

DAFTAR PUSTAKA

- Abellan-Schneyder, I., Matchado, M. S., Reitmeier, S., Sommer, A., Sewald, Z., Baumbach, J., List, M. & Neuhaus, K. (2021). Primer, pipelines, parameters: issues in 16s rna gene sequencing. *Microbial Ecology*, 6(1), 1-22. doi: <https://doi.org/10.1128/mSphere.01202-20>
- Abel, A. (2012). The history of dyes and pigments. *Colour Design*, 557–587. doi:10.1016/b978-0-08-101270-3.00024-2
- Affat, S. S. (2021). Classifications, advantages, disadvantages, toxicity effects of natural and synthetic dyes: a review. *University of Thi-Qar Journal of Science*, 8(1), 130-135.
- Afreen, S., Anwer, R., Singh, R. K., & Fatma, T. (2016). Extracellular laccase production and its optimization from *Arthrospira maxima* catalyzed decolorization of synthetic dyes. *Saudi Journal of Biological Sciences*, 1(1), 1-8. doi:10.1016/j.sjbs.2016.01.015
- Alexander, J., Barregard, L., Bignami, M., Ceccatelli, S., Cottrill, B., Dinovi, M., Edler, L., Grasl-Kraupp, B., Hogstrand, B., Hoogenboom, L., Knutsen, H. K., Nebbia, C. S., Oswald, I., Petersen, A., Rogiers, V. M., Rose, M., Roudot, A. C., Schwerdtle, T., Vleminckx, C., Vollmer, G. & Wallace, H. (2016). Malachite green in food. *EFSA Journal*, 14(7), 1-80. doi:10.2903/j.efsa.2016.4530
- Ali Redha, A. (2020). Removal of heavy metals from aqueous media by biosorption. *Arab Journal of Basic and Applied Sciences*, 27(1), 183–193. doi:10.1080/25765299.2020.1756177
- Álvarez, B., López, M. M., & Biosca, E. G. (2019). Biocontrol of the Major Plant Pathogen *Ralstonia solanacearum* in Irrigation Water and Host Plants by Novel Waterborne Lytic Bacteriophages. *Frontiers in Microbiology*, 10, 1-17. doi:10.3389/fmicb.2019.02813
- Al-fawwaz, A. & Abdullah, M. (2016). Decolorization of methylene blue and malachite green by immobilized *Desmodesmus* sp. isolated from north Jordan. *International Journal of Environmental Science and Development*, 7(2), 95-99. doi: 10.7763/IJESD.2016.V7.748
- Amin, M. M. & Khodabakhshi, A. (2012). Determination of malachite green in trout tissue and effluent water from fish farms. *International Journal of Environmental Health Engineering* 1(1), 51-56. doi: 10.4103/2277-9183.94394
- Ankisettyalli, K., Cheng, J. J.-Y., Baker, E. N., & Bashiri, G. (2016). PdxH proteins of mycobacteria are typical members of the classical pyridoxine/pyridoxamine 5'-phosphate oxidase family. *FEBS Letters*, 590(4), 453–460. doi:10.1002/1873-3468.12080

- Ardila-Leal, L. D., Poutou-Piñales, R. A., Pedroza-Rodríguez, A. M. & Quevedo-Hidalgo, B. E. (2021). A Brief History of Colour, the Environmental Impact of Synthetic Dyes and Removal by Using Laccases. *Molecules* 2021, 26(13), 3813. <https://doi.org/10.3390/molecules26133813>
- Ashraf, F., Irfan, M., Shakir, H. A., Ali, S. & Khan, M. (2020). An overview of production and industrial exploitation of bacterial laccases. *Punjab University Journal of Zoology*, 35(1), 147-156
- Bach, C. E., Warnock, D. D., Van Horn, D. J., Weintraub, M. N., Sinsabaugh, R. L., Allison, S. D., & German, D. P. (2013). Measuring phenol oxidase and peroxidase activities with pyrogallol, 1-DOPA, and ABTS: Effect of assay conditions and soil type. *Soil Biology and Biochemistry*, 67, 183–191. doi:10.1016/j.soilbio.2013.08.022
- Bajpai, P. (2018). Printing and Graphic Arts. *Biermann's Handbook of Pulp and Paper*, 19, 283–310. doi:10.1016/b978-0-12-814238-7.00013-1
- Balasubramanyan, S. & Kanmani, S. (2014). Ozonation of textile dyeing wastewater - a review. *AOP for Textile wastewater treatment*, 15(3), 46-50.
- Banaei, N., Kincaid, E. Z., Lin, S.-Y. G., Desmond, E., Jacobs, W. R., & Ernst, J. D. (2009). Lipoprotein Processing Is Essential for Resistance of Mycobacterium tuberculosis to Malachite Green. *Antimicrobial Agents and Chemotherapy*, 53(9), 3799–3802. doi:10.1128/aac.00647-09
- Banat, I. M., Nigam, P., Singh, D., & Marchant, R. (1996). Microbial decolorization of textile-dyecontaining effluents: A review. *Bioresource Technology*, 58(3), 217–227. doi:10.1016/s0960-8524(96)00113-7
- Barathi, S., Aruljothi, K. N., Karthik, C. & Padikasan, I. A. (2020). Optimization for enhanced ecofriendly decolorization and detoxification of reactive blue160 textile dye by *Bacillus subtilis*. *Biotechnology Reports*, 28(1), 1-7. doi:10.1016/j.btre.2020.e00522
- Barbusinski, K. & Majewski, J. (2003). Discoloration of azo dye acid red 18 by fenton reagent in the presence of iron powder. *Polish Journal of Environmental Studies* 12(2), 151-155.
- Bello-Gil, D., Roig-Molina, E., Fonseca, J., Sarmiento-Ferrández, M. D., Ferrándiz, M., Franco, E., Mira, E., Maestro, B. & Sanz, J. M. (2018). An enzymatic system for decolorization of wastewater dyes using immobilized CueO laccase-like multicopper oxidase on poly-3-hydroxybutyrate. *Microbial Biotechnology*. doi:10.1111/1751-7915.13287
- Benkhaya, S., Mrabet, S., & El Harfi, A. (2020). A review on classifications, recent synthesis and applications of textile dyes. *Inorganic Chemistry Communications*, 107891. doi:10.1016/j.inoche.2020.107891

- Bondarczuk, K. & Piotrowska-Seget, Z. (2013). Molecular basis of active copper resistance mechanisms in gram-negative bacteria. *Cell Biology and Toxicology*, 29(6), 397–405. doi:10.1007/s10565-013-9262-1
- Breckau, D., Mahlitz, E., Sauerwald, A., Layer, G., & Jahn, D. (2003). Oxygen-dependent coproporphyrinogen III oxidase (HemF) from *Escherichia coli* is stimulated by manganese. *Journal of Biological Chemistry*, 278(47), 46625–46631. doi:10.1074/jbc.m308553200
- Bundesinstitut für Risikobewertung. (2007). *Collection and pre-selection of available data to be used for the risk assessment of malachite green residues by JECFA*. Retrieved from https://www.bfr.bund.de/cm/349/collection_and_pre_selection_of_available_data_to_be_used_for_the_risk_assessment_of_malachite_green_residues_by_jecfa.pdf
- Čáp, M., Váchová, L., & Palková, Z. (2012). Reactive Oxygen Species in the Signaling and Adaptation of Multicellular Microbial Communities. *Oxidative Medicine and Cellular Longevity*, 2012, 1–13. doi:10.1155/2012/976753
- Carlos, R. S. do N., Marília, M. N., Aline, B. M. V., Carlos, A. R., & Manuela, da S. (2013). Textile azo dye degradation by *Candida rugosa* INCQS 71011 isolated from a non-impacted area in Semi-Arid Region of Brazilian Northeast. *African Journal of Biotechnology*, 12(47), 6636–6642. doi:10.5897/ajb2013.12859
- Caro, C. A. D. & Claudia, H. (2015). *UV/VIS spectrophotometry - Fundamentals and Applications*. Mettler-Toledo Publication
- Chang, J.-S. & Lin, Y.-C. (2000). Fed-Batch Bioreactor Strategies for Microbial Decolorization of Azo Dye Using a *Pseudomonas luteola* Strain. *Biotechnology Progress*, 16(6), 979–985. doi:10.1021/bp000116z
- Chaturvedi, A., Rai, B. N., Singh, R. S., & Jaiswal, R. P. (2021). A comprehensive review on the integration of advanced oxidation processes with biodegradation for the treatment of textile wastewater containing azo dyes. *Reviews in Chemical Engineering*, 0(0). doi:10.1515/revce-2020-0010
- Chauhan, P. S., Goradia, B., & Saxena, A. (2017). Bacterial laccase: recent update on production, properties and industrial applications. *3 Biotech*, 7(5), 323-343. doi:10.1007/s13205-017-0955-7
- Chen, H., Feng, J., Kweon, O., Xu, H., & Cerniglia, C. E. (2010). Identification and molecular characterization of a novel flavin-free NADPH preferred azoreductase encoded by *azoB* in *Pigmentiphaga kullae* K24. *BMC Biochemistry*, 11(1), 13-23. doi:10.1186/1471-2091-11-13
- Christopher, L. P., Yao, B., & Ji, Y. (2014). Lignin biodegradation with laccase-mediator systems. *Frontiers in Energy Research*, 2(12), 1-13. doi:10.3389/fenrg.2014.00012

- Claus, H., & Decker, H. (2006). Bacterial tyrosinases. *Systematic and Applied Microbiology*, 29(1), 3–14. doi:10.1016/j.syapm.2005.07.012
- Coleman, G. (1967). Studies on the Regulation of Extracellular Enzyme Formation by *Bacillus subtilis*. *Journal of General Microbiology*, 49(3), 421–431. doi:10.1099/00221287-49-3-421
- Clark, J. (2022). *What causes molecules to absorb uv and visible light*. Retrieved from [https://chem.libretexts.org/Bookshelves/Physical_and_Theoretical_Chemistry_Textbook_Maps/Supplemental_Modules_\(Physical_and_Theoretical_Chemistry\)/Spectroscopy/Electronic_Spectroscopy/Electronic_Spectroscopy_Basics/What_Causes_Molecules_to_Absorb_UV_and_Visible_Light](https://chem.libretexts.org/Bookshelves/Physical_and_Theoretical_Chemistry_Textbook_Maps/Supplemental_Modules_(Physical_and_Theoretical_Chemistry)/Spectroscopy/Electronic_Spectroscopy/Electronic_Spectroscopy_Basics/What_Causes_Molecules_to_Absorb_UV_and_Visible_Light)
- Crossley, C. (2008). Membrane filtration technology in the dye industry. *Journal of the Society of Dyers and Colourists*, 114(7-8), 194–196. doi:10.1111/j.1478-4408.1998.tb01981.x
- Cruz-Vázquez, A., Tomasini, A., Armas-Tizapantzi, A., Marcial-Quino, J. & Montiel-González, A. M. (2022). Extracellular proteases and laccases produced by *Pleurotus ostreatus* PoB: the effects of proteases on laccase activity. *International Microbiology*, 25(2022), 495–502. doi: <https://doi.org/10.1007/s10123-022-00238-9>
- Culp, S. J. & Beland, F. A. (1996). Malachite green: a toxicological review. *Journal of the American College of Toxicology*, 15(3):219-238.
- Culp, S. J., Mellick, P. W., Trotter, R. W., Greenlees, K. J., Kodell, R. L., & Beland, F. A. (2006). *Carcinogenicity of malachite green chloride and leucomalachite green in B6C3F1 mice and F344 rats*. *Food and Chemical Toxicology*, 44(8), 1204–1212. doi:10.1016/j.fct.2006.01.016
- Dako, E., Bernier, A.-M., Thomas, A., & K., C. (2012). *The Problems Associated with Enzyme Purification*. *Chemical Biology*. InTech
- Davalli, P., Mitic, T., Caporali, A., Lauriola, A., & D’Arca, D. (2016). ROS, Cell Senescence, and Novel Molecular Mechanisms in Aging and Age-Related Diseases. *Oxidative Medicine and Cellular Longevity*, 2016, 1–18. doi:10.1155/2016/3565127
- Dennison, C. (2005). Investigating the structure and function of cupredoxins. *Coordination Chemistry Reviews*, 249(24), 3025–3054. doi:10.1016/j.ccr.2005.04.021
- Denis, S., & Boyaval, P. (1991). Microbial enzyme production in a membrane bioreactor. *Applied Microbiology and Biotechnology*, 34(5), 608–612. doi:10.1007/bf00167908

- De Tullio, M., Guether, M., & Balestrini, R. (2013). Ascorbate oxidase is the potential conductor of a symphony of signaling pathways. *Plant Signaling & Behavior*, 8(3), 1-4. doi:10.4161/psb.23213
- Dinamarca, M. A., Ruiz-Manzano, A., & Rojo, F. (2002). Inactivation of cytochrome o ubiquinol oxidase relieves catabolic repression of the *Pseudomonas putida* GPo1 alkane degradation pathway. *Journal of Bacteriology*, 184(14), 3785–3793. doi:10.1128/jb.184.14.3785-3793.2002
- Dittapongpitch, V. & Surat, S. (2003). Detection of *Ralstonia solanacearum* in soil and weeds from commercial tomato fields using immunocapture and the polymerase chain reaction. *Journal of Phytopathology*, 151, 239–246.
- Djoko, K. Y., Chong, L. X., Wedd, A. G., & Xiao, Z. (2010). Reaction Mechanisms of the Multicopper Oxidase CueO from *Escherichia coli* Support Its Functional Role as a Cuprous Oxidase. *Journal of the American Chemical Society*, 132(6), 2005–2015. doi:10.1021/ja9091903
- Doherty, M. D., Cohen, G. M., Gant, T. W., Naish, S., & Riley, P. A. (1985). Metabolism of 1-naphthol by tyrosinase. *Biochemical Pharmacology*, 34(17), 3167–3172. doi:10.1016/0006-2952(85)90164-9
- Duke, T., Mathur, A., Kukuruzovic, R. H., & McGuigan, M. (2003). Hypotonic vs isotonic saline solutions for intravenous fluid management of acute infections. *Cochrane Database of Systematic Reviews*, 1, 1-12. doi:10.1002/14651858.cd004169.pub2
- Du, L. N., Pan, K. K., Li, G., Yang, Y. Y., Xu, F. C. (2018). Efficient degradation of malachite green by *Aeromonas* sp. strain DH-6. *Applied Environmental Biotechnology*, 3(2), 1-7.
- Du, L. N., Wang, S., Li, G., Wang, B., Jia, X.-M., Zhao, Y.-H., & Chen, Y.-L. (2011). Biodegradation of malachite green by *Pseudomonas* sp. strain DY1 under aerobic condition: characteristics, degradation products, enzyme analysis and phytotoxicity. *Ecotoxicology*, 20(2), 438–446. doi:10.1007/s10646-011-0595-3
- Elgarahy, A. M., Elwakeel, K. Z., Mohammad, S. H., & Elshoubaky, G. A. (2021). A critical review of biosorption of dyes, heavy metals and metalloids from wastewater as an efficient and green process. *Cleaner Engineering and Technology*, 4, 1-15. doi:10.1016/j.clet.2021.100209
- Endo, K. (2003). Enzymological Characterization of EpoA, a Laccase-Like Phenol Oxidase Produced by *Streptomyces griseus*. *Journal of Biochemistry*, 133(5), 671–677. doi:10.1093/jb/mvg086

- Ezike, T. C., Udeh, J. O., Joshua, P. E., Ezugwu, A. L., Isiwu, C. V., Eze, S. O. O., & Chilaka, F. C. (2021). Substrate specificity of a new laccase from *Trametes polyzona* WRF03. *Heliyon*, 7(1), 1-8. doi:10.1016/j.heliyon.2021.e06080
- Fang, Q., Feng, Y., Feng, P., Wang, X., & Zong, Z. (2019). Nosocomial bloodstream infection and the emerging carbapenem-resistant pathogen *Ralstonia insidiosa*. *BMC Infectious Diseases*, 19(1), 1-9. doi:10.1186/s12879-019-3985-4
- Fenoll, L. G., García-Ruiz, P. A., Varón, R., & García-Cánovas, F. (2003). Kinetic Study of the Oxidation of Quercetin by Mushroom Tyrosinase. *Journal of Agricultural and Food Chemistry*, 51(26), 7781–7787. doi:10.1021/jf034656y
- Filipkowska, U. (2007). Adsorption and desorption of reactive dyes onto chitin and chitosan flakes and beads. *Adsorption Science & Technology*, 24(9), 781-795.
- Finzi, J. (2004). Trypanosoma cruzi response to the oxidative stress generated by hydrogen peroxide. *Molecular and Biochemical Parasitology*, 133(1), 37–43. doi:10.1016/j.molbiopara.2003.08.011
- Flachmann, R., Kunz, N., Seifert, J., Gutlich, M., Wientjes, F.-J., Laufer, A., & Gassen, H. G. (1988). Molecular biology of pyridine nucleotide biosynthesis in *Escherichia coli*. Cloning and characterization of quinolinate synthesis genes nadA and nadB. *European Journal of Biochemistry*, 175(2), 221–228. doi:10.1111/j.1432-1033.1988.tb14187.x
- Flores-Cruz, Z. & Allen, C. (2011). Necessity of OxyR for the hydrogen peroxide stress response and full virulence in *Ralstonia solanacearum*. *Applied and Environmental Microbiology*, 77(18), 6426–6432. doi:10.1128/aem.05813-11
- Fosso-Kankeu, E., Simelane, L. P., Waanders, F. B., Njobeh, P. B. & Pandey, S. (2016). Physico-chemical treatment influenced by bacterial membrane and impact on dye adsorption capacity. *Conference: International Conference on Advances in Science, Engineering, Technology and Natural Resources*, 16, 93-97.
- Frank, J. A., Reich, C. I., Sharma, S., Weisbaum, J. S., Wilson, B. A., & Olsen, G. J. (2008). Critical evaluation of two primers commonly used for amplification of bacterial 16S rRNA genes. *Applied and Environmental Microbiology*, 74(8), 2461–2470. doi:10.1128/aem.02272-07
- Frieden, C. (1957). The Calculation of an Enzyme-Substrate Dissociation Constant from the Over-all Initial Velocity for Reactions Involving Two Substrates. *Journal of the American Chemical Society*, 79(8), 1894–1896. doi:10.1021/ja01565a034
- Ghannam, M. G. & Varacallo, M. (2022). *Biochemistry, polymerase chain reaction*. StatPearls.
- Ghribi, M., Meddeb-Mouelhi, F. & Beauregard, M. (2016). Microbial diversity in various types of paper mill sludge: identification of enzyme activities with

- potential industrial applications. *SpringerPlus*, 5(1), 1-14. doi:10.1186/s40064-016-3147-8
- Giles, C. H., Rahman, S. M. K., & Smith, D. (1961). Studies in the light absorption of Dyes.1. *Textile Research Journal*, 31(8), 679–687. doi:10.1177/004051756103100801
- Gomare, S. S., Parshetti, G. K., & Govindwar, S. P. (2009). Biodegradation of Malachite Green by *Brevibacillus laterosporus* MTCC 2298. *Water Environment Research*, 81(11), 2329–2336. doi:10.2175/106143009x407357
- Graham, Kate. (2021). *Rules of electronic excitation*. Retrieved from [https://chem.libretexts.org/Ancillary_Materials/Worksheets/Worksheets%3A_Inorganic_Chemistry/Structure_and_Reactivity_in_Organic_Biological_and_Inorganic_Chemistry_\(Chem_315\)/8%3A_Photochemistry/8.2%3A_Rules_of_Electronic_Excitation](https://chem.libretexts.org/Ancillary_Materials/Worksheets/Worksheets%3A_Inorganic_Chemistry/Structure_and_Reactivity_in_Organic_Biological_and_Inorganic_Chemistry_(Chem_315)/8%3A_Photochemistry/8.2%3A_Rules_of_Electronic_Excitation)
- Grass, G., Thakali, K., Klebba, P. E., Thieme, D., Muller, A., Wildner, G. F., & Rensing, C. (2004). Linkage between catecholate siderophores and the multicopper oxidase CueO in *Escherichia coli*. *Journal of Bacteriology*, 186(17), 5826–5833. doi:10.1128/jb.186.17.5826-5833.2004
- Gregersen, S., Kongsted, A. S. H., Nielsen, R. B., Hansen, S. S., Lau, F. A., Rasmussen, . B., Holdt, S. L. & Jacobsen, C. (2021). Enzymatic extraction improves intracellular protein recovery from the industrial carrageenan seaweed *Eucheuma denticulatum* revealed by quantitative, subcellular protein profiling: A high potential source of functional food ingredients. *Food Chemistry: X*, 12(2021), 1-13. doi: <https://doi.org/10.1016/j.fochx.2021.100137>
- Gupta, N. (2019). DNA extraction and polymerase chain reaction. *Journal of Cytology*, 36(2), 116–117.
- Hall, W. T. (1929). Oxidation-reduction reactions. *Journal of Chemical Education*, 6(3), 479-485. doi:10.1021/ed006p479
- Hamada, M., Toyofuku, M., Miyano, T. & Nomura, N. (2014). cbb3-Type cytochrome c oxidases, aerobic respiratory enzymes, impact the anaerobic life of *Pseudomonas aeruginosa* PAO1. *Journal of Bacteriology*, 196(22), 3881–3889. doi:10.1128/jb.01978-14
- Hanum, L., Windusari, Y., Setiawan, A., Muharni, Adriansyah, F. & Mubarok, A. A. (2018). Comparison of CTAB method and wizard genomic dna purification system kit from promega on dna isolation of local varieties of rice of south Sumatera. *Journal of Science & Technology Indonesia*, 3(2018), 26-29. doi: <http://doi.org/10.26554/sti.2018.3.1.26-29>

- Hassan, M. M. & Carr, C. M. (2018). A critical review on recent advancements of the removal of reactive dyes from dyehouse effluent by ion-exchange adsorbents. *Chemosphere*, 209, 201–219. doi:10.1016/j.chemosphere.2018.06.043
- Huang, H., Zhao, Y., Xu, Z., Ding, Y., Zhang, W., & Wu, L. (2018). Biosorption characteristics of a highly Mn(II)-resistant *Ralstonia pickettii* strain isolated from Mn ore. *PLOS ONE*, 13(8), 1-17. doi:10.1371/journal.pone.0203285
- Huang, J., Liu, C., Price, G. W., Li, Y., & Wang, Y. (2021). Identification of a novel heavy metal resistant *Ralstonia* strain and its growth response to cadmium exposure. *Journal of Hazardous Materials*, 416(2021), 1-15. doi:10.1016/j.jhazmat.2021.125942
- Husain, Q. (2006). Potential Applications of the Oxidoreductive Enzymes in the Decolorization and Detoxification of Textile and Other Synthetic Dyes from Polluted Water: A Review. *Critical Reviews in Biotechnology*, 26(4), 201–221. doi:10.1080/07388550600969936
- Hong, Y., Zeng, J., Wang, X., Drlica, K., & Zhao, X. (2019). Post-stress bacterial cell death mediated by reactive oxygen species. *Proceedings of the National Academy of Sciences*, 1, 1-8. doi:10.1073/pnas.1901730116
- Islami, R. Pembuatan ragi tape dan tape. *Jurnal Penelitian Dan Pengembangan Agrokompleks*, 1(2), 56-63
- Jadhav, P., Sonne, M., Kadam, A., Patil, S., Dahigaonkar, K. & Oberoi, J. K. (2018). Formulation of cost effective alternative bacterial culture media using fruit and vegetables waste. *International Journal of Current Research and Review*, 10(2), 6-15.
- Janusz, Pawlik, Świdarska-Burek, Polak, Sulej, Jarosz-Wilkolazka, & Paszczyński. (2020). Laccase properties, physiological functions, and evolution. *International Journal of Molecular Sciences*, 21(3), 966-991. doi:10.3390/ijms21030966
- Jay, Z. J., & Inskip, W. P. (2015). The distribution, diversity, and importance of 16S rRNA gene introns in the order Thermoproteales. *Biology Direct*, 10(1), 35-45. doi:10.1186/s13062-015-0065-6
- Johnson, K., Lennon, S. J., & Rudd, N. (2014). Dress, body and self: research in the social psychology of dress. *Fashion and Textiles*, 1(1). doi:10.1186/s40691-014-0020-7
- Jones, J. J., & Falkinham III, J. O. (2003). Decolorization of Malachite Green and Crystal Violet by Waterborne Pathogenic Mycobacteria. *Antimicrobial Agents and Chemotherapy*, 47(7), 2323–2326. doi:10.1128/aac.47.7.2323-2326.2003

- Kandelbauer, A., & Guebitz, G. M. (2005). Bioremediation for the decolorization of textile dyes — a review. *Environmental Chemistry*, 26, 269–288. doi:10.1007/3-540-26531-7_26
- Kant, R. (2012). Textile dyeing industry an environmental hazard. *Natural Science*, 4(1), 22-26. 10.4236/ns.2012.41004
- Karen, P. (2015). Oxidation state, a long-standing issue!. *Angewandte Chemie International Edition*, 54(16), 4716–4726. doi:10.1002/anie.201407561
- Kaur, K., Sharma, A., Capalash, N., & Sharma, P. (2019). Multicopper oxidases: Biocatalysts in microbial pathogenesis and stress management. *Microbiological Research*, 222, 1–13. doi:10.1016/j.micres.2019.02.007
- Kahng, H.-Y., Byrne, A. M., Olsen, R. H., & Kukor, J. J. (2000). Characterization and Role of *tbuX* in Utilization of Toluene by *Ralstonia pickettii* PKO1. *Journal of Bacteriology*, 182(5), 1232–1242. doi:10.1128/jb.182.5.1232-1242.2000
- Khan, S. A., Hussain, D., & Khan, T. A. (2021). Recent Advances in Synthetic Dyes. *Innovative and Emerging Technologies for Textile Dyeing and Finishing*, 91–111. doi:10.1002/9781119710288.ch3
- Kim, Y.-H., Lee, C., Go, H., Konishi, K., Lee, K., Lau, P. C. K. & Yu, M.-H. (2010). Decolorization of malachite green by cytochrome c in the mitochondria of the fungus *Cunninghamella elegans*. *Archives of Biochemistry and Biophysics*, 494(2), 159–165. doi:10.1016/j.abb.2009.11.027
- Krastanov, A. I. Gochev, V. & Girova, T. D. (2007). Nutritive medium dependent biosynthesis of extracellular laccase from *trichoderma* spp. *Bulgarian Journal of Agricultural Science*, 13(2007), 349-355.
- Krithika, A., Gayathri, K. V., Kumar, D. T. & Doss, C. G. P. (2021). Mixed azo dyes degradation by an intracellular azoreductase enzyme from alkaliphilic *Bacillus subtilis*: a molecular docking study. *Archives of Microbiology*, 203(6), 3033–3044. doi:10.1007/s00203-021-02299-2
- Kulysa, J. Vidziunaitea, R. & Schneider, P. (2003). Laccase-catalyzed oxidation of naphthol in the presence of soluble polymers. *Enzyme and Microbial Technology*, 32(3-4), 455-463
- Kumar, P., Agnihotri, R., Wasewar, K. L., Uslu, H. & Yoo, C. (2012). Status of adsorptive removal of dye from textile industry effluent. *Desalination and Water Treatment*, 50(1-3), 226–244. doi:10.1080/19443994.2012.719472
- Kyzas, G. Z., Kostoglou, M., Lazaridis, N. K. & Bikiaris, D. N. (2013). *Decolorization of dyeing wastewater using polymeric absorbents - an overview*. InTech.

- Lawton, T. J., Sayavedra-Soto, L. A., Arp, D. J., & Rosenzweig, A. C. (2009). Crystal Structure of a Two-domain Multicopper Oxidase. *Journal of Biological Chemistry*, 284(15), 10174–10180. doi:10.1074/jbc.m900179200
- Lenardon, M. D., Munro, C. A., & Gow, N. A. (2010). Chitin synthesis and fungal pathogenesis. *Current Opinion in Microbiology*, 13(4), 416–423. doi:10.1016/j.mib.2010.05.002
- Lin, Y.-F., Hu, Y.-H., Jia, Y.-L., Li, Z.-C., Guo, Y.-J., Chen, Q.-X., & Lin, H.-T. (2012). Inhibitory effects of naphthols on the activity of mushroom tyrosinase. *International Journal of Biological Macromolecules*, 51(1-2), 32–36. doi:10.1016/j.ijbiomac.2012.04.026
- Liu, Y., Yan, M., Geng, Y., & Huang, J. (2015). ABTS-Modified Silica Nanoparticles as Laccase Mediators for Decolorization of Indigo Carmine Dye. *Journal of Chemistry*, 2015, 1–7. doi:10.1155/2015/670194
- Lucena-Aguilar, G., Sánchez-López, A. M., Barberán-Aceituno, C., Carrillo-Ávila, J. A., López-Guerrero, J. A., & Aguilar-Quesada, R. (2016). DNA source selection for downstream applications based on DNA quality indicators analysis. *Biopreservation and Biobanking*, 14(4), 264–270. doi:10.1089/bio.2015.0064
- Lopez-Contreras, A. M., Gabor, K., Martens, A. A., Renckens, B. A. M., Claassen, P. A. M., van der Oost, J., & de Vos, W. M. (2004). Substrate-Induced Production and Secretion of Cellulases by *Clostridium acetobutylicum*. *Applied and Environmental Microbiology*, 70(9), 5238–5243. doi:10.1128/aem.70.9.5238-5243.2004
- Lorenz, T. C. (2012). Polymerase chain reaction: basic protocol plus troubleshooting and optimization strategies. *Journal of Visualized Experiments*, 63(1), 1-14. doi:10.3791/3998
- Loum, J., Byamukama, R., & Wanyama, P. A. G. (2020). UV–Vis spectrometry for quantitative study of tannin and flavonoid rich dyes from plant sources. *Chemistry Africa*, 3(2), 449–455. doi:10.1007/s42250-020-00135-6
- Mabrouk, M. & Yusef, H. (2008). Decolorization of fast red by *Bacillus subtilis* HM. *Journal of Applied Sciences Research*, 4(3), 262-269.
- Mamedov, T. G., Pienaar, E., Whitney, S. E., TerMaat, J. R., Carvill, G., Goliath, R., Subramanian, A. & Viljoen, H. J. (2008). A fundamental study of the PCR amplification of GC-rich DNA templates. *Computational Biology and Chemistry*, 32(6), 452–457. doi:10.1016/j.compbiolchem.2008.07.021
- Mamouei, M., Budidha, K., Baishya, N., Qassem, M., & Kyriacou, P. A. (2021). An empirical investigation of deviations from the Beer–Lambert law in optical

- estimation of lactate. *Scientific Reports*, 11(1), 1-9. doi:10.1038/s41598-021-92850-4
- Mathivanan, M., V, P., Chinnaiyah S, S., & Sundaram RS, S. (2018). Dye Degradation using *Saccharomyces Cerevisiae*. *International Journal of Engineering & Technology*, 7(3.12), 180-184, 180. doi:10.14419/ijet.v7i3.12.15915
- Ma, J., Katsonouri, A. & Gennis, R. B. (1997). Subunit II of the cytochrome bo3 ubiquinol oxidase from *Escherichia coli* is a lipoprotein. *Biochemistry*, 36(38), 11298–11303. doi:10.1021/bi9709710
- Megha, V. & Meenakshi, S. (2015). Optimization of different parameters on synthetic dye decolorization by free and immobilized *Mucor hiemalis* MV04 (KR078215). *Research Journal of Chemical Sciences*, 5(6), 20-27.
- Mergeay, M., Monchy, S., Vallaes, T., Auquier, V., Benotmane, A., Bertin, P., Taghavi, S., Dunn, J., Lelie, D. & Wattiez, R. (2003). *Ralstonia metallidurans*, a bacterium specifically adapted to toxic metals: towards a catalogue of metal-responsive genes. *FEMS Microbiology Reviews*, 27(2-3), 385–410. doi:10.1016/s0168-6445(03)00045-7
- Michelle, Siregar, R. N., Sanjaya, A., Lucy, J. & Pinontoan, R. (2020). Methylene blue decolorizing bacteria isolated from water sewage in yogyakarta, indonesia. *Biodiversitas*, 21(3), 1136-1141. doi: 10.13057/biodiv/d210338
- Miller, M. J., Hermodson, M. & Gennis, R. B. (1987). The active form of the cytochrome d terminal oxidase complex of *Escherichia coli* is a heterodimer containing one copy of each of the two subunits. *The Journal Of Biological Chemistry*, 263(11), 5235-5240. doi: [https://doi.org/10.1016/S0021-9258\(18\)60705-7](https://doi.org/10.1016/S0021-9258(18)60705-7)
- Misal, S. A., & Gawai, K. R. (2018). Azoreductase: a key player of xenobiotic metabolism. *Bioresources and Bioprocessing*, 5(1), 17-26. doi:10.1186/s40643-018-0206-8
- Miyazaki, K., Sato, M., & Tsukuda, M. (2017). PCR primer design for 16s rrnas for experimental horizontal gene transfer test in *Escherichia coli*. *Frontiers in Bioengineering and Biotechnology*, 5(14), 1-7. doi:10.3389/fbioe.2017.00014
- Modirshahla, N. & Behnajady, M. A. (2006). Photooxidative degradation of malachite green (MG) by UV/H₂O₂: influence of operational parameters and kinetic modeling. *Dyes and Pigments*, 70(1), 54-59.
- Morsy, S. A. G. Z., Ahmad Tajudin, A., Ali, M. S. M., & Shariff, F. M. (2020). Current development in decolorization of synthetic dyes by immobilized laccases. *Frontiers in Microbiology*, 11, 1-8. doi:10.3389/fmicb.2020.572309
- Mostafa, I. M., Gilani, M. R. H. S., Chen, Y., Lou, B., Li, J. & Xu, G. (2021). Lucigenin-pyrogallol chemiluminescence for the multiple detection of

- pyrogallol, cobalt ion, and tyrosinase. *Journal of Food and Drug Analysis*. 29, 510-520. doi: <https://doi.org/10.38212/2224-6614.3361>
- Muñoz-Muñoz, J. L., García-Molina, F., García-Ruiz, P. A., Molina-Alarcón, M., Tudela, J., García-Cánovas, F. & Rodríguez-López, J. N. (2008). Phenolic substrates and suicide inactivation of tyrosinase: kinetics and mechanism. *Biochemical Journal*, 416(3), 431–440. doi:10.1042/bj20080892
- Nabilah, B. Purnomo, A. S., Rizqi, H. D., Putro, H. S. & Nawfa, R. (2022). The effect of *Ralstonia pickettii* bacterium addition on methylene blue dye biodecolorization by brown-rot fungus *Daedalea dickinsii*. *Heliyon*, 8(2), e08963. doi: <https://doi.org/10.1016/j.heliyon.2022.e08963>
- National Center for Biotechnology Information (2022). PubChem Compound Summary for CID 11295, Malachite green cation. Retrieved July 27, 2022 from <https://pubchem.ncbi.nlm.nih.gov/compound/Malachite-green-cation>.
- Nogueira, N. P. de A., Souza, C. F. de, Saraiva, F. M. de S., Sultano, P. E., Dalmau, S. R., Bruno, R. E., Goncalves, R. L. S., Laranja, G. A. T., Leal, L. H. M., Coelho, M. G. P., Masuda, C. A., Oliveira, M. F. & Paes, M. C. (2011). Heme-Induced ROS in *Trypanosoma Cruzi* Activates CaMKII-Like That Triggers Epimastigote Proliferation. One Helpful Effect of ROS. *PLoS ONE*, 6(10), 1-13. doi:10.1371/journal.pone.0025935
- Novik, G., Meerovskaya, O., & Savich, V. (2017). Waste Degradation and Utilization by Lactic Acid Bacteria: Use of Lactic Acid Bacteria in Production of Food Additives, Bioenergy and Biogas. *Food Additives*. doi:10.5772/intechopen.69284
- Odinokov, A., & Ostroumov, D. (2015). Structural Degradation and Swelling of Lipid Bilayer under the Action of Benzene. *The Journal of Physical Chemistry B*, 119(48), 15006–15013. doi:10.1021/acs.jpcc.5b09420
- Oktaviana, A. Y., Suherman, D. & Sulistyowati, E. (2015). Pengaruh ragi tape terhadap ph, bakteri asam laktat dan laktosa yogurt. *Jurnal Sain Peternakan Indonesia*, 10(1), 22-31.
- Omar, S. (2016). Decolorization of different textile dyes by isolated *aspergillus niger*. *Journal of Environmental Science and Technology*, 9(1), 149-156. doi:10.3923/jest.2016.149.156
- Omeregíe, E. Ofojekwu, P. C., Anosike, J. C. & Adeleye, A. O. (1998). Acute toxicity of malachite green to the Nile tilapia, *oreochromis niloticus* (L.). *Journal of Aquaculture in the Tropics*, 13(4), 233-237.
- Paiva, C. N., & Bozza, M. T. (2014). Are reactive oxygen species always detrimental to pathogens?. *Antioxidants & Redox Signaling*, 20(6), 1000–1037. doi:10.1089/ars.2013.5447

- Pandey, V. P., Awasthi, M., Singh, S., Tiwari, S., & Dwivedi, U. N. (2017). A comprehensive review on function and application of plant peroxidases. *Biochemistry & Analytical Biochemistry*, 6(1), 1-16. doi:10.4172/2161-1009.1000308
- Park, Y.-J., Ko, J.-J., Yun, S.-L., Lee, E. Y., Kim, S.-J., Kang, S.-W., Lee, B. C. & Kim, S.-K. (2008). Enhancement of bioremediation by *Ralstonia* sp. HM-1 in sediment polluted by Cd and Zn. *Bioresource Technology*, 99(16), 7458–7463. doi:10.1016/j.biortech.2008.02.024
- Patel, Y. Chhaya, U., Rudakiya, D. & Joshi, S. (2021). *Microbial Rejuvenation of Polluted Environment*. Springer: Singapore.
- Paudel, S., Dobhal, S., Alvarez, A. M. & Arif, M. (2020). Taxonomy and phylogenetic research on *Ralstonia solanacearum* species complex: a complex pathogen with extraordinary economic consequences. *Pathogens*, 9(11), 886. doi:10.3390/pathogens9110886
- Paul, A. & Datta, B. (2016). Cadmium-resistant *Ralstonia mannitolilytica* relieved cadmium toxicity in mustard plant through root colonization and growth promoting activity. *Research Journal of Microbiology*, 11(1), 157-168. doi: 10.17311/jm.2016.157.168
- Pellicer, M. T., Badia, J., Aguilar, J. & Baldoma, L. (1996). Glc locus of *Escherichia coli*: characterization of genes encoding the subunits of glycolate oxidase and the glc regulator protein. *Journal Of Bacteriology*, 178(7), 2051-2059.
- Pereira-Flores, E., Glöckner, F. O., & Fernandez-Guerra, A. (2019). Fast and accurate average genome size and 16S rRNA gene average copy number computation in metagenomic data. *BMC Bioinformatics*, 20(1), 1-13. doi:10.1186/s12859-019-3031-y
- Pereira, L., & Alves, M. (2011). Dyes—Environmental Impact and Remediation. *Environmental Protection Strategies for Sustainable Development*, 111–162. doi:10.1007/978-94-007-1591-2_4
- Pritchard, H. O., & Skinner, H. A. (1955). The concept of electronegativity. *Chemical Reviews*, 55(4), 745–786. doi:10.1021/cr50004a005
- Piro, B., Mattana, G., Zrig, S., Anquetin, G., Battaglini, N., Capitao, D., Maurin, A & Reisberg, S. (2018). Fabrication and Use of Organic Electrochemical Transistors for Sensing of Metabolites in Aqueous Media. *Applied Sciences*, 8(6), 928. doi:10.3390/app8060928
- Polman, K. & Breckenridge, C. R. (1996). Biomass-mediated binding and recovery of textile dyes from waste effluents. *Textile Chemist and Colorist*, 28(4), 31-35.

- Pourcho, R. G., Bernstein, M. H., & Gould, S. F. (1978). Malachite Green: Applications in Electron Microscopy. *Stain Technology*, 53(1), 29–35. doi:10.3109/10520297809111440
- Purnomo, A. S., Asranudin, A., Prasetyoko, D. & Azizah, Y. D.N. (2021). The biotransformation and biodecolorization of methylene blue by xenobiotic bacterium *Ralstonia pickettii*, 21(6), 1418-1430. doi: https://doi.org/10.22146/ijc.65806
- Purnomo, A. S. & Mawaddah, M. O. (2020). Biodecolorization of methyl orange by mixed cultures of brown-rot fungus *Daedalea dickinsii* and bacterium *Pseudomonas aeruginosa*. *Biodiversitas Journal of Biological Diversity*, 21(5), 2297-2302. doi: 10.13057/biodiv/d210561
- Purushotham, P., Cho, S. H., Díaz-Moreno, S. M., Kumar, M., Nixon, B. T., Bulone, V., & Zimmer, J. (2016). A single heterologously expressed plant cellulose synthase isoform is sufficient for cellulose microfibril formation in vitro. *Proceedings of the National Academy of Sciences*, 113(40), 11360–11365. doi:10.1073/pnas.1606210113
- Quintin, M., Dukovski, I., Bhatnagar, J. & Segrè, D. (2021). Optimality of extracellular enzyme production and activity in dynamic flux balance modeling. *BioRxiv*, 1-34. doi: https://doi.org/10.1101/2021.11.01.466736
- Rane, A. & Joshi, S. (2021). Biodecolorization and biodegradation of dyes: a review. *The Open Biotechnology Journal*, 15(1), 97-108. doi: 10.2174/1874070702115010097
- Rajashekar, K. K., Mahadevan, G. D., Neelagund, S. E., Sathynarayana, M., Vijaya, D., & Mulla, S. I. (2021). Decolorization of amaranth R.I and fast red E azo dyes by thermophilic *Geobacillus thermoleovorans* KNG 112. *Journal of Chemical Technology & Biotechnology*, 97(2), 482-489. doi:10.1002/jctb.6834
- Ramalho, P. A., Paiva, S., Cavaco-Paulo, A., Casal, M., Cardoso, M. H., & Ramalho, M. T. (2005). Azo Reductase Activity of Intact *Saccharomyces cerevisiae* Cells Is Dependent on the Fre1p Component of Plasma Membrane Ferric Reductase. *Applied and Environmental Microbiology*, 71(7), 3882–3888. doi:10.1128/aem.71.7.3882-3888.2005
- Raval, N. P., Shah, P. U., Ladha, D. G., Wadhvani, P. M. & Shah, N. K. (2015). Comparative study of chitin and chitosan beads for the adsorption of hazardous anionic azo dye Congo Red from wastewater. *Desalination and Water Treatment*, 57(20), 9247–9262. doi:10.1080/19443994.2015.1027959
- Reddy Pagala, V., Park, J., Reed, D. W., & Hartzell, P. L. (2002). Cellular localization of D-lactate dehydrogenase and NADH oxidase from *Archaeoglobus fulgidus*. *Archaea*, 1(2), 95–104. doi:10.1155/2002/297264

- Reiss, R., Ihssen, J., Richter, M., Eichhorn, E., Schilling, B., & Thöny-Meyer, L. (2013). Laccase versus Laccase-Like Multi-Copper Oxidase: A Comparative Study of Similar Enzymes with Diverse Substrate Spectra. *PLoS ONE*, 8(6), e65633. doi:10.1371/journal.pone.0065633
- Rizk, N. M. H., Eldourghamy, A. S., Aly, S. A., Sabae, S. Z. & Sobhy, A. (2020). Production of lignin peroxidase from aquatic bacteria, *Alcaligenes aquatilis*. *Egyptian Journal of Aquatic Biology & Fisheries*, 24(3), 213 – 223.
- Robinson, P. K. (2015). Enzymes: principles and biotechnological applications. *Essays In Biochemistry*, 59(0), 1–41. doi:10.1042/bse0590001
- Rowland, J. L. & Niederweis, M. (2013). A multicopper oxidase is required for copper resistance in *Mycobacterium tuberculosis*. *Journal of Bacteriology*, 195(16), 3724–3733. doi:10.1128/jb.00546-13
- Roy, D. C., Biswas, S. K., Sheam, M. M., Hasan, M. R., Saha, A. K., Roy, A. K., ... Tang, S.-S. (2020). Bioremediation of Malachite Green dye by two bacterial strains isolated from textile effluents. *Current Research in Microbial Sciences*. doi:10.1016/j.crmicr.2020.06.001
- Ryan, M. P., Pembroke, J. T., & Adley, C. C. (2007). *Ralstonia pickettii* in environmental biotechnology: potential and applications. *Journal of Applied Microbiology*, 103(4), 754–764. doi:10.1111/j.1365-2672.2007.03361.x
- Ryu, B. H. (1992). Decolorization of azo dyes by *Aspergillus sojae* B-10. *The Korean Society for Microbiology and Biotechnology*, 2(3), 215-219.
- Sajin, K. A., Anoobkumar, K. & Rasa, O. K. (2020). pH Indicators: a valuable gift for analytical chemistry. *Saudi Journal of Medical and Pharmaceutical Sciences*, 6(5), 393-400.
- Santana, J. K. G., Seixas, A. L., Ribeiro, L. H. G., Cardoso, A. C. S., Rocha, F. S., Fernandes, M. F. G. & Muniz, M. F. S. (2018). Staining fungal structures with artificial dyes used in the industry of juices. *Ciência Rural*, 48(9), 1-4.
- Salvi, N. A. (2018). Decolorization of Erythrosine B by *Rhizopus arrhizus* biomass. *Applied Water Science*, 8(7), 1-11. doi:10.1007/s13201-018-0800-0
- Seely, O. (2022). Accuracy of Spectrophotometer Readings. Retrieved from [https://chem.libretexts.org/Bookshelves/Analytical_Chemistry/Supplemental_Modules_\(Analytical_Chemistry\)/Quantifying_Nature/Accuracy_of_Spectrophotometer_Readings](https://chem.libretexts.org/Bookshelves/Analytical_Chemistry/Supplemental_Modules_(Analytical_Chemistry)/Quantifying_Nature/Accuracy_of_Spectrophotometer_Readings)
- Sigman, J. A., Kim, H. K., Zhao, X., Carey, J. R., & Lu, Y. (2003). The role of copper and protons in heme-copper oxidases: kinetic study of an engineered heme-copper center in myoglobin. *Proceedings of the National Academy of Sciences*, 100(7), 3629–3634. doi:10.1073/pnas.0737308100

- Sharma, P., Jha, A. B., Dubey, R. S. & Pessarakli, M. (2012). Reactive oxygen species, oxidative damage, and antioxidative defense mechanism in plants under stressful conditions. *Journal of Botany*, 2012, 1–26. doi:10.1155/2012/217037
- Sharma, V., Jambrina, P. G., Kaukonen, M., Rosta, E. & Rich, P. R. (2017). Insights into functions of the H channel of cytochrome c oxidase from atomistic molecular dynamics simulations. *Biophysics And Computational Biology*, 114 (48), 10339-10348
- Shi, B., Li, G., Wang, D., Feng, C. & Tang, H. (2007). Removal of direct dyes by coagulation: The performance of preformed polymeric aluminum species. *Journal of Hazardous Materials*, 143(1-2), 567–574. doi:10.1016/j.jhazmat.2006.09.076
- Silverstein, T. P. (2011). Oxidation and reduction: too many definitions?. *Journal of Chemical Education*, 88(3), 279–281. doi:10.1021/ed100777q
- Sipos, R., Szekely, A. J., Palatinszky, M., Revesz, S., Marialigeti, K. & Nikolausz, M. (2007). Effect of primer mismatch, annealing temperature and PCR cycle number on 16S rRNA gene-targeting bacterial community analysis. *FEMS Microbiology Ecology*, 60(2), 341–350. doi:10.1111/j.1574-6941.2007.00283.x
- Slama, H. B., Bouket, A. C., Pourhassan, Z. Alenezi, F. N., Silini, A. Cherif-Silini, H., Oszako, T., Luptakova, L., Golińska, P. & Belbahri, L. (2021). Diversity of Synthetic Dyes from Textile Industries, Discharge Impacts and Treatment Methods. *Applied Science*, 11(14), 6255. <https://doi.org/10.3390/app11146255>
- Slatko, B. E., Gardner, A. F., & Ausubel, F. M. (2018). Overview of next-generation sequencing technologies. *Current Protocols in Molecular Biology*, 122(1), 1-11. doi:10.1002/cpmb.59
- Sondhi, S., Sharma, P., Saini, S., Puri, N., & Gupta, N. (2014). Purification and Characterization of an Extracellular, Thermo-Alkali-Stable, Metal Tolerant Laccase from *Bacillus tequilensis* SN4. *PLoS ONE*, 9(5), 1-10. doi:10.1371/journal.pone.0096951
- Song, Y., Liu, C., McTeague, M. & Finegold, S. M. (2003). 16S Ribosomal DNA sequence-based analysis of clinically significant gram-positive anaerobic cocci. *Journal of Clinical Microbiology*, 41(4), 1363–1369. doi:10.1128/jcm.41.4.1363-1369.2003
- Souza, D. C. de, Palmeiro, J. K., Maestri, A. C., Cogo, L. L., Rauen, C. H., Graaf, M. E., Grein, F. L. & Nogueira, K. da S. (2018). *Ralstonia mannitolilytica* bacteremia in a neonatal intensive care unit. *Revista Da Sociedade Brasileira de Medicina Tropical*, 51(5), 709–711. doi:10.1590/0037-8682-0118-2018

- Šponer, J., Sabat, M., Burda, J. V., Leszczynski, J., & Hobza, P. (1999). Interaction of the adenine–thymine Watson–Crick and adenine–adenine reverse-hoogsteen dna base pairs with hydrated group IIa (Mg^{2+} , Ca^{2+} , Sr^{2+} , Ba^{2+}) and IIb (Zn^{2+} , Cd^{2+} , Hg^{2+}) metal cations: absence of the base pair stabilization by metal-induced polarization effects. *The Journal of Physical Chemistry B*, *103*(13), 2528–2534. doi:10.1021/jp983744w
- Srivastava, S. J. Gupta, A. K., Srivastava, P. K. & Abhinav. (2004). Acute toxicity of malachite green to fingerlings of common carp, cyprinus carpio. *Biological Memoirs* *30*(2), 120-121.
- Steinegger, A., Wolfbeis, O. S., & Borisov, S. M. (2020). Optical sensing and imaging of ph values: spectroscopies, materials, and applications. *Chemical Reviews*. doi:10.1021/acs.chemrev.0c00451
- Stergiopoulos, D., Konstantinos, D., Giannakoudakis, P. & Sotiropoulos, S. (2014). Electrochemical decolorization and removal of indigo carmine textile dye from wastewater. *Global Nest Journal*, *16*(3), 499-506.
- Sumathi & Manju. (2000). Uptake of reactive textile dyes by *Aspergillus foetidus*. *Enzyme and Microbial Technology*, *27*(6), 347-355. doi:10.1016/s0141-0229(00)00234-9
- Surti, H. S., Vaghela, K. B., Raval, V. H., Panchal, R. R. & Rajput, K. (2020). A review on microbial decolorization and degradation of dyes. *Bioscience Biotechnology Research Communications*, *13*(1), 224-232.
- Sudova, E, Machova, J., Svobodova, Z. & Vesely, T. (2007). Negative effects of malachite green and possibilities of its replacement in the treatment of fish eggs and fish: a review. *Veterinarni Medicina*, *52*(12), 527–539
- Suspène, R., Renard, M., Henry, M., Guétard, D., Puyraimond-Zemmour, D., Billecoq, A., Bouloy, M., Tangy, F., Vartanian, J. P. & Wain-Hobson, S. (2008). Inverting the natural hydrogen bonding rule to selectively amplify GC-rich ADAR-edited RNAs. *Nucleic Acids Research*, *36*(12), 72-82. doi:10.1093/nar/gkn295
- Swinehart, D. F. (1962). The Beer-Lambert Law. *Journal of Chemical Education*, *39*(7), 333-335. doi:10.1021/ed039p333
- Takahashi, H., Suzuoka, D., & Morita, A. (2015). Why is Benzene Soluble in Water? Role of OH/ π Interaction in Solvation. *Journal of Chemical Theory and Computation*, *11*(3), 1181–1194. doi:10.1021/ct501133u
- Tamayo-Ramos, J. A., van Berkel, W. J., & de Graaff, L. H. (2012). Biocatalytic potential of laccase-like multicopper oxidases from *Aspergillus niger*. *Microbial Cell Factories*, *11*(1), 165-176. doi:10.1186/1475-2859-11-165

- Tamura, K. Stecher, G. & Kumar, S. (2021). MEGA11: Molecular Evolutionary Genetics Analysis version 11. *Molecular Biology and Evolution* 38,3022-3027.
- Taylor, A. B., Stoj, C. S., Ziegler, L., Kosman, D. J., & Hart, P. J. (2005). The copper-iron connection in biology: Structure of the metallo-oxidase Fet3p. *Proceedings of the National Academy of Sciences*, 102(43), 15459–15464. doi:10.1073/pnas.0506227102
- Tiwari, S., Gaur, R. & Singh, A. (2016). Distillery spentwash decolorization by a noval consortium of *Pediococcus acidilactici* and *Candida tropicalis* under static condition. *Pakistan Journal of Biological Sciences*, 17(6), 780-791,
- Traving, S. J., Thygesen, U. H., Riemann, L., & Stedmon, C. A. (2015). A model of extracellular enzymes in free-living microbes: which strategy pays off?. *Applied and Environmental Microbiology*, 81(21), 7385–7393. doi:10.1128/aem.02070-15
- Tripathi, N & Sapra, A. (2021). *Gram staining*. StatPearls: America.
- Valencia, C. A., Pervaiz, M. A., Husami, A., Qian, Y., & Zhang, K. (2013). Sanger sequencing principles, history, and landmarks. *Next Generation Sequencing Technologies in Medical Genetics*, 1(1), 3–11. doi:10.1007/978-1-4614-9032-6_1
- Větrovský, T., & Baldrian, P. (2013). The Variability of the 16S rRNA Gene in Bacterial Genomes and Its Consequences for Bacterial Community Analyses. *PLoS ONE*, 8(2), 1-10. doi:10.1371/journal.pone.0057923
- Vijayanand, S. & Misra, M. (2017). Decolourization of industrial dyes using Ascomycetes and mucor species. *International Journal of Pharma and Bio Sciences*, 8(2), 285-291. doi:10.22376/ijpbs.2017.8.2.b285-291
- Vitor, V., & Corso, C. R. (2008). Decolorization of textile dye by *Candida albicans* isolated from industrial effluents. *Journal of Industrial Microbiology & Biotechnology*, 35(11), 1353–1357. doi:10.1007/s10295-008-0435-5
- Vollmer, W., Blanot, D. & De Pedro, M. A. (2008). Peptidoglycan structure and architecture. *FEMS Microbiology Reviews*, 32(2), 149–167. doi:10.1111/j.1574-6976.2007.00094.x
- Wahart, A. J. C., Staniland, J., Miller, G. J. & Cosgrove, S. C. (2022). Oxidase enzymes as sustainable oxidation catalysts. *The Royal Society*, 9(1), 1-17.
- Wijayanti, K. S., Hidayah, N., Yulianti, T., Supriyono, Djajadi & Andika, Y. (2021). Distribution of bacterial wilt disease (*Ralstonia solanacearum*) on tobacco in Temanggung. *Earth and Environmental Science*, 743(2021), 1-6. doi: 10.1088/1755-1315/743/1/012032

- Wilfinger, W. W., Mackey, K. & Chomczynski, P. (1997). Effect of pH and ionic strength on the spectrophotometric assessment of nucleic acid purity. *BioTechniques*, 22(3), 474–481. doi:10.2144/97223st01
- Wimberly, B. T., Brodersen, D. E., Clemons, W. M., Morgan-Warren, R. J., Carter, A. P., Vornrhein, C., Hartsch, T. & Ramakrishnan, V. (2000). Structure of the 30S ribosomal subunit. *Nature*, 407(6802), 327–339. doi:10.1038/35030006
- Wojnárovits, L. & Takács, E. (2008). Irradiation treatment of azo dye containing wastewater: An overview. *Radiation Physics and Chemistry*, 77(3), 225–244. doi:10.1016/j.radphyschem.2007.05.003
- Wong, & Yuen. (1998). Decolourization and biodegradation of N,N'-dimethyl-p-phenylenediamine by *Klebsiella pneumoniae* RS-13 and *Acetobacter liquefaciens* S-1. *Journal of Applied Microbiology*, 85(1), 79–87. doi:10.1046/j.1365-2672.1998.00479.x
- Xiong, S.-L., Lim, G. T., Yin, S.-J., Lee, J., Si, Y.-X., Yang, J.-M., Park, Y. D. & Qian, G.-Y. (2019). The inhibitory effect of pyrogallol on tyrosinase activity and structure: Integration study of inhibition kinetics with molecular dynamics simulation. *International Journal of Biological Macromolecules*, 121, 463–471. doi:10.1016/j.ijbiomac.2018.10.046
- Yang, B., Wang, Y., & Qian, P.-Y. (2016). Sensitivity and correlation of hypervariable regions in 16S rRNA genes in phylogenetic analysis. *BMC Bioinformatics*, 17(1), 1-8. doi:10.1186/s12859-016-0992-y
- Yang, Y., Wang, G., Wang, B., Du, L., Jia, X. & Zhao, Y. (2011). Decolorization of malachite green by a newly isolated *Penicillium* sp. YW 01 and optimization of decolorization parameters. *Environmental Engineering Science*, 28(8), 555–562. doi:10.1089/ees.2010.0172
- Yazdani, M. R. (2018). *Engineered adsorptive materials for water remediation - development, characterization, and application*. Aalto University.
- Yu, J., Ogata, D., Gai, Z., Taguchi, S., Tanaka, I., Ooi, T., & Yao, M. (2014). Structures of AzrA and of AzrC complexed with substrate or inhibitor: insight into substrate specificity and catalytic mechanism. *Acta Crystallographica Section D Biological Crystallography*, 70(2), 553–564. doi:10.1107/s1399004713030988
- Zeng, J., Eckenrode, H. M., Dounce, S. M., & Dai, H.-L. (2013). Time-Resolved Molecular Transport across Living Cell Membranes. *Biophysical Journal*, 104(1), 139–145. doi:10.1016/j.bpj.2012.11.3814
- Zhou, X., & Xiang, X. (2013). Effect of different plants on azo-dye wastewater biodecolorization. *Procedia Environmental Sciences*, 18, 540–546. doi:10.1016/j.proenv.2013.04.073