

DAFTAR KEPUSTAKAAN

- Abe, K., Iwamoto, S., & Yano, H. (2007). Obtaining cellulose nanofibers with a uniform width of 15 nm from wood. *Biomacromolecules*, 8(10), 3276–3278.
- Ahmad, A. R., Mujiyanto, A., & Waloyo, H. T. (2023). Pengaruh Susunan Serat pada Komposit Serat Hibrid Laminat Berpenguat Serat Kaca dan Serat Tandan Kosong Kelapa Sawit terhadap Kekuatan Tarik. *Journal Technology Urgency Breaktrugh in Engineering*, 2(1), 67–72.
- Albertsson, A. C., & Karlsson, S. (1994). Chemistry and biochemistry of polymer biodegradation. *Chemistry and Technology of Biodegradable Polymers.*, 7–17.
- Amiralian, N., Annamalai, P. K., Memmott, P., & Martin, D. J. (2015). Isolation of cellulose nanofibrils from *Triodia pungens* via different mechanical methods. *Cellulose*, 22, 2483–2498.
- Amorim, D. R. B., da Silva Guimarães, I., Fugikawa-Santos, L., Vega, M. L., & da Cunha, H. N. (2020). Effect of temperature on the electrical conductivity of polyaniline/cashew gum blends. *Materials Chemistry and Physics*, 253, 123383.
- Arina, H., & Faizah, N. (2023). Pengaruh Penambahan Serat Kulit Jagung Terhadap Sifat Mekanik Komposit Polipropilena (PP) dengan Penambahan Aluminium Oksida (Al₂O₃) dan Maleat Anhidrida (MAH) sebagai Coupling Agent. *Journal of Polymer Chemical Engineering and Technology*, 1(1), 41–48.
- Avella, M., Buzarovska, A., Errico, M. E., Gentile, G., & Grozdanov, A. (2009). Eco-challenges of bio-based polymer composites. *Materials*, 2(3), 911–925.
- Ayrlimis, N., Kaymakci, A., & Ozdemir, F. (2013). Physical, mechanical, and thermal properties of polypropylene composites filled with walnut shell flour. *Journal of Industrial and Engineering Chemistry*, 19(3), 908–914.
- Balakrishnan, P., Sreekala, M. S., Kunaver, M., Huskić, M., & Thomas, S. (2017). Morphology, transport characteristics and viscoelastic polymer chain confinement in nanocomposites based on thermoplastic potato starch and cellulose nanofibers from pineapple leaf. *Carbohydrate Polymers*, 169,

176– 188.

- Banagar, A. R., Venkateshappa, S. C., Kamath, S. S., & Bennehalli, B. (2018). Tensile and flexural properties of areca sheath fibers. *Materials Today: Proceedings*, 5(14), 28080–28088.
- Bavan, D. S., & Kumar, G. C. M. (2010). Potential use of natural fiber composite materials in India. *Journal of Reinforced Plastics and Composites*, 29(24), 3600–3613.
- Bello-Pérez, L. A., Agama-Acevedo, E., Sánchez-Hernández, L., & Paredes-López, O. (1999). Isolation and partial characterization of banana starches. *Journal of Agricultural and Food Chemistry*, 47(3), 854–857.
- Binoj, J. S., Raj, R. E., Sreenivasan, V. S., & Thusnavis, G. R. (2016). Morphological, physical, mechanical, chemical and thermal characterization of sustainable Indian areca fruit husk fibers (*Areca catechu* L.) as potential alternate for hazardous synthetic fibers. *Journal of Bionic Engineering*, 13(1), 156–165. 2023
- BPS, 2023, Produksi Tanaman Perkebunan Rakyat (TonTahun 2022, <https://sumbar.bps.go.id/id/statistics-table/2/NTEjMg==/produksi-tanaman-perkebunan-rakyat-.html> (diakses 8 Desember 2023)
- Bras, J., Hassan, M. L., Bruzesse, C., Hassan, E. A., El-Wakil, N. A., & Dufresne, A. (2010). Mechanical, barrier, and biodegradability properties of bagasse cellulose whiskers reinforced natural rubber nanocomposites. *Industrial Crops and Products*, 32(3), 627–633.
- Bueche, F. (1986). Introduction to physics for scientists and engineers. (*No Title*).
- Cervera, M. F., Heinämäki, J., Krogars, K., Jörgensen, A. C., Karjalainen, M., Colarte, A. I., & Yliruusi, J. (2004). Solid-state and mechanical properties of aqueous chitosan-amylose starch films plasticized with polyols. *Aaps Pharmscitech*, 5, 109–114.
- Chaker, A., Mutje, P., Vilaseca, F., & Boufi, S. (2013). Reinforcing potential of nanofibrillated cellulose from nonwoody plants. *Polymer Composites*, 34(12), 1999–2007.
- Chandra, J., George, N., & Narayanankutty, S. K. (2016). Isolation and characterization of cellulose nanofibrils from arecanut husk fibre.

Carbohydrate Polymers, 142, 158–166.

- Chang, P. R., Jian, R., Zheng, P., Yu, J., & Ma, X. (2010). Preparation and properties of glycerol plasticized-starch (GPS)/cellulose nanoparticle (CN) composites. *Carbohydrate Polymers*, 79(2), 301–305.
- Chen, C.-H., Ko, C.-J., Chuang, C.-H., Mao, C.-F., Liao, W.-T., & Hsieh, C.-D. (2017). Synthesis and characterization of polyaniline co-doped with nitric acid and dodecyl benzene sulfonic acid. *Journal of Polymer Research*, 24, 1–10.
- Chen, Q.-H., Li, X.-Y., Huang, C.-L., Liu, P., Zeng, Q.-Z., Yang, X.-Q., & Yuan, Y. (2021). Development and mechanical properties of soy protein isolate- chitin nanofibers complex gel: The role of high-pressure homogenization. *LWT*, 150, 112090.
- Cheng, D., Wen, Y., An, X., Zhu, X., & Ni, Y. (2016). TEMPO-oxidized cellulose nanofibers (TOCNs) as a green reinforcement for waterborne polyurethane coating (WPU) on wood. *Carbohydrate Polymers*, 151, 326–334.
- Cherian, B. M., Leão, A. L., de Souza, S. F., Costa, L. M. M., de Olyveira, G. M., Kottaisamy, M., Nagarajan, E. R., & Thomas, S. (2011). Cellulose nanocomposites with nanofibres isolated from pineapple leaf fibers for medical applications. *Carbohydrate Polymers*, 86(4), 1790–1798.
- Cho, M.-J., & Park, B.-D. (2011). Tensile and thermal properties of nanocellulose-reinforced poly (vinyl alcohol) nanocomposites. *Journal of Industrial and Engineering Chemistry*, 17(1), 36–40.
- Coniwanti, P., Laila, L., & Alfira, M. R. (2015). Pembuatan film plastik biodegradabel dari pati jagung dengan penambahan kitosan dan pemplastis gliserol. *Jurnal Teknik Kimia*, 20(4).
- Costa, C., Medronho, B., Eivazi, A., Svanedal, I., Lindman, B., Edlund, H., & Norgren, M. (2021). Lignin enhances cellulose dissolution in cold alkali. *Carbohydrate Polymers*, 274, 118661.
- da Silva, M. A., Bierhalz, A. C. K., & Kieckbusch, T. G. (2009). Alginate and pectin composite films crosslinked with Ca²⁺ ions: Effect of the plasticizer concentration. *Carbohydrate Polymers*, 77(4), 736–742.
- De Gonzalo, G., Colpa, D. I., Habib, M. H. M., & Fraaije, M. W. (2016). Bacterial

- enzymes involved in lignin degradation. *Journal of Biotechnology*, 236, 110–119.
- De Menezes, A. J., Siqueira, G., Curvelo, A. A. S., & Dufresne, A. (2009). Extrusion and characterization of functionalized cellulose whiskers reinforced polyethylene nanocomposites. *Polymer*, 50(19), 4552–4563.
- de Oliveira, L. R., Manzato, L., Mascarenhas, Y. P., & Sanches, E. A. (2017). The influence of heat treatment on the semi-crystalline structure of polyaniline Emeraldine-salt form. *Journal of Molecular Structure*, 1128, 707–717.
- Dias, A. B., Müller, C. M. O., Larotonda, F. D. S., & Laurindo, J. B. (2011). Mechanical and barrier properties of composite films based on rice flour and cellulose fibers. *LWT-Food Science and Technology*, 44(2), 535–542.
- EDITION, F. (n.d.). *Principles Of Composite Material Mechanics*.
- Effendi, D. B., Rosyid, N. H., Nandiyanto, A. B. D., & Mudzakir, A. (2015). Sintesis Nanoselulosa. *Jurnal Integrasi Proses*, 5(2).
- Fairus, S., Haryono Miranthi, A., & Aprianto, A. (2010). Pengaruh Konsentrasi HCL dan waktu hidrolisis terhadap perolehan glukosa yang dihasilkan dari pati biji nangka. *Jurnal Seminar Nasional Teknik Kimia*. ISSN, 1693–4393.
- Fan, M., & Fu, F. (2016). *Advanced high strength natural fibre composites in construction*. Woodhead Publishing.
- Firdaus, F., & Anwar, C. (2004). Potensi limbah padat-cair industri tepung tapioka sebagai bahan baku film plastik biodegradabel. *Jurnal Fakultas Hukum UII*, 1(2), 89017.
- Fitriani, F. (2018). Sintesis dan Uji Kualitas Plastik Biodegradable dari Pati Biji Nangka Menggunakan Variasi Penguat Logam Seng Oksida (ZnO) dan Plasticizer Gliserol. *Universitas Islam Negeri Alauddin Makassar*.
- Fitriani, F., Bahri, S., & Nurhaeni, N. (2013). Produksi Bioetanol Tongkol Jagung (Zea Mays) dari Hasil Proses Delignifikasi. *Natural Science: Journal of Science and Technology*, 2(3).
- Fortunati, E., Peltzer, M., Armentano, I., Torre, L., Jiménez, A., & Kenny, J. M. (2012). Effects of modified cellulose nanocrystals on the barrier and migration properties of PLA nano-biocomposites. *Carbohydrate Polymers*, 90(2), 948–956.

- Ghazanfari, M., Jahromi, I. R., Moallemi-Oreh, A., Ebadi-Dehaghani, H., & Akbarzadeh, M. (2016). Evaluation of mixing efficiency in elaborating of chitosan/cellulose nanocomposite via statistical analyses. *International Journal of Biological Macromolecules*, 93, 703–711.
- Grinshpan, D., Savitskaya, T., Tsygankova, N., Makarevich, S., Kimlenka, I., & Ivashkevich, O. (2017). Good real world example of wood-based sustainable chemistry. *Sustainable Chemistry and Pharmacy*, 5, 1–13.
- Gupta, H., Kumar, H., Kumar, M., Gehlaut, A. K., Gaur, A., Sachan, S., & Park, J.-W. (2020). Synthesis of biodegradable films obtained from rice husk and sugarcane bagasse to be used as food packaging material. *Environmental Engineering Research*, 25(4), 506–514.
- Hamidah, H., Mahrudin, M., & Irianti, R. (2022). Etnobotani Areca catechu L.(Pinang) Suku Dayak Bakumpai Bantuil Kabupaten Barito Kuala Berbentuk Buku Ilmiah Populer. *JUPEIS: Jurnal Pendidikan Dan Ilmu Sosial*, 1(4), 51– 66.
- Han, J. H. (2005). Gennadios A.(2005). Edible films and coatings: a review. *Innovations in Food Packaging*, 240–262.
- Hancox, N. L. (1996). Engineering mechanics of composite materials. *Materials and Design*, 2(17), 114.
- Harini, K., & Mohan, C. C. (2020). Isolation and characterization of micro and nanocrystalline cellulose fibers from the walnut shell, corncob and sugarcane bagasse. *International Journal of Biological Macromolecules*, 163, 1375– 1383.
- Hartono, M. R., & Subawi, H. (2016). *Pengenalan teknik komposit*. Deepublish.
- Haryono, M. B., & Utami, W. B. (2020). Mekanisme/Model Penguatan Komposit Bermatrik Logam dengan Berpenguat Partikel. *Mechanical:Jurnal Ilmiah Teknik Mesin*, 11(1), 1–5.
- Hidayah, B. I. (2015). Pembuatan Biodegradable Film dari Pati Biji Nangka (*Artocarpus hetrophyllus*) dengan Penambahan Kitosan. *Seminar Nasional Teknik Kimia" Kejuangan"*, 1–8.
- Hidayat, R., Mulyadi, S., & Handani, S. (2015). Pengaruh Penambahan Pati Talas Terhadap sifat Mekanik dan Sifat Biodegradabel Plastik Campuran

- Polipropilena dan Gula Jagung. *Jurnal Fisika Unand*, 4(3).
- Hidayat, S., Leonardo, C., Kartawidjaja, M., Alamsyah, W., & Rahayu, I. (2016). Sintesis polianilin dan karakteristik kinerjanya sebagai anoda pada sistem baterai asam sulfat. *Jurnal Material Dan Energi Indonesia*, 6(1), 20–21.
- Holmes, J. H. (1978). *Medical physics*. Cameron JR, and Skofronick JG, John Wiley and Sons, Inc., New York, 1978. \$21.95. Wiley Online Library.
- Hu ChuanShuang, H. C., Zhao Yu, Z. Y., Li KeCheng, L. K., Zhu, J. Y., & Gleisner, R. (2015). *Optimizing cellulose fibrillation for the production of cellulose nanofibrils by a disk grinder*.
- Huang, C., Zhang, Q. M., DeBotton, G., & Bhattacharya, K. (2004). All-organic dielectric-percolative three-component composite materials with high electromechanical response. *Applied Physics Letters*, 84(22), 4391–4393.
- Hubbe, M. A., Rojas, O. J., Lucia, L. A., & Sain, M. (2008). Cellulosic nanocomposites: a review. *BioResources*, 3(3), 929–980.
- Hyer, M. W., & White, S. R. (2009). *Stress analysis of fiber-reinforced composite materials*. DEStech Publications, Inc.
- Ioelovich, M. (2012). Optimal conditions for isolation of nanocrystalline cellulose particles. *Nanoscience and Nanotechnology*, 2(2), 9–13.
- Irzaman, M. A., Syafutra, H., & Ismangil, A. (2010). Uji konduktivitas listrik dan dielektrik film tipis lithium tantalate (LiTaO₃) yang didadah niobium pentaoksida (Nb₂O₅) menggunakan metode chemical solution deposition. *Prosiding Seminar Nasional Fisika, Bandung*, 175–183.
- Iwamoto, S., Nakagaito, A. N., & Yano, H. (2007). Nano-fibrillation of pulp fibers for the processing of transparent nanocomposites. *Applied Physics A*, 89, 461–466.
- Kamagi, J. (2017). Sifat Komposit Berpenguat Serat Buah Pinang dengan Variasi Fraksi Volume 3%, 5%, 7%, dan 9%. *Skripsi S1, Universitas Sanata Darma, Yogyakarta*.
- Karpinos, D. M. (1985). *Composite Materials. Handbook*. Naukova Dumka, Kiev.
- Kaw, A. K. (2005). *Mechanics of composite materials*. CRC press.
- Kengkhetkit, N., & Amornsakchai, T. (2012). Utilisation of pineapple leaf waste for plastic reinforcement: 1. A novel extraction method for short pineapple leaf fiber. *Industrial Crops and Products*, 40, 55–61.

- Khalid, M. Y., Al Rashid, A., & Sheikh, M. F. (2021). Effect of anodizing process on inter laminar shear strength of GLARE composite through T-peel test: experimental and numerical approach. *Experimental Techniques*, 45(2), 227–235.
- Khantwal, R., Gupta, G., & Negi, R. S. (2016). Walnut shell reinforced composite: a review. *Int. J. Sci. Eng. Res*, 7(5), 179–189.
- Khawas, P., & Deka, S. C. (2016). Isolation and characterization of cellulose nanofibers from culinary banana peel using high-intensity ultrasonication combined with chemical treatment. *Carbohydrate Polymers*, 137, 608–616.
- Klein, W. (2011). Rieter İplikçilik El Kitabı. *Çev. Kırtay, E. Rieter Machine Works Ltd.*
- Lee, K.-Y., Aitomäki, Y., Berglund, L. A., Oksman, K., & Bismarck, A. (2014). On the use of nanocellulose as reinforcement in polymer matrix composites. *Composites Science and Technology*, 105, 15–27.
- Liang, Y. L., & Pearson, R. A. (2009). Toughening mechanisms in epoxy–silica nanocomposites (ESNs). *Polymer*, 50(20), 4895–4905.
- Lin, O. H., Ishak, Z. A. M., & Akil, H. M. (2009). Preparation and properties of nanosilica-filled polypropylene composites with PP-methyl POSS as compatibiliser. *Materials & Design*, 30(3), 748–751.
- Lumba, R., & Yusniar, M. (2020). Analisis Komposisi Kimia Tepung Pisang “Mulu Bebe”(Musa acuminata) Indigenous Halmahera Utara Yang Dimodifikasi Sebagai Sumber Pangan Prebiotik. *Scientific Journal of Food Technology*, 7(1), 1–9.
- Ma, X., Yu, J., & Kennedy, J. F. (2005). Studies on the properties of natural fibers-reinforced thermoplastic starch composites. *Carbohydrate Polymers*, 62(1), 19–24.
- Mahardika, M., Abral, H., Kasim, A., Arief, S., & Asrofi, M. (2018). Production of nanocellulose from pineapple leaf fibers via high-shear homogenization and ultrasonication. *Fibers*, 6(2), 28.
- Morin, F. O., Takamura, Y., & Tamiya, E. (2005). Investigating neuronal activity with planar microelectrode arrays: achievements and new perspectives. *Journal of Bioscience and Bioengineering*, 100(2), 131–143.
- Motru, S., Adithyakrishna, V. H., Bharath, J., & Guruprasad, R. (2020).

- Development and evaluation of mechanical properties of biodegradable PLA/flax fiber green composite laminates. *Materials Today: Proceedings*, 24, 641–649.
- Muhajir, M., Mizar, M. A., & Sudjimat, D. A. (2017). Analisis kekuatan tarik bahan komposit matriks resin berpenguat serat alam dengan berbagai varian tata letak. *Jurnal Teknik Mesin*, 24(2).
- Mulyawan, A. S., Sana, A. W., & Kaelani, Z. (2015). Identifikasi sifat fisik dan sifat termal serat-serat selulosa untuk pembuatan komposit. *Arena Tekstil*, 30(2), 53974.
- Nilandita, W., & Hakim, A. (2023). Karakteristik Fisik dan Mekanik Bioplastik Berbahan Dasar Pati Limbah Kulit Pisang Raja Bulu (*Musa paradisiaca L. var sapientum*) dengan Variasi Jenis Plasticizer dan Kitosan. *Dampak*, 20(1), 26–32.
- Ningsih, E. S., Mulyadi, S., & Yetri, Y. (2012). Modifikasi polipropilena sebagai polimer komposit biodegradabel dengan bahan pengisi pati pisang dan sorbitol sebagai platisizer. *Jurnal Fisika Unand*, 1(1).
- Nurdiansyah, H., Sumarji, S., Syuhri, A., Laksana, D. D., & Abduh, M. (2017). Pengaruh Ukuran Partikel Limbah Kopi Terhadap Karakterisasi Sifat Mekanik pada Panel Komposit. *ROTOR*, 1–4.
- Nurin, F. S. (2023). *Pengaruh Variasi Kelembaban Terhadap Nilai Sifat Listrik dari Film Komposit Polyvinyl Alcohol/Zinc Oxide/Polypyrrole*. Universitas Andalas.
- Padmaraj, N. H., Kini, M. V., Pai, B. R., & Shenoy, B. S. (2013). Development of short areca fiber reinforced biodegradable composite material. *Procedia Engineering*, 64, 966–972.
- Peill, N. J., & Hoffmann, M. R. (1995). Development and optimization of a TiO₂-coated fiber-optic cable reactor: photocatalytic degradation of 4-chlorophenol. *Environmental Science & Technology*, 29(12), 2974–2981.
- Polnaya, F. J., Ega, L., & Wattimena, D. (2016). Karakteristik edible film pati sagu alami dan pati sagu fosfat dengan penambahan gliserol. *Agritech*, 36(3), 247–252.
- Putri, E., & Gea, S. (2018). Isolasi dan Karakterisasi Nanokistral Selulosa dari Tandan Sawit (*Elaeis Guineensis* Jack). *Elkawnie: Journal of Islamic*

Science and Technology, 4(1), 13–22.

- Ramesh, A., Srinivasulu, N. V., & Rani, M. I. (2019). Development and evaluation of water absorption, compression and impact properties of okra Nanofibrillated cellulose reinforcement in epoxy resin composites. *Materials Today: Proceedings*, 19, 748–754.
- Rattaz, A., Mishra, S. P., Chabot, B., & Daneault, C. (2011). Cellulose nanofibres by sonocatalysed-TEMPO-oxidation. *Cellulose*, 18, 585–593.
- Reddy, N., & Yang, Y. (2009). Properties and potential applications of natural cellulose fibers from the bark of cotton stalks. *Bioresource Technology*, 100(14), 3563–3569.
- Resnick, H. (1985). *Fisika Jilid 1 Edisi Ketiga*. Jakarta: Erlangga.
- RHAMADAN, A. S. (2015). Pengaruh Panjang Serat Terhadap Laju Keausan Dari Material Komposit Tandan Kosong Kelapa Sawit Dengan Pengikat Resin Polyester Dan Filler Kalsium Karbonat. UPT. Perpustakaan Unand.
- Rodiawan, R., Suhdi, S., & Rosa, F. (2017). Analisa sifat-sifat serat alam sebagai penguat komposit ditinjau dari kekuatan mekanik. *Turbo: Jurnal Program Studi Teknik Mesin*, 5(1).
- Sadeghifar, H., Filpponen, I., Clarke, S. P., Brougham, D. F., & Argyropoulos, D. S. (2011). Production of cellulose nanocrystals using hydrobromic acid and click reactions on their surface. *Journal of Materials Science*, 46, 7344–7355.
- Sato, M., Ishii, H., Sueda, Y., Watanabe, K., & Nagao, D. (2021). A reinforced, high- κ ternary polymer nanocomposite dielectrics of PVDF, barium titanate nanoparticles, and TEMPO-oxidized cellulose nanofibers. *Composites Part C: Open Access*, 5, 100163.
- Schwartz, M. M. (1984). *Composite Material Handbook* McGraw-Hill Book Company. New York USA.
- Shalumon, K. T., Anulekha, K. H., Girish, C. M., Prasanth, R., Nair, S. V., & Jayakumar, R. (2010). Single step electrospinning of chitosan/poly (caprolactone) nanofibers using formic acid/acetone solvent mixture. *Carbohydrate Polymers*, 80(2), 413–419.
- Shimoda, K., & Hinoki, T. (2021). Effects of fiber volume fraction on the densification and mechanical properties of unidirectional SiCf/SiC-matrix

- composites. *Journal of the European Ceramic Society*, 41(2), 1163–1170.
- Smith, B. C. (2011). *Fundamentals of Fourier transform infrared spectroscopy*. CRC press.
- Sosiati, H., Nahyudin, A., Wijayanti, D. A., & Triyana, K. (2018). Effect of alkali treatment and MAPP addition on tensile strength of sisal/polypropylene composites. *Journal of Advanced Manufacturing Technology (JAMT)*, 12(2), 65–78.
- Sugeri, A. (2018). *Komparasi sifat mekanis polipropilen dari bahan polipropilen murni dengan variasi baur ulang 1 kali dan 2 kali*. Thesis. Yogyakarta: Program Study Teknik Mesin, Fakultas Teknik, Universitas
- Sultana, T., Sultana, S., Nur, H. P., & Khan, M. W. (2020). Studies on mechanical, thermal and morphological properties of betel nut husk nano cellulose reinforced biodegradable polymer composites. *Journal of Composites Science*, 4(3), 83.
- Suprpti, M. L. (2004). *Keripik, Manisan Kering, dan Sirup Nangka*.
- Susmita, R., & Muttaqin, A. (2013). Analisis Sifat Listrik Komposit Polianilin (PANi) Terhadap Penambahan Bottom Ash Sebagai Elektroda Superkapasitor. *Jurnal Fisika Unand*, 2(2).
- Tamiogy, W. R., Kardisa, A., Hisbullah, H., & Aprilia, S. (2019). pemanfaatan selulosa dari limbah kulit buah pinang sebagai bahan baku pembuatan bioplastik. *Jurnal Rekayasa Kimia & Lingkungan*, 14(1), 63–71.
- Teixeira, E. de M., Pasquini, D., Curvelo, A. A. S., Corradini, E., Belgacem, M. N., & Dufresne, A. (2009). Cassava bagasse cellulose nanofibrils reinforced thermoplastic cassava starch. *Carbohydrate Polymers*, 78(3), 422–431.
- Tjahjanti, P. H. (2018). Buku Ajar Teori Dan Aplikasi Material Komposit Dan Polimer. *Umsida Press*, 1–24.
- Venugopal, B., & Gopalakrishnan, J. (n.d.). *Isolation Of Cellulose Nanofibres From Areca Spathe And Its Characterization*.
- Waliszewski, K. N., Aparicio, M. A., Bello, L. A., & Monroy, J. A. (2003). Changes of banana starch by chemical and physical modification. *Carbohydrate Polymers*, 52(3), 237–242.
- Wirajaya, A. (2007). Karakteristik Komposit Sandwich Serat Alami Sebagai

Absorber Suara. *Tugas Akhir, ITB, Bandung, Indonesia.*

Wirawan, S. K., Prasetya, A., & Ernie, E. (2012). Pengaruh plasticizer pada karakteristik edible film dari pektin. *Reaktor, 14*(1), 61–67.

YUDHA, V. (2018). *Fabrikasi Film Nanokomposit berbasis PVA dan Nanoselulosa dari Serat Pelepah Salak*. Universitas Gadjah Mada.

Yusriah Lazim, Y. L., Sapuan Mohd Salit, S. M. S., Zainudin, E. S., Mariatti Mustapha, M. M., & Mohammad Jawaid, M. J. (2014). *Effect of alkali treatment on the physical, mechanical, and morphological properties of waste betel nut (Areca catechu) husk fibre.*

Zhang, L., Zhong, J., & Ren, X. (2017). Natural fiber-based biocomposites. *Green Biocomposites: Manufacturing and Properties*, 31–70.

Zhou, Y. M., Fu, S. Y., Zheng, L. M., & Zhan, H. Y. (2012). Effect of nanocellulose isolation techniques on the formation of reinforced poly (vinyl alcohol) nanocomposite films. *Express Polymer Letters, 6*(10).

