

References

- Abraham, B. M., Saleh, B. K., & Zelelew, D. Z. (2022). Effect of post-harvest handling and ripening methods on quality and shelf-life of banana. *American Journal of Plant Sciences*, 13(02), 175–192. <https://doi.org/10.4236/ajps.2022.132011>
- Adi, D. D., Oduro, I. N., & Tortoe, C. (2019a). Physicochemical changes in plantain during normal storage ripening. *Scientific African*, 6. <https://doi.org/10.1016/j.sciaf.2019.e00164>
- Adi, D. D., Oduro, I. N., & Tortoe, C. (2019b). Physicochemical changes in plantain during normal storage ripening. *Scientific African*, 6. <https://doi.org/10.1016/j.sciaf.2019.e00164>
- Ahmad, B. A., Zakariyya, U. A., Abubakar, M., Sani, M. M., & Ahmad, M. A. (2020). Pharmacological activities of banana. *Banana Nutrition - Function and Processing Kinetics*. <https://doi.org/10.5772/intechopen.83299>
- Akter, B., Talukder, N., Bari, L., & Mohd Salleh, R. (2019). Evaluation of ripening period, shelf-life, and physiological properties of Sobri (*Musa Cavendish*) and Sagor (*Musa Oranta*) bananas triggered by ethephon and calcium carbide. *Food Research*, 4(2), 407–412. [https://doi.org/10.26656/fr.2017.4\(2\).290](https://doi.org/10.26656/fr.2017.4(2).290)
- Al-Dairi, M., Pathare, P. B., Al-Yahyai, R., Jayasuriya, H., & Al-Attabi, Z. (2023). Postharvest quality, technologies, and strategies to reduce losses along the supply chain of Banana: A Review. *Trends in Food Science & Technology*, 134, 177–191. <https://doi.org/10.1016/j.tifs.2023.03.003>
- Algarni, E. H., Elnaggar, I. A., Abd El-wahed, A. E., Taha, I. M., AL-Jumayi, H. A., Elhamamsy, S. M., Mahmoud, S. F., & Fahmy, A. (2022). Effect of chitosan nanoparticles as edible coating on the storability and quality of Apricot Fruits. *Polymers*, 14(11), 2227. <https://doi.org/10.3390/polym14112227>
- Alonso-Salinas, R., Lopez-Miranda, S., Perez-Lopez, A. J., & Acosta-Motos, J. R. (2024). Strategies to delay ethylene-mediated ripening in climacteric fruits: Implications for shelf life extension and Postharvest Quality. *Horticulturae*, 10(8), 840. <https://doi.org/10.3390/horticulturae10080840>

- Aloui, H., & Khwaldia, K. (2016). Natural antimicrobial edible coatings for microbial safety and Food Quality Enhancement. *Comprehensive Reviews in Food Science and Food Safety*, 15(6), 1080–1103. <https://doi.org/10.1111/1541-4337.12226>
- Anean, H. A., Mallasiy, L. O., Bader, D. M., & Shaat, H. A. (2023). Nano edible coatings and films combined with zinc oxide and pomegranate peel active phenol compounds has been to extend the shelf life of minimally processed pomegranates. *Materials*, 16(4), 1569. <https://doi.org/10.3390/ma16041569>
- Anjum, D. H. (2016). Characterization of nanomaterials with transmission electron microscopy. *IOP Conference Series: Materials Science and Engineering*, 146, 012001. <https://doi.org/10.1088/1757-899x/146/1/012001>
- Aquino, C. F., Salomo, L. C., Cecon, P. R., Siqueira, D. L., & Ribeiro, S. M. (2017). Physical, chemical and morphological characteristics of banana cultivars depending on maturation stages. *Revista Caatinga*, 30(1), 87–96. <https://doi.org/10.1590/1983-21252017v30n110rc>
- Arena, M. E., Povilonis, I. S., Borroni, V., Constenla, D., & Radice, S. (2021). Changes in physicochemical properties at different development stages of *Hexachlamys edulis* fruit, an underutilized South American species. *Heliyon*, 7(11). <https://doi.org/10.1016/j.heliyon.2021.e08323>
- Arista, N. I. D., & Ardiningtyas, S. A. (2024). Comparative analysis of ethylene-induced ripening in climacteric and non-climacteric fruits: implications for post-harvest management. *Social Agriculture, Food System, and Environmental Sustainability*, 1(2), 90-100.
- Barhoum, A., & García-Betancourt, M. L. (2018). Physicochemical characterization of nanomaterials: Size, morphology, optical, magnetic, and electrical properties. *Emerging Applications of Nanoparticles and Architecture Nanostructures*, 279–304. <https://doi.org/10.1016/b978-0-323-51254-1.00010-5>

- Barik, M., BhagyaRaj, G. V. S., Dash, K. K., & Shams, R. (2024). A thorough evaluation of chitosan-based packaging film and coating for food product shelf-life extension. *Journal of Agriculture and Food Research*, 16, 101164. <https://doi.org/10.1016/j.jafr.2024.101164>
- Bhagwat, V. R. (2019). Safety of water used in food production. *Food Safety and Human Health*, 219–247. <https://doi.org/10.1016/b978-0-12-816333-7.00009-6>
- Biswas, R., Alam, M., Sarkar, A., Haque, M. I., Hasan, Md. M., & Hoque, M. (2022). Application of nanotechnology in food: Processing, preservation, packaging and Safety Assessment. *Heliyon*, 8(11). <https://doi.org/10.1016/j.heliyon.2022.e11795>
- Cai, R., Cheng, Q., Zhao, J., Zhou, P., Wu, Z., Ma, X., Hu, Y., Wang, H., Lan, X., Zhou, J., & Tao, G. (2025). Sericin-assisted green synthesis of gold nanoparticles as broad-spectrum antimicrobial and biofilm-disrupting agents for therapy of bacterial infection. *International Journal of Nanomedicine*, Volume 20, 3559–3574. <https://doi.org/10.2147/ijn.s494616>
- Campos, H., & Caligari, P. D. S. (2017). *Genetic Improvement of Tropical Crops*. <https://doi.org/10.1007/978-3-319-59819-2>
- Campuzano, A., Rosell, C. M., & Cornejo, F. (2018). Physicochemical and nutritional characteristics of banana flour during ripening. *Food Chemistry*, 256, 11–17. <https://doi.org/10.1016/j.foodchem.2018.02.113>
- Chan, M. (2018, October 6). The coat on fruits – wax? https://www.cfs.gov.hk/english/multimedia/multimedia_pub/multimedia_pub_fsf_120_02.html#:~:text=Purpose%20and%20Process%20of%20Fruit%20Waxing&text=Waxing%20can%20seal%20small%20cracks,growth%20and%20development%20of%20pathogens.
- Chimvaree, C., Wongs-Aree, C., Supapvanich, S., Charoenrat, T., Tepsorn, R., & Boonyaritthongchai, P. (2019). Effect of sericin coating on reducing browning of fresh-cut mango cv.'Nam Dok Mai No. 4'. *Agriculture and Natural Resources*, 53(5), 521-526.

- Chotikakham, S., Panya, A., & Saengnil, K. (2022). Methyl salicylate retards mitochondria-mediated programmed cell death in Peel spotting of 'suecree' banana during storage. *Postharvest Biology and Technology*, 194, 112099. <https://doi.org/10.1016/j.postharvbio.2022.112099>
- Choudhury, N., Nickhil, C., & Deka, S. C. (2023). Comprehensive review on the nutritional and therapeutic value of banana by-products and their applications in food and non-food sectors. *Food Bioscience*, 56, 103416. <https://doi.org/10.1016/j.fbio.2023.103416>
- Chouhan, D., & Mandal, B. B. (2020). Silk biomaterials in wound healing and skin regeneration therapeutics: From bench to bedside. *Acta Biomaterialia*, 103, 24–51. <https://doi.org/10.1016/j.actbio.2019.11.050>
- Dai, L., Wang, X., Zhang, J., & Li, C. (2025). Application of chitosan and its derivatives in postharvest coating preservation of fruits. *Foods*, 14(8), 1318. <https://doi.org/10.3390/foods14081318>
- Dong, C., Hu, H., Hu, Y., & Xie, J. (2016). Metabolism of flavonoids in novel banana germplasm during Fruit Development. *Frontiers in Plant Science*, 7. <https://doi.org/10.3389/fpls.2016.01291>
- Duan, C., Meng, X., Meng, J., Khan, Md. I., Dai, L., Khan, A., An, X., Zhang, J., Huq, T., & Ni, Y. (2019). Chitosan as a preservative for fruits and vegetables: A review on chemistry and antimicrobial properties. *Journal of Bioresources and Bioproducts*, 4(1), 11–21. <https://doi.org/10.21967/jbb.v4i1.189>
- El-Naggar, N. E.-A., Shiha, A. M., Mahrous, H., & Mohammed, A. B. (2022). Green synthesis of chitosan nanoparticles, optimization, characterization and antibacterial efficacy against multi drug resistant biofilm-forming *Acinetobacter baumannii*. *Scientific Reports*, 12(1). <https://doi.org/10.1038/s41598-022-24303-5>
- Elahi, M., Ali, S., Tahir, H. M., Mushtaq, R., & Bhatti, M. F. (2020). Sericin and fibroin nanoparticles—natural product for cancer therapy: A comprehensive review. *International Journal of Polymeric Materials and Polymeric Biomaterials*, 70(4), 256–269. <https://doi.org/10.1080/00914037.2019.1706515>

- Eslami, Z., Elkoun, S., Robert, M., & Adjallé, K. (2023). A review of the effect of plasticizers on the physical and mechanical properties of alginate-based films. *Molecules*, 28(18), 6637. <https://doi.org/10.3390/molecules28186637>
- Esyanti, R. R., Zaskia, H., Amalia, A., & Nugrahapraja, dan H. (2019). Chitosan nanoparticle-based coating as post-harvest technology in banana. *Journal of Physics: Conference Series*, 1204, 012109. <https://doi.org/10.1088/1742-6596/1204/1/012109>
- Fan, Y., Li, J., Guo, Y., Xie, L., & Zhang, G. (2021a). Digital image colorimetry on smartphone for Chemical Analysis: A Review. *Measurement*, 171, 108829. <https://doi.org/10.1016/j.measurement.2020.108829>
- Fan, Y., Li, J., Guo, Y., Xie, L., & Zhang, G. (2021b). Digital image colorimetry on smartphone for Chemical Analysis: A Review. *Measurement*, 171, 108829. <https://doi.org/10.1016/j.measurement.2020.108829>
- Fu, X., Cheng, S., Liao, Y., Huang, B., Du, B., Zeng, W., Jiang, Y., Duan, X., & Yang, Z. (2018a). Comparative analysis of pigments in red and yellow banana fruit. *Food Chemistry*, 239, 1009–1018. <https://doi.org/10.1016/j.foodchem.2017.07.046>
- Fu, X., Cheng, S., Liao, Y., Huang, B., Du, B., Zeng, W., Jiang, Y., Duan, X., & Yang, Z. (2018b). Comparative analysis of pigments in red and yellow banana fruit. *Food Chemistry*, 239, 1009–1018. <https://doi.org/10.1016/j.foodchem.2017.07.046>
- Gokarneshan, N. (2023). “development of medical textiles from sericin coated polyester materials.” *Biomedical Journal of Scientific & Technical Research*, 53(1). <https://doi.org/10.26717/bjstr.2023.53.008348>
- Guarnieri, A., Triunfo, M., Scieuzo, C., Ianniciello, D., Tafi, E., Hahn, T., Zibek, S., Salvia, R., De Bonis, A., & Falabella, P. (2022). Antimicrobial properties of chitosan from different developmental stages of the bioconverter insect hermetia illucens. *Scientific Reports*, 12(1). <https://doi.org/10.1038/s41598-022-12150-3>

- Hamam, A. R. (2019). Technological, applications, and characteristics of edible films and coatings: A Review. *SN Applied Sciences*, 1(6). <https://doi.org/10.1007/s42452-019-0660-8>
- Harugade, A., Sherje, A. P., & Pethe, A. (2023). Chitosan: A review on properties, biological activities and recent progress in biomedical applications. *Reactive and Functional Polymers*, 191, 105634. <https://doi.org/10.1016/j.reactfunctpolym.2023.105634>
- He, H., Cai, R., Wang, Y., Tao, G., Guo, P., Zuo, H., Chen, L., Liu, X., Zhao, P., & Xia, Q. (2017). Preparation and characterization of silk sericin/PVA blend film with silver nanoparticles for potential antimicrobial application. *International Journal of Biological Macromolecules*, 104, 457–464. <https://doi.org/10.1016/j.ijbiomac.2017.06.009>
- Hejjaji, E. M. A., Smith, A. M., & Morris, G. A. (2018). Evaluation of the mucoadhesive properties of chitosan nanoparticles prepared using different chitosan to Tripolyphosphate (CS:TPP) ratios. *International Journal of Biological Macromolecules*, 120, 1610–1617. <https://doi.org/10.1016/j.ijbiomac.2018.09.185>
- Jaimun, R., & Sangsuwan, J. (2019). Efficacy of chitosan-coated paper incorporated with Vanillin and ethylene adsorbents on the control of Anthracnose and the quality of Nam Dok Mai Mango Fruit. *Packaging Technology and Science*, 32(8), 383–394. <https://doi.org/10.1002/pts.2446>
- Jaiturong, P., Laosirisathian, N., Sirithunyalug, B., Eitssayeam, S., Sirilun, S., Chaiyana, W., & Sirithunyalug, J. (2020). Physicochemical and prebiotic properties of resistant starch from Musa Sapientum Linn., ABB Group, CV. Kluai Namwa luang. *Heliyon*, 6(12). <https://doi.org/10.1016/j.heliyon.2020.e05789>
- Javed, R., Sajjad, A., Naz, S., Sajjad, H., & Ao, Q. (2022). Significance of capping agents of colloidal nanoparticles from the perspective of drug and Gene Delivery, bioimaging, and Biosensing: An insight. *International Journal of Molecular Sciences*, 23(18), 10521. <https://doi.org/10.3390/ijms231810521>
- Jia, H., Wu, C., Huang, M., & Zhu, Q. (2025). An intelligent fruit freshness monitoring system using hydrophobic indicator labels based on methylcellulose, K-Carrageenan, and sodium

- tripolyphosphate, combined with Deep Learning. *International Journal of Biological Macromolecules*, 291, 140001. <https://doi.org/10.1016/j.ijbiomac.2025.140001>
- Jongsri, P., Wangsomboondee, T., Rojsitthisak, P., & Seraypheap, K. (2016). Effect of molecular weights of chitosan coating on postharvest quality and physicochemical characteristics of Mango Fruit. *LWT*, 73, 28–36. <https://doi.org/10.1016/j.lwt.2016.05.038>
- Jovanović, G. D., Klaus, A. S., & Nikšić, M. P. (2016). Antimicrobial activity of chitosan coatings and films against *listeria monocytogenes* on black radish. *Revista Argentina de Microbiología*, 48(2), 128–136. <https://doi.org/10.1016/j.ram.2016.02.003>
- Kanoujia, J., Parashar, P., Singh, M., Tripathi, C. B., & Saraf, S. A. (2018). Genipin initiated crosslinked sericin/chitosan hydrogels: Accelerated wound healing in an animal model. *Der Pharmacia Lettre*, 10, 37-57.
- Kanyora, M. G., Kegode, T. M., Kurgat, J., Kibogo, H., Asudi, G., Tanga, C. M., Ayalew, W., Sevgan, S., & Ndungu, N. (2024). Evaluating antibacterial and antioxidant properties of sericin recovered from cocoons of *Bombyx Mori*, *gonometa postica* and *Samia Ricini* in Kenya. *PLOS ONE*, 19(12). <https://doi.org/10.1371/journal.pone.0316259>
- Khanal, B. P., Sangroula, B., Bhattarai, A., Almeida, G. K., & Knoche, M. (2022a). Pathways of postharvest water loss from Banana Fruit. *Postharvest Biology and Technology*, 191, 111979. <https://doi.org/10.1016/j.postharvbio.2022.111979>
- Khanal, B. P., Sangroula, B., Bhattarai, A., Almeida, G. K., & Knoche, M. (2022b). Pathways of postharvest water loss from Banana Fruit. *Postharvest Biology and Technology*, 191, 111979. <https://doi.org/10.1016/j.postharvbio.2022.111979>
- Kleih, A.-K., & Sparke, K. (2021). Visual marketing: The importance and consumer recognition of fruit brands in supermarket fruit displays. *Food Quality and Preference*, 93, 104263. <https://doi.org/10.1016/j.foodqual.2021.104263>

- Kunz, R. I., Brancalhão, R. M., Ribeiro, L. de, & Natali, M. R. (2016). Silkworm sericin: Properties and Biomedical Applications. *BioMed Research International*, 2016, 1–19. <https://doi.org/10.1155/2016/8175701>
- Kuyu, C. G., & Tola, Y. B. (2018). Assessment of banana fruit handling practices and associated fungal pathogens in Jimma Town Market, Southwest Ethiopia. *Food Science & Nutrition*, 6(3), 609–616. <https://doi.org/10.1002/fsn3.591>
- Leblanc, D., Gagné, M.-J., & Brassard, J. (2021). Effectiveness of water and sanitizer washing solutions for removing enteric viruses from blueberries. *Food Control*, 126, 108043. <https://doi.org/10.1016/j.foodcont.2021.108043>
- Li, X., Zhu, X., Wang, H., Lin, X., Lin, H., & Chen, W. (2018). Postharvest application of wax controls pineapple fruit ripening and improves fruit quality. *Postharvest Biology and Technology*, 136, 99–110. <https://doi.org/10.1016/j.postharvbio.2017.10.012>
- Lobo, M. G., & Rojas, F. J. (2020). Biology and postharvest physiology of banana. *Handbook of Banana Production, Postharvest Science, Processing Technology, and Nutrition*, 19–44. <https://doi.org/10.1002/9781119528265.ch2>
- Lufu, R., Ambaw, A., & Opara, U. L. (2024). Mechanisms and modelling approaches to weight loss in Fresh Fruit: A Review. *Technology in Horticulture*, 4(1), 0–0. <https://doi.org/10.48130/tihort-0024-0003>
- Ma, L., Liang, C., Cui, Y., Du, H., Liu, H., Zhu, L., Yu, Y., Lu, C., Benjakul, S., Brennan, C., & Brennan, M. A. (2022). Prediction of banana maturity based on the sweetness and color values of different segments during ripening. *Current Research in Food Science*, 5, 1808–1817. <https://doi.org/10.1016/j.crfs.2022.08.024>
- Ma, M., Liu, Y., Zhang, S., & Yuan, Y. (2024). Edible coating for fresh-cut fruit and vegetable preservation: Biomaterials, functional ingredients, and joint non-thermal technology. *Foods*, 13(23), 3937. <https://doi.org/10.3390/foods13233937>

- Maduwanthi, S. D., & Marapana, R. A. (2019a). Comparative study on aroma volatiles, organic acids, and sugars of Ambul Banana (*musa acuminata*, aab) treated with induced ripening agents. *Journal of Food Quality*, 2019, 1–9. <https://doi.org/10.1155/2019/7653154>
- Maduwanthi, S. D., & Marapana, R. A. (2019b). Smoking treatment in enhancing banana ripening and its effects on physical and biochemical attributes of Ambul banana (musa acuminata, aab). *Journal of Food and Agriculture*, 12(2), 23. <https://doi.org/10.4038/jfa.v12i2.5221>
- Mansourbahmani, S., Ghareyazie, B., Zarinnia, V., Kalatejari, S., & Mohammadi, R. S. (2017). Study on the efficiency of ethylene scavengers on the maintenance of postharvest quality of Tomato Fruit. *Journal of Food Measurement and Characterization*, 12(2), 691–701. <https://doi.org/10.1007/s11694-017-9682-3>
- Maringgal, B., Hashim, N., Mohamed Amin Tawakkal, I. S., & Muda Mohamed, M. T. (2020). Recent advance in edible coating and its effect on fresh/fresh-cut fruits quality. *Trends in Food Science & Technology*, 96, 253–267. <https://doi.org/10.1016/j.tifs.2019.12.024>
- Maseko, K. H., Regnier, T., Meiring, B., Wokadala, O. C., & Anyasi, T. A. (2024). Musa species variation, production, and the application of its processed flour: A Review. *Scientia Horticulturae*, 325, 112688. <https://doi.org/10.1016/j.scienta.2023.112688>
- Mathew, S. S., Maria, H. J., Allardyce, B. J., Rajkhowa, R., & Thomas, S. (2024). Waste to wealth: Exploring the versatile prospects of discarded silk sericin. *ACS Sustainable Chemistry & Engineering*, 12(3), 1165–1184. <https://doi.org/10.1021/acssuschemeng.3c04264>
- Mathias, M. G., Kaale, L. D., & Kibazohi, O. (2021). Physico-chemical properties of mechanically extracted banana juice at different ripening stages. *Tanzania Journal of Science*, 47(5), 1596–1605. <https://doi.org/10.4314/tjs.v47i5.10>
- Matloob, A., Ayub, H., Mohsin, M., Ambreen, S., Khan, F. A., Oranab, S., Rahim, M. A., Khalid, W., Nayik, G. A., Ramniwas, S., & Ercisli, S. (2023). A review on edible coatings and films: Advances,

- composition, production methods, and safety concerns. *ACS Omega*, 8(32), 28932–28944.
<https://doi.org/10.1021/acsomega.3c03459>
- Medina, M. D. R., & Ruales, J. (2024). Post-harvest alternatives in banana cultivation. *Agronomy*, 14(9), 2109. <https://doi.org/10.3390/agronomy14092109>
- Mei, S., Fu, B., Su, X., Chen, H., Lin, H., Zheng, Z., Dai, C., & Yang, D.-P. (2022). Developing silk sericin-based and carbon dots reinforced bio-nanocomposite films and potential application to Litchi Fruit. *LWT*, 164, 113630. <https://doi.org/10.1016/j.lwt.2022.113630>
- Mohammed, M., Syeda, J., Wasan, K., & Wasan, E. (2017). An overview of chitosan nanoparticles and its application in non-parenteral drug delivery. *Pharmaceutics*, 9(4), 53. <https://doi.org/10.3390/pharmaceutics9040053>
- Momin, M. C., Jamir, A. R., Ankalagi, N., Henny, T., & Devi, O. B. (2021). Edible coatings in fruits and vegetables: A brief review. *Pharma Innov. J*, 10(7), 71-78.
- Morales-Olán, G., Ríos-Corripio, M. A., Hernández-Cázares, A. S., Zaca-Morán, P., Luna-Suárez, S., & Rojas-López, M. (2021). Effect of chitosan nanoparticles incorporating antioxidants from *salvia hispanica* L. on the amaranth flour films. *Food Technology and Biotechnology*, 60(1), 52–66. <https://doi.org/10.17113/ftb.60.01.22.7144>
- Muindi, M. P., Yukuhiro, F., Ichikawa, S., Teramoto, H., & Kameda, T. (2022). Silk Nanoparticles of Intact Sericin. *The Journal of Silk Science and Technology of Japan*, 30, 93-103.
- Nekesa, R., Njue, L., & Abong', G. (2023). Influence of knowledge, attitude and practices of consumers on the consumption of hydroponically grown fruits and vegetables in Kiambu County, Kenya. *East African Journal of Science, Technology and Innovation*, 4. <https://doi.org/10.37425/eajsti.v4i.739>
- Netshiheni, R. K., Omolola, A. O., Anyasi, T. A., & Jideani, A. I. (2020). Banana bioactives: Absorption, utilisation and health benefits. *Banana Nutrition - Function and Processing Kinetics*. <https://doi.org/10.5772/intechopen.83369>

- Niyaz, Z., & Gok, Z. G. (2024). Synthesis and characterization of chitosan/sericin composite blend membranes containing silver nanoparticles for effective antibacterial applications. *ChemistrySelect*, 9(40). <https://doi.org/10.1002/slct.202403514>
- Nunes, C., Silva, M., Farinha, D., Sales, H., Pontes, R., & Nunes, J. (2023). Edible coatings and future trends in active food packaging—fruits' and traditional sausages' shelf life increasing. *Foods*, 12(17), 3308. <https://doi.org/10.3390/foods12173308>
- Odetayo, T., Sithole, L., Shezi, S., Nomngongo, P., Tesfay, S., & Ngobese, N. Z. (2022). Effect of nanoparticle-enriched coatings on the shelf life of Cavendish Bananas. *Scientia Horticulturae*, 304, 111312. <https://doi.org/10.1016/j.scienta.2022.111312>
- Paramasivam, S. K., Saravanan, A., Narayanan, S., Shiva, K. N., Ravi, I., Mayilvaganan, M., Pushpa, R., & Uma, S. (2021). Exploring differences in the physicochemical, functional, structural, and pasting properties of banana starches from dessert, cooking, and plantain cultivars (*Musa* spp.). *International Journal of Biological Macromolecules*, 191, 1056–1067. <https://doi.org/10.1016/j.ijbiomac.2021.09.172>
- Phromsopha, T., & Baimark, Y. (2017). Chitosan/silk sericin blend microparticles prepared by water-in-oil emulsification-diffusion for controlled release of silk sericin antioxidant. *International Journal of Drug Delivery Technology*, 7(04). <https://doi.org/10.25258/ijddt.v7i04.10656>
- Ramirez, R., Restrepo, L., Perez, C., & Jimenez, A. (2019). Physical, chemical and processing postharvest technologies in Strawberry. *Strawberry - Pre- and Post-Harvest Management Techniques for Higher Fruit Quality*. <https://doi.org/10.5772/intechopen.83575>
- Rattanapan, C., & Ounsaneha, W. (2021). Water Footprint Assessment of Thai Banana Production. *International Journal of Environmental Science and Development*, 12(5), 151–156. <https://doi.org/10.18178/ijesd.2021.12.5.1333>
- Raval, N., Maheshwari, R., Kalyane, D., Youngren-Ortiz, S. R., Chougule, M. B., & Tekade, R. K. (2019). Importance of physicochemical characterization of nanoparticles in pharmaceutical product

- development. *Basic Fundamentals of Drug Delivery*, 369–400.
<https://doi.org/10.1016/b978-0-12-817909-3.00010-8>
- Regmi, P., Bagale, P., Pokhrel, S., & Subedi, D. (2024). Review on: Techniques to maintain quality and post-harvest shelf- life of banana fruits. *Tropical Agrobiodiversity*, 5(1), 26–29.
<https://doi.org/10.26480/trab.01.2024.26.29>
- Ringer, T., Damerow, L., & Blanke, M. M. (2018). Non-invasive determination of surface features of banana during ripening. *Journal of Food Science and Technology*, 55(10), 4197–4203.
<https://doi.org/10.1007/s13197-018-3352-2>
- Saavedra, G. M., Figueroa, N. E., Poblete, L. A., Cherian, S., & Figueroa, C. R. (2016). Effects of preharvest applications of methyl jasmonate and chitosan on postharvest decay, quality and chemical attributes of fragaria chiloensis fruit. *Food Chemistry*, 190, 448–453.
<https://doi.org/10.1016/j.foodchem.2015.05.107>
- Saberi Riseh, R., Vatankhah, M., Hassanisaadi, M., & Kennedy, J. F. (2023). Chitosan-based nanocomposites as coatings and packaging materials for the postharvest improvement of Agricultural Product: A Review. *Carbohydrate Polymers*, 309, 120666.
<https://doi.org/10.1016/j.carbpol.2023.120666>
- Sarda, F. A. H., de Lima, F. N. R., Lopes, N. T. T., Santos, A. de, Tobaruela, E. de, Kato, E. T. M., & Menezes, E. W. (2016). Identification of carbohydrate parameters in commercial unripe banana flour. *Food Research International*, 81, 203–209. <https://doi.org/10.1016/j.foodres.2015.11.016>
- Seo, S.-J., Das, G., Shin, H.-S., & Patra, J. K. (2023). Silk sericin protein materials: Characteristics and applications in food-sector industries. *International Journal of Molecular Sciences*, 24(5), 4951.
<https://doi.org/10.3390/ijms24054951>
- Shen, C., Yang, X., Wang, D., Li, J., Zhu, C., Wu, D., & Chen, K. (2024). Carboxymethyl Chitosan and polycaprolactone-based rapid in-situ packaging for fruit preservation by solution blow spinning. *Carbohydrate Polymers*, 326, 121636. <https://doi.org/10.1016/j.carbpol.2023.121636>

- Shinga, M. H., Silue, Y., & Fawole, O. A. (2025). Recent advancements and trends in postharvest application of edible coatings on Bananas: A comprehensive review. *Plants*, 14(4), 581. <https://doi.org/10.3390/plants14040581>
- Sidhu, A. K., Verma, N., & Kaushal, P. (2022). Role of biogenic capping agents in the synthesis of metallic nanoparticles and evaluation of their therapeutic potential. *Frontiers in Nanotechnology*, 3. <https://doi.org/10.3389/fnano.2021.801620>
- Sidhu, J. S., & Zafar, T. A. (2018). Bioactive compounds in banana fruits and their health benefits. *Food Quality and Safety*, 2(4), 183–188. <https://doi.org/10.1093/fqsafe/fyy019>
- Sinanoglou, V. J., Tsiaka, T., Aouant, K., Mouka, E., Ladika, G., Kritsi, E., Konteles, S. J., Ioannou, A.-G., Zoumpoulakis, P., Strati, I. F., & Cavouras, D. (2023). Quality Assessment of banana ripening stages by combining analytical methods and image analysis. *Applied Sciences*, 13(6), 3533. <https://doi.org/10.3390/app13063533>
- Singh, B., Singh, J. P., Kaur, A., & Singh, N. (2016). Bioactive compounds in banana and their associated health benefits – A Review. *Food Chemistry*, 206, 1–11. <https://doi.org/10.1016/j.foodchem.2016.03.033>
- Sugianti, C., Imaizumi, T., Thammawong, M., & Nakano, K. (2022). Recent postharvest technologies in the banana supply chain. *Reviews in Agricultural Science*, 10(0), 123–137. https://doi.org/10.7831/ras.10.0_123
- Suhag, R., Kumar, N., Petkoska, A. T., & Upadhyay, A. (2020). Film formation and deposition methods of edible coating on food products: A Review. *Food Research International*, 136, 109582. <https://doi.org/10.1016/j.foodres.2020.109582>
- Syame, S. M., Mohamed, W. S., Mahmoud, R. K., & Omara, S. T. (2017). Synthesis of copper-chitosan nanocomposites and its application in treatment of local pathogenic isolates bacteria. *Oriental Journal of Chemistry*, 33(6), 2959–2969. <https://doi.org/10.13005/ojc/330632>

- Tarangini, K., Kavi, P., & Jagajjanani Rao, K. (2022). Application of sericin-based edible coating material for postharvest shelf-life extension and preservation of tomatoes. *eFood*, 3(5). <https://doi.org/10.1002/efd2.36>
- Tavassoli-Kafrani, E., Shekarchizadeh, H., & Masoudpour-Behabadi, M. (2016). Development of Edible Films and coatings from alginates and carrageenans. *Carbohydrate Polymers*, 137, 360–374. <https://doi.org/10.1016/j.carbpol.2015.10.074>
- Thuy, N. M., Linh, M. N., My, L. T. D., Minh, V. Q., & Tai, N. V. (2021). Physico-chemical changes in “Xiem” banana cultivar (cultivated in Vietnam) during ripening and storage at different temperatures. *Food Research*, 5(6), 229–237. [https://doi.org/10.26656/fr.2017.5\(6\).370](https://doi.org/10.26656/fr.2017.5(6).370)
- Wang, S.-L., Zhuo, J.-J., Fang, S.-M., Xu, W., & Yu, Q.-Y. (2024). Silk sericin and its composite materials with antibacterial properties to enhance wound healing: A Review. *Biomolecules*, 14(6), 723. <https://doi.org/10.3390/biom14060723>
- Wang, Zhaojun, Tian, B., Boom, R., & van der Goot, A. J. (2019). Air bubbles in calcium caseinate fibrous material enhances anisotropy. *Food Hydrocolloids*, 87, 497–505. <https://doi.org/10.1016/j.foodhyd.2018.08.037>
- Wang, Z., Yao, X., Jia, C., Zheng, Y., Lin, Q., Wang, J., Liu, J., Zhu, Z., Peng, L., Xu, B., Cong, X., & Jin, Z. (2022). Genome-wide characterization and analysis of R2R3-MYB genes related to fruit ripening and stress response in banana (*Musa acuminata* L. AAA Group, CV. ‘cavendish’). *Plants*, 12(1), 152. <https://doi.org/10.3390/plants12010152>
- Wongwaiwech, D., Kamchonemenukool, S., Ho, C.-T., Li, S., Thongsook, T., Majai, N., Premjet, D., Sujipuli, K., & Weerawatanakorn, M. (2022). Nutraceutical difference between two popular Thai NAMWA cultivars used for Sun dried banana products. *Molecules*, 27(17), 5675. <https://doi.org/10.3390/molecules27175675>
- Wu, Q., Ma, Z., Qin, Y., Li, Y., Huang, B., Zhang, X., Du, L., Song, J., Zhang, Z., & Pang, X. (2019). Imbalanced expression of stay-green 1 alleles in banana aab/ABB cultivars prevents

- high-temperature-induced green ripening as in AAA cavendish fruit. *Postharvest Biology and Technology*, 158, 110980. <https://doi.org/10.1016/j.postharvbio.2019.110980>
- Wu, Y., Wu, H., & Hu, L. (2023). Recent advances of proteins, polysaccharides and lipids-based edible films/coatings for Food Packaging Applications: A Review. *Food Biophysics*, 19(1), 29–45. <https://doi.org/10.1007/s11483-023-09794-7>
- Yalcin, E., Kara, G., Celik, E., Pinarli, F. A., Saylam, G., Sucularli, C., Ozturk, S., Yilmaz, E., Bayir, O., Korkmaz, M. H., & Denkbaz, E. B. (2019). Preparation and characterization of novel albumin-sericin nanoparticles as Sirna delivery vehicle for laryngeal cancer treatment. *Preparative Biochemistry and Biotechnology*, 49(7), 659–670. <https://doi.org/10.1080/10826068.2019.1599395>
- Yan, X., Meng, F., Wigati, L. P., Van, T. T., Phuong, N. T., Koga, A., Tanaka, F., & Tanaka, F. (2024). Improvement of cross-linked films based on Chitosan/Diepoxy-poly (ethylene glycol) incorporating trans-cinnamaldehyde essential oil: Preparation, properties, and application in Banana Storage. *International Journal of Biological Macromolecules*, 263, 130299. <https://doi.org/10.1016/j.ijbiomac.2024.130299>
- Yanat, M., & Schroen, K. (2021). Preparation methods and applications of chitosan nanoparticles; with an outlook toward reinforcement of biodegradable packaging. *Reactive and Functional Polymers*, 161, 104849. <https://doi.org/10.1016/j.reactfunctpolym.2021.104849>
- Yang, J., Liang, G., Xiang, T., & Situ, W. (2021). Effect of crosslinking processing on the chemical structure and biocompatibility of a chitosan-based hydrogel. *Food Chemistry*, 354, 129476. <https://doi.org/10.1016/j.foodchem.2021.129476>
- Yang, Z., Zhai, X., Zhang, C., Shi, J., Huang, X., Li, Z., Zou, X., Gong, Y., Holmes, M., Povey, M., & Xiao, J. (2022). Agar/Tio2/radish anthocyanin/neem essential oil bionanocomposite bilayer films with improved bioactive capability and electrochemical writing property for Banana Preservation. *Food Hydrocolloids*, 123, 107187. <https://doi.org/10.1016/j.foodhyd.2021.107187>

- Yuan, Y., Nasri, M., Manayi, A., Zhang, J., Wu, C., Jeon, T.-J., & Kang, L. (2024). Sericin coats of silk fibres, a degumming waste or future material? *Materials Today Bio*, 29, 101306. <https://doi.org/10.1016/j.mtbio.2024.101306>
- Zambrano-Zaragoza, M., González-Reza, R., Mendoza-Muñoz, N., Miranda-Linares, V., Bernal-Couoh, T., Mendoza-Elvira, S., & Quintanar-Guerrero, D. (2018). Nanosystems in edible coatings: A novel strategy for food preservation. *International Journal of Molecular Sciences*, 19(3), 705. <https://doi.org/10.3390/ijms19030705>
- Zhao, D., Yu, S., Sun, B., Gao, S., Guo, S., & Zhao, K. (2018). Biomedical applications of chitosan and its derivative nanoparticles. *Polymers*, 10(4), 462. <https://doi.org/10.3390/polym10040462>
- Zhong, Y., Zhuang, C., Gu, W., & Zhao, Y. (2019). Effect of molecular weight on the properties of chitosan films prepared using electrostatic spraying technique. *Carbohydrate Polymers*, 212, 197–205. <https://doi.org/10.1016/j.carbpol.2019.02.048>
- Zhuang, C., Zhong, Y., & Zhao, Y. (2019). Effect of deacetylation degree on properties of chitosan films using electrostatic spraying technique. *Food Control*, 97, 25–31. <https://doi.org/10.1016/j.foodcont.2018.10.014>
- Şener, S., Türemiş, N. F., & Tanır, F. (2020). Agrochemical usage for sustainable fruit production and human health. *Agrochemicals Detection, Treatment and Remediation*, 291–305. <https://doi.org/10.1016/b978-0-08-103017-2.00012-x>