

DAFTAR KEPUSTAKAAN

- Abraham, E., Deepa, B., Pothan, L. A., Jacob, M., Thomas, S., Cvelbar, U., dan Anandjiwala, R. (2011). "Extraction of nanocellulose fibrils from lignocellulosic fibres: A novel approach". *Carbohydrate Polymers*, 86(4), 1468–1475.
- Abral, Hairul, Basri, A., Muhammad, F., Fernando, Y., Hafizulhaq, F., Mahardika, M., Sugiarti, E., Sapuan, S.M., Ilyas, R.A., dan Stephane, I. (2019). "A simple method for improving the properties of the sago starch films prepared by using ultrasonication treatment". *Food Hydrocolloids*, 93, 276–283.
- Abral, Hairul, Hartono, A., Hafizulhaq, F., Handayani, D., Sugiarti, E., dan Pradipta, O. (2019a). "Characterization of PVA/cassava starch biocomposites fabricated with and without sonication using bacterial cellulose fiber loadings". *Carbohydrate Polymers*, 206, 593–601.
- Abral, Hairul, Kadriadi, Mahardika, M., Handayani, D., Sugiarti, E., dan Muslimin, A. N. (2019b). "Characterization of disintegrated bacterial cellulose nanofibers/PVA bionanocomposites prepared via ultrasonication". *International Journal of Biological Macromolecules*, 135, 591–599.
- Abral, Hairul, Satria, R. S., Mahardika, M., Hafizulhaq, F., Affi, J., Asrofi, M., Handayani, D., Sapuan, S. M., Stephane, I., dan Sugiarti, E dan Muslimin, A. N. (2019c). "Comparative study of the physical and tensile properties of jicama (*Pachyrhizus erosus*) starch film prepared using three different methods". *Starch-Stärke*, 1800224.
- Abral, Hairul, Anugrah, A. S., Hafizulhaq, F., Handayani, D., Sugiarti, E., dan Muslimin, A. N. (2018). "Effect of nanofibers fraction on properties of the starch based biocomposite prepared in various ultrasonic power". *International Journal of Biological Macromolecules*.
- Abral, Hairul, Dalimunthe, M. H., Hartono, J., Efendi, R. P., Asrofi, M., Sugiarti, E., Sapuan, S. M., Park, J. W., dan Kim, H. J. (2018a). "Characterization of Tapioca Starch Biopolymer Composites Reinforced with Micro Scale Water Hyacinth Fibers". *Starch/Staerke*, 70(7–8), 1–8.
- Abral, Hairul, Lawrensus, V., Handayani, D., dan Sugiarti, E. (2018b).

- "Preparation of nano-sized particles from bacterial cellulose using ultrasonication and their characterization". *Carbohydrate Polymers*, 191, 161–167.
- Abral, Hairul, Putra, G. J., Asrofi, M., Park, J.-W., dan Kim, H.-J. (2018c). "Effect of vibration duration of high ultrasound applied to bio-composite while gelatinized on its properties". *Ultrasonics Sonochemistry*, 40(Part A), 697–702.
- Abral, Hairul, dan Mahardika, M. (2016). "Tensile properties of bacterial cellulose nanofibers-polyester composites". *IOP Conference Series: Materials Science and Engineering*, 137(1), 12019. IOP Publishing.
- Abral, Hairul, Putra, H., Sapuan, S. M., dan 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.
- Abreu, A. S., Oliveira, M., de Sá, A., Rodrigues, R. M., Cerqueira, M. A., Vicente, A. A., dan Machado, A. V. (2015). "Antimicrobial nanostructured starch based films for packaging". *Carbohydrate Polymers*, 129, 127–134.
- Al-Hassan, A. A., dan Norziah, M. H. (2012). "Starch-gelatin edible films: Water vapor permeability and mechanical properties as affected by plasticizers". *Food Hydrocolloids*, 26(1), 108–117.
- Alves, V. D., Mali, S., Beléia, A., dan Grossmann, M. V. E. (2007). "Effect of glycerol and amylose enrichment on cassava starch film properties". *Journal of Food Engineering*, 78(3), 941–946.
- Asrofi, Mochamad, Abral, H., Kasim, A., Pratoto, A., Mahardika, M., Park, J.-W., dan Kim, H.-J. (2018). "Isolation of nanocellulose from water hyacinth fiber (WHF) produced via digester-sonication and its characterization". *Fibers and Polymers*, 19(8), 1618–1625.
- Asrofi, Mochamad, Abral, H., Kasim, A., Pratoto, A., Mahardika, M., dan Hafizulhaq, F. (2018a). "Characterization of the sonicated yam bean starch bionanocomposites reinforced by nanocellulose water hyacinth fiber (whf): the effect of various fiber loading". *Journal of Engineering Science and Technology*, 13(9), 2700–2715.

- Asrofi, Mochamad, Abral, H., Kasim, A., Pratoto, A., Mahardika, M., dan Hafizulhaq, F. (2018b). "Mechanical Properties of a Water Hyacinth Nanofiber Cellulose Reinforced Thermoplastic Starch Bionanocomposite: Effect of Ultrasonic Vibration during Processing". *Fibers*, 6(2), 40.
- Asrofi, Mochamad, Abral, H., Putra, Y. K., Sapuan, S. M., dan Kim, H.-J. (2018c). "Effect of duration of sonication during gelatinization on properties of tapioca starch water hyacinth fiber biocomposite". *International Journal of Biological Macromolecules*, 108, 167–176.
- Asrofi, Mochamad, Abral, H., Kasim, A., dan Pratoto, A. (2017a). "Characterization of the microfibrillated cellulose from water hyacinth pulp after alkali treatment and wet blending". *IOP Conference Series: Materials Science and Engineering*, 204(1), 12018. IOP Publishing.
- Asrofi, Mochamad, Abral, H., Kasim, A., dan Pratoto, A. (2017b). "XRD and FTIR Studies of Nanocrystalline Cellulose from Water Hyacinth (*Eichornia crassipes*) Fiber". *Journal of Metastable and Nanocrystalline Materials*, 29, 9–16. Trans Tech Publ.
- Avella, M., De Vlieger, J. J., Errico, M. E., Fischer, S., Vacca, P., dan Volpe, M. G. (2005). "Biodegradable starch/clay nanocomposite films for food packaging applications". *Food Chemistry*, 93(3), 467–474.
- Avella, M., Errico, M. E., Rimedio, R., dan Sadocco, P. (2002). "Preparation of biodegradable polyesters/high-amylose-starch composites by reactive blending and their characterization". *Journal of Applied Polymer Science*, 83(7), 1432–1442.
- Avellaneda-Torres, L. M., Pulido, C. P. G., dan Rojas, E. T. (2014). "Assessment of cellulolytic microorganisms in soils of Nevados Park, Colombia". *Brazilian Journal of Microbiology*, 45(4), 1211–1220.
- Averous, L., dan Boquillon, N. (2004). "Biocomposites based on plasticized starch: thermal and mechanical behaviours". *Carbohydrate Polymers*, 56(2), 111–122.
- Babae, M., Jonoobi, M., Hamzeh, Y., dan Ashori, A. (2015). "Biodegradability and mechanical properties of reinforced starch nanocomposites using cellulose nanofibers". *Carbohydrate Polymers*, 132, 1–8.

- Balakrishnan, P., Gopi, S., dan Thomas, S. (2018). "UV resistant transparent bionanocomposite films based on potato starch/cellulose for sustainable packaging". *Starch-Stärke*, 70(1–2), 1700139.
- Barzegar, H., Azizi, M. H., Barzegar, M., dan Hamidi-Esfahani, Z. (2014). "Effect of potassium sorbate on antimicrobial and physical properties of starch–clay nanocomposite films". *Carbohydrate Polymers*, 110, 26–31.
- Béguin, P., dan Aubert, J.-P. (1994). "The biological degradation of cellulose". *FEMS Microbiology Reviews*, 13(1), 25–58.
- Bootklad, M., dan Kaewtatip, K. (2013). "Biodegradation of thermoplastic starch/eggshell powder composites". *Carbohydrate Polymers*, 97(2), 315–320.
- Chandra, J., George, N., dan Narayanankutty, S. K. (2016). "Isolation and characterization of cellulose nanofibrils from arecanut husk fibre". *Carbohydrate Polymers*, 142, 158–166.
- Chang, S.-T., Chen, L.-C., Lin, S.-B., dan Chen, H.-H. (2012). Nano-biomaterials application: Morphology and physical properties of bacterial cellulose/gelatin composites via crosslinking. *Food Hydrocolloids*, 27(1), 137–144.
- Chen, W., Yu, H., Liu, Y., Chen, P., Zhang, M., dan Hai, Y. (2011). "Individualization of cellulose nanofibers from wood using high-intensity ultrasonication combined with chemical pretreatments". *Carbohydrate Polymers*, 83(4), 1804–1811.
- Chen, W., Yu, H., Liu, Y., Hai, Y., Zhang, M., dan Chen, P. (2011). "Isolation and characterization of cellulose nanofibers from four plant cellulose fibers using a chemical-ultrasonic process". *Cellulose*, 18(2), 433–442.
- Chen, X., Yu, J., Zhang, Z., dan Lu, C. (2011). "Study on structure and thermal stability properties of cellulose fibers from rice straw". *Carbohydrate Polymers*, 85(1), 245–250.
- Chen, Z., Schols, H. A., dan Voragen, A. G. J. (2004). "Differently sized granules from acetylated potato and sweet potato starches differ in the acetyl substitution pattern of their amylose populations". *Carbohydrate Polymers*, 56(2), 219–226.
- Cheng, Q., Wang, S., dan Han, Q. (2010). "Novel process for isolating fibrils from

- cellulose fibers by high-intensity ultrasonication. II. fibril characterization". *Journal of Applied Polymer Science*, 115(5), 2756–2762.
- Cheng, W., Chen, J., Liu, D., Ye, X., dan Ke, F. (2010). "Impact of ultrasonic treatment on properties of starch film-forming dispersion and the resulting films". *Carbohydrate Polymers*, 81, 707–711.
- Cherian, B. M., Leão, A. L., de Souza, S. F., Thomas, S., Pothan, L. A., dan Kottaisamy, M. (2010). "Isolation of nanocellulose from pineapple leaf fibres by steam explosion". *Carbohydrate Polymers*, 81(3), 720–725.
- Chirayil, C. J., Joy, J., Mathew, L., Mozetic, M., Koetz, J., dan Thomas, S. (2014). "Isolation and characterization of cellulose nanofibrils from *Helicteres isora* plant". *Industrial Crops and Products*, 59(Supplement C), 27–34.
- Chung, Y.-L., Ansari, S., Estevez, L., Hayrapetyan, S., Giannelis, E. P., dan Lai, H.-M. (2010). "Preparation and properties of biodegradable starch–clay nanocomposites". *Carbohydrate Polymers*, 79(2), 391–396.
- Das, K., Ray, D., Bandyopadhyay, N. R., Sahoo, S., Mohanty, A. K., dan Misra, M. (2011). "Physico-mechanical properties of the jute micro/nanofibril reinforced starch/polyvinyl alcohol biocomposite films". *Composites Part B: Engineering*, 42(3), 376–381.
- Dufresne, A. (2017). "Cellulose nanomaterial reinforced polymer nanocomposites". *Current Opinion in Colloid dan Interface Science*, 29, 1–8.
- Dungani, R., Owolabi, A. F., dan Saurabh, C. K. (2016). "Preparation and Fundamental Characterization of Cellulose Nanocrystal from Oil Palm Fronds Biomass". *Journal of Polymers and the Environment*.
- Fahma, F., Iwamoto, S., Hori, N., Iwata, T., dan Takemura, A. (2010). "Isolation, preparation, and characterization of nanofibers from oil palm empty-fruit-bunch (OPEFB)". *Cellulose*, 17(5), 977–985.
- Fahma, F., Iwamoto, S., Hori, N., Iwata, T., dan Takemura, A. (2011). "Effect of pre-acid-hydrolysis treatment on morphology and properties of cellulose nanowhiskers from coconut husk". *Cellulose*, 18(2), 443–450.
- Fazeli, M., Keley, M., dan Biazar, E. (2018). "Preparation and characterization of starch-based composite films reinforced by cellulose nanofibers". *International Journal of Biological Macromolecules*, 116, 272–280.

- Ginting, E., Widodo, Y., Rahayuningsih, S. A., dan Jusuf, M. (2005). Karakteristik pati beberapa varietas ubi jalar. *Jurnal Penelitian Tanaman Pangan*, 1(24), 8–17.
- Goyat, M. S., Ray, S., dan Ghosh, P. K. (2011). "Innovative application of ultrasonic mixing to produce homogeneously mixed nanoparticulate-epoxy composite of improved physical properties". *Composites Part A: Applied Science and Manufacturing*, 42(10), 1421–1431.
- Guimarães Jr, M., Botaro, V. R., Novack, K. M., Teixeira, F. G., dan Tonoli, G. H. D. (2015). "Starch/PVA-based nanocomposites reinforced with bamboo nanofibrils". *Industrial Crops and Products*, 70, 72–83.
- Gupta, P., Samant, K., dan Sahu, A. (2012). "Isolation of cellulose-degrading bacteria and determination of their cellulolytic potential". *International Journal of Microbiology*, 2012.
- Haafiz, M. K. M., Eichhorn, S. J., Hassan, A., dan Jawaid, M. (2013). "Isolation and characterization of microcrystalline cellulose from oil palm biomass residue". *Carbohydrate Polymers*, 93(2), 628–634.
- Harmen, P. F. H., Huijgen, W., Bermudez, L., dan Bakker, R. (2010). *Literature review of physical and chemical pretreatment processes for lignocellulosic biomass*. Wageningen UR-Food dan Biobased Research.
- Heydari, A., Alemzadeh, I., dan Vossoughi, M. (2013). "Functional properties of biodegradable corn starch nanocomposites for food packaging applications". *Materials dan Design*, 50, 954–961.
- Hossain, M. K., Karim, M. R., Chowdhury, M. R., Imam, M. A., Hosur, M., Jeelani, S., dan Farag, R. (2014). "Comparative mechanical and thermal study of chemically treated and untreated single sugarcane fiber bundle". *Industrial Crops and Products*, 58, 78–90.
- Hu, Y., Tang, L., Lu, Q., Wang, S., Chen, X., dan Huang, B. (2014). "Preparation of cellulose nanocrystals and carboxylated cellulose nanocrystals from borer powder of bamboo". *Cellulose*, 21(3), 1611–1618.
- Jabli, M., Tka, N., Ramzi, K., dan Saleh, T. A. (2018). "Physicochemical characteristics and dyeing properties of lignin-cellulosic fibers derived from Nerium oleander". *Journal of Molecular Liquids*, 249, 1138–1144.

- Johar, N., Ahmad, I., dan Dufresne, A. (2012). "Extraction, preparation and characterization of cellulose fibres and nanocrystals from rice husk". *Industrial Crops and Products*, 37(1), 93–99.
- John, M. J., dan Thomas, S. (2008). "Biofibres and biocomposites". *Carbohydrate Polymers*, 71(3), 343–364.
- Jonoobi, M., Harun, J., Mishra, M., dan 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.
- Kaewpirom, S., dan Worrarat, C. (2014). "Preparation and properties of pineapple leaf fiber reinforced poly (lactic acid) green composites". *Fibers and Polymers*, 15(7), 1469–1477.
- Kaewtatip, K., dan Thongmee, J. (2012). "Studies on the structure and properties of thermoplastic starch/luffa fiber composites". *Materials dan Design*, 40, 314–318.
- Kalita, E., Nath, B. K., Deb, P., Agan, F., Islam, M. R., dan Saikia, K. (2015). "High quality fluorescent cellulose nanofibers from endemic rice husk: Isolation and characterization". *Carbohydrate Polymers*, 122, 308–313.
- Kargarzadeh, H., Ahmad, I., Abdullah, I., Dufresne, A., Zainudin, S. Y., dan Sheltami, R. M. (2012). "Effects of hydrolysis conditions on the morphology, crystallinity, and thermal stability of cellulose nanocrystals extracted from kenaf bast fibers". *Cellulose*, 19(3), 855–866.
- Kargarzadeh, H., Johar, N., dan Ahmad, I. (2017). "Starch biocomposite film reinforced by multiscale rice husk fiber". *Composites Science and Technology*, 151, 147–155.
- Karimi, S., Tahir, P. M., Karimi, A., Dufresne, A., dan Abdulkhani, A. (2014). "Kenaf bast cellulosic fibers hierarchy: A comprehensive approach from micro to nano". *Carbohydrate Polymers*, 101, 878–885.
- Kaushik, A., dan Kaur, R. (2016). "Thermoplastic starch nanocomposites reinforced with cellulose nanocrystals: effect of plasticizer on properties". *Composite Interfaces*, 23(7), 701–717.
- Karnwal A, dan Nigam V. (2013). "Production of amylase by isolated

- microorganisms and its application". *Int. J. Pharm Bio. Sci.*, 3(4), 354-360.
- Khalil, H. P. S. A., Bhat, A. H., dan Yusra, A. F. I. (2012). "Green composites from sustainable cellulose nanofibrils: A review". *Carbohydrate Polymers*, 87(2), 963–979.
- Khan, A., Khan, R. A., Salmieri, S., Le Tien, C., Riedl, B., Bouchard, J., Chauve, G., Tan, V., Kamal, M. R., dan Lacroix, M. (2012). "Mechanical and barrier properties of nanocrystalline cellulose reinforced chitosan based nanocomposite films". *Carbohydrate Polymers*, 90(4), 1601–1608.
- Khan, J. A., dan Priya, R. (2011). "A study on partial purification and characterization of extracellular amylases from *Bacillus subtilis*". *Adv. Appl. Sci. Res.*, 2(3), 509–519.
- Khawas, P., dan 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.
- Li, J., Wei, X., Wang, Q., Chen, J., Chang, G., Kong, L., Su, J., dan Liu, Y. (2012). "Homogeneous isolation of nanocellulose from sugarcane bagasse by high pressure homogenization". *Carbohydrate Polymers*, 90(4), 1609–1613.
- Li, X., Qiu, C., Ji, N., Sun, C., Xiong, L., dan Sun, Q. (2015). "Mechanical, barrier and morphological properties of starch nanocrystals-reinforced pea starch films". *Carbohydrate Polymers*, 121, 155–162.
- Liew, S. Y., Thielemans, W., dan Hewakandamby, B. (2016). "Separation of sulphuric acid from an acid suspension of cellulose nanocrystals by manual shaking". *Journal of Nano Research*, 38, 58–72. Trans Tech Publ.
- López, O. V., Castillo, L. A., García, M. A., Villar, M. A., dan Barbosa, S. E. (2015). "Food packaging bags based on thermoplastic corn starch reinforced with talc nanoparticles". *Food Hydrocolloids*, 43, 18–24.
- Lu, D. R., Xiao, C. M., dan Xu, S. J. (2009). "Starch-based completely biodegradable polymer materials". *Express Polymer Letters*, 3(6), 366–375.
- Maflahah, I. (2010). Analisis proses pembuatan pati jagung (maizena) berbasis neraca massa. *Jurnal Embryo*, 7(1), 40–45.
- Mahardika, M., Abral, H., Kasim, A., Arief, S., Hafizulhaq, F., dan Asrofi, M. (2019). "Properties of cellulose nanofiber/bengkoang starch

- bionanocomposites: Effect of fiber loading". *LWT*, 108554.
- Mahardika, M., Abrial, H., Kasim, A., Arief, S., dan Asrofi, M. (2018). "Production of Nanocellulose from Pineapple Leaf Fibers via High-Shear Homogenization and Ultrasonication". *Fibers*, 6(2), 28.
- Mali, S., Grossmann, M. V. E., García, M. A., Martino, M. N., dan Zaritzky, N. E. (2005). "Mechanical and thermal properties of yam starch films". *Food Hydrocolloids*, 19(1), 157–164.
- Mali, S., Grossmann, M. V. E., Garcia, M. A., Martino, M. N., dan Zaritzky, N. E. (2002). "Microstructural characterization of yam starch films". *Carbohydrate Polymers*, 50(4), 379–386.
- McGrance, S. J., Cornell, H. J., dan Rix, C. J. (1998). "A simple and rapid colorimetric method for the determination of amylose in starch products". *Starch-Stärke*, 50(4), 158–163.
- Mélo, E. A., Stamford, T. L. M., Silva, M. P. C., Krieger, N., dan Stamford, N. P. (2003). "Functional properties of yam bean (*Pachyrhizus erosus*) starch". *Bioresource Technology*, 89(1), 103–106.
- Moon, R. J., Martini, A., Nairn, J., Simonsen, J., dan Youngblood, J. (2011). "Cellulose nanomaterials review: structure, properties and nanocomposites". *Chemical Society Reviews*, 40(7), 3941–3994.
- Müller, C. M. O., Borges, J., dan Yamashita, F. (2012). "Composites of thermoplastic starch and nanoclays produced by extrusion and thermopressing". *Carbohydrate Polymers*, 89(2), 504–510.
- Müller, C. M. O., Laurindo, J. B., dan Yamashita, F. (2009). "Effect of cellulose fibers addition on the mechanical properties and water vapor barrier of starch-based films". *Food Hydrocolloids*, 23(5), 1328–1333.
- Nadirah, W. O. W., Jawaid, M., Al Masri, A. A., Khalil, H. P. S. A., Suhaily, S. S., dan Mohamed, A. R. (2012). "Cell wall morphology, chemical and thermal analysis of cultivated pineapple leaf fibres for industrial applications". *Journal of Polymers and the Environment*, 20(2), 404–411.
- Nafchi, A. M., Alias, A. K., Mahmud, S., dan Robal, M. (2012). "Antimicrobial, rheological, and physicochemical properties of sago starch films filled with nanorod-rich zinc oxide". *Journal of Food Engineering*, 113(4), 511–519.

- Nagarajan, T. T., Babu, A. S., Palanivelu, K., dan Nayak, S. K. (2016). "Mechanical and Thermal Properties of PALF Reinforced Epoxy Composites". *Macromolecular Symposia*, 361(1), 57–63. Wiley Online Library.
- Nogi, M., Iwamoto, S., Nakagaito, A. N., dan Yano, H. (2009). "Optically transparent nanofiber paper". *Advanced Materials*, 21(16), 1595–1598.
- Phua, Y. J., Lau, N. S., Sudesh, K., Chow, W. S., dan Ishak, Z. A. M. (2012). "Biodegradability studies of poly (butylene succinate)/organo-montmorillonite nanocomposites under controlled compost soil conditions: effects of clay loading and compatibiliser". *Polymer Degradation and Stability*, 97(8), 1345–1354.
- Prachayawarakorn, Jutarat, Sangnitdej, P., dan Boonpasith, P. (2010). "Properties of thermoplastic rice starch composites reinforced by cotton fiber or low-density polyethylene". *Carbohydrate Polymers*, 81(2), 425–433.
- Prachayawarakorn, Jutarat, Ruttanabus, P., dan Boonsom, P. (2011). "Effect of cotton fiber contents and lengths on properties of thermoplastic starch composites prepared from rice and waxy rice starches". *Journal of Polymers and the Environment*, 19(1), 274–282.
- Qiu, K., dan Netravali, A. (2017). "In Situ Produced Bacterial Cellulose Nanofiber-Based Hybrids for Nanocomposites". *Fibers*, 5(3), 31.
- Ramesh, M., Mitchell, J. R., Jumel, K., dan Harding, S. E. (1999). "Amylose content of rice starch". *Starch/Staerke*, 51(8–9), 311–313.
- Romero-Bastida, C. A., Bello-Perez, L. A., Velazquez, G., dan Alvarez-Ramirez, J. (2015). "Effect of the addition order and amylose content on mechanical, barrier and structural properties of films made with starch and montmorillonite". *Carbohydrate Polymers*, 127, 195–201.
- Ruiz, B., Chávez, A., Forero, A., García-Huante, Y., Romero, A., Sánchez, M., Rocha, D., Sánchez, B., Rodríguez-Sanoja, R., Sánchez, S., dan Langley, E. (2010). "Production of microbial secondary metabolites: regulation by the carbon source". *Critical Reviews in Microbiology*, 36(2), 146–167.
- Santos, R. M. D., Neto, W. P. F., Silvério, H. A., Martins, D. F., Dantas, N. O., dan Pasquini, D. (2013). "Cellulose nanocrystals from pineapple leaf, a new approach for the reuse of this agro-waste". *Industrial Crops and Products*,

50(Supplement C), 707–714.

- Sari, N. H., Wardana, I. N. G., Irawan, Y. S., dan Siswanto, E. (2017). "The Effect of Sodium Hydroxide on Chemical and Mechanical Properties of Corn Husk Fiber". *Oriental Journal of Chemistry*, 33(6), 3037–3042.
- Sari, F. K. (2014). Ekstraksi Pati Resisten dari Tiga Varietas Kentang Lokal yang Berpotensi sebagai Kandidat Prebiotik. *Berkala Ilmiah Pertanian*, 1(3), 38–42.
- Schmitt, H., Prashantha, K., Soulestin, J., Lacrampe, M. F., dan Krawczak, P. (2012). "Preparation and properties of novel melt-blended halloysite nanotubes/wheat starch nanocomposites". *Carbohydrate Polymers*, 89(3), 920–927.
- Segal, L., Creely, J. J., A.E. Martin, J., dan 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), Pp.786–794.
- Sena, A. R., Araujo, M. A. M., Souza, F. V. D., Mattoso, L. H. C., dan Marconcini, J. M. (2013). "Characterization and comparative evaluation of thermal , structural , chemical , mechanical and morphological properties of six pineapple leaf fiber varieties for use in composites". *Industrial Crops dan Products*, 43, 529–537.
- Shariatnia, Z., dan Fazli, M. (2015). "Mechanical properties and antibacterial activities of novel nanobiocomposite films of chitosan and starch". *Food Hydrocolloids*, 46, 112–124.
- Sheltami, R. M., Abdullah, I., Ahmad, I., Dufresne, A., dan Kargarzadeh, H. (2012). "Extraction of cellulose nanocrystals from mengkuang leaves (*Pandanus tectorius*)". *Carbohydrate Polymers*, 88(2), 772–779.
- Siqueira, G., Bras, J., Follain, N., Belbekhouche, S., Marais, S., dan Dufresne, A. (2013). "Thermal and mechanical properties of bio-nanocomposites reinforced by *Luffa cylindrica* cellulose nanocrystals". *Carbohydrate Polymers*, 91(2), 711–717.
- Sonia, A., dan Dasan, K. P. (2013). "Celluloses microfibrils (CMF)/ poly (ethylene-co-vinyl acetate) (EVA) composites for food packaging applications : A study based on barrier and biodegradation behavior". *Journal*

- of Food Engineering*, 118(1), 78–89.
- Statistik, B. P. (2017). Statistik tanaman buah-buahan dan sayuran tahunan Indonesia 2017. *Badan Pusat Statistik Republik Indonesia*.
- Sudharhsan, S., Senthilkumar, S., dan Ranjith, K. (2007). "Physical and nutritional factors affecting the production of amylase from species of *Bacillus* isolated from spoiled food waste". *African Journal of Biotechnology*, 6(4).
- Susilawati, S., Nurdjanah, S., dan Putri, S. (2012). Karakteristik sifat fisik dan kimia ubi kayu (*manihot esculenta*) berdasarkan lokasi penanaman dan umur panen berbeda. *Jurnal Teknologi dan Industri Hasil Pertanian*, 13(2), 59–72.
- Swinkels, J. J. M. (1985). "Composition and properties of commercial native starches". *Starch-Stärke*, 37(1), 1–5.
- Syafri, E., Wahono, S., Irwan, A., Asrofi, M., Sari, N. H., dan Fudholi, A. (2019). "Characterization and properties of cellulose microfibers from water hyacinth filled sago starch biocomposites". *International Journal of Biological Macromolecules*.
- Syafri, E., Kasim, A., Abral, H., Sudirman, Sulungbudi, G. T., Sanjay, M. R., dan Sari, N. H. (2018a). "Synthesis and characterization of cellulose nanofibers (CNF) ramie reinforced cassava starch hybrid composites". *International Journal of Biological Macromolecules*, 120, 578–586.
- Syafri, E., Kasim, A., Asben, A., Senthamarikannan, P., dan Sanjay, M. R. (2018b). "Studies on Ramie cellulose microfibrils reinforced cassava starch composite: influence of microfibrils loading composite: influence of microfibrils loading". *Journal of Natural Fibers*, 1–10.
- Teixeira, E. de M., Lotti, C., Corrêa, A. C., Teodoro, K. B. R., Marconcini, J. M., dan Mattoso, L. H. C. (2011). "Thermoplastic corn starch reinforced with cotton cellulose nanofibers". *Journal of Applied Polymer Science*, 120(4), 2428–2433.
- Teixeira, E. de M., Corrêa, A. C., Manzoli, A., de Lima Leite, F., de Oliveira, C. R., dan Mattoso, L. H. C. (2010). "Cellulose nanofibers from white and naturally colored cotton fibers". *Cellulose*, 17(3), 595–606.
- Thomas, M. G., Abraham, E., Jyotishkumar, P., Maria, H. J., Pothen, L. A., dan Thomas, S. (2015). "Nanocelluloses from jute fibers and their nanocomposites

- with natural rubber: Preparation and characterization". *International Journal of Biological Macromolecules*, 81, 768–777.
- Tomé, L. C., Fernandes, S. C. M., Perez, D. S., Sadocco, P., Silvestre, A. J. D., Neto, C. P., Marrucho, I. M., dan Freire, C. S. R. (2013). "The role of nanocellulose fibers, starch and chitosan on multipolysaccharide based films". *Cellulose*, 20(4), 1807–1818.
- Wang, N., Ding, E., dan Cheng, R. (2007). "Thermal degradation behaviors of spherical cellulose nanocrystals with sulfate groups". *Polymer*, 48(12), 3486–3493.
- Yang, H., Yan, R., Chen, H., Lee, D. H., dan Zheng, C. (2007). "Characteristics of hemicellulose, cellulose and lignin pyrolysis". *Fuel*, 86(12), 1781–1788.
- Yu, L., Dean, K., dan Li, L. (2006). "Polymer blends and composites from renewable resources". 31, 576–602.
- Zainuddin, S. Y. Z., Ahmad, I., Kargarzadeh, H., Abdullah, I., dan Dufresne, A. (2013). "Potential of using multiscale kenaf fibers as reinforcing filler in cassava starch-kenaf biocomposites". *Carbohydrate Polymers*, 92(2), 2299–2305.
- Zhao, J., Zhang, W., Zhang, X., Zhang, X., Lu, C., dan Deng, Y. (2013). "Extraction of cellulose nanofibrils from dry softwood pulp using high shear homogenization". *Carbohydrate Polymers*, 97(2), 695–702.

