DAFTAR PUSTAKA

Abdolmohammadi, S., Siyamak, S., Ibrahim, N. A., Yunus, W. M. Z. W., Rahman, M. Z. A., Azizi, S., & Fatehi, A. (2012). Enhancement of mechanical and thermal properties of polycaprolactone/chitosan blend by calcium carbonate nanoparticles. *International journal of molecular sciences*, *13*(4), 4508-4522.

Abdullah, H. H., Asa'ari, A. Z. M., Zawawi, N. I. M., Abdullah, L. C., & Zakaria, S. (2013). Effects of physical treatments on the hydrophobicity of kenaf whole stem paper surface using stearic acid. *BioResources*, *8*(3), 4088-4100.

Abdullah, M., Khairurrijal, K., & Khairurrijal, K. (2009). Karakterisasi Nanomaterial. *Jurnal Nanosains & Nanoteknologi*, *2*(1), 1-9.

Abe, K., & Yano, H. (2009). Comparison of the characteristics of cellulose microfibril aggregates of wood, rice straw and potato tuber. *Cellulose*, *16*(6), 1017.

Abe, K., Iwamoto, S., & Yano, H. (2007). Obtaining cellulose nanofibers with a uniform width of 15 nm from wood. *Biomacromolecules*, *8*(10), 3276-3278.

Abraham, E., Deepa, B., Pothan, L. A., Jacob, M., Thomas, S., Cvelbar, U., & Anandjiwala, R. (2011). Extraction of nanocellulose fibrils from lignocellulosic fibres: A novel approach. *Carbohydrate Polymers*, *86*(4), 1468-1475.

Abral, H., Kadriadi, D., Rodianus, A., Mastariyanto, P., Arief, S., Sapuan, S. M., & Ishak, M. R. (2014). Mechanical properties of water hyacinth fibers–polyester composites before and after immersion in water. *Materials & Design*, *58*, 125-129.

Abral, H., Andriyanto, H., Samera, R., Sapuan, S. M., & Ishak, M. R. (2012). Mechanical properties of screw pine (pandanus odoratissimus) fibers—unsaturated polyester composites. *Polymer-Plastics Technology and Engineering*, *51*(5), 500-506.

Abral, H., Putra, G. J., Asrofi, M., Park, J. W., & Kim, H. J. (2018). Effect of vibration duration of high ultrasound applied to bio-composite while gelatinized on its properties. *Ultrasonics sonochemistry*, *40*, 697-702.

Abral, H., Putra, H., Sapuan, S. M., & Ishak, M. R. (2013).Effect of alkalization on mechanical properties of water hyacinth fibers-unsaturated polyester composites.Polymer-Plastics Technology and Engineering, 52(5), 446-451.

Akil, H., Omar, M. F., Mazuki, A. A. M., Safiee, S. Z. A. M., Ishak, Z. M., & Bakar, A. A. (2011). Kenaf fiber reinforced composites: A review. *Materials & Design*, *32*(8-9), 4107-4121.

Alemdar, A., & Sain, M. (2008).Isolation and characterization of nanofibers from agricultural residues–Wheat straw and soy hulls.*Bioresource technology*, *99*(6), 1664-1671.

Alloin, F., D'Aprea, A., Dufresne, A., El Kissi, N., & Bossard, F. (2011). Poly (oxyethylene) and ramie whiskers based nanocomposites: influence of processing: extrusion and casting/evaporation. *Cellulose*, *18*(4), 957-973.

American Society for Testing and Materials—ASTM, (2005) Testmethod for tensile properties of plastics. ASTM D-638, in:Annual Book of ASTM Standards, ASTM, Philadelphia,vol. 08.01,.

Angelini, L. G., Lazzeri, A., Levita, G., Fontanelli, D., & Bozzi, C. (2000). Ramie (Boehmeria nivea (L.) Gaud.) and Spanish Broom (Spartium junceum L.) fibres for composite materials: agronomical aspects, morphology and mechanical properties. *Industrial Crops and Products*, *11*(2-3), 145-161.

Angellier, H., Molina-Boisseau, S., Dole, P., & Dufresne, A. (2006). Thermoplastic starch− waxy maize starch nanocrystals nanocomposites. *Biomacromolecules*, *7*(2), 531-539.

Angles, M. N., & Dufresne, A. (2000). Plasticized starch/tunicin whiskers nanocomposites. 1. Structural analysis. *Macromolecules*, *33*(22), 8344-8353.

Anita, Z., Akbar, F., Harap, H. (2013). Pengaruh penambahan gliserol terhadap sifat mekanik film plastik biodegradasi dari pati kulit singkong, Jurnal Teknik Kimia USU, Vol. 2, No. 2

Anonymous. (2005).*Highlights in Bioplastics*, Berlin: IBAW Publication.

Anonymous. (2018), (https://www.cnnindonesia.com/gaya-hidup/20160222182308-277-12685/indonesia-penyumbang-sampah-plastik-terbesar-ke-dua-dunia(di akses 19 juni 2018)

Ashori, A., Harun, J., Raverty, W. D., & Yusoff, M. N. M. (2006). Chemical and morphological characteristics of Malaysian cultivated kenaf (Hibiscus cannabinus) fiber. *Polymer-Plastics Technology and Engineering*, *45*(1), 131-134.

Asrofi, M., Abral, H., Putra, Y. K., Sapuan, S. M., & Kim, H. J. (2018). Effect of duration of sonication during gelatinization on properties of tapioca starch water hyacinth fiber biocomposite. *International journal of biological macromolecules*, *108*, 167-176.

ASTM, D. 1104-56. (1971).“. Standard test method for holocellulose in wood,” American Society for Testing and Materials.

Avérous, L. (2008). Polylactic acid: synthesis, properties and applications. In *Monomers, polymers and composites from renewable resources* (pp. 433-450).

Azeredo, H. M., Miranda, K. W., Rosa, M. F., Nascimento, D. M., & de Moura, M. R. (2012). Edible films from alginate-acerola puree reinforced with cellulose whiskers. *LWT-Food Science and Technology*, *46*(1), 294-297.

Badan Pusat Statistik. (2011). Indonesia Dalam Angka 2010. Jakarta.

Baek, C. S., Cho, K. H., & Ahn, J. W. (2014). Effect of Grain Size and Replacement Ratio on the Plastic Properties of Precipitated Calcium

Carbonate Using Limestone as Raw Material. *Journal of the Korean Ceramic Society*, *51*(2), 127-131.

Beck-Candanedo, S., Roman, M., & Gray, D. G. (2005). Effect of reaction conditions on the properties and behavior of wood cellulose nanocrystal suspensions. *Biomacromolecules*, *6*(2), 1048-1054.

Belibi, P. C., Daou, T. J., Ndjaka, J. M. B., Michelin, L., Brendlé, J., Nsom, B., & Durand, B. (2013). Tensile and water barrier properties of cassava starch composite films reinforced by synthetic zeolite and beidellite. *Journal of Food Engineering*, *115*(3), 339-346.

Bevitori, A. B., Silva, I. L. A. D., Carreiro, R. S., Margem, F. M., & Monteiro, S. N. (2012). Elastic modulus variation with diameter for ramie fibers. *Characterization of Minerals, Metals, and Materials*, 395-402.

Bodirlau, R., Teaca, C. A., & Spiridon, I. (2013). Influence of natural fillers on the properties of starch-based biocomposite films. *Composites Part B: Engineering*, *44*(1), 575-583.

Bonnardeaux, J. O. H. N. (2006). Glycerin Overview. *Department of Agriculture and Food: Western Australia*.

Budi, U.S., Hartati, S., Purwati, D.R., (2005), Biologi Tanaman Rami, Monograf Balittas No.8, Balai Penelitian Tanaman Tembakau Dan Serat, ISSN : 0853-9308

Cadena, C. E. M.,. J. M., R. Vélez, J. F. Santa, and V. Otálvaro G. (2017). Natural fibers from plantain pseudostem (Musa Paradisiaca) for use in fiber-reinforced composites. Journal of Natural Fibers 14 (5):1–13. doi:10.1080/15440478.2016.1266295.

Camarena, F., & Martinez-Mora, J. A. (2006). Potential of ultrasound to evaluate turgidity and hydration of the orange peel. *Journal of food engineering*, *75*(4), 503-507.

Cané, M. (2005). *En viaje* (Vol. 29). Fundacion Biblioteca Ayacuch.

Cao, X., Chen, Y., Chang, P. R., Muir, A. D., & Falk, G. (2008). Starch-based nanocomposites reinforced with flax cellulose nanocrystals. *Express Polym Lett*, *2*(7), 502-510.

Cao, X., Ding, B., Yu, J., & Al-Deyab, S. S. (2012). Cellulose nanowhiskers extracted from TEMPO-oxidized jute fibers. *Carbohydrate polymers*, *90*(2), 1075-1080.

Carvalho, A. J. (2008). Starch: major sources, properties and applications as thermoplastic materials. In *Monomers, polymers and composites from renewable resources* (pp. 321-342).

Chan, H. C., Chia, C. H., Zakaria, S., Ahmad, I., & Dufresne, A. (2012). Production and characterisation of cellulose and nano-crystalline cellulose from kenaf core wood. *BioResources*, *8*(1), 785-794.

Chanda, M., & Roy, S. K. (2008). *Industrial polymers, specialty polymers, and their applications*. CRC press.

Chatterjee, A., & Mishra, S. 2013. Rheological, thermal and mechanical properties of nano-calcium carbonate (CaCO 3)/poly (methyl methacrylate)(PMMA) core-shell nanoparticles reinforced polypropylene (PP) composites. *Macromolecular Research*, *21*(5), 474-483.

Chen, W. S., H. P. Yu., P. Chen, N. X. Jiang, J. H. Shen, Y. X. Liu, and Q. Li. (2011b). Preparation and morphologicalcharacteristics of cellulose micro/nano fibrils. Materials Science Forum 675-677:255–58. doi:10.4028/www.scientific.net/MSF.675-677.

Chen, W., H. Yu, Y. Liu, P. Chen, M. Zhang, and Y. Hai. (2011a). Individualization of cellulose nanofibers from wood using high-intensity ultrasonication combined with chemical pretreatments. Carbohydrate Polymers 83 (4):1804–11. doi:10.1016/j.carbpol.2010.10.040.

Cherian, B. M., Leão, A. L., de Souza, S. F., Thomas, S., Pothan, L. A., & Kottaisamy, M. (2010). Isolation of nanocellulose from pineapple leaf fibres by steam explosion. *Carbohydrate Polymers*, *81*(3), 720-725.

Chirayil, C. J., J. Joy, L. Mathew, M. Mozetic, J. Koetz, and S. Thomas. (2014). Isolation and characterization ofcellulose nanofibrils from helicteres isora plant. Industrial Crops and Products 59:27–34. doi:10.1016/j.indcrop.2014.04.020.

Choi, H. Y., & Lee, J. S. (2012). Effects of surface treatment of ramie fibers in a ramie/poly (lactic acid) composite. *Fibers and Polymers*, *13*(2), 217-223.

Curvelo, A. A. S., De Carvalho, A. J. F., & Agnelli, J. A. M. (2001). Thermoplastic starch–cellulosic fibers composites: preliminary results. *Carbohydrate Polymers*, *45*(2), 183-188.

Czigány, T., Romhány, G., & Kovács, J. G. (2007). Starch for injection moulding purposes. *Engineering Biopolymers: Homopolymers, Blends, and Composites*.

Damanik, N., H. C. Ong, W. T. Chong, and A. S. Silitonga. (2017). Biodiesel production from Calophyllum inophyllum−palm mixed oil. Particle A: Recovery, Utilization, and Environmental Effects 39 (12):1283–89.

de Graaf, R. A., Karman, A. P., & Janssen, L. P. (2003). Material properties and glass transition temperatures of different thermoplastic starches after extrusion processing. *Starch‐Stärke*, *55*(2), 80-86.

Dhakal, H. N., Zhang, Z. Y., & Richardson, M. O. W. (2007). Effect of water absorption on the mechanical properties of hemp fibre reinforced unsaturated polyester composites. *Composites science and technology*, *67*(7-8), 1674-1683.

Dziedzic, S. Z., & Kearsley, M. W. (1995). The technology of starch production. In *Handbook of starch hydrolysis products and their derivatives* (pp. 1-25). Springer, Boston, MA.

Edhirej, A., Sapuan, S. M., Jawaid, M., & Zahari, N. I. (2017). Preparation and characterization of cassava bagasse reinforced thermoplastic cassava starch. *Fibers and Polymers*, *18*(1), 162-171.

Edwards, H. G. M., Farwell, D. W., & Webster, D. (1997). FT-Raman microscopy of untreated natural plant fibres. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 53(13), 2383–2392.

Eriksson, K. E. L., Blanchette, R. A., & Ander, P. (1990). Morphological aspects of wood degradation by fungi and bacteria. In *Microbial and enzymatic degradation of wood and wood components* (pp. 1-87). Springer, Berlin, Heidelberg.

Fahma, F., Hori, N., Iwamoto, S., Iwata, T., & Takemura, A. (2016). Cellulose nanowhiskers from sugar palm fibers. *Emirates Journal of Food and Agriculture*, 566-571.

Fahma, F., Hori, N., Iwata, T., & Takemura, A. (2017). PVA nanocomposites reinforced with cellulose nanofibers from oil palm empty fruit bunches (OPEFBs). *Emirates Journal of Food and Agriculture*, 323-329.

Fahma, F., Iwamoto, S., Hori, N., Iwata, T., & Takemura, A. (2011). Effect of pre-acid-hydrolysis treatment on morphology and properties of cellulose nanowhiskers from coconut husk. *Cellulose*, *18*(2), 443-450.

Fang, J. M., Fowler, P. A., Tomkinson, J., & Hill, C. A. S. (2002). The preparation and characterisation of a series of chemically modified potato starches. *Carbohydrate polymers*,*47*(3), 245-252.FAO Statisticaldatabase. 2009.

Ferdiyan, F. N. (2012). Effect Of Rattan Bark Nanofiber Microstructure With High Energy Milling Method To Quality Mechanical Biocomposites. *Jurnal Biofisika*, *8*(1).Gañán, P., Zuluaga, R., Restrepo, A., Labidi, J., & Mondragon, I. 2008. Plantain fibre bundles isolated from Colombian agro-industrial residues. *Bioresource Technology*, *99*(3), 486-491.

George, C. S.,. J. C.,. N., and S. K. Narayanankutty. (2016). Isolation and characterization of cellulose nanofibrils fromareca nut husk fibre. Carbohydrate Polymers 142:158–66. doi:10.1016/j.carbpol.2016.01.015.

Glenn, G. M., Klamczynski, A. P., Ludvik, C., Shey, J., Imam, S. H., Chiou, B. S., ... and Offeman, R. (2006). Permeability of starch gel matrices and select films to solvent vapors. *Journal of agricultural and food chemistry*, *54*(9), 3297-3304.

Gopinath, R., K. Ganesan, S. S. Saravanakumar, and R. Poopathi. (2016). Characterization of new cellulosic fiber fromthe stem of sida rhombifolia. International Journal of Polymer Analysis and Characterization 21 (2):123–29.doi:10.1080/1023666X.2016.1117712.

Günzler, H., and Gremlich, H. U. 2002. IR spectroscopy. An introduction.

Gurunathan, T., Mohanty, S., & Nayak, S. K. (2015). A review of the recent developments in biocomposites based on natural fibres and their application perspectives. *Composites Part A: Applied Science and Manufacturing*, *77*, 1-25.

Habibi, Y., Goffin, A. L., Schiltz, N., Duquesne, E., Dubois, P., & Dufresne, A. (2008). Bionanocomposites based on poly (ε-caprolactone)-grafted cellulose nanocrystals by ring-opening polymerization. *Journal of Materials Chemistry*, *18*(41), 5002-5010.

Han, J., C. Zhou, A. D. French, G. Han, and Q. Wu. (2013). Characterization of cellulose ii nanoparticles regeneratedfrom 1-butyl-3-methylimidazolium chloride. Carbohydrate Polymers 94 (2):773–81. doi:10.1016/j.carbpol.2013.02.003.

Han, L., Wang, Y., Liu, L., Xiang, F. M., Huang, T., & Zhou, Z. W. (2010). Crystallization, mechanical and thermal properties of sorbitol derivatives nucleated polypropylene/calcium carbonate composites. *Chinese Journal of Polymer Science*, *28*(4), 457-466.

Haque, M.M., Hasan, M., Islam, M.S., Ali, M.E., (2009). Physico-mechanical properties of chemically treated palm and coir fiber reinforced polypropylene composites. Bioresour. Technol. 100, 4903–4906

Hasanah, Y. R. (2017). Pengaruh Penambahan Filler Kalsium Karbonat (CaCO 3) Dan Clay Terhadap Sifat Mekanik Dan Biodegradable Plastik Dari Limbah Tapioka , Universitas Muhammadiyah Purwokerto).

Helbert, W., Cavaille, J. Y., & Dufresne, A. (1996). Thermoplastic nanocomposites filled with wheat straw cellulose whiskers. Part I: processing and mechanical behavior. *Polymer composites*,*17*(4), 604-611.

Herlina Sari, N., Wardana, I. N. G., Irawan, Y. S., & Siswanto, E. (2018). Characterization of the chemical, physical, and mechanical properties of NaOH-treated natural cellulosic fibers from corn husks. *Journal of Natural Fibers*, *15*(4), 545-558.

Hidayati, S., Zuidar, A. S., & Ardiani, A. (2015). Aplikasi Sorbitol Pada Produksi Biodegradable Film Dari Nata De Cassava. *Reaktor*, *15*(3), 195-203.

Himmelsbach, D. S., Khalili, S., & Akin, D. E. (2002). The use of FT-IR microspectroscopic mapping to study the effects of enzymatic retting of flax (Linum usitatissimum L) stems. *Journal of the Science of Food and Agriculture*, *82*(7), 685-696.

Hossain S. I., M. Hasan, Md. N. Hasan, and A. Hassan, (2013), Effect of Chemical Treatment on Physical, Mechanical and Thermal Properties of Ladies Finger Natural Fiber, Hindawi Publishing CorporationAdvances in Materials Science and Engineering Volume 2013, Article ID 824274, 6 pages http://dx.doi.org/10.1155/2013/824274

http://www.bps.go.id/index.php/publikasi/369, diakses 14 Juli 2018 http://www.fao.org/ag/agp/agpc/gcds/en/research.html, diakses 22 Mei 2017

Huda, T. (2007). Karakteristik Fisikokimiawi Film Plastik Biodegradable dari Komposit Pati Singkong-Ubi Jalar. *Jurnal Logika*, *4*(1).

Huneault, M. A., & Li, H. (2007). Morphology and properties of compatibilized polylactide/thermoplastic starch blends. *Polymer*,*48*(1), 270-280.

Ishiaku, U. S., Pang, K. W., Lee, W. S., & Ishak, Z. M. (2002). Mechanical properties and enzymic degradation of thermoplastic and granular sago starch filled poly (ε-caprolactone). *European Polymer Journal*, *38*(2), 393-401.

Jamarun, N., Juita, R., & Rahayuningsih, J. (2015). Synthesis and Characterizations Precipitated Calsium Carbonate from Shell Crust (Anadara granosa). *Research Journal Of Pharmaceutical Biological And Chemical Sciences*, *6*(5), 136-140.

John, M. J., & Thomas, S. (2008). Biofibres and biocomposites.*Carbohydrate polymers*, *71*(3), 343-364.

Jonoobi, M., Harun, J., Mishra, M., & Oksman, K. (2009). Chemical composition, crystallinity and thermal degradation of bleached and unbleached kenaf bast (Hibiscus cannabinus) pulp and nanofiber. *BioResources*, *4*(2), 626-639.

Jonoobi, M., Khazaeian, A., Tahir, P. M., Azry, S. S., & Oksman, K. (2011). Characteristics of cellulose nanofibers isolated from rubberwood and empty fruit bunches of oil palm using chemo-mechanical process. *Cellulose*, *18*(4), 1085-1095.

Kakroodi, A. R., Cheng, S., Sain, M., & Asiri, A. (2014). Mechanical, thermal, and morphological properties of nanocomposites based on polyvinyl alcohol and cellulose nanofiber from Aloe vera rind. *Journal of Nanomaterials*, *2014*, 139.

Kalambur, S., & Rizvi, S. S. (2006). An overview of starch-based plastic blends from reactive extrusion. *Journal of Plastic Film & Sheeting*, *22*(1), 39-58.

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.

Kirboga, S., & Oner, M. (2013). Effect of the experimental parameters on calcium carbonate precipitation. *Chem Eng*, *32*, 2119-2124.

Klemm, D., Schumann, D., Kramer, F., Heßler, N., Koth, D., & Sultanova, B. (2009, June). Nanocellulose materials–different cellulose, different functionality. In *Macromolecular symposia*(Vol. 280, No. 1, pp. 60-71). Weinheim: WILEY-VCH Verlag.

Kusumo, F., Silitonga, A. S., Ong, H. C., Masjuki, H. H., & Mahlia, T. M. I. (2017). A comparative study of ultrasound and infrared transesterification of Sterculia foetida oil for biodiesel production. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, *39*(13), 1339-1346..

Latinwo, G. K., Aribike, D. S., Oyekunle, L. O., Susu, A. A., & Kareem, S. A. (2010). Effects of calcium carbonate of different compositions and particle size distributions on the mechanical properties of flexible polyurethane foam. *Nature and Science*, *8*(9), 92-101.

Le Troedec, M., Sedan, D., Peyratout, C., Bonnet, J. P., Smith, A., Guinebretiere, R., & Krausz, P. (2008). Influence of various chemical treatments on the composition and structure of hemp fibres. *Composites Part A: Applied Science and Manufacturing*,*39*(3), 514-522.

Lee, S. Y., Chen, H., & Hanna, M. A. (2008). Preparation and characterization of tapioka starch–poly (lactic acid) nanocomposite foams by melt intercalation based on clay type. *Industrial crops and products*, *28*(1), 95-106.

Liu, Z.-T., Y. Yang, L. Zhang, Z.-W. Liu, and H. Xiong. (2007). Study on the cationic modification and dyeing of ramiefiber. Cellulose (London, England) 14 (4):337–45. doi:10.1007/s10570-007-9117-0.

López, O. V., Lecot, C. J., Zaritzky, N. E., & García, M. A. (2011). Biodegradable packages development from starch based heat sealable films. *Journal of Food Engineering*, *105*(2), 254-263.

Lu, Y., Weng, L., & Cao, X. (2006). Morphological, thermal and mechanical properties of ramie crystallites—reinforced plasticized starch biocomposites. *Carbohydrate polymers*, *63*(2), 198-204.

Ma, X., Chang, P. R., Yu, J., & Stumborg, M. (2009). Properties of biodegradable citric acid-modified granular starch/thermoplastic pea starch composites. *Carbohydrate Polymers*, *75*(1), 1-8.

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.

Madigan, M. T., & Martinko, J. M. (2006). Microorganisms and microbiology. *Brock biology of microorganisms. 11th ed. Upper Saddle River, New Jersey (NJ): Pearson Prentice Hall*, 1-20.

Mali, S., Grossmann, M. V. E., Garcia, M. A., Martino, M. N., & Zaritzky, N. E. (2002). Microstructural characterization of yam starch films. *Carbohydrate Polymers*, *50*(4), 379-386.

Mali, S., Sakanaka, L. S., Yamashita, F., & Grossmann, M. V. E. (2005). Water sorption and mechanical properties of cassava starch films and their relation to plasticizing effect. *Carbohydrate Polymers*, *60*(3), 283-289.

Manfredi, L. B., Rodríguez, E. S., Wladyka-Przybylak, M., & Vázquez, A. (2006). Thermal degradation and fire resistance of unsaturated polyester, modified acrylic resins and their composites with natural fibres. *Polymer degradation and stability*, *91*(2), 255-261.

Maheshwaran, M. V., Hyness, N. R. J., Senthamaraikannan, P., Saravanakumar, S. S., & Sanjay, M. R. (2017). Characterization of natural cellulosic fiber from Epipremnum aureum stem. *Journal of Natural Fibers*, 1-10.

Mohanty, A. K., Misra, M., & Drzal, L. T. (Eds.). (2005). *Natural fibers, biopolymers, and biocomposites*. CRC press.

Monteiro, S. N., Terrones, L. A. H., & D'almeida, J. R. M. (2008). Mechanical performance of coir fiber/polyester composites.*Polymer testing*, *27*(5), 591-595.

Monteiro, S. N., Satyanarayana, K. G., & Lopes, F. P. D. (2010). High strength natural fibers for improved polymer matrix composites. In *Materials Science Forum* (Vol. 638, pp. 961-966). Trans Tech Publications.

Morán, J. I., Alvarez, V. A., Cyras, V. P., & Vázquez, A. (2008). Extraction of cellulose and preparation of nanocellulose from sisal fibers. *Cellulose*, *15*(1), 149-159.

Mulyono, N., Suhartono, M. T., & Angelina, S. (2015). Journal Of Harmonized Research (JOHR). *Journal Of Harmonized Research in Applied Sciences*, *3*(2), 125-132.

Nacos, M. K., Katapodis, P., Pappas, C., Daferera, D., Tarantilis, P. A., Christakopoulos, P., & Polissiou, M. (2006). Kenaf xylan–a source of biologically active acidic oligosaccharides. *Carbohydrate polymers*, *66*(1), 126-134.

Nam, S., & Netravali, A. N. (2006). Green composites. I. Physical properties of ramie fibers for environment-friendly green composites. *Fibers and Polymers*, *7*(4), 372-379.

Nikmatin, S. (2012). Bionanokomposit filler nanopartikel serat kulit rotan sebagai material pengganti komposit sintetis fiber glass pada komponen kendaraan bermotor. *Disertasi). Departmen Teknik Pertanian Fakultas Teknologi Pertanian, IPB. Bogor*.

Nikmatin, S., Purwanto, S., Maddu, A., Mandang, T., & Purwanto, A. (2010). Analysis of Structure Cellulose Rattan Biomassas Bionanocomposite Filler by Using X-ray Diffraction.*Indonesian Journal of Materials Science*, *13*(2).

Nugraha, I. N. P. (2011). Pengaruh Perlakuan Kimia Serat Alam Ramie Terhadap Kekuatan Tarik Serat Tunggal. *Jurnal Pendidikan Teknologi dan Kejuruan*, *8*(2).

Obasi, H. C., & Igwe, I. O. (2014). Effects of native cassava starch and compatibilizer on biodegradable and tensile properties of polypropylene. *American J. Eng. Res*, *3*(2), 96-104.

Penjumras, P., Rahman, R. A., Talib, R. A., & Abdan, K. (2015). Mechanical properties and water absorption behaviour of durian rind cellulose reinforced Poly (lactic acid) biocomposites. *International Journal on Advanced Science, Engineering and Information Technology*, *5*(5), 343-349.

Pérez, J., Munoz-Dorado, J., de la Rubia, T. D. L. R., & Martinez, J. (2002). Biodegradation and biological treatments of cellulose, hemicellulose and lignin: an overview. *International microbiology*, *5*(2), 53-63.

Prachayawarakorn, J., Chaiwatyothin, S., Mueangta, S., & Hanchana, A. (2013). Effect of jute and kapok fibers on properties of thermoplastic cassava starch composites. *Materials & Design*, *47*, 309-315.

Pratomo, H., & Rohaeti, E. (2015). Bioplastics nata de cassava as an ingredient edible film environmentally friendly. Saintek Research Journal.16 (2).

Qiao, X., Tang, Z., & Sun, K. (2011). Plasticization of corn starch by polyol mixtures. *Carbohydrate Polymers*, *83*(2), 659-664.

Quintana, E., Roncero, M. B., Vidal, T., & Valls, C. (2017). Cellulose oxidation by Laccase-TEMPO treatments.*Carbohydrate polymers*, *157*, 1488-1495.

Raabe, J., Fonseca, A. D. S., Bufalino, L., Ribeiro, C., Martins, M. A., Marconcini, J. M., ... & Tonoli, G. H. D. (2015). Biocomposite of cassava starch reinforced with cellulose pulp fibers modified with deposition of silica (SiO2) nanoparticles.*Journal of Nanomaterials*, *2015*.

Rahul, S., Resto O., Kahyar R.S.. (2009). Effect of nanocrystallinity on the electrochemical performance of LiMn. cathode. *J of Renuable and Sustainahle Energy* 23:95-103.

Ramakrishna, S. (2008). An introduction to electrospinning and nanofibers. New York: Wiley

Rasat, M. S. M., Wahab, R., Kari, Z. A., Yunus, A. A. M., Moktar, J., & Ramle, S. F. M. (2013). Strength properties of bio-composite lumbers from lignocelluloses of oil palm fronds agricultural residues. *International Journal on Advanced Science, Engineering and Information Technology*, *3*(3), 199-209.

Rickard, J. E. (1991). M. Asaoka, and J. M. V. Blanshard: Cassava Starch: Review of Physical-Chemical Properties.*Tropical Sci*, *31*, 189-207.

Robert, R. F. (2001). Bast and Other Plant Fiber. Woodhead Publishing Ltd, Cambridge, England.

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*(22), 7344-7355.

Sahari, J., Sapuan, S. M., Zainudin, E. S., & Maleque, M. A. (2013). Mechanical and thermal properties of environmentally friendly composites derived from sugar palm tree. *Materials & Design*, *49*, 285-289.

Saputro, A. N. C., & Ovita, A. L. (2017). Synthesis and Characterization of Bioplastic from Chitosan-Ganyong Starch (Canna edulis). *JKPK (Jurnal Kimia dan Pendidikan Kimia)*, *2*(1), 13-21.

Saurabh, C. K., Gupta, S., Bahadur, J., Mazumder, S., Variyar, P. S., & Sharma, A. (2015). Mechanical and barrier properties of guar gum based nano-composite films. *Carbohydrate polymers*, *124*, 77-84.

Schmidt, W. (1928). Über Die Temperatur-Und Stabili-Tätsverhältnisse Von Seen. *Geografiska Annaler*, *10*(1-2), 145-177.

Segal, L. G. J. M. A., Creely, J. J., Martin Jr, A. E., & Conrad, C. M. (1959). An empirical method for estimating the degree of crystallinity of native cellulose using the X-ray diffractometer. *Textile Research Journal*, *29*(10), 786-794.

Senthamaraikannan, P., S. S. Saravanakumar, V. P. Arthanarieswaran, and P. Sugumaran. (2016). Physicochemical properties of new cellulosic fibers from bark of Acacia planifrons. International Journal of Polymer Analysis and Characterization 21:207–13. doi:10.1080/1023666X.2016.1133138.

Shah, P. B., Bandopadhyay, S., & Bellare, J. R. (1995). Environmentally degradable starch filled low density polyethylene. *Polymer Degradation and Stability*, *47*(2), 165-173.

Shebani, A. N., Van Reenen, A. J., & Meincken, M. (2008). The effect of wood extractives on the thermal stability of different wood species. *Thermochimica Acta*, *471*(1-2), 43-50.

Silitonga, A. S., Masjuki, H. H., Ong, H. C., Mahlia, T. M. I., & Kusumo, F. (2017). Optimization of extraction of lipid from Isochrysis galbana microalgae species for biodiesel synthesis.*Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, *39*(11), 1167-1175.

Sinaga, R. F., Ginting, G. M., Ginting, M. H. S., & Hasibuan, R. (2014). Pengaruh Penambahan Gliserolterhadap Sifat Kekuatan Tarik Dan Pemanjangan Saat Putus Bioplastik Dari Pati Umbi Talas. *Jurnal Teknik Kimia USU*,*3*(2).

Siracusa, V., Rocculi, P., Romani, S., & Dalla Rosa, M. (2008). Biodegradable polymers for food packaging: a review. *Trends in Food Science & Technology*, *19*(12), 634-643.

Slade, L., & Levine, H. (1993). Thermoplastic starches.*Carbohydrate Polymers*, *12*, 105-9..

Song, Y., & Zheng, Q. (2008). Improved tensile strength of glycerol-plasticized gluten bioplastic containing hydrophobic liquids. *Bioresource technology*, *99*(16), 7665-7671.

Sreekala, M. S., & Thomas, S. (2003). Effect of fibre surface modification on water-sorption characteristics of oil palm fibres.*Composites Science and Technology*, *63*(6), 861-869.

Srichuwong, S., & Jane, J. L. (2007). Physicochemical properties of starch affected by molecular composition and structures. *Food Science and Biotechnology*, *16*(5), 663-674.

Sun, Q., Xi, T., Li, Y., & Xiong, L. (2014). Characterization of corn starch films reinforced with CaCO3 nanoparticles. *PloS one*, *9*(9), e106727.

Sunilkumar, M., Francis, T., Thachil, E. T., & Sujith, A. (2012). Low density polyethylene–chitosan composites: a study based on biodegradation. *Chemical engineering journal*, *204,* 114-124.

Sunilkumar, M., Francis, T., Thachil, E. T., & Sujith, A. (2012). Low density polyethylene–chitosan composites: a study based on biodegradation. *Chemical engineering journal*, *204,* 114-124.

Surdia, N.M., 2000, Degradasi Polimer, *Majalah Polimer Indonesia*, 3 (1), pp. 20-21.

Syafri, E., A. Kasim, H. Abral, A. Asben, and S. Wahono. 2016. Pengembangan digester pulp untuk menghasilkan partikel selulosa serat rami sebagai filler material bionanokomposit. Prosiding Seminar Nasional Di Payakumbuh 12 12. Sept 2016:527–540. ISBN : 978-979-986910.

Syafri, E., Kasim, A., Abral, H., & Asben, A. 2017. Effect of Precipitated Calcium Carbonate on Physical, Mechanical and Thermal Properties of Cassava Starch Bioplastic Composites. *International Journal on Advanced Science, Engineering and Information Technology*, *7*(5), 1950-1956.

Syafri, E., Kasim, A., Abral, H., Asben, A., & Sudirman, S. 2018b. Pembuatan dan Karakterisasi Komposit Bioplastik Berbasis Filler Cellulose Micro Fibers Rami. *Jurnal Sains Materi Indonesia*, *19*(2), 66-72.

Syafri. E., Anwar Kasim, Hairul Abral, and Alfi Asben. 2018a. “Cellulose Nanofibers Isolation and Characterization from Ramie Using a Chemical-Ultrasonic Treatment.” 1–12. DOI 10.1080/15440478.2018.1455073

Syafrudin A, Suryono, Suseno JE. 2008. Rancang bangun generator pulsa gelombang ultrasonik dan implementasinya untuk pengukuran jarak antara dua obyek. *Fisika 11: 29-37*.

Tapia-Blácido, D., Mauri, A. N., Menegalli, F. C., Sobral, P. J. A., & Añón, M. C. 2007. Contribution of the starch, protein, and lipid fractions to the physical, thermal, and structural properties of amaranth (Amaranthus caudatus) flour films. *Journal of Food Science*, *72*(5).

TAPPI, Standards and suggested methods. Technical Association of Pulp & Paper industry. Atlanta, Georgia, USA.

Teixeira, E. D. M., Pasquini, D., Curvelo, A. A., Corradini, E., Belgacem, M. N., & Dufresne, A. 2009. Cassava bagasse cellulose nanofibrils reinforced thermoplastic cassava starch. *Carbohydrate polymers*, *78*(3), 422-431.

Tharanathan, R. N. (2003). Biodegradable films and composite coatings: past, present and future. *Trends in Food Science & Technology*, *14*(3), 71-78.

Tibolla, H., F. M. Pelissari, M. I. Rodrigues, and F. C. Menegalli. (2017). Cellulose nanofibers produced from banana peel by enzymatic treatment: Study of process conditions. Industrial Crops and Products 95:664–74..

Tipler, P.A. (2001). *Fisika untuk Sains dan Teknik.* Ed ke-3. Vol ke-2. Soegiyono B, penerjemah; Jakarta: Erlangga. Terjemahan dari: *Physics for Scientistand Engineers Vol 2 3rd Ed*

Tongdeesoontorn, W., Mauer, L. J., Wongruong, S., Sriburi, P., & Rachtanapun, P. (2012). Mechanical and physical properties of cassava starch-gelatin composite films. *International Journal of Polymeric Materials*, *61*(10), 778-792.

Versino, F., & Gardaa, M. A. (2014). Cassava (Manihot esculenta) starch films reinforced with natural fibrous filler. *Industrial Crops and Products*, *58*, 305-314.

Vignesh, V., A. N. Balaji, and M. K. V. Karthikeyan. (2016). Extraction and characterization of new cellulosic fibers from Indian mallow stem: An exploratory investigation. International Journal of Polymer Analysis and Characterization 21 (6):504–12.

Wahono, S., Irwan, A., Syafri, E., & Asrofi, M. (2018). Preparation and characterization of ramie cellulose nanofibers/caco3 unsaturated polyester resin composites. *ARPN Journal of Engineering and Applied Sciences*, *13*(2), 746-51.

Wang, L.-F., S. Shankar, and J.-W. Rhim. (2017). Properties of alginate-based films reinforced with cellulose fibers andcellulose nanowhiskers isolated from mulberry pulp. Food Hydrocolloids 63:201–08. doi:10.1016/j.foodhyd.2016.08.041.

Wicaksono, R., Syamsu, K., Yuliasih, I., Nasir, M., & Street, K. (2013). Cellulose nanofibers from cassava bagasse: Characterization and application on tapioka-film. *Cellulose*, *3*(13), 79-87.

Widyaningsih, S., Kartika, D., & Nurhayati, Y. T. 2012. Pengaruh Penambahan Sorbitol Dan Kalsium Karbonat Terhadap Karakteristik Dan Sifat Biodegradasi Film Dari Pati Kulit Pisang. *Molekul*, *7*(1), 69-81.

Wurzburg, O. B. (1986). Converted starches. *Modified starches: Properties and uses*, 18-41.

Xanthos. M. (2010). Polymers and Polymer Composites. Di dalam: Xanthos M, editor. *Functional Fillers for Plastic*. Ed ke-2. Weinheim: WILEY-VCH Verlag GmbH & Co. hlm 3-18.

Xie, F., Pollet, E., Halley, P. J., & Avérous, L. (2013). Starch-based nano-biocomposites. *Progress in Polymer Science*, *38*(10-11), 1590-1628.

Yang, J. H., Park, J., Kim, D., & Lee, D. (2004). Effects of calcium carbonate as the expanding inhibitor on the structural and mechanical properties of expanded starch/polyvinyl alcohol. blends. *Journal of applied polymer science*, *93*(4), 1762-1768.

Yongvanich, N. (2015). Isolation of nanocellulose from pomelo fruit fibers by chemical treatments. Journal of NaturalFibers 12 (4):323–31.

Yusmarlela, (2009). Studi Pemanfaatan Plasticizer Gliserol dalam Film Pati Ubi dengan Pengisi Serbuk Batang Ubi Kayu. Tesis. Sekolah Pascasarjana, Universitas Sumatra Utara. Medan

Zubaidi. (2008). Nanofiber dan electrospinning serta pemanfaatannya dalam pembuatan tekstil masa depan. Bandung : Balai Besar Tekstil Press.