-0-12-816129-6.00001-6>
- Cai, M., Takagi, H., Nakagaito, A. N., Katoh, M., Ueki, T., Waterhouse, G. I. N., & Li, Y. (2015). Influence of alkali treatment on internal microstructure and tensile properties of abaca fibers. *Industrial Crops & Products*, 65, 27–35. <https://doi.org/10.1016/j.indcrop.2014.11.048>
- Callister, W.D., 2007, *Materials science and engineering : an introduction*, 7 th edition, John Wiley & Sons, New York.
- El-baky, M. A. A. (2017). *Evaluation of Mechanical Properties of Jute / Glass / Carbon Fibers Reinforced Hybrid Composites*. 18(12), 2417–2432. <https://doi.org/10.1007/s12221-017-7682-x>
- El-Sakhawy, M., & Hassan, M. L. (2007). Physical and mechanical properties of microcrystalline cellulose prepared from agricultural residues. *Carbohydrate Polymers*, 67(1), 1–10. <https://doi.org/10.1016/j.carbpol.2006.04.009>

Gibson, R.F., 2016, Principles of Composite Material Mechanics. Fourth Edition. CRC Press, London.

Gieparda, W., Rojewski, S., Wüstenhagen, S., Kicinska-jakubowska, A., & Krombholz, A. (2021). Chemical modification of natural fibres to epoxy laminate for lightweight constructions. *Composites Part A*, 140, 106171. <https://doi.org/10.1016/j.compositesa.2020.106171>

Haafiz, M. K. M., Hassan, A., Zakaria, Z., Inuwa, I. M., Islam, M. S., & Jawaid, M. (2013). Properties of polylactic acid composites reinforced with oil palm biomass microcrystalline cellulose. *Carbohydrate Polymers*, 98(1), 139–145. <https://doi.org/10.1016/j.carbpol.2013.05.069>

Hashim, N., Majid, D. L. A., Baitab, D. M., Yidris, N., & Zahari, R. (2019). Tensile Properties of Woven Intra-Ply Carbon/Kevlar Reinforced Epoxy Hybrid Composite at Sub-Ambient Temperature. In *Reference Module in Materials Science and Materials Engineering*. Elsevier Ltd. <https://doi.org/10.1016/b978-0-12-803581-8.11567-x>

Hendri Hestiawan, J. K. (2017). Pengaruh Penambahan Katalis Terhadap Sifat Mekanis Resin Poliester Tak Jenuh. *Teknosia*, 3(1), 1–7. <https://doi.org/10.6789/teknosia.v3i1.2118>

Jabbar, A., Militký, J., Wiener, J., Kale, B. M., Ali, U., & Rwawiire, S. (2017). Nanocellulose coated woven jute/green epoxy composites: Characterization of mechanical and dynamic mechanical behavior. *Composite Structures*, 161, 340–349. <https://doi.org/10.1016/j.compstruct.2016.11.062>

Jamasri & Yudhanto, F. (2021). *Effect of Addition Microcrystalline Cellulose on Mechanical Properties of Jute / Glass Fibers Hybrid Laminated Composite*. 12(1), 1–8.

Kaw, A. K., & Group, F. (2006). *Composite*.

Khalid, M. Y., Arif, Z. U., Sheikh, M. F., & Nasir, M. A. (2021). Mechanical characterization of glass and jute fiber-based hybrid composites fabricated

through compression molding technique. *International Journal of Material Forming*. <https://doi.org/10.1007/s12289-021-01624-w>

Khan, Y. (2019). Characterizing the properties of tissue constructs for regenerative engineering. In *Encyclopedia of Biomedical Engineering* (Vols. 1–3). Elsevier. <https://doi.org/10.1016/B978-0-12-801238-3.99897-0>

Kumar, D., Pagar, D. D., Kumar, R., & Pruncu, C. I. (2019). Recent progress of reinforcement materials : a comprehensive overview of composite materials. *Integrative Medicine Research*, *x*, *x*, 1–21. <https://doi.org/10.1016/j.jmrt.2019.09.068>

Lei, W., Zhou, X., Fang, C., Li, Y., Song, Y., Wang, C., & Huang, Z. (2019). New approach to recycle office waste paper: Reinforcement for polyurethane with nano cellulose crystals extracted from waste paper. *Waste Management*, *95*, 59–69. <https://doi.org/10.1016/j.wasman.2019.06.003>

Li, X., Tabil, L. G., & Panigrahi, S. (2007). Chemical treatments of natural fiber for use in natural fiber-reinforced composites: A review. *Journal of Polymers and the Environment*, *15*(1), 25–33. <https://doi.org/10.1007/s10924-006-0042-3>

Liu, W., Fei, M. en, Ban, Y., Jia, A., & Qiu, R. (2017). Preparation and evaluation of green composites from microcrystalline cellulose and a soybean-oil derivative. *Polymers*, *9*(10). <https://doi.org/10.3390/polym9100541>

Mubarak, Y. A., & Abdulsamad, R. T. (2019). Effects of microcrystalline cellulose on the mechanical properties of low-density polyethylene composites. *Journal of Thermoplastic Composite Materials*, *32*(3), 297–311. <https://doi.org/10.1177/0892705717753056>

Mwaikambo, L. Y., & Bisanda, E. T. N. (1999). Performance of cotton-kapok fabric-polyester composites. *Polymer Testing*, *18*(3), 181–198. [https://doi.org/10.1016/S0142-9418\(98\)00017-8](https://doi.org/10.1016/S0142-9418(98)00017-8)

Nakagaito, A. N., & Yano, H. (2004). The effect of morphological changes from pulp fiber towards nano-scale fibrillated cellulose on the mechanical properties

of high-strength plant fiber based composites. *Applied Physics A: Materials Science and Processing*, 78(4), 547–552. <https://doi.org/10.1007/s00339-003-2453-5>

Narayana, V. L., & Rao, L. B. (2021). Materials Today : Proceedings A brief review on the effect of alkali treatment on mechanical properties of various natural fiber reinforced polymer composites. *Materials Today: Proceedings*, xxxx. <https://doi.org/10.1016/j.matpr.2020.12.117>

Parveen, S., Pichandi, S., Goswami, P., & Rana, S. (2020). Novel glass fibre reinforced hierarchical composites with improved interfacial, mechanical and dynamic mechanical properties developed using cellulose microcrystals. *Materials and Design*, 188, 108448. <https://doi.org/10.1016/j.matdes.2019.108448>

Pichandi, S., Rana, S., Parveen, S., & Fanguero, R. (2018). A green approach of improving interface and performance of plant fibre composites using microcrystalline cellulose. *Carbohydrate Polymers*, 197, 137–146. <https://doi.org/10.1016/j.carbpol.2018.05.074>

Pratama, R. D., Farid, M., & Nurdiansah, H. (2017). Pengaruh Proses Alkalisasi terhadap Morfologi Serat Tandan Kosong Kelapa Sawit untuk Bahan Penguat Komposit Absorpsi Suara. *Jurnal Teknik ITS*, 6(2), 250–254. <https://doi.org/10.12962/j23373539.v6i2.24274>

Reddy, K. O., Maheswari, C. U., Shukla, M., Song, J. I., & Rajulu, A. V. (2013). Composites : Part B Tensile and structural characterization of alkali treated Borassus fruit fine fibers. *Composites Part B*, 44(1), 433–438. <https://doi.org/10.1016/j.compositesb.2012.04.075>

Reddy, K. O., Reddy, K. R. N., & Zhang, J. (2013). *Effect of Alkali Treatment on the Properties of Century Fiber*. December 2014, 37–41. <https://doi.org/10.1080/15440478.2013.800812>

Rehman, M. M., Zeeshan, M., Shaker, K., & Nawab, Y. (2019). Effect of micro-

crystalline cellulose particles on mechanical properties of alkaline treated jute fabric reinforced green epoxy composite. *Cellulose*, 26(17), 9057–9069. <https://doi.org/10.1007/s10570-019-02679-4>

Reis, P. N. B., & Ferreira, J. A. M. (2007). *Flexural behaviour of hybrid laminated composites*. 38, 1612–1620. <https://doi.org/10.1016/j.compositesa.2006.11.010>

Sanjay, M. R., Arpitha, G. R., & Yogesha, B. (2015). Study on Mechanical Properties of Natural - Glass Fibre Reinforced Polymer Hybrid Composites : A Review. *Materials Today: Proceedings*, 2(4–5), 2959–2967. <https://doi.org/10.1016/j.matpr.2015.07.264>

Shomad, M. A., Yudhanto, F., & Anugrah, R. A. (2020). *Manufaktur dan Analisa Kekuatan Tarik Komposit Hybrid Serat Glass / Carbon untuk Aplikasi Pembuatan Blade Turbin Savonius*. 2(1), 47–51.

Silva, L., Parveen, S., Filho, A., Zottis, A., Rana, S., Vanderlei, R., & Fangueiro, R. (2018). A facile approach of developing micro crystalline cellulose reinforced cementitious composites with improved microstructure and mechanical performance. *Powder Technology*, 338, 654–663. <https://doi.org/10.1016/j.powtec.2018.07.076>

Srinivasan, V. S., Boopathy, S. R., Sangeetha, D., & Ramnath, B. V. (2014). Evaluation of Mechanical and Thermal Properties of Banana-Flax based Natural Fibre composite. *JOURNAL OF MATERIALS&DESIGN*. <https://doi.org/10.1016/j.matdes.2014.03.014>

Thwe, M. M., & Liao, K. (2003). Durability of bamboo-glass fiber reinforced polymer matrix hybrid composites. *Composites Science and Technology*, 63(3–4), 375–387. [https://doi.org/10.1016/S0266-3538\(02\)00225-7](https://doi.org/10.1016/S0266-3538(02)00225-7)

Velmurugan, R., & Manikandan, V. (2007). *Mechanical properties of palmyra / glass fiber hybrid composites*. 38, 2216–2226. <https://doi.org/10.1016/j.compositesa.2007.06.006>

- Yan, L., Chouw, N., & Jayaraman, K. (2014). Flax fibre and its composites - A review. *Composites Part B: Engineering*, 56, 296–317. <https://doi.org/10.1016/j.compositesb.2013.08.014>
- Yudhanto, F., Wisnujati, A., Lingkar, J., Tamantirto, B., Grafika, J., & Yogyakarta, N. (2016). *Pengaruh Perlakuan Alkali Terhadap Kekuatan Tarik dan Wettability Serat Alam Agave Sisalana Perrine. 2010.*
- Yudhanto, F., Wisnujati, A., Yudha, V., & Dantes, K. R. (2000). *Effect of Chemical Treatments on Morphological , Physical and Mechanical Properties of Bamboo / Glass Fibers Hybrid Laminated Composite. 0*, 1–4.
- Zhou, W., Apkarian, R., Wang, Z. L., & Joy, D. (2007). Fundamentals of scanning electron microscopy (SEM). *Scanning Microscopy for Nanotechnology: Techniques and Applications*, 1–40. https://doi.org/10.1007/978-0-387-39620-0_1