

DAFTAR PUSTAKA

- Abdelbary, A. (2022). Wear Mechanisms and Methods of Wear Testing. In *Tribology and Characterization of Surface Coatings* (pp. 71–97).
<https://doi.org/https://doi.org/10.1002/9781119818878.ch4>
- Abdul Khalil, H. P. S., Davoudpour, Y., Saurabh, C. K., Hossain, M. S., Adnan, A. S., Dungani, R., Paridah, M. T., Mohamed, Z. I. S., Fazita, M. R. N., Syakir, M. I., & Haafiz, M. K. M. (2016). A review on nanocellulosic fibres as new material for sustainable packaging: Process and applications. *Renewable and Sustainable Energy Reviews*, 64, 823–836.
<https://doi.org/10.1016/j.rser.2016.06.072>
- Aboudi, J., Arnold, S., & Bednarczyk, B. (2013). Micromechanics of Composite Materials. In *Micromechanics of Composite Materials*.
<https://doi.org/10.1016/C2011-0-05224-9>
- Ahmad, N. D., Kusmono, Wildan, M. W., & Herianto. (2023). Preparation and properties of cellulose nanocrystals-reinforced Poly (lactic acid) composite filaments for 3D printing applications. *Results in Engineering*, 17(September 2022), 100842. <https://doi.org/10.1016/j.rineng.2022.100842>
- Akpan, E. I., Shen, X., Wetzel, B., & Friedrich, K. (2018). Design and Synthesis of Polymer Nanocomposites. In *Polymer Composites with Functionalized Nanoparticles: Synthesis, Properties, and Applications*. Elsevier Inc.
<https://doi.org/10.1016/B978-0-12-814064-2.00002-0>
- Aldabib, J. M., & Ishak, Z. A. M. (2020). Effect of hydroxyapatite filler concentration on mechanical properties of poly (methyl methacrylate) denture base. *SN Applied Sciences*, 2(4). <https://doi.org/10.1007/s42452-020-2546-1>
- Ali, F., Kalva, S. N., Mroue, K. H., Keyan, K. S., Tong, Y., Khan, O. M., & Koç, M. (2023). Degradation assessment of Mg-Incorporated 3D printed PLA scaffolds for biomedical applications. *Bioprinting*, 35(July), e00302.

<https://doi.org/10.1016/j.bprint.2023.e00302>

Amir, S. M. M., Sultan, M. T. H., Jawaidd, M., Ariffin, A. H., Mohd, S., Salleh, K. A. M., Ishak, M. R., & Md Shah, A. U. (2018). Nondestructive testing method for Kevlar and natural fiber and their hybrid composites. *Durability and Life Prediction in Biocomposites, Fibre-Reinforced Composites and Hybrid Composites*, 367–388. <https://doi.org/10.1016/B978-0-08-102290-0.00016-7>

Antonini, A., Liberale, C., & Fellin, T. (2014). Fluorescent layers for characterization of sectioning microscopy with coverslip-uncorrected and water immersion objectives. *Optics Express*, 22(12), 14293. <https://doi.org/10.1364/oe.22.014293>

Asadollahzadeh, M., Mahboubi, A., Taherzadeh, M. J., Åkesson, D., & Lennartsson, P. R. (2022). Application of Fungal Biomass for the Development of New Polylactic Acid-Based Biocomposites. *Polymers*, 14(9). <https://doi.org/10.3390/polym14091738>

Barbosa, R. F. S., Souza, A. G., Ferreira, F. F., & Rosa, D. S. (2019). Isolation and acetylation of cellulose nanostructures with a homogeneous system. *Carbohydrate Polymers*, 218(February), 208–217. <https://doi.org/10.1016/j.carbpol.2019.04.072>

Barclay, C. W., Spence, D., & Laird, W. R. E. (2005). Intra-oral temperatures during function. *Journal of Oral Rehabilitation*, 32(12), 886–894. <https://doi.org/10.1111/j.1365-2842.2005.01509.x>

Bennett, C., Sojithamporn, P., Thanakulwattana, W., Wattanuchariya, W., Leksakul, K., Nakkiew, W., Jantanasakulwong, K., Rachtanapun, P., Suhr, J., & Sawangrat, C. (2022). Optimization of 3D Printing Technology for Fabrication of Dental Crown Prototype Using Plastic Powder and Zirconia Materials. *Materials*, 15(23). <https://doi.org/10.3390/ma15238618>

Bijelic-Donova, J., Garoushi, S., Vallittu, P. K., & Lassila, L. V. J. (2016).

- Mechanical properties, fracture resistance, and fatigue limits of short fiber reinforced dental composite resin. *Journal of Prosthetic Dentistry*, 115(1), 95–102. <https://doi.org/10.1016/j.prosdent.2015.07.012>
- C Dathan, P., Nair, K. C., S Kumar, A., & AR, L. (2023). Flexural Strength is a Critical Property of Dental Materials-An Overview. *Acta Scientific Dental Scienecs*, 7(7), 99–103. <https://doi.org/10.31080/asds.2023.07.1667>
- Carpenter, A. W., De Lannoy, C. F., & Wiesner, M. R. (2015). Cellulose nanomaterials in water treatment technologies. *Environmental Science and Technology*, 49(9), 5277–5287. <https://doi.org/10.1021/es506351r>
- Chakraborty, B. C., & Ratna, D. (2020). Experimental techniques and instruments for vibration damping. In *Polymers for Vibration Damping Applications* (Issue m). <https://doi.org/10.1016/b978-0-12-819252-8.00006-9>
- Chandana, A., Mallick, S. P., Dikshit, P. K., Singh, B. N., & Sahi, A. K. (2022). Recent Developments in Bacterial Nanocellulose Production and its Biomedical Applications. *Journal of Polymers and the Environment*, 30(10), 4040–4067. <https://doi.org/10.1007/s10924-022-02507-0>
- Christensen, A. M., Passalacqua, N. V., & Bartelink, E. J. (2019). Human osteology and odontology. In *Forensic Anthropology*. <https://doi.org/10.1016/b978-0-12-815734-3.00002-6>
- Curson, M. E. J., & Duggal, M. S. (2003). DENTAL DISEASE | Structure of Teeth. *Encyclopedia of Food Sciences and Nutrition*, 1743–1746. <https://doi.org/10.1016/b0-12-227055-x/00324-2>
- DeStefano, V., Khan, S., & Tabada, A. (2020). Applications of PLA in modern medicine. *Engineered Regeneration*, 1(August), 76–87. <https://doi.org/10.1016/j.engreg.2020.08.002>
- Duan, B., Ren, Y., Xu, Y., Chen, W., Ye, Q., Huang, Y., Zhu, J., & Dai, S. (2017).

Identification and characterization of a new intermediate to obtain high quality perovskite films with hydrogen halides as additives. *Inorganic Chemistry Frontiers*, 4(3), 473–480. <https://doi.org/10.1039/c6qi00492j>

Dutta, K., Saikia, A., Saikia, B. K., & Singh, A. (2023). Functionalization and Thereafter Grafting with Lactic Acid to Synthesize Lignin-poly(lactic Acid) Copolymer for Thin Film Preparation. *Journal of Polymers and the Environment*, 31(8), 3393–3403. <https://doi.org/10.1007/s10924-023-02825-x>

Fisher, T., Almeida, J. H. S., Falzon, B. G., & Kazancı, Z. (2023). Tension and Compression Properties of 3D-Printed Composites: Print Orientation and Strain Rate Effects. *Polymers*, 15(7), 1–15. <https://doi.org/10.3390/polym15071708>

Gauss, C., & Pickering, K. L. (2023). A new method for producing poly(lactic acid) biocomposites for 3D printing with improved tensile and thermo-mechanical performance using grafted nanofibrillated cellulose. *Additive Manufacturing*, 61(November 2022), 103346. <https://doi.org/10.1016/j.addma.2022.103346>

Ghaemi, F., Abdullah, L. C., Kargarzadeh, H., Abdi, M. M., Azli, N. F. W. M., & Abbasian, M. (2018). Comparative study of the electrochemical, biomedical, and thermal properties of natural and synthetic nanomaterials. *Nanoscale Research Letters*, 13(1). <https://doi.org/10.1186/s11671-018-2508-3>

Ghasemlou, M., Daver, F., Ivanova, E. P., Habibi, Y., & Adhikari, B. (2021). Surface modifications of nanocellulose: From synthesis to high-performance nanocomposites. *Progress in Polymer Science*, 119, 101418. <https://doi.org/10.1016/j.progpolymsci.2021.101418>

Ghodke, S. A., Maheshwari, U., Gupta, S., Sonawane, S. H., & Bhanvase, B. A. (2021). Nanomaterials for adsorption of pollutants and heavy metals: Introduction, mechanism, and challenges. In *Handbook of Nanomaterials for Wastewater Treatment: Fundamentals and Scale up Issues*. Elsevier Inc.

<https://doi.org/10.1016/B978-0-12-821496-1.00032-5>

Gigi, M. K. (2023). *Properties of nanocellulose and zirconia alumina on polymethylmethacrylate dental composite*. 30(158), 30–35.
<https://doi.org/10.20473/j.djmkkg.v56.i1.p30>

Givan, D. A. (2014). Precious metal alloys for dental applications. In *Precious Metals for Biomedical Applications*. Woodhead Publishing Limited.
<https://doi.org/10.1533/9780857099051.2.109>

Godec, D., Pilipović, A., Breški, T., Ureña, J., Jordá, O., Martínez, M., Gonzalez-Gutierrez, J., Schuschnigg, S., Blasco, J. R., & Portolés, L. (2022). *Introduction to Additive Manufacturing BT - A Guide to Additive Manufacturing* (D. Godec, J. Gonzalez-Gutierrez, A. Nordin, E. Pei, & J. Ureña Alcázar (eds.); pp. 1–44). Springer International Publishing.
https://doi.org/10.1007/978-3-031-05863-9_1

Graninger, G., Falzon, B. G., & Kumar, S. (2022). Introduction to Polylactic Acid (PLA) Composites : State of the Art, Opportunities, New Challenges, and Future Outlook. *Polylactic Acid-Based Nanocellulose and Cellulose Composites*, 1–28. <https://doi.org/10.1201/9781003160458-1>

Gregor-Svetec, D. (2022). Chapter 14 - Polymers in printing filaments. In J. B. T.-P. for 3D P. Izdebska-Podsiadły (Ed.), *Plastics Design Library* (pp. 155–269). William Andrew Publishing. <https://doi.org/https://doi.org/10.1016/B978-0-12-818311-3.00002-1>

Gregor-Svetec, D., Leskovšek, M., Leskovar, B., Stanković Elesini, U., & Vrabič-Brodnjak, U. (2021). Analysis of pla composite filaments reinforced with lignin and polymerised-lignin-treated nfc. *Polymers*, 13(13).
<https://doi.org/10.3390/polym13132174>

Gumustas, M., Sengel-Turk, C. T., Gumustas, A., Ozkan, S. A., & Uslu, B. (2017). Effect of Polymer-Based Nanoparticles on the Assay of Antimicrobial Drug

Delivery Systems. In *Multifunctional Systems for Combined Delivery, Biosensing and Diagnostics*. Elsevier Inc. <https://doi.org/10.1016/B978-0-323-52725-5.00005-8>

Hasnain, M. S., & Nayak, A. K. (2018). Nanocomposites for improved orthopedic and bone tissue engineering applications. In *Applications of Nanocomposite Materials in Orthopedics*. Elsevier Inc. <https://doi.org/10.1016/B978-0-12-813740-6.00008-9>

Hassan, M. L., Abou-Elesoud, W. S., Safwat, E. M., Hassan, E. A., Fadel, S. M., & Labeeb, A. M. (2022). Effect of cellulose nanocrystals on rheology, liquid crystal, and delivery behavior of metronidazole poloxamer-based in-situ dental medication. *Cellulose*, 29(18), 9511–9529. <https://doi.org/10.1007/s10570-022-04864-4>

Hata, K., Ikeda, H., Nagamatsu, Y., Masaki, C., Hosokawa, R., & Shimizu, H. (2022). Dental Poly(methyl methacrylate)-Based Resin Containing a Nanoporous Silica Filler. *Journal of Functional Biomaterials*, 13(1). <https://doi.org/10.3390/jfb13010032>

Heinze, T. (2016). *Cellulose: Structure and Properties BT - Cellulose Chemistry and Properties: Fibers, Nanocelluloses and Advanced Materials* (O. J. Rojas (ed.); pp. 1–52). Springer International Publishing. https://doi.org/10.1007/12_2015_319

Holtzaple, M. T. (2003). Encyclopedia of Food Sciences and Nutrition. *Encyclopedia of Food Sciences and Nutrition*, 998–1007.

Hossain, N., Islam, M. A., Chowdhury, M. A., & Alam, A. (2022). Advances of nanoparticles employment in dental implant applications. *Applied Surface Science Advances*, 12(November), 100341. <https://doi.org/10.1016/j.apsadv.2022.100341>

Huang, J., Ma, X., Yang, G., & Alain, D. (2019). Introduction to nanocellulose.

Nanocellulose: From Fundamentals to Advanced Materials, Mcc, 1–20.
<https://doi.org/10.1002/9783527807437.ch1>

Jagadeesh, P., Puttegowda, M., Rangappa, S. M., Alexey, K., Gorbatyuk, S., Khan, A., Doddamani, M., & Siengchin, S. (2022). A comprehensive review on 3D printing advancements in polymer composites: technologies, materials, and applications. In *International Journal of Advanced Manufacturing Technology* (Vol. 121, Issues 1–2). Springer London. <https://doi.org/10.1007/s00170-022-09406-7>

Jatisukanto, G., Malau, V., Iman, M. N., Iswanto, T. P. (2013). Characteristic of AlN Layer Deposited by d.c. Magnetron Sputtering on AISI 410 Steel. *International Journal of Engineering & Technology IJET-IJENS* 13, 02, 129–133.

Jeevanandam, J., Ling, J. K. U., Tiong, M., Barhoum, A., Chan, Y. S., Acquah, C., & Danquah, M. K. (2022). *Nanocelluloses: Sources, Types, Unique Properties, Market, and Regulations BT - Handbook of Nanocelluloses: Classification, Properties, Fabrication, and Emerging Applications* (A. Barhoum (ed.); pp. 3–34). Springer International Publishing. https://doi.org/10.1007/978-3-030-89621-8_4

Jiang, G., Yang, T., Xu, J., Tao, D., Luo, C., Wang, C., Dong, Q., & Wang, Y. (2020). Investigation into hydroxypropyl-methylcellulose-reinforced polylactide composites for fused deposition modelling. *Industrial Crops and Products*, 146(July 2019), 112174. <https://doi.org/10.1016/j.indcrop.2020.112174>

Jing, X., Zhipeng, Y., Kaiyong, L., Junjie, L., Xinyuan, H., Juan, Z., & Yujie, F. (2022). Effect of Age on Mechanical Properties of Human Tooth Enamel. *Frontiers in Materials*, 9(April), 1–9. <https://doi.org/10.3389/fmats.2022.888638>

- Kamboj, G., Gaff, M., Smardzewski, J., Haviarová, E., Hui, D., Rousek, R., Das, S., Rezaei, F., & Sethy, A. K. (2022). Comparative study on the properties of cellulose nanofiber (CNF) and cellulose nanocrystals (CNC) reinforced 1C-PUR adhesive bonded wooden joints. *Construction and Building Materials*, 344(June). <https://doi.org/10.1016/j.conbuildmat.2022.128262>
- Kögel-Knabner, I., & Amelung, W. (2013). Dynamics, Chemistry, and Preservation of Organic Matter in Soils. In *Treatise on Geochemistry: Second Edition* (Vol. 12). <https://doi.org/10.1016/B978-0-08-095975-7.01012-3>
- Krishna Alla, R., Ginjupalli, K., Upadhya, N., Shammash, M., Krishna Ravi, R., & Sekhar, R. (2011). Surface roughness of implants: A review. *Trends in Biomaterials and Artificial Organs*, 25(3), 112–118.
- Kristiawan, R. B., Imaduddin, F., Ariawan, D., Ubaidillah, & Arifin, Z. (2021). A review on the fused deposition modeling (FDM) 3D printing: Filament processing, materials, and printing parameters. *Open Engineering*, 11(1), 639–649. <https://doi.org/10.1515/eng-2021-0063>
- Kusmono, & Wiratma, O. E. R. (2021). Fabrication and Characterization of PLA/Nanocrystalline Cellulose Nanocomposite Filaments for 3D Printing Application. *IOP Conference Series: Materials Science and Engineering*, 1096(1), 012055. <https://doi.org/10.1088/1757-899x/1096/1/012055>
- Kwon, S. B., Kim, J. D., & Lee, J. M. (2021). A void growth- and coalescence-dependent anisotropic damage model for polymeric foams. *Continuum Mechanics and Thermodynamics*, 33(2), 545–561. <https://doi.org/10.1007/s00161-020-00926-9>
- Lee, D. H., & Cho, N. G. (2012). Assessment of surface profile data acquired by a stylus profilometer. *Measurement Science and Technology*, 23(10). <https://doi.org/10.1088/0957-0233/23/10/105601>
- Lee, J. H., Park, S. H., & Kim, S. H. (2020). Surface alkylation of cellulose

nanocrystals to enhance their compatibility with polylactide. *Polymers*, 12(1), 1–16. <https://doi.org/10.3390/polym12010178>

Li, L., Chen, Y., Yu, T., Wang, N., Wang, C., & Wang, H. (2019). Preparation of polylactic acid/TEMPO-oxidized bacterial cellulose nanocomposites for 3D printing via Pickering emulsion approach. *Composites Communications*, 16(September), 162–167. <https://doi.org/10.1016/j.coco.2019.10.004>

Mali, P., & Sherje, A. P. (2022). Cellulose nanocrystals: Fundamentals and biomedical applications. *Carbohydrate Polymers*, 275(August 2021), 118668. <https://doi.org/10.1016/j.carbpol.2021.118668>

Mandala, R., Bannoth, A. P., Akella, S., Rangari, V. K., & Kodali, D. (2022). A short review on fused deposition modeling 3D printing of bio-based polymer nanocomposites. In *Journal of Applied Polymer Science* (Vol. 139, Issue 14). John Wiley and Sons Inc. <https://doi.org/10.1002/app.51904>

Mehzabeen, K. R., Mahtaba, K. R., Boughton, P. C., & Ruys, A. J. (2014). *A review on wear simulation tests of biomaterials*. 38, 13–20.

Mustafa, S. N. I. S., Man, S. H. C., Hassan, A., Baharulrazi, N., & Mohamad, Z. (2021). Mechanical and Thermal Properties of Polylactic Acid/Liquid Epoxidized Natural Rubber/Graphene Oxide Composites. *Chemical Engineering Transactions*, 89(November), 439–444. <https://doi.org/10.3303/CET2189074>

Nagarajan, K. J., Ramanujam, N. R., Sanjay, M. R., Siengchin, S., Surya Rajan, B., Sathick Basha, K., Madhu, P., & Raghav, G. R. (2021). A comprehensive review on cellulose nanocrystals and cellulose nanofibers: Pretreatment, preparation, and characterization. In *Polymer Composites* (Vol. 42, Issue 4). <https://doi.org/10.1002/pc.25929>

Narkis, M., Vaxman, A., Kenig, S., & Siegmman, A. (1989). Quantitative Measurement of Fiber Orientation and Fracture, Void and Weld-Lines in Short

Fiber Reinforced Thermoplastic Composites. *Journal of Thermoplastic Composite Materials*, 2(4), 307–318.
<https://doi.org/10.1177/089270578900200405>

Nasrazadani, S., & Hassani, S. (2015). Modern analytical techniques in failure analysis of aerospace, chemical, and oil and gas industries. In *Handbook of Materials Failure Analysis with Case Studies from the Oil and Gas Industry*. Elsevier Ltd. <https://doi.org/10.1016/B978-0-08-100117-2.00010-8>

Nasrin, R., Biswas, S., Rashid, T. U., Afrin, S., Jahan, R. A., Haque, P., & Rahman, M. M. (2017). Preparation of Chitin-PLA laminated composite for implantable application. *Bioactive Materials*, 2(4), 199–207.
<https://doi.org/10.1016/j.bioactmat.2017.09.003>

Nechyporchuk, O., Belgacem, M. N., & Bras, J. (2016). Production of cellulose nanofibrils: A review of recent advances. *Industrial Crops and Products*, 93, 2–25. <https://doi.org/10.1016/j.indcrop.2016.02.016>

Nibur, K. A., & Somerday, B. P. (2012). Fracture and fatigue test methods in hydrogen gas. *Gaseous Hydrogen Embrittlement of Materials in Energy Technologies: The Problem, Its Characterisation and Effects on Particular Alloy Classes*, 195–236. <https://doi.org/10.1533/9780857093899.2.195>

Nikam, D., & Milani, A. S. (2022). Effect of fiber orientation on the stresses generated in dental crowns made of glass fiber composites. *Composite Structures*, 279(October 2021), 114790.
<https://doi.org/10.1016/j.compstruct.2021.114790>

Panchal, M., Khare, S., Khamkar, P., & Suresh Bhole, K. (2022). Dental implants: A review of types, design analysis, materials, additive manufacturing methods, and future scope. *Materials Today: Proceedings*, 68, 1860–1867.
<https://doi.org/10.1016/j.matpr.2022.08.049>

Park, S. J., & Seo, M. K. (2011). Composite Characterization. In *Interface Science*

and Technology (Vol. 18). <https://doi.org/10.1016/B978-0-12-375049-5.00008-6>

Punia, H., Tokas, J., Bhadu, S., Rani, A., Sangwan, S., Kamboj, A., Yashveer, S., & Baloda, S. (2022). *Nanocellulose as Reinforcement Materials for Polymer Matrix Composites BT - Handbook of Nanocelluloses: Classification, Properties, Fabrication, and Emerging Applications* (A. Barhoum (ed.); pp. 407–440). Springer International Publishing. https://doi.org/10.1007/978-3-030-89621-8_25

Rahimi Kord Sofla, M., Batchelor, W., Kosinkova, J., Pepper, R., Brown, R., & Rainey, T. (2019). Cellulose nanofibres from bagasse using a high speed blender and acetylation as a pretreatment. *Cellulose*, 26(8), 4799–4814. <https://doi.org/10.1007/s10570-019-02441-w>

Rahimi Kord Sofla, M., Brown, R. J., Tsuzuki, T., & Rainey, T. J. (2016). A comparison of cellulose nanocrystals and cellulose nanofibres extracted from bagasse using acid and ball milling methods. *Advances in Natural Sciences: Nanoscience and Nanotechnology*, 7(3). <https://doi.org/10.1088/2043-6262/7/3/035004>

Rahman, M. R., Hui, J. L. C., & Hamdan, S. Bin. (2018). Introduction and reinforcing potential of silica and various clay dispersed nanocomposites. In *Silica and Clay Dispersed Polymer Nanocomposites: Preparation, Properties and Applications*. Elsevier Ltd. <https://doi.org/10.1016/B978-0-08-102129-3.00001-4>

Raju, T. S. (2019). Acetylation of Proteins. *Co²⁺ and Post-Translational Modifications of Therapeutic Antibodies and Proteins*, 17–29. <https://doi.org/10.1002/9781119053354.ch2>

Rashid, H. (2014). The effect of surface roughness on ceramics used in dentistry: A review of literature. *European Journal of Dentistry*, 8(4), 571–579.

<https://doi.org/10.4103/1305-7456.143646>

Rong, X., & Keif, M. (2007). A study of PLA printability with flexography. *Proceedings of the Technical Association of the Graphic Arts, TAGA*, 605–613.

Rosli, N. A., Wan Ishak, W. H., & Ahmad, I. (2021). Eco-friendly high-density polyethylene/amorphous cellulose composites: Environmental and functional value. *Journal of Cleaner Production*, 290. <https://doi.org/10.1016/j.jclepro.2021.125886>

Ruz-Cruz, M. A., Herrera-Franco, P. J., Flores-Johnson, E. A., Moreno-Chulim, M. V., Galera-Manzano, L. M., & Valadez-González, A. (2022). Thermal and mechanical properties of PLA-based multiscale cellulosic biocomposites. *Journal of Materials Research and Technology*, 18, 485–495. <https://doi.org/10.1016/j.jmrt.2022.02.072>

Salas, C., Nypelö, T., Rodriguez-Abreu, C., Carrillo, C., & Rojas, O. J. (2014). Nanocellulose properties and applications in colloids and interfaces. *Current Opinion in Colloid and Interface Science*, 19(5), 383–396. <https://doi.org/10.1016/j.cocis.2014.10.003>

Sampurno, M. A. F., & Wildan, M. W. (2021). Experimental of diametral tensile strength, compressive strength and vickers hardness of hydroxyapatite/zirconia (HAp/ZrO₂) composites as a candidate of dental prostheses. *AIP Conference Proceedings*, 2338(November). <https://doi.org/10.1063/5.0068004>

Setyawan, E. Y., Djiwo, S., Praswanto, D. H., & Siagian, P. (2020). Effect of cocopeat and brass powder composition as a filler on wear resistance properties. *IOP Conference Series: Materials Science and Engineering*, 725(1). <https://doi.org/10.1088/1757-899X/725/1/012041>

Shahrubudin, N., Lee, T. C., & Ramlan, R. (2019). An overview on 3D printing

- technology: Technological, materials, and applications. *Procedia Manufacturing*, 35, 1286–1296. <https://doi.org/10.1016/j.promfg.2019.06.089>
- Shankaran, D. R. (2018). Cellulose Nanocrystals for Health Care Applications. In *Applications of Nanomaterials: Advances and Key Technologies*. Elsevier Ltd. <https://doi.org/10.1016/B978-0-08-101971-9.00015-6>
- Sharif, A., Mondal, S., & Hoque, M. E. (2019). Polylactic acid (PLA)-based nanocomposites: Processing and properties. *Bio-Based Polymers and Nanocomposites: Preparation, Processing, Properties & Performance*, May, 233–254. https://doi.org/10.1007/978-3-030-05825-8_11
- Shrivastava, A. (2018). Plastic Properties and Testing. In *Introduction to Plastics Engineering*. <https://doi.org/10.1016/b978-0-323-39500-7.00003-4>
- Siakeng, R., Jawaid, M., Ariffin, H., Sapuan, S. M., Asim, M., & Saba, N. (2019). Natural fiber reinforced polylactic acid composites: A review. *Polymer Composites*, 40(2), 446–463. <https://doi.org/10.1002/pc.24747>
- Signori, F., Coltelli, M. B., & Bronco, S. (2009). Thermal degradation of poly(lactic acid) (PLA) and poly(butylene adipate-co-terephthalate) (PBAT) and their blends upon melt processing. *Polymer Degradation and Stability*, 94(1), 74–82. <https://doi.org/10.1016/j.polyimdegradstab.2008.10.004>
- Silva, S. C. da, Simões, B. M., Yamashita, F., & Carvalho, F. A. de. (2022). Compatibilizers for biodegradable starch and poly (lactic acid) materials produced by thermoplastic injection. *Research, Society and Development*, 11(14), e476111436521. <https://doi.org/10.33448/rsd-v11i14.36521>
- Sin, L. T., Rahmat, A. R., & Rahman, W. A. W. A. (2013a). 2 - Synthesis and Production of Poly(lactic Acid). In L. T. Sin, A. R. Rahmat, & W. A. W. A. B. T.-P. A. Rahman (Eds.), *Plastics Design Library* (pp. 71–107). William Andrew Publishing. [https://doi.org/https://doi.org/10.1016/B978-1-4377-4459-0.00002-0](https://doi.org/10.1016/B978-1-4377-4459-0.00002-0)

- Sin, L. T., Rahmat, A. R., & Rahman, W. A. W. A. (2013b). 4 - Chemical Properties of Poly(lactic Acid). In L. T. Sin, A. R. Rahmat, & W. A. W. A. B. T.-P. A. Rahman (Eds.), *Plastics Design Library* (pp. 143–176). William Andrew Publishing. <https://doi.org/10.1016/B978-1-4377-4459-0.00004-4>
- Sodeyama, M. K., Ikeda, H., Nagamatsu, Y., Masaki, C., Hosokawa, R., & Shimizu, H. (2021). Printable PICN Composite Mechanically Compatible with Human Teeth. *Journal of Dental Research*, 100(13), 1475–1481. <https://doi.org/10.1177/00220345211012930>
- Song, K., Zhu, X., Zhu, W., & Li, X. (2019). Preparation and characterization of cellulose nanocrystal extracted from Calotropis procera biomass. *Bioresources and Bioprocessing*, 6(1). <https://doi.org/10.1186/s40643-019-0279-z>
- Sosiati, H., Rizky, A. M., Latief, A. L. M., Adi, R. K., & Hamdan, S. (2023). The mechanical and physical properties of microcrystalline cellulose (MCC)/sisal/PMMA hybrid composites for dental applications. *Materials Research Express*, 10(3). <https://doi.org/10.1088/2053-1591/acbb57>
- Suchanek, W., & Yoshimura, M. (1998). Processing and properties of hydroxyapatite-based biomaterials for use as hard tissue replacement implants. *Journal of Materials Research*, 13(1), 94–117. <https://doi.org/10.1557/JMR.1998.0015>
- Sukmawan, R., Kusmono, N., & Wildan, M. W. (2023). Optimizing Acetic Anhydride Amount for Improved Properties of Acetylated Cellulose Nanofibers from Sisal Fibers Using a High-Speed Blender. *ACS Omega*, 8(30), 27117–27126. <https://doi.org/10.1021/acsomega.3c02178>
- Teh, S. J., & Lai, C. W. (2019). Carbon nanotubes for dental implants. In *Applications of Nanocomposite Materials in Dentistry*. Elsevier Inc. <https://doi.org/10.1016/B978-0-12-813742-0.00005-5>

- Titus, D., James Jebaseelan Samuel, E., & Roopan, S. M. (2018). Nanoparticle characterization techniques. In *Green Synthesis, Characterization and Applications of Nanoparticles*. Elsevier Inc. <https://doi.org/10.1016/B978-0-08-102579-6.00012-5>
- Wang, L., Gardner, D. J., & Bousfield, D. W. (2018). Cellulose nanofibril-reinforced polypropylene composites for material extrusion: Rheological properties. *Polymer Engineering & Science*, 58(5), 793–801. <https://doi.org/https://doi.org/10.1002/pen.24615>
- Weng, Z., Wang, J., Senthil, T., & Wu, L. (2016). Mechanical and thermal properties of ABS/montmorillonite nanocomposites for fused deposition modeling 3D printing. *Materials and Design*, 102, 276–283. <https://doi.org/10.1016/j.matdes.2016.04.045>
- Wintermantel, E., Mayer, J., Goehring, T. N., & Aqida, S. N. (2016). Composites for Biomedical Applications. *Reference Module in Materials Science and Materials Engineering*, 1–6. <https://doi.org/10.1016/b978-0-12-803581-8.01735-5>
- Wubet, W. (2019). *Green Synthesis of CuO Nanoparticles for the Application of Dye Sensitized Solar* SCHOOL OF APPLIED NATURAL SCIENCE APPLIED CHEMISTRY PROGRAM (PHYSICAL CHEMISTRY) Seminar (Chem . 6755) ON : Green Synthesis of CuO Nanoparticles for the Application of Dy. July, 8–9.
- Xu, J., Wu, Z., Wu, Q., & Kuang, Y. (2020). Acetylated cellulose nanocrystals with high-crystallinity obtained by one-step reaction from the traditional acetylation of cellulose. *Carbohydrate Polymers*, 229(November 2019), 115553. <https://doi.org/10.1016/j.carbpol.2019.115553>
- Yadav, S., & Gangwar, S. (2021). Long-term solubility and sorption characteristics of novel dental restoratives. *International Journal of Engineering, Science and*

Technology, 13(1), 17–24. <https://doi.org/10.4314/ijest.v13i1.3s>

Yanikoglu, N. D., & Sakarya, R. E. (2020). Test methods used in the evaluation of the structure features of the restorative materials: A literature review. *Journal of Materials Research and Technology*, 9(5), 9720–9734. <https://doi.org/10.1016/j.jmrt.2020.06.049>

Zhang, X., & Liou, F. (2021). Chapter 1 - Introduction to additive manufacturing. In J. Pou, A. Riveiro, & J. P. B. T.-A. M. Davim (Eds.), *Handbooks in Advanced Manufacturing* (pp. 1–31). Elsevier. <https://doi.org/https://doi.org/10.1016/B978-0-12-818411-0.00009-4>

Zhao, M., Geng, Y., Fan, S., Yao, X., Zhu, M., & Zhang, Y. (2021). 3D-printed strong hybrid materials with low shrinkage for dental restoration. *Composites Science and Technology*, 213(June), 108902. <https://doi.org/10.1016/j.compscitech.2021.108902>

Zhao, M., Yang, D., Fan, S., Yao, X., Wang, J., Zhu, M., & Zhang, Y. (2022). 3D-Printed Strong Dental Crown with Multi-Scale Ordered Architecture, High-Precision, and Bioactivity. *Advanced Science*, 9(5), 1–13. <https://doi.org/10.1002/advs.202104001>

Zhou, R. J., & Burkhart, T. (2010). Mechanical and optical properties of nanosilica-filled polycarbonate composites. *Journal of Thermoplastic Composite Materials*, 23(4), 487–500. <https://doi.org/10.1177/0892705709353720>