

6. References

- Abdel-Raouf, N., Al-Enazi, N. M., Ibraheem, I. B. M., Alharbi, R. M., & Alkhulaifi, M. M. (2019). Biosynthesis of silver nanoparticles by using of the marine brown alga Padina pavonia and their characterization. *Saudi Journal of Biological Sciences*, 26(6), 1207–1215. <https://doi.org/10.1016/j.sjbs.2018.01.007>
- Abdel-Wahab, W. M. (2013). Protective effect of thymoquinone on sodium fluoride-induced hepatotoxicity and oxidative stress in rats. *The Journal of Basic & Applied Zoology*, 66(5), 263–270. <https://doi.org/10.1016/j.jobaz.2013.04.002>
- Abou El-Nour, K. M. M., Eftaiha, A., Al-Warthan, A., & Ammar, R. A. A. (2010). Synthesis and applications of silver nanoparticles. *Arabian Journal of Chemistry*, 3(3), 135–140. <https://doi.org/10.1016/j.arabjc.2010.04.008>
- Adebayo-Tayo, B., Salaam, A., & Ajibade, A. (2019). Green synthesis of silver nanoparticle using Oscillatoria sp. extract, its antibacterial, antibiofilm potential and cytotoxicity activity. *Heliyon*, 5(10), e02502. <https://doi.org/10.1016/j.heliyon.2019.e02502>
- Adeyemi, O. S., & Akanji, M. A. (2011). Biochemical changes in the kidney and liver of rats following administration of ethanolic extract of Psidium guajava leaves. *Human and Experimental Toxicology*, 30(9), 1266–1274. <https://doi.org/10.1177/0960327110388534>
- Adeyemi, Oluyomi Stephen, & Adewumi, I. (2014). Biochemical Evaluation of Silver Nanoparticles in Wistar Rats. *International Scholarly Research Notices*, 2014, 1–8. <https://doi.org/10.1155/2014/196091>
- Aebi, H. (1984). Oxygen Radicals in Biological Systems. *Methods in Enzymology*, 105(1947), 121–126. [https://doi.org/10.1016/S0076-6879\(84\)05016-3](https://doi.org/10.1016/S0076-6879(84)05016-3)
- Agarwal, S., & Mehrotra, R. (2016). An Overview of Molecular Simulation. *JSM Chemistry*, 4(2), 1024–1028.
- Ahmad, A., Mukherjee, P., Senapati, S., Mandal, D., Khan, M. I., Kumar, R., & Sastry, M. (2003). Extracellular biosynthesis of silver nanoparticles using the fungus Fusarium oxysporum. *Colloids and Surfaces B: Biointerfaces*, 28(4), 313–318. [https://doi.org/10.1016/S0927-7765\(02\)00174-1](https://doi.org/10.1016/S0927-7765(02)00174-1)
- Ahmed, K. B. A., Senthilnathan, R., Megarajan, S., & Anbazhagan, V. (2015). Sunlight mediated synthesis of silver nanoparticles using redox phytoprotein and their application in catalysis and colorimetric mercury sensing. *Journal of Photochemistry and Photobiology B: Biology*, 151, 39–45. <https://doi.org/10.1016/j.jphotobiol.2015.07.003>
- Ahmed, S., Saifullah, Ahmad, M., Swami, B. L., & Ikram, S. (2016). Green synthesis of silver nanoparticles using Azadirachta indica aqueous leaf extract . *Journal of Radiation Research and Applied Sciences*, 9(1), 1–7. <https://doi.org/10.1016/j.jrras.2015.06.006>
- Aina, D. A., Owolo, O., Lateef, A., Aina, F. O., & Hakeem, A. S. (2019). Biomedical applications of chasmanthera dependens stem extract mediated silver nanoparticles as antimicrobial, antioxidant, anticoagulant, thrombolytic, and larvicidal agents. *Karbala International Journal of Modern Science*, 5(2), 2. <https://doi.org/10.33640/2405-609X.1018>
- Akarchariya, N., Sirilun, S., Julsrigival, J., & Chansakaowa, S. (2017). Chemical profiling and antimicrobial activity of essential oil from Curcuma aeruginosa Roxb., Curcuma glans K. Larsen & J. Mood and Curcuma cf. xanthorrhiza Roxb. collected in Thailand. *Asian Pacific Journal of Tropical Biomedicine*, 7(10), 881–885. <https://doi.org/10.1016/j.apjtb.2017.09.009>

- Al-Reza, S. M., Rahman, A., Sattar, M. A., Rahman, M. O., & Fida, H. M. (2010). Essential oil composition and antioxidant activities of Curcuma aromatica Salisb. *Food and Chemical Toxicology*, 48(6), 1757–1760. <https://doi.org/10.1016/j.fct.2010.04.008>
- Al-Saif, S. S. A. L., Awad, M. A., & Siddiqui, M. I. (2018). Formation, characterization and pathogen activities of green synthesis of curcuma silver nanoparticles. *Journal of Computational and Theoretical Nanoscience*, 15(4), 1300–1306. <https://doi.org/10.1166/jctn.2018.7306>
- Al-Shabib, N. A., Husain, F. M., Ahmed, F., Khan, R. A., Ahmad, I., Alsharaeh, E., ... Aliev, G. (2016). Biogenic synthesis of Zinc oxide nanostructures from Nigella sativa seed: Prospective role as food packaging material inhibiting broad-spectrum quorum sensing and biofilm. *Scientific Reports*, 6(December), 1–15. <https://doi.org/10.1038/srep36761>
- Al-Shmgani, H. S. A., Mohammed, W. H., Sulaiman, G. M., & Saadoon, A. H. (2017). Biosynthesis of silver nanoparticles from Catharanthus roseus leaf extract and assessing their antioxidant, antimicrobial, and wound-healing activities. *Artificial Cells, Nanomedicine and Biotechnology*, 45(6), 1234–1240. <https://doi.org/10.1080/21691401.2016.1220950>
- Almadiy, A. A., Nenaah, G. E., & Shawer, D. M. (2018). Facile synthesis of silver nanoparticles using harmala alkaloids and their insecticidal and growth inhibitory activities against the khapra beetle. *Journal of Pest Science*, 91(2), 727–737. <https://doi.org/10.1007/s10340-017-0924-2>
- Alsamarraie, A. F. K., Wang, W., & Zhou, P. (2018). Green Synthesis of Silver Nanoparticles Using Turmeric Extracts and Investigation of Their Antibacterial Activities. *Colloids and Surfaces B: Biointerfaces*, 171, 398–405. <https://doi.org/10.1016/j.colsurfb.2018.07.059>
- Alsamarraie, F. K., Wang, W., Zhou, P., Mustapha, A., & Lin, M. (2018). Green synthesis of silver nanoparticles using turmeric extracts and investigation of their antibacterial activities. *Colloids and Surfaces B: Biointerfaces*, 171, 398–405. <https://doi.org/10.1016/j.colsurfb.2018.07.059>
- Amendola, V., & Meneghetti, M. (2009). Laser ablation synthesis in solution and size manipulation of noble metal nanoparticles. *Physical Chemistry Chemical Physics*, 11(20), 3805–3821. <https://doi.org/10.1039/b900654k>
- Amendola, V., & Meneghetti, M. (2013). What controls the composition and the structure of nanomaterials generated by laser ablation in liquid solution? *Physical Chemistry Chemical Physics*, 15(9), 3027–3046. <https://doi.org/10.1039/c2cp42895d>
- Amooaghaie, R., Saeri, M. R., & Azizi, M. (2015). Synthesis, characterization and biocompatibility of silver nanoparticles synthesized from Nigella sativa leaf extract in comparison with chemical silver nanoparticles. *Ecotoxicology and Environmental Safety*, 120, 400–408. <https://doi.org/10.1016/j.ecoenv.2015.06.025>
- Anand, G., Sumithira, G., Chinna Raja, R., Muthukumar, A., & Vidhya, G. (2013). In vitro and in vivo anticancer activity of hydro- alcoholic extract of Ipomoea carnea leaf against Ehrlich Ascites Carcinoma cell lines. *Int J Adv Pharm Gen Res*, 1(1), 39–54.
- Anitha, P., Geogi, P., Yogeswari, J., & Anthoni, S. (2014). *In Vitro* Anticancer Activity of Ethanolic Extract of *Euphorbia hirta* (L.). *Science, Technology and Arts Research Journal*, 3(1), 01. <https://doi.org/10.4314/star.v3i1.1>
- Anjusha, S., & Gangaprasad, A. (2014). Phytochemical and Antibacterial Analysis of Two

- Important Curcuma species, Curcuma aromatica Salisb. and Curcuma xanthorrhiza Roxb.(Zingiberaceae). *Journal of Pharmacognosy and Phytochemistry*, 3(3), 50–53. Retrieved from http://www.phytojournal.com/vol3Issue3/Issue_sep_2014/27.1.pdf
- Antony, J. J., Ali, M., Sithika, A., Joseph, T. A., Suriyakalaa, U., Sankarganesh, A., ... Achiraman, S. (2013). Colloids and Surfaces B : Biointerfaces In vivo antitumor activity of biosynthesized silver nanoparticles using Ficus religiosa as a nanofactory in DAL induced mice model. *Colloids and Surfaces B: Biointerfaces*, 108, 185–190. <https://doi.org/10.1016/j.colsurfb.2013.02.041>
- Aquino, R., Morelli, S., Lauro, M. R., Abdo, S., Saija, A., & Tomaino, A. (2001). Phenolic constituents and antioxidant activity of an extract of Anthurium versicolor leaves. *Journal of Natural Products*, 64(8), 1019–1023. <https://doi.org/10.1021/np0101245>
- Arokkiaraj, S., Vincent, S., Saravanan, M., Lee, Y., Oh, Y. K., & Kim, K. H. (2017). Green synthesis of silver nanoparticles using Rheum palmatum root extract and their antibacterial activity against Staphylococcus aureus and Pseudomonas aeruginosa. *Artificial Cells, Nanomedicine and Biotechnology*, 45(2), 372–379. <https://doi.org/10.3109/21691401.2016.1160403>
- Arul Jacob, B. Y., Shanmuga Praba, P., SVasantha, V., Jeyasundari, J., & Brightson Arul Jacob, Y. (2015). Synthesis of plant-mediated silver nanoparticles using Ficus microcarpa leaf extract and evaluation of their antibacterial activities. *Chem. Bull.*, 4(3), 116–120. Retrieved from <https://www.researchgate.net/publication/307122719>
- Arulkumar, S., & Sabesan, M. (2010). Rapid preparation process of antiparkinsonian drug Mucuna pruriens silver nanoparticle by bioreduction and their characterization. *Pharmacognosy Research*, 2(4), 233–236. <https://doi.org/10.4103/0974-8490.69112>
- Arun Kumar, K. V., John, J., Sooraj, T. R., Raj, S. A., Unnikrishnan, N. V., & Selvaraj, N. B. (2019). Surface plasmon response of silver nanoparticles doped silica synthesised via sol-gel route. *Applied Surface Science*, 472(January), 40–45. <https://doi.org/10.1016/j.apsusc.2018.05.178>
- Aryal, S., Baniya, M. K., Danekhu, K., Kunwar, P., Gurung, R., & Koirala, N. (2019). Total Phenolic content, Flavonoid content and antioxidant potential of wild vegetables from western Nepal. *Plants*, 8(4). <https://doi.org/10.3390/plants8040096>
- Ashkarran, A. A. (2010). A novel method for synthesis of colloidal silver nanoparticles by arc discharge in liquid. *Current Applied Physics*, 10(6), 1442–1447. <https://doi.org/10.1016/j.cap.2010.05.010>
- Balachandar, R., Gurumoorthy, P., Karmegam, N., Barabadi, H., Subbaiya, R., Anand, K., ... Saravanan, M. (2019). Plant-Mediated Synthesis, Characterization and Bactericidal Potential of Emerging Silver Nanoparticles Using Stem Extract of Phyllanthus pinnatus: A Recent Advance in Phytonanotechnology. *Journal of Cluster Science*, 30(6), 1481–1488. <https://doi.org/10.1007/s10876-019-01591-y>
- Balakrishnan, S., & Srinivasan, M. (2016). Biosynthesis of silver nanoparticles from mangrove plant (Avicennia marina) extract and their potential mosquito larvicidal property. *Journal of Parasitic Diseases*, 40(3), 991–996. <https://doi.org/10.1007/s12639-014-0621-5>
- Balasubramani, G., & Ramkumar, R. (2017). Albizia amara Roxb . Mediated Gold Nanoparticles and Evaluation of Their Antioxidant , Antibacterial and Cytotoxic Properties. *Journal of Cluster Science*, 28(1), 259–275. <https://doi.org/10.1007/s10876-016-1085-9>

- Banerjee, P., Satapathy, M., Mukhopahayay, A., & Das, P. (2014). Leaf extract mediated green synthesis of silver nanoparticles from widely available Indian plants: Synthesis, characterization, antimicrobial property and toxicity analysis. *Bioresources and Bioprocessing*, 1(1), 1–10. <https://doi.org/10.1186/s40643-014-0003-y>
- Barber, D. J., & Freestone, I. C. (1990). An Investigation of the Origin of the Colour of the Lycurgus Cup By Analytical Transmission Electron Microscopy. *Archaeometry*, 32(1), 33–45. <https://doi.org/10.1111/j.1475-4754.1990.tb01079.x>
- Bauer, A. W., Kirby, W. M. M., Sherris, J. C., Turck, A. M., & Graevenitz, A. Von. (1978). Antibiotic Susceptibility Testing by a Standardized Single Disk Method. *American Journal of Clinical Pathology*, 45(3), 493–496. [https://doi.org/10.1016/S0305-4179\(78\)80006-0](https://doi.org/10.1016/S0305-4179(78)80006-0)
- Beattie, I. R., & Haverkamp, R. G. (2011). Silver and gold nanoparticles in plants: Sites for the reduction to metal. *Metalomics*, 3(6), 628–632. <https://doi.org/10.1039/c1mt00044f>
- Beers Jr., R. ., & Sizer, I. W. (1952). A spectrophotometric method for measuring the breakdown of hydrogen peroxide by catalase. *J. Biol. Chem.* 195, 133–140. *J Biol Chem*, 195(1), 133–140.
- Behravan, M., Hossein Panahi, A., Naghizadeh, A., Ziae, M., Mahdavi, R., & Mirzapour, A. (2019). Facile green synthesis of silver nanoparticles using Berberis vulgaris leaf and root aqueous extract and its antibacterial activity. *International Journal of Biological Macromolecules*, 124, 148–154. <https://doi.org/10.1016/j.ijbiomac.2018.11.101>
- Bhargava, A., Pareek, V., Roy Choudhury, S., Panwar, J., & Karmakar, S. (2018). Superior Bactericidal Efficacy of Fucose-Functionalized Silver Nanoparticles against Pseudomonas aeruginosa PAO1 and Prevention of Its Colonization on Urinary Catheters. *ACS Applied Materials and Interfaces*, 10(35), 29325–29337. <https://doi.org/10.1021/acsmami.8b09475>
- Bhau, B. S., Ghosh, S., Puri, S., Borah, B., Sarmah, D. K., & Khan, R. (2015). Green synthesis of gold nanoparticles from the leaf extract of Nepenthes khasiana and antimicrobial assay. *Advanced Materials Letters*, 6(1), 55–58. <https://doi.org/10.5185/amlett.2015.5609>
- Bilia, A. R., Piazzini, V., Guccione, C., Risaliti, L., Asprea, M., Capechi, G., & Bergonzi, M. C. (2017). Improving on Nature: The Role of Nanomedicine in the Development of Clinical Natural Drugs. *Planta Medica*, 83(5), 366–381. <https://doi.org/10.1055/s-0043-102949>
- Bindhu, M. R., & Umadevi, M. (2015). Antibacterial and catalytic activities of green synthesized silver nanoparticles. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, 135, 373–378. <https://doi.org/10.1016/j.saa.2014.07.045>
- Biswal, J., Misra, N., Borde, L. C., & Sabharwal, S. (2013). Synthesis of silver nanoparticles in methacrylic acid solution by gamma radiolysis and their application for estimation of dopamine at low concentrations. *Radiation Physics and Chemistry*, 83, 67–73. <https://doi.org/10.1016/j.radphyschem.2012.10.003>
- Bonnia, N. N., Kamaruddin, M. S., Nawawi, M. H., Ratim, S., Azlina, H. N., & Ali, E. S. (2016). Green Biosynthesis of Silver Nanoparticles Using ‘Polygonum Hydropiper’ and Study its Catalytic Degradation of Methylene Blue. *Procedia Chemistry*, 19, 594–602. <https://doi.org/10.1016/j.proche.2016.03.058>
- Bonsnes, R.W. and Taussky, H. H. (1945). On Colorimetric Determination of Creatinine by

- the Jaffe Reaction. *The Journal of Biological Chemistry*, 158, 581–591.
- Botha, T. L., Elemike, E. E., Horn, S., Onwudiwe, D. C., Giesy, J. P., & Wepener, V. (2019). Cytotoxicity of Ag, Au and Ag-Au bimetallic nanoparticles prepared using golden rod (*Solidago canadensis*) plant extract. *Scientific Reports*, 9(1), 1–8. <https://doi.org/10.1038/s41598-019-40816-y>
- Boutinguiza, M., Comesaña, R., Lusquiños, F., Riveiro, A., Del Val, J., & Pou, J. (2015). Production of silver nanoparticles by laser ablation in open air. *Applied Surface Science*, 336, 108–111. <https://doi.org/10.1016/j.apsusc.2014.09.193>
- Britton, K. L., Langridge, S. J., Baker, P. J., Weeradechapon, K., Sedelnikova, S. E., De Lucas, J. R., ... Turner, G. (2000). The crystal structure and active site location of isocitrate lyase from the fungus *Aspergillus nidulans*. *Structure*, 8(4), 349–362. [https://doi.org/10.1016/S0969-2126\(00\)00117-9](https://doi.org/10.1016/S0969-2126(00)00117-9)
- Brownlee, W. J., & Seib, F. P. (2018). Impact of the hypoxic phenotype on the uptake and efflux of nanoparticles by human breast cancer cells. *Scientific Reports*, 8(1), 1–11. <https://doi.org/10.1038/s41598-018-30517-3>
- Burduşel, A. C., Gherasim, O., Grumezescu, A. M., Mogoantă, L., Ficai, A., & Andronescu, E. (2018). Biomedical applications of silver nanoparticles: An up-to-date overview. *Nanomaterials*, 8(9), 1–24. <https://doi.org/10.3390/nano8090681>
- Burt, S. (2004). Essential oils: Their antibacterial properties and potential applications in foods - A review. *International Journal of Food Microbiology*, 94(3), 223–253. <https://doi.org/10.1016/j.ijfoodmicro.2004.03.022>
- Buzea, C., Pacheco, I. I., & Robbie, K. (2007). Nanomaterials and nanoparticles: Sources and toxicity. *Biointerphases*, 2(4), MR17–MR71. <https://doi.org/10.1116/1.2815690>
- Cano, A. I., Chiralt, A., & González-Martínez, C. (2017). Silver Composite Materials and Food Packaging. *Composites Materials for Food Packaging*, 123–151. <https://doi.org/10.1002/9781119160243.ch3>
- Castro-aceituno, V., Castro-aceituno, V., Ahn, S., Yesmin, S., & Singh, P. (2017). Anticancer activity of silver nanoparticles from Panax ginseng fresh leaves in human cancer cells ScienceDirect Anticancer activity of silver nanoparticles from Panax ginseng fresh leaves in human cancer cells. *Biomedicine et Pharmacotherapy*, 84(October), 158–165. <https://doi.org/10.1016/j.biopha.2016.09.016>
- Chaudhary, K. K., & Mishra, N. (2016). A Review on Molecular Docking: Novel Tool for Drug Discovery. *JSM Chem*, 4(3), 1029.
- Cheesbrough M; McArthur J. (1976). *Laboratory manual for rural tropical hospitals - a basis for training courses*. Edinburgh Churchill Livingstone.
- Chen, F., Hableel, G., Zhao, E. R., & Jokerst, J. V. (2018). Multifunctional nanomedicine with silica: Role of silica in nanoparticles for theranostic, imaging, and drug monitoring. *Journal of Colloid and Interface Science*, 521, 261–279. <https://doi.org/10.1016/j.jcis.2018.02.053>
- Chen, I. N., Chang, C. C., Ng, C. C., Wang, C. Y., Shyu, Y. T., & Chang, T. L. (2008). Antioxidant and antimicrobial activity of Zingiberaceae plants in Taiwan. *Plant Foods for Human Nutrition*, 63(1), 15–20. <https://doi.org/10.1007/s11130-007-0063-7>
- Chen, J., Wang, J., Zhang, X., & Jin, Y. (2008). Microwave-assisted green synthesis of silver nanoparticles by carboxymethyl cellulose sodium and silver nitrate. *Materials Chemistry*

- and Physics, 108(2–3), 421–424. <https://doi.org/10.1016/j.matchemphys.2007.10.019>
- Chengzheng, W., Jiazhi, W., Shuangjiang, C., Swamy, M. K., Sinniah, U. R., Akhtar, M. S., & Umar, A. (2018). Biogenic Synthesis, Characterization and Evaluation of Silver Nanoparticles from Aspergillus niger JX556221 Against Human Colon Cancer Cell Line HT-29. *Journal of Nanoscience and Nanotechnology*, 18(5), 3673–3681. <https://doi.org/10.1166/jnn.2018.15364>
- Choi, O., & Hu, Z. (2008). Size dependent and reactive oxygen species related nanosilver toxicity to nitrifying bacteria. *Environmental Science and Technology*, 42(12), 4583–4588. <https://doi.org/10.1021/es703238h>
- Choudhary, M. K., Kataria, J., & Sharma, S. (2018). Evaluation of the kinetic and catalytic properties of biogenically synthesized silver nanoparticles. *Journal of Cleaner Production*, 198, 882–890. <https://doi.org/10.1016/j.jclepro.2018.09.015>
- Criado, C. L. (2015). Exploring the Potential of Plant-Derived Natural Products beyond Functional Food: Applications in Nanomedicine. *Journal of Nanomedicine Research*, 2(3), 2–5. <https://doi.org/10.15406/jnmr.2015.02.00032>
- Crisponi, G., Nurchi, V. M., Lachowicz, J. I., Peana, M., Medici, S., & Zoroddu, M. A. (2017). *Toxicity of Nanoparticles: Etiology and Mechanisms. Antimicrobial Nanoarchitectonics: From Synthesis to Applications.* Elsevier Inc. <https://doi.org/10.1016/B978-0-323-52733-0.00018-5>
- Crooks, P. A., Li, M., & Dwoskin, L. P. (1997). Metabolites of nicotine in rat brain after peripheral nicotine administration: Cotinine, nornicotine, and norcotinine. *Drug Metabolism and Disposition*, 25(1), 47–54.
- Cross, S. E., Jin, Y. S., Lu, Q. Y., Rao, J., & Gimzewski, J. K. (2011). Green tea extract selectively targets nanomechanics of live metastatic cancer cells. *Nanotechnology*, 22(21). <https://doi.org/10.1088/0957-4484/22/21/215101>
- Cui, B. Z., Zheng, L. Y., Waryoba, D., Marinescu, M., & Hadjipanayis, G. C. (2011). Anisotropic SmCo5 flakes and nanocrystalline particles by high energy ball milling. *Journal of Applied Physics*, 109(7), 107–110. <https://doi.org/10.1063/1.3562447>
- Cyril, N., George, J. B., Joseph, L., Raghavamenon, A. C., & Sylas, V. P. (2019). Assessment of antioxidant, antibacterial and anti-proliferative (lung cancer cell line A549) activities of green synthesized silver nanoparticles from Derris trifoliata. *Toxicology Research*, 8(2), 297–308. <https://doi.org/10.1039/C8TX00323H>
- da Silva Ferreira, V., ConzFerreira, M. E., Lima, L. M. T. R., Frasés, S., de Souza, W., & Sant'Anna, C. (2017). Green production of microalgae-based silver chloride nanoparticles with antimicrobial activity against pathogenic bacteria. *Enzyme and Microbial Technology*, 97, 114–121. <https://doi.org/10.1016/j.enzmictec.2016.10.018>
- Dahoumane, S. A., Mechouet, M., Alvarez, F. J., Agathos, S. N., & Jeffryes, C. (2016). Microalgae: An outstanding tool in nanotechnology. *Revista Bionatura*, 1(4), 196–201. <https://doi.org/10.21931/RB/2016.01.04.7>
- Dahoumane, S. A., Mechouet, M., Wijesekera, K., Filipe, C. D. M., Sicard, C., Bazylinski, D. A., & Jeffryes, C. (2017). Algae-mediated biosynthesis of inorganic nanomaterials as a promising route in nanobiotechnology-a review. *Green Chemistry*, 19(3), 552–587. <https://doi.org/10.1039/c6gc02346k>
- Dakhil, A. S. (2017). Journal of King Saud University – Science Biosynthesis of silver

- nanoparticle (AgNPs) using Lactobacillus and their effects on oxidative stress biomarkers in rats. *Journal of King Saud University - Science*, 29(4), 462–467. <https://doi.org/10.1016/j.jksus.2017.05.013>
- Danilczuk, M., Lund, A., Sadlo, J., Yamada, H., & Michalik, J. (2006). Conduction electron spin resonance of small silver particles. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, 63(1), 189–191. <https://doi.org/10.1016/j.saa.2005.05.002>
- Das, G., Patra, J. K., Debnath, T., Ansari, A., & Shin, H. S. (2019). Investigation of antioxidant, antibacterial, antidiabetic, and cytotoxicity potential of silver nanoparticles synthesized using the outer peel extract of Ananas comosus (L.). *PLoS ONE*, 14(8), 1–19. <https://doi.org/10.1371/journal.pone.0220950>
- Dauthal, P., & Mukhopadhyay, M. (2016). Noble Metal Nanoparticles: Plant-Mediated Synthesis, Mechanistic Aspects of Synthesis, and Applications. *Industrial and Engineering Chemistry Research*, 55(36), 9557–9577. <https://doi.org/10.1021/acs.iecr.6b00861>
- David-Pfeuty, T., & Nouvian-Dooghe, Y. (1995). Highly specific antibody to Rous sarcoma virus src gene product recognizes nuclear and nucleolar antigens in human cells. *Journal of Virology*, 69(3), 1699–1713. <https://doi.org/10.1128/jvi.69.3.1699-1713.1995>
- Dayma, P. B., Mangrola, A. V., Suriyraj, S. P., Dudhagara, P., & Rajesh, K. (2019). Synthesis of Bio-Silver Nanoparticles Using Desert Streptomyces Intermedius and Its Antimicrobial Activity Isolated. *Journal of Pharmaceutical, Chemical and Biological Sciences*, 7(August), 94–101.
- Dhamecha, D., Jalalpure, S., & Jadhav, K. (2016). Journal of Photochemistry & Photobiology , B : Biology Nepenthes khasiana mediated synthesis of stabilized gold nanoparticles : Characterization and biocompatibility studies. *JPB*, 154, 108–117. <https://doi.org/10.1016/j.jphotobiol.2015.12.002>
- Dhand, V., Soumya, L., Bharadwaj, S., Chakra, S., Bhatt, D., & Sreedhar, B. (2016). Green synthesis of silver nanoparticles using Coffea arabica seed extract and its antibacterial activity. *Materials Science and Engineering C*, 58, 36–43. <https://doi.org/10.1016/j.msec.2015.08.018>
- Dipankar, C., & Murugan, S. (2012). The green synthesis, characterization and evaluation of the biological activities of silver nanoparticles synthesized from Iresine herbstii leaf aqueous extracts. *Colloids and Surfaces B: Biointerfaces*, 98, 112–119. <https://doi.org/10.1016/j.colsurfb.2012.04.006>
- Dos Santos Ramos, M. A., Da Silva, P. B., Spósito, L., De Toledo, L. G., Bonifácio, B. vidal, Rodero, C. F., ... Bauab, T. M. (2018). Nanotechnology-based drug delivery systems for control of microbial biofilms: A review. *International Journal of Nanomedicine*, 13, 1179–1213. <https://doi.org/10.2147/IJN.S146195>
- Dosoky, N. S., & Setzer, W. N. (2018). Chemical Composition and Biological Activities of Essential Oils of Curcuma Species, 10–17. <https://doi.org/10.3390/nu10091196>
- Dr Vishnu Kiran Manam, D. M. S. (2014). In vitro cytotoxic activity of silver nano particle biosynthesized from Colpomenia sinuosa and Halymenia porphyroides using DLA and EAC cell lines. *World Journal of Pharmaceutical Sciences*, 2(9), 926–930. Retrieved from <http://www.wjpsonline.org/>
- Drabkin, D. L., & Austin, J. H. (1935). Spectrophotometric Studies. *Journal of Biological Chemistry*, 112(1), 51–65. [https://doi.org/10.1016/s0021-9258\(18\)74965-x](https://doi.org/10.1016/s0021-9258(18)74965-x)

- Dujardin, E., Peet, C., Stubbs, G., Culver, J. N., & Mann, S. (2003). Organization of metallic nanoparticles using tobacco mosaic virus templates. *Nano Letters*, 3(3), 413–417. <https://doi.org/10.1021/nl034004o>
- Egorova, E. M., & Revina, A. A. (2000). Synthesis of metallic nanoparticles in reverse micelles in the presence of quercetin. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 168(1), 87–96. [https://doi.org/10.1016/S0927-7757\(99\)00513-0](https://doi.org/10.1016/S0927-7757(99)00513-0)
- El-Refai, A. A., Ghoniem, G. A., El-Khatib, A. Y., & Hassaan, M. M. (2018). Eco-friendly synthesis of metal nanoparticles using ginger and garlic extracts as biocompatible novel antioxidant and antimicrobial agents. *Journal of Nanostructure in Chemistry*, 8(1), 71–81. <https://doi.org/10.1007/s40097-018-0255-8>
- El Mahdy, M. M., Eldin, T. A. S., Aly, H. S., Mohammed, F. F., & Shaalan, M. I. (2015). Evaluation of hepatotoxic and genotoxic potential of silver nanoparticles in albino rats. *Experimental and Toxicologic Pathology*, 67(1), 21–29. <https://doi.org/10.1016/j.etp.2014.09.005>
- Eng, C., Reza, H., Ali, M., & Morad, A. (2011). Archive of SID Synthesis of ZnO Nanoparticles by Spray Pyrolysis Method Archive of SID, 30(1), 1–6.
- Espinasse, B. P., Geitner, N. K., Schierz, A., Therezien, M., Richardson, C. J., Lowry, G. V., ... Wiesner, M. R. (2018). Comparative Persistence of Engineered Nanoparticles in a Complex Aquatic Ecosystem. *Environmental Science and Technology*, 52(7), 4072–4078. <https://doi.org/10.1021/acs.est.7b06142>
- Fantino, E., Chiappone, A., Roppolo, I., Manfredi, D., Bongiovanni, R., Pirri, C. F., & Calignano, F. (2016). 3D Printing of Conductive Complex Structures with in Situ Generation of Silver Nanoparticles. *Advanced Materials*, 28(19), 3712–3717. <https://doi.org/10.1002/adma.201505109>
- Ferreira, L. A. B., Garcia-Fossa, F., Radaic, A., Durán, N., Fávaro, W. J., & de Jesus, M. B. (2020). Biogenic silver nanoparticles: In vitro and in vivo antitumor activity in bladder cancer. *European Journal of Pharmaceutics and Biopharmaceutics*, 151, 162–170. <https://doi.org/10.1016/j.ejpb.2020.04.012>
- Figueiredo, T. A., Sobral, R. G., Ludovice, A. M., de Almeida, J. M. F., Bui, N. K., Vollmer, W., ... Tomasz, A. (2012). Identification of genetic determinants and enzymes involved with the amidation of glutamic acid residues in the peptidoglycan of *Staphylococcus aureus*. *PLoS Pathogens*, 8(1). <https://doi.org/10.1371/journal.ppat.1002508>
- Flores, O., Wang, Z., Knudsen, K. E., & Burnstein, K. L. (2010). Nuclear targeting of cyclin-dependent kinase 2 reveals essential roles of cyclin-dependent kinase 2 localization and cyclin E in vitamin D-mediated growth inhibition. *Endocrinology*, 151(3), 896–908. <https://doi.org/10.1210/en.2009-1116>
- Franci, G., Falanga, A., Galdiero, S., Palomba, L., Rai, M., Morelli, G., & Galdiero, M. (2015). Silver nanoparticles as potential antibacterial agents. *Molecules*, 20(5), 8856–8874. <https://doi.org/10.3390/molecules20058856>
- Francis, S., Joseph, S., Koshy, E. P., & Mathew, B. (2018). Microwave assisted green synthesis of silver nanoparticles using leaf extract of *elephantopus scaber* and its environmental and biological applications. *Artificial Cells, Nanomedicine and Biotechnology*, 46(4), 795–804. <https://doi.org/10.1080/21691401.2017.1345921>
- Friesner, R. A., Banks, J. L., Murphy, R. B., Halgren, T. A., Klicic, J. J., Mainz, D. T., ... Shenkin, P. S. (2004). Glide: A New Approach for Rapid, Accurate Docking and

- Scoring. 1. Method and Assessment of Docking Accuracy. *Journal of Medicinal Chemistry*, 47(7), 1739–1749. <https://doi.org/10.1021/jm0306430>
- Gangula, A., Podila, R., M, R., Karanam, L., Janardhana, C., & Rao, A. M. (2011). Catalytic reduction of 4-nitrophenol using biogenic gold and silver nanoparticles derived from breynia rhamnoides. *Langmuir*, 27(24), 15268–15274. <https://doi.org/10.1021/la2034559>
- Gardea-Torresdey, J. L., Gomez, E., Peralta-Videa, J. R., Parsons, J. G., Troiani, H., & Jose-Yacaman, M. (2003). Alfalfa sprouts: A natural source for the synthesis of silver nanoparticles. *Langmuir*, 19(4), 1357–1361. <https://doi.org/10.1021/la020835i>
- Ghojavand, S., Madani, M., & Karimi, J. (2020). Green Synthesis, Characterization and Antifungal Activity of Silver Nanoparticles Using Stems and Flowers of Felty Germanander. *Journal of Inorganic and Organometallic Polymers and Materials*, 30(8), 2987–2997. <https://doi.org/10.1007/s10904-020-01449-1>
- Gisbert-Garzarán, M., Berkmann, J. C., Giasafaki, D., Lozano, D., Spyrou, K., Manzano, M., ... Vallat-Regí, M. (2020). Engineered pH-Responsive Mesoporous Carbon Nanoparticles for Drug Delivery. *ACS Applied Materials and Interfaces*, 12(13), 14946–14957. <https://doi.org/10.1021/acsami.0c01786>
- Goodsell, D. S., & Olson, A. J. (1990). Automated docking of substrates to proteins by simulated annealing. *Proteins: Structure, Function, and Bioinformatics*, 8(3), 195–202. <https://doi.org/10.1002/prot.340080302>
- Grano, M., Galimi, F., Zambonin, G., Colucci, S., Cottone, E., Zallone, A. Z., & Comoglio, P. M. (1996). Hepatocyte growth factor is a coupling factor for osteoclasts and osteoblasts in vitro. *Proceedings of the National Academy of Sciences of the United States of America*, 93(15), 7644–7648. <https://doi.org/10.1073/pnas.93.15.7644>
- Green, D. V. S. (2003). Virtual Screening of Virtual Libraries. *Progress in Medicinal Chemistry*, 41, 61–97. [https://doi.org/10.1016/S0079-6468\(02\)41002-8](https://doi.org/10.1016/S0079-6468(02)41002-8)
- Gurr, J. R., Wang, A. S. S., Chen, C. H., & Jan, K. Y. (2005). Ultrafine titanium dioxide particles in the absence of photoactivation can induce oxidative damage to human bronchial epithelial cells. *Toxicology*, 213(1–2), 66–73. <https://doi.org/10.1016/j.tox.2005.05.007>
- Gurusamy, V., Krishnamoorthy, R., Gopal, B., Veeraravagan, V., & Periyasamy. (2017). Systematic investigation on hydrazine hydrate assisted reduction of silver nanoparticles and its antibacterial properties. *Inorganic and Nano-Metal Chemistry*, 47(5), 761–767. <https://doi.org/10.1080/15533174.2015.1137074>
- H.U Bergmeyer. (1974). *Methods of Enzymatic Analysis* (2nd ed.). Academic Press, New York.
- Habig, W. H., Pabst, M. J., & Jakoby, W. B. (1974). Glutathione S transferases. The first enzymatic step in mercapturic acid formation. *Journal of Biological Chemistry*, 249(22), 7130–7139. [https://doi.org/10.1016/S0021-9258\(19\)42083-8](https://doi.org/10.1016/S0021-9258(19)42083-8)
- Harris, A. T., & Bali, R. (2008). On the formation and extent of uptake of silver nanoparticles by live plants. *Journal of Nanoparticle Research*, 10(4), 691–695. <https://doi.org/10.1007/s11051-007-9288-5>
- Hassan, H. A., & Yousef, M. I. (2009). Mitigating effects of antioxidant properties of black berry juice on sodium fluoride induced hepatotoxicity and oxidative stress in rats. *Food*

- and Chemical Toxicology, 47(9), 2332–2337. <https://doi.org/10.1016/j.fct.2009.06.023>
- Hatchett, D. W., & White, H. S. (1996). Electrochemistry of sulfur adlayers on the low-index faces of silver. *Journal of Physical Chemistry*, 100(23), 9854–9859. <https://doi.org/10.1021/jp953757z>
- Haverkamp, R. G., Marshall, A. T., & Van Agterveld, D. (2007). Pick your carats: Nanoparticles of gold-silver-copper alloy produced in vivo. *Journal of Nanoparticle Research*, 9(4), 697–700. <https://doi.org/10.1007/s11051-006-9198-y>
- Heydrnejad, M. S., Samani, R. J., & Aghaeivanda, S. (2015). Toxic Effects of Silver Nanoparticles on Liver and Some Hematological Parameters in Male and Female Mice (*Mus musculus*). *Biological Trace Element Research*, 165(2), 153–158. <https://doi.org/10.1007/s12011-015-0247-1>
- Hor, L., Dobson, R. C. J., Downton, M. T., Wagner, J., Hutton, C. A., & Perugini, M. A. (2013). Dimerization of bacterial diaminopimelate epimerase is essential for catalysis. *Journal of Biological Chemistry*, 288(13), 9238–9248. <https://doi.org/10.1074/jbc.M113.450148>
- Hosseinpour-mashkani, S. M., & Ramezani, M. (2014). Silver and silver oxide nanoparticles : Synthesis and characterization by thermal decomposition. *Materials Letters*, 130, 259–262. <https://doi.org/10.1016/j.matlet.2014.05.133>
- Hu, D., Yang, X., Chen, W., Feng, Z., Hu, C., Yan, F., ... Chen, Z. (2021). Rhodiola rosea Rhizome Extract-Mediated Green Synthesis of Silver Nanoparticles and Evaluation of Their Potential Antioxidant and Catalytic Reduction Activities . *ACS Omega*, 6(38), 24450–24461. <https://doi.org/10.1021/acsomega.1c02843>
- Huang, Shing, Chueh, P. J., Lin, Y. W., Shih, T. S., & Chuang, S. M. (2009). Disturbed mitotic progression and genome segregation are involved in cell transformation mediated by nano-TiO₂ long-term exposure. *Toxicology and Applied Pharmacology*, 241(2), 182–194. <https://doi.org/10.1016/j.taap.2009.08.013>
- Huang, Shuai, Wang, Y., Shen, S., Tang, Y., Yu, A., Kang, B., ... Lu, G. (2019). Enhancing the performance of polymer solar cells using solution-processed copper doped nickel oxide nanoparticles as hole transport layer. *Journal of Colloid and Interface Science*, 535, 308–317. <https://doi.org/10.1016/j.jcis.2018.10.013>
- Hussain, I., Singh, N. B., Singh, A., Singh, H., & Singh, S. C. (2016). Green synthesis of nanoparticles and its potential application. *Biotechnology Letters*, 38(4), 545–560. <https://doi.org/10.1007/s10529-015-2026-7>
- Iannone, M. F., Groppe, M. D., de Sousa, M. E., Fernández van Raap, M. B., & Benavides, M. P. (2016). Impact of magnetite iron oxide nanoparticles on wheat (*Triticum aestivum* L.) development: Evaluation of oxidative damage. *Environmental and Experimental Botany*, 131(May 2018), 77–88. <https://doi.org/10.1016/j.envexpbot.2016.07.004>
- Ibrahim, E., Fouad, H., Zhang, M., Zhang, Y., Qiu, W., Yan, C., ... Chen, J. (2019). Biosynthesis of silver nanoparticles using endophytic bacteria and their role in inhibition of rice pathogenic bacteria and plant growth promotion. *RSC Advances*, 9(50), 29293–29299. <https://doi.org/10.1039/c9ra04246f>
- Iravani, S., Korbekandi, H., Mirmohammadi, S. V., & Zolfaghari, B. (2014). Synthesis of silver nanoparticles: Chemical, physical and biological methods. *Research in Pharmaceutical Sciences*, 9(6), 385–406.

- Iravani, Siavash. (2011). Green synthesis of metal nanoparticles using plants. *Green Chemistry*, 13(10), 2638–2650. <https://doi.org/10.1039/c1gc15386b>
- Iravani, Siavash. (2017). Methods for Preparation of Metal Nanoparticles. *Metal Nanoparticles*, 15–31. <https://doi.org/10.1002/9783527807093.ch2>
- Jadalannagari, S., Deshmukh, K., Ramanan, S. R., & Kowshik, M. (2014). Antimicrobial activity of hemocompatible silver doped hydroxyapatite nanoparticles synthesized by modified sol-gel technique. *Applied Nanoscience (Switzerland)*, 4(2), 133–141. <https://doi.org/10.1007/s13204-013-0197-x>
- Jafari, S., Derakhshankhah, H., Alaei, L., Fattahi, A., Varnamkhasti, B. S., & Saboury, A. A. (2019). Mesoporous silica nanoparticles for therapeutic/diagnostic applications. *Biomedicine and Pharmacotherapy*, 109(October 2018), 1100–1111. <https://doi.org/10.1016/j.biopha.2018.10.167>
- Jagtap, U. B., & Bapat, V. A. (2013). Green synthesis of silver nanoparticles using *Artocarpus heterophyllus* Lam. seed extract and its antibacterial activity. *Industrial Crops and Products*, 46, 132–137. <https://doi.org/10.1016/j.indcrop.2013.01.019>
- Jahangirian, H., Lemraski, E. G., Webster, T. J., Rafiee-Moghaddam, R., & Abdollahi, Y. (2017). A review of drug delivery systems based on nanotechnology and green chemistry: Green nanomedicine. *International Journal of Nanomedicine*, 12, 2957–2978. <https://doi.org/10.2147/IJN.S127683>
- Jang, H. D., Kim, S. K., Chang, H., Jo, E. H., Roh, K. M., Choi, J. H., & Choi, J. W. (2015). Synthesis of 3D silver-graphene-titanium dioxide composite via aerosol spray pyrolysis for sensitive glucose biosensor. *Aerosol Science and Technology*, 49(7), 538–546. <https://doi.org/10.1080/02786826.2015.1050086>
- Jantan, I. Bin, Ahmad, A. S., Ali, N. A. M., Ahmad, A. R., & Ibrahim, H. (1999). Chemical composition of the rhizome oils of four curcuma species from Malaysia. *Journal of Essential Oil Research*, 11(6), 719–723. <https://doi.org/10.1080/10412905.1999.9712004>
- Jantan, I., Saputri, F. C., Qaisar, M. N., & Buang, F. (2012). Correlation between chemical composition of curcuma domestica and curcuma xanthorrhiza and their antioxidant effect on human low-density lipoprotein oxidation. *Evidence-Based Complementary and Alternative Medicine*, 2012(Ldl). <https://doi.org/10.1155/2012/438356>
- Jasper, R., Locatelli, G. O., Pilati, C., & Locatelli, C. (2012). Evaluation of biochemical, hematological and oxidative parameters in mice exposed to the herbicide glyphosate-roundup®. *Interdisciplinary Toxicology*, 5(3), 133–140. <https://doi.org/10.2478/v10102-012-0022-5>
- Javey, A., & Dai, H. (2005). Regular arrays of 2 nm metal nanoparticles for deterministic synthesis of nanomaterials. *Journal of the American Chemical Society*, 127(34), 11942–11943. <https://doi.org/10.1021/ja0536668>
- Jayaramudu, T., Raghavendra, G. M., Varaprasad, K., Reddy, G. V. S., Reddy, A. B., Sudhakar, K., & Sadiku, E. R. (2016). Preparation and characterization of poly(ethylene glycol) stabilized nano silver particles by a mechanochemical assisted ball mill process. *Journal of Applied Polymer Science*, 133(7). <https://doi.org/10.1002/app.43027>
- Jeevika, A., & Ravi Shankaran, D. (2015). Seed-free synthesis of 1D silver nanowires ink using clove oil (*Syzygium Aromaticum*) at room temperature. *Journal of Colloid and Interface Science*, 458, 155–159. <https://doi.org/10.1016/j.jcis.2015.07.045>

- Jeong, S., Woo, K., Kim, D., Lim, S., Kim, J. S., Shin, H., ... Moon, J. (2008). Controlling the thickness of the surface oxide layer on Cu nanoparticles for the fabrication of conductive structures by ink-jet printing. *Advanced Functional Materials*, 18(5), 679–686. <https://doi.org/10.1002/adfm.200700902>
- Jeulin, C., Seltzer, V., Bailbé, D., Andreau, K., & Marano, F. (2008). EGF mediates calcium-activated chloride channel activation in the human bronchial epithelial cell line 16HBE14o-: Involvement of tyrosine kinase p60c-src. *American Journal of Physiology - Lung Cellular and Molecular Physiology*, 295(3), 489–497. <https://doi.org/10.1152/ajplung.90282.2008>
- Jian Yang, Yanjing Li, Bo Jiang, and Y. F. (2018). Synthesis and mechanism study of the highly monodispersed extra-small silver nanoparticles in reverse micelles. *Journal of Nanophotonics*, 12(3).
- Jiang, C., Jiang, Z., Zhu, S., Amulraj, J., Deenadayalan, V. K., Jacob, J. A., & Qian, J. (2021). Biosynthesis of silver nanoparticles and the identification of possible reductants for the assessment of in vitro cytotoxic and in vivo antitumor effects. *Journal of Drug Delivery Science and Technology*, 63(February), 102444. <https://doi.org/10.1016/j.jddst.2021.102444>
- Ju, Y. M., Yang, S. G., Ding, Y. C., Sun, C., Gu, C. G., He, Z., ... Xu, B. (2009). Microwave-enhanced H₂O₂-based process for treating aqueous malachite green solutions: Intermediates and degradation mechanism. *Journal of Hazardous Materials*, 171(1–3), 123–132. <https://doi.org/10.1016/j.jhazmat.2009.05.120>
- Juby, K. A., Dwivedi, C., Kumar, M., Kota, S., Misra, H. S., & Bajaj, P. N. (2012). Silver nanoparticle-loaded PVA/gum acacia hydrogel: Synthesis, characterization and antibacterial study. *Carbohydrate Polymers*, 89(3), 906–913. <https://doi.org/10.1016/j.carbpol.2012.04.033>
- Jung, J., Raghavendra, G. M., Kim, D., & Seo, J. (2018). One-step synthesis of starch-silver nanoparticle solution and its application to antibacterial paper coating. *International Journal of Biological Macromolecules*, 107, 2285–2290. <https://doi.org/10.1016/j.ijbiomac.2017.10.108>
- Jyoti, K., & Singh, A. (2016). Green synthesis of nanostructured silver particles and their catalytic application in dye degradation. *Journal of Genetic Engineering and Biotechnology*, 14(2), 311–317. <https://doi.org/10.1016/j.jgeb.2016.09.005>
- Kaabipour, S., & Hemmati, S. (2021). A review on the green and sustainable synthesis of silver nanoparticles and one-dimensional silver nanostructures. *Beilstein Journal of Nanotechnology*, 12, 102–136. <https://doi.org/10.3762/BJNANO.12.9>
- Kalimuthu, K., Suresh Babu, R., Venkataraman, D., Bilal, M., & Gurunathan, S. (2008). Biosynthesis of silver nanocrystals by *Bacillus licheniformis*. *Colloids and Surfaces B: Biointerfaces*, 65(1), 150–153. <https://doi.org/10.1016/j.colsurfb.2008.02.018>
- Kamran, U., Bhatti, H. N., Iqbal, M., Jamil, S., & Zahid, M. (2019). Biogenic synthesis, characterization and investigation of photocatalytic and antimicrobial activity of manganese nanoparticles synthesized from *Cinnamomum verum* bark extract. *Journal of Molecular Structure*, 1179, 532–539. <https://doi.org/10.1016/j.molstruc.2018.11.006>
- Kanagamani, K., Muthukrishnan, P., Ilayaraja, M., Shankar, K., & Kathiresan, A. (2018). Synthesis, Characterisation and DFT Studies of Stigmasterol Mediated Silver Nanoparticles and Their Anticancer Activity. *Journal of Inorganic and Organometallic Polymers and Materials*, 28(3), 702–710. <https://doi.org/10.1007/s10904-017-0721-7>

- Kanagamani, Krishnaswamy, Muthukrishnan, P., Shankar, K., Kathiresan, A., Barabadi, H., & Saravanan, M. (2019). Antimicrobial, Cytotoxicity and Photocatalytic Degradation of Norfloxacin Using Kleinia grandiflora Mediated Silver Nanoparticles. *Journal of Cluster Science*, 30(6), 1415–1424. <https://doi.org/10.1007/s10876-019-01583-y>
- Kang, S. J., Kim, B. M., Lee, Y. J., Hong, S. H., & Chung, H. W. (2009). Titanium dioxide nanoparticles induce apoptosis through the JNK/p38-caspase-8-Bid pathway in phytohemagglutinin-stimulated human lymphocytes. *Biochemical and Biophysical Research Communications*, 386(4), 682–687. <https://doi.org/10.1016/j.bbrc.2009.06.097>
- Kavaz, D., Umar, H., & Shehu, S. (2018). Synthesis, characterization, antimicrobial and antimetastatic activity of silver nanoparticles synthesized from Ficus ingens leaf. *Artificial Cells, Nanomedicine and Biotechnology*, 46(sup3), S1193–S1203. <https://doi.org/10.1080/21691401.2018.1536060>
- Keskar, M., Sabatini, C., Cheng, C., & Swihart, M. T. (2019). Synthesis and characterization of silver nanoparticle-loaded amorphous calcium phosphate microspheres for dental applications. *Nanoscale Advances*, 1(2), 627–635. <https://doi.org/10.1039/c8na00281a>
- Khan, I., Saeed, K., & Khan, I. (2019). Nanoparticles: Properties, applications and toxicities. *Arabian Journal of Chemistry*, 12(7), 908–931. <https://doi.org/10.1016/j.arabjc.2017.05.011>
- Khan, M., Shaik, M. R., Adil, S. F., Khan, S. T., Al-Warthan, A., Siddiqui, M. R. H., ... Tremel, W. (2018). Plant extracts as green reductants for the synthesis of silver nanoparticles: lessons from chemical synthesis. *Dalton Transactions*, 47(35), 11988–12010. <https://doi.org/10.1039/C8DT01152D>
- Khayati, G. R., & Janghorban, K. (2013). Preparation of nanostructure silver powders by mechanical decomposing and mechanochemical reduction of silver oxide. *Transactions of Nonferrous Metals Society of China (English Edition)*, 23(5), 1520–1524. [https://doi.org/10.1016/S1003-6326\(13\)62625-4](https://doi.org/10.1016/S1003-6326(13)62625-4)
- Khezerlou, A., Alizadeh-Sani, M., Azizi-Lalabadi, M., & Ehsani, A. (2018). Nanoparticles and their antimicrobial properties against pathogens including bacteria, fungi, parasites and viruses. *Microbial Pathogenesis*, 123(July), 505–526. <https://doi.org/10.1016/j.micpath.2018.08.008>
- Khoshnamvand, M., Huo, C., & Liu, J. (2019). Silver nanoparticles synthesized using Allium ampeloprasum L. leaf extract: Characterization and performance in catalytic reduction of 4-nitrophenol and antioxidant activity. *Journal of Molecular Structure*, 1175, 90–96. <https://doi.org/10.1016/j.molstruc.2018.07.089>
- Kim, J. K., Jo, C., Hwang, H. J., Park, H. J., Kim, Y. J., & Byun, M. W. (2006). Color improvement by irradiation of Curcuma aromatica extract for industrial application. *Radiation Physics and Chemistry*, 75(3), 449–452. <https://doi.org/10.1016/j.radphyschem.2005.10.019>
- Kiran, M. S., Betageri, V. S., Kumar, C. R. R., Vinay, S. P., & Latha, M. S. (2020). In-Vitro Antibacterial, Antioxidant and Cytotoxic Potential of Silver Nanoparticles Synthesized Using Novel Eucalyptus tereticornis Leaves Extract. *Journal of Inorganic and Organometallic Polymers and Materials*, 30(8), 2916–2925. <https://doi.org/10.1007/s10904-020-01443-7>
- Kitchen, D. B., Decornez, H., Furr, J. R., & Bajorath, J. (2004). Docking and scoring in virtual screening for drug discovery: Methods and applications. *Nature Reviews Drug Discovery*, 3(11), 935–949. <https://doi.org/10.1038/nrd1549>

- Kmis, F. E., Fissan, H., & Rellinghaus, B. (2000). Sintering and evaporation characteristics of gas-phase synthesis of size-selected PbS nanoparticles. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, 69, 329–334. [https://doi.org/10.1016/S0921-5107\(99\)00298-6](https://doi.org/10.1016/S0921-5107(99)00298-6)
- Komes, D., Belščak-Cvitanović, A., Horžić, D., Rusak, G., Likić, S., & Berendika, M. (2011). Phenolic composition and antioxidant properties of some traditionally used medicinal plants affected by the extraction time and hydrolysis. *Phytochemical Analysis*, 22(2), 172–180. <https://doi.org/10.1002/pca.1264>
- Kora, A. J., & Sashidhar, R. B. (2018). Biogenic silver nanoparticles synthesized with rhamnogalacturonan gum: Antibacterial activity, cytotoxicity and its mode of action. *Arabian Journal of Chemistry*, 11(3), 313–323. <https://doi.org/10.1016/j.arabjc.2014.10.036>
- Kora, A. J., Sashidhar, R. B., & Arunachalam, J. (2012). Aqueous extract of gum olibanum (*Boswellia serrata*): A reductant and stabilizer for the biosynthesis of antibacterial silver nanoparticles. *Process Biochemistry*, 47(10), 1516–1520. <https://doi.org/10.1016/j.procbio.2012.06.004>
- Korbekandi, H., Mohseni, S., Jouneghani, R. M., Pourhossein, M., & Iravani, S. (2016). Biosynthesis of silver nanoparticles using *Saccharomyces cerevisiae*. *Artificial Cells, Nanomedicine and Biotechnology*, 44(1), 235–239. <https://doi.org/10.3109/21691401.2014.937870>
- Kumar, Pankaj; Singh, Purushottam Kunar; Hussain, Manowar; Kumar Das, A. (2016). Synthesis of Silver Metal Nanoparticles Through Electric Arc Discharge Method: A Review. *Advanced Science Letters*, 22, 3–7.
- Kumar, B., Smita, K., Seqqat, R., Benalcazar, K., Grijalva, M., & Cumbal, L. (2016). In vitro evaluation of silver nanoparticles cytotoxicity on Hepatic cancer (Hep-G2) cell line and their antioxidant activity: Green approach for fabrication and application. *Journal of Photochemistry and Photobiology B: Biology*, 159, 8–13. <https://doi.org/10.1016/j.jphotobiol.2016.03.011>
- Kumar, C. R. R., Betageri, V. S., Nagaraju, G., Suma, B. P., Kiran, M. S., Pujar, G. H., & Latha, M. S. (2020). One-Pot Synthesis of ZnO Nanoparticles for Nitrite Sensing, Photocatalytic and Antibacterial Studies. *Journal of Inorganic and Organometallic Polymers and Materials*, 30(9), 3476–3486. <https://doi.org/10.1007/s10904-020-01544-3>
- Kumar, P., Govindaraju, M., Senthamilselvi, S., & Premkumar, K. (2013). Photocatalytic degradation of methyl orange dye using silver (Ag) nanoparticles synthesized from *Ulva lactuca*. *Colloids and Surfaces B: Biointerfaces*, 103, 658–661. <https://doi.org/10.1016/j.colsurfb.2012.11.022>
- Kumar, S., Shukla, A., Baul, P. P., Mitra, A., & Halder, D. (2018). Biodegradable hybrid nanocomposites of chitosan/gelatin and silver nanoparticles for active food packaging applications. *Food Packaging and Shelf Life*, 16(November 2017), 178–184. <https://doi.org/10.1016/j.fpsl.2018.03.008>
- Kumar, T. S. J., & Balavigneswaran, C. K. (2013). Green Synthesis of Silver Nanoparticles by *Plumbago indica* and Its Antitumor Activity Against Dalton's Lymphoma Ascites Model. <https://doi.org/10.1007/s12668-013-0102-9>
- Kuntz, I. D., Blaney, J. M., Oatley, S. J., Langridge, R., & Ferrin, T. E. (1982). A Geometric Approach to Macromolecule-Ligand Interactions.

- Kurian, M., Varghese, B., Athira, T., & Krishna, S. (2016). Novel and Efficient Synthesis of Silver Nanoparticles Using Curcuma Longa and Zingiber Officinale Rhizome Extracts. *International Journal of Nanoscience and Nanotechnology*, 12(3), 175–181.
- Kuzminova, A., Beranová, J., Polonskyi, O., Shelemin, A., Kylián, O., Choukourov, A., ... Biederman, H. (2016). Antibacterial nanocomposite coatings produced by means of gas aggregation source of silver nanoparticles. *Surface and Coatings Technology*, 294, 225–230. <https://doi.org/10.1016/j.surfcoat.2016.03.097>
- Lateef, A., Adelere, I. A., Gueguim-Kana, E. B., Asafa, T. B., & Beukes, L. S. (2015). Green synthesis of silver nanoparticles using keratinase obtained from a strain of *Bacillus safensis* LAU 13. *International Nano Letters*, 5(1), 29–35. <https://doi.org/10.1007/s40089-014-0133-4>
- Lawrie A.M., Noble M.E.M., Tunnah P., Brown N.R., Johnson L.N., E. J. A. (1997). Protein kinase inhibition by staurosporine revealed in details of the molecular interaction with CDK2. *Nature Structural Biology*, 4(10), 796–801. <https://doi.org/10.1038/nsb1097-796>
- Lee, K. D., & Nagajyothi, P. C. (2011). Synthesis of plant-mediated silver nanoparticles using dioscorea batatas rhizome extract and evaluation of their antimicrobial activities. *Journal of Nanomaterials*, 2011(3), 557–563. <https://doi.org/10.1155/2011/573429>
- Lee, S. Y., Royston, E., Culver, J. N., & Harris, M. T. (2005). Improved metal cluster deposition on a genetically engineered tobacco mosaic virus template. *Nanotechnology*, 16(7). <https://doi.org/10.1088/0957-4484/16/7/019>
- Lee, Y. H., Choo, C., Watawana, M. I., Jayawardena, N., & Waisundara, V. Y. (2015). An appraisal of eighteen commonly consumed edible plants as functional food based on their antioxidant and starch hydrolase inhibitory activities. *Journal of the Science of Food and Agriculture*, 95(14), 2956–2964. <https://doi.org/10.1002/jsfa.7039>
- Leisico, F., Vieira, D. V., Figueiredo, T. A., Silva, M., Cabrita, E. J., Sobral, R. G., ... Santos-Silva, T. (2018). First insights of peptidoglycan amidation in Gram-positive bacteria—The high-resolution crystal structure of *Staphylococcus aureus* glutamine amidotransferase GatD. *Scientific Reports*, 8(1), 1–13. <https://doi.org/10.1038/s41598-018-22986-3>
- Lengauer, T., & Rarey, M. (1996). Computational methods for biomolecular docking. *Current Opinion in Structural Biology*, 6(3), 402–406. [https://doi.org/10.1016/S0959-440X\(96\)80061-3](https://doi.org/10.1016/S0959-440X(96)80061-3)
- Li, H., He, Y., Wang, X., Liu, D., & Liu, Z. (2019). Bilayer films using broadband nanoparticles and mesoporous TiO₂ for high efficient dye sensitized solar cells. *Journal of Alloys and Compounds*, 773, 743–751. <https://doi.org/10.1016/j.jallcom.2018.09.279>
- Li, S. Q., Zhu, R. R., Zhu, H., Xue, M., Sun, X. Y., Yao, S. De, & Wang, S. L. (2008). Nanotoxicity of TiO₂ nanoparticles to erythrocyte in vitro. *Food and Chemical Toxicology*, 46(12), 3626–3631. <https://doi.org/10.1016/j.fct.2008.09.012>
- Li, S. Y., & Li, S. P. (2009). Antioxidant activities of essential oil of *Curcuma longa* and *Curcuma wenyujin*. *International Journal of Essential Oil Therapeutics*, 3(1), 31–34.
- Li, X., Kim, N., Youn, S., An, T. K., Kim, J., Lim, S., & Kim, S. H. (2019). Sol-gel-processed organic-inorganic hybrid for flexible conductive substrates based on gravure-printed silver nanowires and graphene. *Polymers*, 11(1). <https://doi.org/10.3390/polym11010158>

- Lima, M., Fernando, G., Gomes, A., & Mateus, J. (2019). Green synthesis of silver nanoparticles using *Ziziphus joazeiro* leaf extract for production of antibacterial agents. *Applied Nanoscience*, (0123456789). <https://doi.org/10.1007/s13204-019-01181-4>
- Lin, C. X., Yang, S. Y., Gu, J. L., Meng, J., Xu, H. Y., & Cao, J. M. (2017). The acute toxic effects of silver nanoparticles on myocardial transmembrane potential, INa and IK1 channels and heart rhythm in mice. *Nanotoxicology*, 11(6), 827–837. <https://doi.org/10.1080/17435390.2017.1367047>
- Liu, J., Zhao, F., Wang, H., Zhang, W., Hu, X., Li, X., & Wang, Y. (2019). Generation of dark solitons in erbium-doped fiber laser based on black phosphorus nanoparticles. *Optical Materials*, 89(December 2018), 100–105. <https://doi.org/10.1016/j.optmat.2018.12.055>
- Lobo, V., Patil, A., Phatak, A., & Chandra, N. (2010). Free radicals, antioxidants and functional foods: Impact on human health. *Pharmacognosy Reviews*, 4(8), 118–126. <https://doi.org/10.4103/0973-7847.70902>
- Long, D., Wu, G., & Chen, S. (2007). Preparation of oligochitosan stabilized silver nanoparticles by gamma irradiation. *Radiation Physics and Chemistry*, 76(7), 1126–1131. <https://doi.org/10.1016/j.radphyschem.2006.11.001>
- Madivoli, E. S., Kareru, P. G., Gachanja, A. N., Mugo, S. M., Makhanu, D. S., Wanakai, S. I., & Gavamukulya, Y. (2020). Facile Synthesis of Silver Nanoparticles Using *Lantana trifolia* Aqueous Extracts and Their Antibacterial Activity. *Journal of Inorganic and Organometallic Polymers and Materials*, 30(8), 2842–2850. <https://doi.org/10.1007/s10904-019-01432-5>
- Maghimaa, M., & Alharbi, S. A. (2020). Green synthesis of silver nanoparticles from *Curcuma longa* L. and coating on the cotton fabrics for antimicrobial applications and wound healing activity. *Journal of Photochemistry and Photobiology B: Biology*, 204, 111806. <https://doi.org/10.1016/j.jphotobiol.2020.111806>
- Magnusson, M. H., Deppert, K., Malm, J., Bovin, J., & Samuelson, L. (1999). *Journal Of Nanoparticle Research*, 2,243-251
- Mahapatra, A. K., Karmakar, P., Manna, S., Maiti, K., & Mandal, D. (2017). Benzthiazole-derived chromogenic, fluorogenic and ratiometric probes for detection of hydrazine in environmental samples and living cells. *Journal of Photochemistry and Photobiology A: Chemistry*, 334, 1–12. <https://doi.org/10.1016/j.jphotochem.2016.10.032>
- Malabadi, R. B., Meti, N. T., Mulgund, G. S., & Nataraja, K. (2012). Synthesis of silver nanoparticles from in vitro derived plants and callus cultures of *Costus speciosus* (Koen .); Assessment of antibacterial activity. *In Vitro*, 2(4), 32–42.
- Malekzadeh, M., & Halali, M. (2011). Production of silver nanoparticles by electromagnetic levitation gas condensation. *Chemical Engineering Journal*, 168(1), 441–445. <https://doi.org/10.1016/j.cej.2010.12.081>
- Manee wattanapinyo, P., Banlunara, W., Thammacharoen, C., Ekgasit, S., & Kaewamatawong, T. (2011). An evaluation of acute toxicity of colloidal silver nanoparticles. *Journal of Veterinary Medical Science*, 73(11), 1417–1423. <https://doi.org/10.1292/jvms.11-0038>
- Mankad, M., Patil, G., Patel, D., Patel, P., & Patel, A. (2020). Comparative studies of sunlight mediated green synthesis of silver nanoparaticles from *Azadirachta indica* leaf extract and its antibacterial effect on *Xanthomonas oryzae* pv. *oryzae*. *Arabian Journal of*

- Chemistry, I3(1), 2865–2872. <https://doi.org/10.1016/j.arabjc.2018.07.016>*
- Mao, Q. Q., Huang, Z., Zhong, X. M., Feng, C. R., Pan, A. J., Li, Z. Y., ... Che, C. T. (2010). Effects of SYJN, a Chinese herbal formula, on chronic unpredictable stress-induced changes in behavior and brain BDNF in rats. *Journal of Ethnopharmacology, 128(2), 336–341. <https://doi.org/10.1016/j.jep.2010.01.050>*
- Marchiol, L. (2012). Synthesis of metal nanoparticles in living plants. *Italian Journal of Agronomy, 7(3), 274–282. <https://doi.org/10.4081/ija.2012.e37>*
- Marimuthu, S., Antonisamy, A. J., Malayandi, S., Rajendran, K., Tsai, P., Pugazhendhi, A., & Ponnusamy, V. K. (2020). na 1 P of. *Journal of Photochemistry & Photobiology, B: Biology, 111823. <https://doi.org/10.1016/j.jphotobiol.2020.111823>*
- Mariselvam, R., Ranjitsingh, A. J. A., Thamaraiselvi, C., & Ignacimuthu, S. (2019). Degradation of AZO dye using plants based silver nanoparticles through ultraviolet radiation. *Journal of King Saud University - Science, 31(4), 1363–1365. <https://doi.org/10.1016/j.jksus.2019.07.001>*
- Mary, H. P. A., Susheela, G. K., Jayasree, S., Nizzy, A. M., Rajagopal, B., & Jeeva, S. (2012). Phytochemical characterization and antimicrobial activity of Curcuma xanthorrhiza Roxb. *Asian Pacific Journal of Tropical Biomedicine, 2(2 SUPPL.), S637–S640. [https://doi.org/10.1016/S2221-1691\(12\)60288-3](https://doi.org/10.1016/S2221-1691(12)60288-3)*
- Mavis, R. D., & Stellwagen, E. (1968). Purification and subunit structure of glutathione reductase from bakers' yeast. *Journal of Biological Chemistry, 243(4), 809–814. [https://doi.org/10.1016/s0021-9258\(19\)81737-4](https://doi.org/10.1016/s0021-9258(19)81737-4)*
- McCord, J. M. F. I. (1969). superoxide Dismutase, (22). [https://doi.org/10.1016/S0021-9258\(18\)63504-5](https://doi.org/10.1016/S0021-9258(18)63504-5)
- McGrath, D. A., Fifield, B., Marceau, A. H., Tripathi, S., Porter, L. A., & Rubin, S. M. (2017). Structural basis of divergent cyclin-dependent kinase activation by Spy1/RINGO proteins . *The EMBO Journal, 36(15), 2251–2262. <https://doi.org/10.15252/embj.201796905>*
- Medda, S., Hajra, A., Dey, U., Bose, P., & Mondal, N. K. (2015). Biosynthesis of silver nanoparticles from Aloe vera leaf extract and antifungal activity against Rhizopus sp. and Aspergillus sp. *Applied Nanoscience (Switzerland), 5(7), 875–880. <https://doi.org/10.1007/s13204-014-0387-1>*
- Meijer, L., Borgne, A., Mulner, O., Chong, J. P. J., Blow, J. J., Inagaki, N., ... Moulinoux, J. P. (1997). Biochemical and cellular effects of roscovitine, a potent and selective inhibitor of the cyclin-dependent kinases cdc2, cdk2 and cdk5. *European Journal of Biochemistry, 243(1–2), 527–536. <https://doi.org/10.1111/j.1432-1033.1997.t01-2-00527.x>*
- Mengin-Lecreux, D., Michaud, C., Richaud, C., Blanot, D., & Van Heijenoort, J. (1988). Incorporation of LL-diaminopimelic acid into peptidoglycan of Escherichia coli mutants lacking diamino pimelate epimerase encoded by dapF. *Journal of Bacteriology, 170(5), 2031–2039. <https://doi.org/10.1128/jb.170.5.2031-2039.1988>*
- Mirzaei, H., & Darroudi, M. (2017). Zinc oxide nanoparticles: Biological synthesis and biomedical applications. *Ceramics International, 43(1), 907–914. <https://doi.org/10.1016/j.ceramint.2016.10.051>*
- Mitta, R., Duddu, S., Pulala, R. Y., Bhupalam, P., Mandlem, V., & Konde, A. (2021).

- Mitigative effect of *Momordica cymbalaria* fruit extract against sodium fluoride induced hepatotoxicity in Wistar male albino rats. *Journal of Basic and Clinical Physiology and Pharmacology*, 32(2), 79–87. <https://doi.org/10.1515/jbcpp-2019-0362>
- Mittal, A. K., & Banerjee, U. C. (2021). In vivo safety, toxicity, biocompatibility and anti-tumour efficacy of bioinspired silver and selenium nanoparticles. *Materials Today Communications*, 26(December 2020), 102001. <https://doi.org/10.1016/j.mtcomm.2020.102001>
- Miyazaki, T., Neff, L., Tanaka, S., Horne, W. C., & Baron, R. (2003). Regulation of cytochrome c oxidase activity by c-Src in osteoclasts. *Journal of Cell Biology*, 160(5), 709–718. <https://doi.org/10.1083/jcb.200209098>
- Mohammed, S. S. S., Lawrance, A. V., Sampath, S., Sunderam, V., & Madhavan, Y. (2021). Facile green synthesis of silver nanoparticles from sprouted Zingiberaceae species: Spectral characterisation and its potential biological applications. *Materials Technology*. <https://doi.org/10.1080/10667857.2020.1863571>
- Mohapatra, B., Kuriakose, S., & Mohapatra, S. (2015). Rapid green synthesis of silver nanoparticles and nanorods using *Piper nigrum* extract. *Journal of Alloys and Compounds*, 637, 119–126. <https://doi.org/10.1016/j.jallcom.2015.02.206>
- Moldovan, B., Achim, M., Clichici, S., & Filip, G. A. (2016). SC. <https://doi.org/10.1016/j.molliq.2016.06.003>
- Monks, A., Scudiero, D., Skehan, P., Shoemaker, R., Paull, K., Vistica, D., ... Boyd, M. (1991). Feasibility of a high-flux anticancer drug screen using a diverse panel of cultured human tumor cell lines. *Journal of the National Cancer Institute*, 83(11), 757–766. <https://doi.org/10.1093/jnci/83.11.757>
- Monteiro, C. M., Castro, P. M. L., & Malcata, F. X. (2012). Metal uptake by microalgae: Underlying mechanisms and practical applications. *Biotechnology Progress*, 28(2), 299–311. <https://doi.org/10.1002/btpr.1504>
- Morsi, R. E., Alsabagh, A. M., Nasr, S. A., & Zaki, M. M. (2017). Multifunctional nanocomposites of chitosan, silver nanoparticles, copper nanoparticles and carbon nanotubes for water treatment: Antimicrobial characteristics. *International Journal of Biological Macromolecules*, 97, 264–269. <https://doi.org/10.1016/j.ijbiomac.2017.01.032>
- Moteriya, P., & Chanda, S. (2020). Green Synthesis of Silver Nanoparticles from *Caesalpinia pulcherrima* Leaf Extract and Evaluation of Their Antimicrobial, Cytotoxic and Genotoxic Potential (3-in-1 System). *Journal of Inorganic and Organometallic Polymers and Materials*, 30(10), 3920–3932. <https://doi.org/10.1007/s10904-020-01532-7>
- Munawer, U., Raghavendra, V. B., Ningaraju, S., Krishna, K. L., Ghosh, A. R., Melappa, G., & Pugazhendhi, A. (2020). Biofabrication of gold nanoparticles mediated by the endophytic *Cladosporium* species: Photodegradation, in vitro anticancer activity and in vivo antitumor studies. *International Journal of Pharmaceutics*, 588, 119729. <https://doi.org/10.1016/j.ijpharm.2020.119729>
- Muromachi, T., Tsujino, T., Kamitani, K., & Maeda, K. (2006). Application of functional coatings by sol-gel method. *Journal of Sol-Gel Science and Technology*, 40(2–3), 267–272. <https://doi.org/10.1007/s10971-006-8386-7>
- Murugesan, K., Koroth, J., Srinivasan, P. P., Singh, A., Mukundan, S., Karki, S. S., ... Gupta,

- C. M. (2019). Effects of green synthesised silver nanoparticles (ST06-AgNPs) using curcumin derivative (ST06) on human cervical cancer cells (HeLa) in vitro and EAC tumor bearing mice models, 5257–5270.
- Muthukrishnan, S., Vellingiri, B., & Murugesan, G. (2018). Anticancer effects of silver nanoparticles encapsulated by Gloriosa superba (L.) leaf extracts in DLA tumor cells. *Future Journal of Pharmaceutical Sciences*, 4(2), 206–214. <https://doi.org/10.1016/j.fjps.2018.06.001>
- Muthusamy, G., Thangasamy, S., Raja, M., Chinnappan, S., & Kandasamy, S. (2017). Biosynthesis of silver nanoparticles from Spirulina microalgae and its antibacterial activity. *Environmental Science and Pollution Research*, 24(23), 19459–19464. <https://doi.org/10.1007/s11356-017-9772-0>
- Nakatani, N., Inatani, R., Ohta, H., & Nishioka, A. (1986). Chemical Constituents of Peppers (Piper spp.) and Application to Food Preservation: Naturally Occurring Antioxidative Compounds. *Environmental Health Perspectives*, 67, 135. <https://doi.org/10.2307/3430328>
- Nakkala, J. R., Mata, R., Raja, K., Khub Chandra, V., & Sadras, S. R. (2018). Green synthesized silver nanoparticles: Catalytic dye degradation, in vitro anticancer activity and in vivo toxicity in rats. *Materials Science and Engineering C*, 91(June 2017), 372–381. <https://doi.org/10.1016/j.msec.2018.05.048>
- Nampoothiri, S. V., Philip, R. M., Kankangi, S., Kiran, C. R., & Menon, A. N. (2015). Essential Oil Composition, α -Amylase Inhibition and Antiglycation Potential of Curcuma aromatica Salisb. *Journal of Essential Oil-Bearing Plants*, 18(5), 1051–1058. <https://doi.org/10.1080/0972060X.2014.908746>
- Naqvi, S. Z. H., Kiran, U., Ali, M. I., Jamal, A., Hameed, A., Ahmed, S., & Ali, N. (2013). Combined efficacy of biologically synthesized silver nanoparticles and different antibiotics against multidrug-resistant bacteria. *International Journal of Nanomedicine*, 8, 3187–3195. <https://doi.org/10.2147/IJN.S49284>
- Naraginti, S., & Li, Y. (2017). Journal of Photochemistry & Photobiology , B : Biology Preliminary investigation of catalytic , antioxidant , anticancer and bactericidal activity of green synthesized silver and gold nanoparticles using Actinidia deliciosa, 170, 225–234. <https://doi.org/10.1016/j.jphotobiol.2017.03.023>
- Nasehi, P., Mahmoudi, B., Abbaspour, S. F., & Moghaddam, M. S. (2019). Cadmium adsorption using novel MnFe2O4-TiO2-UIO-66 magnetic nanoparticles and condition optimization using a response surface methodology. *RSC Advances*, 9(35), 20087–20099. <https://doi.org/10.1039/c9ra03430g>
- Nasehi, P., Moghaddam, M. S., Abbaspour, S. F., & Karachi, N. (2020). Preparation and characterization of a novel Mn-Fe2O4 nanoparticle loaded on activated carbon adsorbent for kinetic, thermodynamic and isotherm surveys of aluminum ion adsorption. *Separation Science and Technology (Philadelphia)*, 55(6), 1078–1088. <https://doi.org/10.1080/01496395.2019.1585456>
- Natsuki, J. (2015). A Review of Silver Nanoparticles: Synthesis Methods, Properties and Applications. *International Journal of Materials Science and Applications*, 4(5), 325. <https://doi.org/10.11648/j.ijmsa.20150405.17>
- Nguyen, T., Talbi, H., Hilali, A., Anthonissen, R., Maes, A., & Verschaeve, L. (2019). South African Journal of Botany In vitro toxicity , genotoxicity and antigenotoxicity of Nigella sativa extracts from different geographic locations. *South African Journal of Botany*,

- 126, 132–141. <https://doi.org/10.1016/j.sajb.2019.02.015>
- Niederberger, M. (2007). Nonaqueous sol-gel routes to metal oxide nanoparticles. *Accounts of Chemical Research*, 40(9), 793–800. <https://doi.org/10.1021/ar600035e>
- Niraimathi, K. L., Sudha, V., Lavanya, R., & Brindha, P. (2013). Biosynthesis of silver nanoparticles using Alternanthera sessilis (Linn.) extract and their antimicrobial, antioxidant activities. *Colloids and Surfaces B: Biointerfaces*, 102, 288–291. <https://doi.org/10.1016/j.colsurfb.2012.08.041>
- Noritomi, H., Umezawa, Y., Miyagawa, S., & Kato, S. (2011). Preparation of Highly Concentrated Silver Nanoparticles in Reverse Micelles of Sucrose Fatty Acid Esters through Solid-Liquid Extraction Method. *Advances in Chemical Engineering and Science*, 01(04), 299–304. <https://doi.org/10.4236/aces.2011.14041>
- Norouzi, N., Das, M. K., Richard, A. J., Ibrahim, A. A., El-Kaderi, H. M., & El-Shall, S. (2020). Heterogeneous Catalysis by Ultra-small Bimetallic Nanoparticles Surpassing Homogeneous Catalysis for Carbon-Carbon Bond Forming Reactions. *Nanoscale*, 12(37), 19191–19202. <https://doi.org/10.1039/d0nr04105j>
- Nthunya, L. N., Derese, S., Gutierrez, L., Verliefde, A. R., Mamba, B. B., Barnard, T. G., & Mhlanga, S. D. (2019). Green synthesis of silver nanoparticles using one-pot and microwave-assisted methods and their subsequent embedment on PVDF nanofibre membranes for growth inhibition of mesophilic and thermophilic bacteria. *New Journal of Chemistry*, 43(10), 4168–4180. <https://doi.org/10.1039/C8NJ06160B>
- Nyabola, A. O., Kareru, P. G., Madivoli, E. S., Wanakai, S. I., & Maina, E. G. (2020). Formation of Silver Nanoparticles via Aspilia pluriseta Extracts Their Antimicrobial and Catalytic Activity. *Journal of Inorganic and Organometallic Polymers and Materials*, 30(9), 3493–3501. <https://doi.org/10.1007/s10904-020-01497-7>
- Ohkawa, H., Ohishi, N., & Yagi, K. (1979). Assay for lipid peroxides in animal tissues by thiobarbituric acid reaction. *Analytical Biochemistry*, 95(2), 351–358. [https://doi.org/10.1016/0003-2697\(79\)90738-3](https://doi.org/10.1016/0003-2697(79)90738-3)
- Ojha, S., Sett, A., & Bora, U. (2017). Green synthesis of silver nanoparticles by Ricinus communis var. carmencita leaf extract and its antibacterial study. *Advances in Natural Sciences: Nanoscience and Nanotechnology*, 8(3), 035009. <https://doi.org/10.1088/2043-6254/aa724b>
- OoKolawole, O., Oguntoye, S., Agbede, O., & Olayemi, A. (2006). Studies on the efficacy of Bridelia ferruginea Benth. bark extract in reducing the coliform load and BOD of domestic waste water. *Ethnobotanical Leaflets*, 10(4), 228–238.
- Orhan, I. E., Senol, F. S., Shekfeh, S., Skalicka-Wozniak, K., & Banoglu, E. (2017). Pteryxin - A promising butyrylcholinesterase-inhibiting coumarin derivative from Mutellina purpurea. *Food and Chemical Toxicology*, 109, 970–974. <https://doi.org/10.1016/j.fct.2017.03.016>
- Ovais, M., Khalil, A. T., Raza, A., Khan, M. A., Ahmad, I., Islam, N. U., ... Shinwari, Z. K. (2016). Green synthesis of silver nanoparticles via plant extracts: Beginning a new era in cancer theranostics. *Nanomedicine*, 12(23), 3157–3177. <https://doi.org/10.2217/nnm-2016-0279>
- Padalia, H., Moteriya, P., & Chanda, S. (2015). Green synthesis of silver nanoparticles from marigold flower and its synergistic antimicrobial potential. *Arabian Journal of Chemistry*, 8(5), 732–741. <https://doi.org/10.1016/j.arabjc.2014.11.015>

- Pagadala, N. S., Syed, K., & Tuszynski, J. (2017). Software for molecular docking: a review. *Biophysical Reviews*, 9(2), 91–102. <https://doi.org/10.1007/s12551-016-0247-1>
- Paglia, D. E., & Valentine, W. N. (1967). Studies on the quantitative and qualitative characterization of erythrocyte glutathione peroxidase. *The Journal of Laboratory and Clinical Medicine*, 70(1), 158–169.
- Pal, S., Tak, Y. K., & Song, J. M. (2007). Does the antibacterial activity of silver nanoparticles depend on the shape of the nanoparticle? A study of the gram-negative bacterium *Escherichia coli*. *Applied and Environmental Microbiology*, 73(6), 1712–1720. <https://doi.org/10.1128/AEM.02218-06>
- Palai, P. K., Mondal, A., Chakraborti, C. K., Banerjee, I., & Pal, K. (2019). Green synthesized amino-PEGylated silver decorated graphene nanoplatform as a tumor-targeted controlled drug delivery system. *SN Applied Sciences*, 1(3), 1–18. <https://doi.org/10.1007/s42452-019-0287-9>
- Panáček, A., Kvítek, L., Smékalová, M., Večeřová, R., Kolář, M., Röderová, M., ... Zbořil, R. (2018). Bacterial resistance to silver nanoparticles and how to overcome it. *Nature Nanotechnology*, 13(1), 65–71. <https://doi.org/10.1038/s41565-017-0013-y>
- Park, M., Sohn, Y., Shin, W. G., Lee, J., & Ko, S. H. (2015). Ultrasonication assisted production of silver nanowires with low aspect ratio and their optical properties. *Ultrasonics Sonochemistry*, 22, 35–40. <https://doi.org/10.1016/j.ultsonch.2014.05.007>
- Park, Y., Hong, Y. N., Weyers, A., Kim, Y. S., & Linhardt, R. J. (2011). Polysaccharides and phytochemicals: A natural reservoir for the green synthesis of gold and silver nanoparticles. *IET Nanobiotechnology*, 5(3), 69–78. <https://doi.org/10.1049/iet-nbt.2010.0033>
- Parlinska-Wojtan, M., Kus-Liskiewicz, M., Depciuch, J., & Sadik, O. (2016). Green synthesis and antibacterial effects of aqueous colloidal solutions of silver nanoparticles using camomile terpenoids as a combined reducing and capping agent. *Bioprocess and Biosystems Engineering*, 39(8), 1213–1223. <https://doi.org/10.1007/s00449-016-1599-4>
- Parveen, K., Banse, V., & Ledwani, L. (2016). Green synthesis of nanoparticles: Their advantages and disadvantages. *AIP Conference Proceedings*, 1724. <https://doi.org/10.1063/1.4945168>
- Pérez-Estrada, L. A., Agüera, A., Hernando, M. D., Malato, S., & Fernández-Alba, A. R. (2008). Photodegradation of malachite green under natural sunlight irradiation: Kinetic and toxicity of the transformation products. *Chemosphere*, 70(11), 2068–2075. <https://doi.org/10.1016/j.chemosphere.2007.09.008>
- Pinzaru, I., Coricovac, D., Dehelean, C., Moacă, E. A., Mioc, M., Baderca, F., ... řoica, C. (2018). Stable PEG-coated silver nanoparticles – A comprehensive toxicological profile. *Food and Chemical Toxicology*, 111(October 2017), 546–556. <https://doi.org/10.1016/j.fct.2017.11.051>
- Piszczek, P., & Radtke, A. (2018). Silver Nanoparticles Fabricated Using Chemical Vapor Deposition and Atomic Layer Deposition Techniques: Properties, Applications and Perspectives: Review. *Noble and Precious Metals - Properties, Nanoscale Effects and Applications*. <https://doi.org/10.5772/intechopen.71571>
- Poornima, S., & Valivittan, K. (2017). Degradation of Malachite Green (Dye) by using Photo-Catalytic Biogenic Silver Nanoparticles Synthesized using Red Algae (*Gracilaria corticata*) Aqueous Extract, 6(1), 62–70.

- Poumale, H. M. P., Hamm, R., Zang, Y., Shiono, Y., & Kuete, V. (2013). *Coumarins and Related Compounds from the Medicinal Plants of Africa. Medicinal Plant Research in Africa: Pharmacology and Chemistry.* <https://doi.org/10.1016/B978-0-12-405927-6.00008-4>
- Pozzan, A. (2006). Molecular Descriptors and Methods for Ligand Based Virtual High Throughput Screening in Drug Discovery. *Current Pharmaceutical Design*, 12(17), 2099–2110. <https://doi.org/10.2174/138161206777585247>
- Prakash, P., Gnanaprakasam, P., Emmanuel, R., Arokiyaraj, S., & Saravanan, M. (2013). Green synthesis of silver nanoparticles from leaf extract of *Mimusops elengi*, Linn. for enhanced antibacterial activity against multi drug resistant clinical isolates. *Colloids and Surfaces B: Biointerfaces*, 108, 255–259. <https://doi.org/10.1016/j.colsurfb.2013.03.017>
- Prasad, T. N. V. K. V., Kambala, V. S. R., & Naidu, R. (2013). Phyconanotechnology: Synthesis of silver nanoparticles using brown marine algae *Cystophora moniliformis* and their characterisation. *Journal of Applied Phycology*, 25(1), 177–182. <https://doi.org/10.1007/s10811-012-9851-z>
- Priyadarshini, S., Gopinath, V., Meera Priyadharshini, N., MubarakAli, D., & Velusamy, P. (2013). Synthesis of anisotropic silver nanoparticles using novel strain, *Bacillus flexus* and its biomedical application. *Colloids and Surfaces B: Biointerfaces*, 102, 232–237. <https://doi.org/10.1016/j.colsurfb.2012.08.018>
- Prosposito, P., Burratti, L., & Venditti, I. (2020). Silver nanoparticles as colorimetric sensors for water pollutants. *Chemosensors*, 8(2), 1–29.
- Pugazhendhi, S., Sathya, P., Palanisamy, P. K., & Gopalakrishnan, R. (2016). Synthesis of silver nanoparticles through green approach using *Dioscorea alata* and their characterization on antibacterial activities and optical limiting behavior. *Journal of Photochemistry and Photobiology B: Biology*, 159, 155–160. <https://doi.org/10.1016/j.jphotobiol.2016.03.043>
- Pushpalatha, R., Selvamuthukumar, S., & Kilimozhi, D. (2017). Comparative insilico docking analysis of curcumin and resveratrol on breast cancer proteins and their synergistic effect on MCF-7 cell line. *Journal of Young Pharmacists*, 9(4), 480–485. <https://doi.org/10.5530/jyp.2017.9.94>
- Quassinti, L., Bramucci, M., Lupidi, G., Barboni, L., Ricciutelli, M., Sagratini, G., ... Maggi, F. (2013). In vitro biological activity of essential oils and isolated furanosesquiterpenes from the neglected vegetable *Smyrnium olusatrum* L. (Apiaceae). *Food Chemistry*, 138(2–3), 808–813. <https://doi.org/10.1016/j.foodchem.2012.11.075>
- Quideau, S., Deffieux, D., Douat-Casassus, C., & Pouységu, L. (2011). Plant polyphenols: Chemical properties, biological activities, and synthesis. *Angewandte Chemie - International Edition*, 50(3), 586–621. <https://doi.org/10.1002/anie.201000044>
- Raffi, M., Rumaiz, A. K., Hasan, M. M., & Shah, S. I. (2007). Studies of the growth parameters for silver nanoparticle synthesis by inert gas condensation. *Journal of Materials Research*, 22(12), 3378–3384. <https://doi.org/10.1557/jmr.2007.0420>
- Rafique, M., Sadaf, I., Rafique, M. S., & Tahir, M. B. (2017). A review on green synthesis of silver nanoparticles and their applications. *Artificial Cells, Nanomedicine and Biotechnology*, 45(7), 1272–1291. <https://doi.org/10.1080/21691401.2016.1241792>
- Raghavendra, G. M., Jung, J., Kim, D., Varaprasad, K., & Seo, J. (2016). Identification of silver cubic structures during ultrasonication of chitosan AgNO₃ solution. *Carbohydrate*

- Polymers*, 152, 558–565. <https://doi.org/10.1016/j.carbpol.2016.07.045>
- Rahman, A., Kumar, S., Bafana, A., Dahoumane, S. A., & Jeffryes, C. (2019). Biosynthetic conversion of Ag⁺ to highly Stable Ag0 nanoparticles by wild type and cell wall deficient strains of chlamydomonas reinhardtii. *Molecules*, 24(1). <https://doi.org/10.3390/molecules24010098>
- Rajeshkumar, S., & Bharath, L. V. (2017). Mechanism of plant-mediated synthesis of silver nanoparticles – A review on biomolecules involved, characterisation and antibacterial activity. *Chemico-Biological Interactions*, 273, 219–227. <https://doi.org/10.1016/j.cbi.2017.06.019>
- Rajkumari, S., & Sanatombi, K. (2018). Nutritional value , phytochemical composition , and biological activities of edible Curcuma species : A review. *International Journal of Food Properties*, 20(3), 2668–2687. <https://doi.org/10.1080/10942912.2017.1387556>
- Rama Krishna, A. G., Espenti, C. S., Rami Reddy, Y. V., Obbu, A., & Satyanarayana, M. V. (2020). Green Synthesis of Silver Nanoparticles by Using Sansevieria Roxburghiana, Their Characterization and Antibacterial Activity. *Journal of Inorganic and Organometallic Polymers and Materials*, 30(10), 4155–4159. <https://doi.org/10.1007/s10904-020-01567-w>
- Ramos-Delgado, N. A., Hinojosa-Reyes, L., Guzman-Mar, I. L., Gracia-Pinilla, M. A., & Hernández-Ramírez, A. (2013). Synthesis by sol-gel of WO₃/TiO₂ for solar photocatalytic degradation of malathion pesticide. *Catalysis Today*, 209(September 2017), 35–40. <https://doi.org/10.1016/j.cattod.2012.11.011>
- Rao, K., Aziz, S., Roome, T., Razzak, A., Sikandar, B., Jamali, K. S., ... Shah, M. R. (2018). Gum acacia stabilized silver nanoparticles based nano-cargo for enhanced anti-arthritis potentials of hesperidin in adjuvant induced arthritic rats. *Artificial Cells, Nanomedicine and Biotechnology*, 46(sup1), 597–607. <https://doi.org/10.1080/21691401.2018.1431653>
- Rarey, M., Kramer, B., & Lengauer, T. (1997). Multiple automatic base selection: Protein-ligand docking based on incremental construction without manual intervention. *Journal of Computer-Aided Molecular Design*, 11(4), 369–384. <https://doi.org/10.1023/A:1007913026166>
- Ratan, Z. A., Haidere, M. F., Nurunnabi, M., Shahriar, S. M., Ahammad, A. J. S., Shim, Y. Y., ... Cho, J. Y. (2020). Green chemistry synthesis of silver nanoparticles and their potential anticancer effects. *Cancers*, 12(4), 1–26. <https://doi.org/10.3390/cancers12040855>
- Remya, R. R., Rajasree, S. R. R., Aranganathan, L., & Suman, T. Y. (2015). An investigation on cytotoxic effect of bioactive AgNPs synthesized using Cassia fistula flower extract on breast cancer cell MCF-7. *Biotechnology Reports*, 8, 110–115. <https://doi.org/10.1016/j.btre.2015.10.004>
- Ren, F., Liu, H., Zhang, H., Jiang, Z., Xia, B., Genevois, C., ... Gao, M. (2020). Engineering NIR-IIb fluorescence of Er-based lanthanide nanoparticles for through-skull targeted imaging and imaging-guided surgery of orthotopic glioma. *Nano Today*, 34(July), 100905. <https://doi.org/10.1016/j.nantod.2020.100905>
- Review, P. (2013). Study of total phenol , flavonoids contents and phytochemical screening of various leaves crude extracts of locally grown *T* hymus vulgaris, 3(9), 705–710. [https://doi.org/10.1016/S2221-1691\(13\)60142-2](https://doi.org/10.1016/S2221-1691(13)60142-2)
- Ribeiro, A. P. C., Anbu, S., Alegria, E. C. B. A., Fernandes, A. R., Baptista, P. V., Mendes,

- R., ... Pombeiro, A. J. L. (2018). Evaluation of cell toxicity and DNA and protein binding of green synthesized silver nanoparticles. *Biomedicine and Pharmacotherapy*, 101(February), 137–144. <https://doi.org/10.1016/j.bioph.2018.02.069>
- Rice-evans, C. A., Miller, N. J., Bolwell, P. G., Bramley, P. M., & Pridham, J. B. (1995). The relative antioxidant activities of plant-derived polyphenolic flavonoids. *Free Radical Research*, 22(4), 375–383. <https://doi.org/10.3109/10715769509145649>
- Roumani, M., Duval, R. E., Ropars, A., Risler, A., Robin, C., & Larbat, R. (2020). Phenolamides: Plant specialized metabolites with a wide range of promising pharmacological and health-promoting interests. *Biomedicine and Pharmacotherapy*, 131(September). <https://doi.org/10.1016/j.bioph.2020.110762>
- Russo, G., Curcio, F., Bulli, G., Aran, L., Della-morte, D., Testa, G., ... Abete, P. (2012). Oxidative Stress and Diseases. *Oxidative Stress and Diseases*, 757–772. <https://doi.org/10.5772/2535>
- Saha, J., Begum, A., Mukherjee, A., & Kumar, S. (2017). A novel green synthesis of silver nanoparticles and their catalytic action in reduction of Methylene Blue dye. *Sustainable Environment Research*, 27(5), 245–250. <https://doi.org/10.1016/j.serj.2017.04.003>
- Salea, R., Widjojokusumo, E., Veriansyah, B., & Tjandrawinata, R. R. (2014). Optimizing oil and xanthorrhizol extraction from Curcuma xanthorrhiza Roxb. rhizome by supercritical carbon dioxide. *Journal of Food Science and Technology*, 51(9), 2197–2203. <https://doi.org/10.1007/s13197-014-1272-3>
- Salleh, N., Ismail, S., & Ab Halim, M. R. (2016). Effects of Curcuma xanthorrhiza extracts and their constituents on phase II drug-metabolizing enzymes activity. *Pharmacognosy Research*, 8(4), 309–315. <https://doi.org/10.4103/0974-8490.188873>
- Sankar, R., Manikandan, P., Malarvizhi, V., Fathima, T., Shivashangari, K. S., & Ravikumar, V. (2014). Green synthesis of colloidal copper oxide nanoparticles using Carica papaya and its application in photocatalytic dye degradation. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, 121(75), 746–750. <https://doi.org/10.1016/j.saa.2013.12.020>
- Sankar, R., Rahman, P. K. S. M., Varunkumar, K., Anusha, C., Kalaiarasi, A., Shivashangari, K. S., & Ravikumar, V. (2017). Facile synthesis of Curcuma longa tuber powder engineered metal nanoparticles for bioimaging applications. *Journal of Molecular Structure*, 1129, 8–16. <https://doi.org/10.1016/j.molstruc.2016.09.054>
- Saravanakumar, K., Chelliah, R., MubarakAli, D., Oh, D. H., Kathiresan, K., & Wang, M. H. (2019). Unveiling the potentials of biocompatible silver nanoparticles on human lung carcinoma A549 cells and Helicobacter pylori. *Scientific Reports*, 9(1), 1–8. <https://doi.org/10.1038/s41598-019-42112-1>
- Sasidharan, D., Namitha, T. R., Johnson, S. P., Jose, V., & Mathew, P. (2020). Synthesis of silver and copper oxide nanoparticles using Myristica fragrans fruit extract: Antimicrobial and catalytic applications. *Sustainable Chemistry and Pharmacy*, 16(March), 100255. <https://doi.org/10.1016/j.scp.2020.100255>
- Sastray, M., Ahmad, A., Islam Khan, M., & Kumar, R. (2003). Biosynthesis of metal nanoparticles using fungi and actinomycete. *Current Science*, 85(2), 162–170.
- Sathishkumar, M., Sneha, K., & Yun, Y. S. (2010). Immobilization of silver nanoparticles synthesized using Curcuma longa tuber powder and extract on cotton cloth for bactericidal activity. *Bioresource Technology*, 101(20), 7958–7965.

- <https://doi.org/10.1016/j.biortech.2010.05.051>
- Sathishkumar, P., Preethi, J., Vijayan, R., Mohd Yusoff, A. R., Ameen, F., Suresh, S., ... Palvannan, T. (2016). Anti-acne, anti-dandruff and anti-breast cancer efficacy of green synthesised silver nanoparticles using *Coriandrum sativum* leaf extract. *Journal of Photochemistry and Photobiology B: Biology*, 163, 69–76. <https://doi.org/10.1016/j.jphotobiol.2016.08.005>
- Sathishkumar, R. S., Sundaramanickam, A., Srinath, R., Ramesh, T., Saranya, K., Meena, M., & Surya, P. (2019). Green synthesis of silver nanoparticles by bloom forming marine microalgae *Trichodesmium erythraeum* and its applications in antioxidant, drug-resistant bacteria, and cytotoxicity activity. *Journal of Saudi Chemical Society*, 23(8), 1180–1191. <https://doi.org/10.1016/j.jscs.2019.07.008>
- Schlebusch, H., Rick, W., Lang, H., & Knedel, M. (1974). Normbereiche der Aktivitäten klinisch wichtiger Enzyme. *Deutsche Medizinische Wochenschrift*, 99(15), 765–766. <https://doi.org/10.1055/s-0028-1107840>
- Schnecke, V., Nordisk, N., & Kuhn, L. (2002). Virtual Screening: An Alternative or Complement to High Throughput Screening? *Virtual Screening: An Alternative or Complement to High Throughput Screening?*, (May 2007). <https://doi.org/10.1007/0-306-46883-2>
- Schulz-Gasch, T., & Stahl, M. (2003). Binding site characteristics in structure-based virtual screening: Evaluation of current docking tools. *Journal of Molecular Modeling*, 9(1), 47–57. <https://doi.org/10.1007/S00894-002-0112-Y>
- Seifipour, R., Nozari, M., & Pishkar, L. (2020). Green Synthesis of Silver Nanoparticles using *Tragopogon Collinus* Leaf Extract and Study of Their Antibacterial Effects. *Journal of Inorganic and Organometallic Polymers and Materials*, 30(8), 2926–2936. <https://doi.org/10.1007/s10904-020-01441-9>
- Setua, P., Pramanik, R., Sarkar, S., Seth, D., & Sarkar, N. (2009). Direct observation of solvation dynamics in an aqueous reverse micellar system containing silver nanoparticles in the reverse micellar core. *Journal of Physical Chemistry B*, 113(17), 5677–5680. <https://doi.org/10.1021/jp810229m>
- Shah, B., Modi, D. C., & Bhuva, H. A. (2010). ewsletter Shah et al . Phyto-Pharmacological Profile and Potential Therapeutic Uses of Curcuma Aromatica Pharmacologyonline 2 : 918-930 (2010) Shah et al ., 930, 918–930.
- Shahverdi, A. R., Minaeian, S., Shahverdi, H. R., Jamalifar, H., & Nohi, A. A. (2007). Rapid synthesis of silver nanoparticles using culture supernatants of Enterobacteria: A novel biological approach. *Process Biochemistry*, 42(5), 919–923. <https://doi.org/10.1016/j.procbio.2007.02.005>
- Shameli, K., Ahmad, M. Bin, Shabanzadeh, P., Al-Mulla, E. A. J., Zamanian, A., Abdollahi, Y., ... Haroun, R. Z. (2014). Effect of *Curcuma longa* tuber powder extract on size of silver nanoparticles prepared by green method. *Research on Chemical Intermediates*, 40(3), 1313–1325. <https://doi.org/10.1007/s11164-013-1040-4>
- Shanmuganathan, R., Karuppusamy, I., Saravanan, M., Muthukumar, H., Ponnuchamy, K., Ramkumar, V. S., & Pugazhendhi, A. (2019). Synthesis of Silver Nanoparticles and their Biomedical Applications - A Comprehensive Review. *Current Pharmaceutical Design*, 25(24), 2650–2660. <https://doi.org/10.2174/1381612825666190708185506>
- Shanmugasundaram, T., Radhakrishnan, M., Gopikrishnan, V., Pazhanimurugan, R., &

- Balagurunathan, R. (2013). A study of the bactericidal, anti-biofouling, cytotoxic and antioxidant properties of actinobacterially synthesised silver nanoparticles. *Colloids and Surfaces B: Biointerfaces*, 111, 680–687. <https://doi.org/10.1016/j.colsurfb.2013.06.045>
- Sharma, A., Srivastava, A. K., Jeon, Y., & Ahn, B. (2018). Template-assisted fabrication of nanostructured tin (β -Sn) arrays for bulk microelectronic packaging devices. *Metals*, 8(5), 1–11. <https://doi.org/10.3390/met8050347>
- Sharma, G., Sharma, A. R., Kurian, M., Bhavesh, R., Nam, J. S., & Lee, S. S. (2014). Green synthesis of silver nanoparticle using Myristica fragrans (nutmeg) seed extract and its biological activity. *Digest Journal of Nanomaterials and Biostructures*, 9(1), 325–332.
- Sharma, R. K., Nigam, S., Chouryal, Y. N., Nema, S., Bera, S. P., Bhargava, Y., & Ghosh, P. (2019). Eu-Doped BaF₂ Nanoparticles for Bioimaging Applications. *ACS Applied Nano Materials*, 2(2), 927–936. <https://doi.org/10.1021/acsanm.8b02180>
- Sharma, V. K., Sayes, C. M., Guo, B., Pillai, S., Parsons, J. G., Wang, C., ... Ma, X. (2019). Interactions between silver nanoparticles and other metal nanoparticles under environmentally relevant conditions: A review. *Science of the Total Environment*, 653, 1042–1051. <https://doi.org/10.1016/j.scitotenv.2018.10.411>
- Sharma, V. K., Yngard, R. A., & Lin, Y. (2009). Silver nanoparticles: Green synthesis and their antimicrobial activities. *Advances in Colloid and Interface Science*, 145(1–2), 83–96. <https://doi.org/10.1016/j.cis.2008.09.002>
- Shi, J., Kantoff, P. W., Wooster, R., & Farokhzad, O. C. (2017). Cancer nanomedicine: Progress, challenges and opportunities. *Nature Reviews Cancer*, 17(1), 20–37. <https://doi.org/10.1038/nrc.2016.108>
- Shih, S. J., & Chien, I. C. (2013). Preparation and characterization of nanostructured silver particles by one-step spray pyrolysis. *Powder Technology*, 237, 436–441. <https://doi.org/10.1016/j.powtec.2012.12.032>
- Shivaji, S., Madhu, S., & Singh, S. (2011). Extracellular synthesis of antibacterial silver nanoparticles using psychrophilic bacteria. *Process Biochemistry*, 46(9), 1800–1807. <https://doi.org/10.1016/j.procbio.2011.06.008>
- Shivakumar, M., Nagashree, K. L., Yallappa, S., Manjappa, S., Manjunath, K. S., & Dharmaprakash, M. S. (2017). Biosynthesis of silver nanoparticles using pre-hydrolysis liquor of Eucalyptus wood and its effective antimicrobial activity. *Enzyme and Microbial Technology*, 97(October 2017), 55–62. <https://doi.org/10.1016/j.enzmictec.2016.11.006>
- Shrivastava, S., Bera, T., Roy, A., Singh, G., Ramachandrara, P., & Dash, D. (2007). Characterization of enhanced antibacterial effects of novel silver nanoparticles. *Nanotechnology*, 18(22). <https://doi.org/10.1088/0957-4484/18/22/225103>
- Shwetha, U. R., Latha, M. S., Rajith Kumar, C. R., Kiran, M. S., & Betageri, V. S. (2020). Facile Synthesis of Zinc Oxide Nanoparticles Using Novel Areca catechu Leaves Extract and Their In Vitro Antidiabetic and Anticancer Studies. *Journal of Inorganic and Organometallic Polymers and Materials*, (0123456789), 3–10. <https://doi.org/10.1007/s10904-020-01575-w>
- Shyamaprosad Goswami,Krishnendu Aich, Sangita Das, Sohini Basuroy, B. P. and S. S. (2014). A reaction based colorimetric as well as fluorescence ‘turn on’ probe for the rapid detection of hydrazine. *J. Mater. Chem. C*, 4(27). <https://doi.org/10.1039/b000000x>

- Silva, L. P., Pereira, T. M., & Bonatto, C. C. (2019). Frontiers and perspectives in the green synthesis of silver nanoparticles. In *Green Synthesis, Characterization and Applications of Nanoparticles*, 137-164. Elsevier. <https://doi.org/10.1016/b978-0-08-102579-6.00007-1>
- Singh, G., Singh, O. P., & Maurya, S. (2002). Chemical and biocidal investigations on essential oils of some Indian curcuma species. *Progress in Crystal Growth and Characterization of Materials*, 45(1–2), 75–81. [https://doi.org/10.1016/S0960-8974\(02\)00030-X](https://doi.org/10.1016/S0960-8974(02)00030-X)
- Singh, H., Das, S., Yadav, J., Srivastava, V. K., Jyoti, A., & Kaushik, S. (2021). In silico prediction, molecular docking and binding studies of acetaminophen and dexamethasone to Enterococcus faecalis diaminopimelate epimerase. *Journal of Molecular Recognition*, 34(9), 1–8. <https://doi.org/10.1002/jmr.2894>
- Singh, S. P., Mishra, A., Shyanti, R. K., Singh, R. P., & Acharya, A. (2020). Silver Nanoparticles Synthesized Using Carica papaya Leaf Extract (AgNPs-PLE) Causes Cell Cycle Arrest and Apoptosis in Human Prostate (DU145) Cancer Cells. *Biological Trace Element Research*, 1–16. <https://doi.org/10.1007/s12011-020-02255-z>
- Singha, D., Barman, N., & Sahu, K. (2014). A facile synthesis of high optical quality silver nanoparticles by ascorbic acid reduction in reverse micelles at room temperature. *Journal of Colloid and Interface Science*, 413, 37–42. <https://doi.org/10.1016/j.jcis.2013.09.009>
- Sivakumar, M., Surendar, S., Jayakumar, M., Seedevi, P., Sivasankar, P., Ravikumar, M., ... Loganathan, S. (2020). Parthenium hysterophorus Mediated Synthesis of Silver Nanoparticles and its Evaluation of Antibacterial and Antineoplastic Activity to Combat Liver Cancer Cells. *Journal of Cluster Science*, 0123456789. <https://doi.org/10.1007/s10876-020-01775-x>
- Sivaramakrishnan, M., Jagadeesan Sharavanan, V., Karaiyagowder Govindarajan, D., Meganathan, Y., Devaraj, B. S., Natesan, S., ... Kandaswamy, K. (2019). Green synthesized silver nanoparticles using aqueous leaf extracts of Leucas aspera exhibits antimicrobial and catalytic dye degradation properties. *SN Applied Sciences*, 1(3), 208. <https://doi.org/10.1007/s42452-019-0221-1>
- Smitha, S. L., Philip, D., & Gopchandran, K. G. (2009). Green synthesis of gold nanoparticles using Cinnamomum zeylanicum leaf broth. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, 74(3), 735–739. <https://doi.org/10.1016/j.saa.2009.08.007>
- Sochol, R. D., Sweet, E., Glick, C. C., Wu, S. Y., Yang, C., Restaino, M., & Lin, L. (2018). 3D printed microfluidics and microelectronics. *Microelectronic Engineering*, 189, 52–68. <https://doi.org/10.1016/j.mee.2017.12.010>
- Solanki, J. N., & Murthy, Z. V. P. (2011). Reduction of nitro aromatic compounds over Ag/Al₂O₃ nanocatalyst prepared in water-in-oil microemulsion: Effects of water-to-surfactant mole ratio and type of reducing agent. *Industrial and Engineering Chemistry Research*, 50(12), 7338–7344. <https://doi.org/10.1021/ie200536q>
- Soman, S., & Ray, J. G. (2016). Silver nanoparticles synthesized using aqueous leaf extract of *Ziziphus oenoplia* (L.) Mill: Characterization and assessment of antibacterial activity. *Journal of Photochemistry and Photobiology B: Biology*, 163, 391–402. <https://doi.org/10.1016/j.jphotobiol.2016.08.033>
- Sondi, I., & Salopek-Sondi, B. (2004). Silver nanoparticles as antimicrobial agent: A case

- study on *E. coli* as a model for Gram-negative bacteria. *Journal of Colloid and Interface Science*, 275(1), 177–182. <https://doi.org/10.1016/j.jcis.2004.02.012>
- Soonwera, M., Wongnet, O., & Sittichok, S. (2018). Ovicidal effect of essential oils from Zingiberaceae plants and Eucalyptus globulus on eggs of head lice, *Pediculus humanus capitidis* De Geer. *Phytomedicine*, 47(April), 93–104. <https://doi.org/10.1016/j.phymed.2018.04.050>
- Sportelli, M. C., Izzi, M., Volpe, A., Clemente, M., Picca, R. A., Ancona, A., ... Cioffi, N. (2018). The pros and cons of the use of laser ablation synthesis for the production of silver nano-antimicrobials. *Antibiotics*, 7(3). <https://doi.org/10.3390/antibiotics7030067>
- Sreekanth, T. V. M., Ravikumar, S., & Eom, I. Y. (2014). Green synthesized silver nanoparticles using *Nelumbo nucifera* root extract for efficient protein binding, antioxidant and cytotoxicity activities. *Journal of Photochemistry and Photobiology B: Biology*, 141, 100–105. <https://doi.org/10.1016/j.jphotobiol.2014.10.002>
- Sriram, M. I., Barath, S., Kanth, M., Kalishwaralal, K., & Gurunathan, S. (2010). Antitumor activity of silver nanoparticles in Dalton ' s lymphoma ascites tumor model, 753–762. <https://doi.org/10.2147/IJN.S11727>
- Sulaiman, F. A., Adeyemi, O. S., Akanji, M. A., Oloyede, H. O. B., Sulaiman, A. A., Olatunde, A., ... Salawu, M. O. (2015). Biochemical and morphological alterations caused by silver nanoparticles in Wistar rats. *Journal of Acute Medicine*, 5(4), 96–102. <https://doi.org/10.1016/j.jacme.2015.09.005>
- Sutar, S. S., Patil, P. J., Tamboli, A. S., Patil, D. N., Apine, O. A., & Jadhav, J. P. (2019). Biodegradation and detoxification of malachite green by a newly isolated bioluminescent bacterium *Photobacterium leiognathi* strain MS under RSM optimized culture conditions. *Biocatalysis and Agricultural Biotechnology*, 20(November), 101183. <https://doi.org/10.1016/j.bcab.2019.101183>
- Taniyama, Y., Weber, D. S., Rocic, P., Hilenski, L., Akers, M. L., Park, J., ... Griendling, K. K. (2003). Pyk2- and Src-Dependent Tyrosine Phosphorylation of PDK1 Regulates Focal Adhesions. *Molecular and Cellular Biology*, 23(22), 8019–8029. <https://doi.org/10.1128/mcb.23.22.8019-8029.2003>
- Tavakoli, M., Malakooti, M. H., Paisana, H., Ohm, Y., Green Marques, D., Alhais Lopes, P., ... Majidi, C. (2018). EGaIn-Assisted Room-Temperature Sintering of Silver Nanoparticles for Stretchable, Inkjet-Printed, Thin-Film Electronics. *Advanced Materials*, 30(29), 1–7. <https://doi.org/10.1002/adma.201801852>
- Tezcan, F., Gültekin-Özgüven, M., Diken, T., Özçelik, B., & Erim, F. B. (2009). Antioxidant activity and total phenolic, organic acid and sugar content in commercial pomegranate juices. *Food Chemistry*, 115(3), 873–877. <https://doi.org/10.1016/j.foodchem.2008.12.103>
- The, N., Feynman, R., Feynman, R., & Taniguchi, N. (1970). Helw.Pdf.
- Tiwari, D. K., Jin, T., & Behari, J. (2011). Dose-dependent in-vivo toxicity assessment of silver nanoparticle in Wistar rats. *Toxicology Mechanisms and Methods*, 21(1), 13–24. <https://doi.org/10.3109/15376516.2010.529184>
- Tripathi, D., Modi, A., Narayan, G., & Rai, S. P. (2019). Green and cost effective synthesis of silver nanoparticles from endangered medicinal plant *Withania coagulans* and their potential biomedical properties. *Materials Science and Engineering C*, 100(December 2017), 152–164. <https://doi.org/10.1016/j.msec.2019.02.113>

- Trotter, J.-Y., & Scheraga, H. A. (1999). PRODOCK: Software Package for Protein. *Journal of Computational Chemistry*, 20(4), 412–427.
- Tseng, K. H., Chou, C. J., Liu, T. C., Tien, D. C., Chang, C. Y., & Stobinski, L. (2018). Relationship between Ag nanoparticles and Ag ions prepared by arc discharge method. *Nanotechnology Reviews*, 7(1), 1–9. <https://doi.org/10.1515/ntrev-2017-0167>
- Tseng, K. H., Chou, C. J., Liu, T. C., Tien, D. C., Wu, T. C., & Stobinski, L. (2018). Interactive Relationship between Silver Ions and Silver Nanoparticles with PVA Prepared by the Submerged Arc Discharge Method. *Advances in Materials Science and Engineering*, 2018. <https://doi.org/10.1155/2018/3240959>
- Uddin, A. K. M. R., Siddique, M. A. B., Rahman, F., Ullah, A. K. M. A., & Khan, R. (2020). Cocos nucifera Leaf Extract Mediated Green Synthesis of Silver Nanoparticles for Enhanced Antibacterial Activity. *Journal of Inorganic and Organometallic Polymers and Materials*, 30(9), 3305–3316. <https://doi.org/10.1007/s10904-020-01506-9>
- Ueno, S., Nakashima, K., Sakamoto, Y., & Wada, S. (2015). Synthesis of silver-strontium titanate hybrid nanoparticles by sol-gel-hydrothermal method. *Nanomaterials*, 5(2), 386–397. <https://doi.org/10.3390/nano5020386>
- Ullah, I., Khalil, A. T., Ali, M., Iqbal, J., Ali, W., Alarifi, S., & Shinwari, Z. K. (2020). Green-Synthesized Silver Nanoparticles Induced Apoptotic Cell Death in MCF-7 Breast Cancer Cells by Generating Reactive Oxygen Species and Activating Caspase 3 and 9 Enzyme Activities. *Oxidative Medicine and Cellular Longevity*, 2020. <https://doi.org/10.1155/2020/1215395>
- Ullah, M., Ali, M. E., & Hamid, S. B. A. (2014). Surfactant-assisted ball milling: A novel route to novel materials with controlled nanostructure-A review. *Reviews on Advanced Materials Science*, 37(1–2), 1–14.
- Ulwali, R. A., Abbas, H. K., Yasoob, N., & Alwally, H. A. (2021). Nanotechnology and the Most Important Characterization Techniques for Nanomaterial's: A Review. *NeuroQuantology*, 19(8), 42–52. <https://doi.org/10.14704/nq.2021.19.8.nq21111>
- Uttayarat, P., Eamsiri, J., Tangthong, T., & Suwanmala, P. (2015). Radiolytic synthesis of colloidal silver nanoparticles for antibacterial wound dressings. *Advances in Materials Science and Engineering*, 2015(1). <https://doi.org/10.1155/2015/376082>
- van Hest, J. J. H. A., Agronskaia, A. V., Fokkema, J., Montanarella, F., Gregorio Puig, A., de Mello Donega, C., ... Gerritsen, H. C. (2019). Towards robust and versatile single nanoparticle fiducial markers for correlative light and electron microscopy. *Journal of Microscopy*, 274(1), 13–22. <https://doi.org/10.1111/jmi.12778>
- Varadavenkatesan, T., Selvaraj, R., & Vinayagam, R. (2019). Dye degradation and antibacterial activity of green synthesized silver nanoparticles using Ipomoea digitata Linn. flower extract. *International Journal of Environmental Science and Technology*, 16(5), 2395–2404. <https://doi.org/10.1007/s13762-018-1850-4>
- Varadavenkatesan, Thivaharan, Selvaraj, R., & Vinayagam, R. (2016). Phyto-synthesis of silver nanoparticles from Mussaenda erythrophylla leaf extract and their application in catalytic degradation of methyl orange dye. *Journal of Molecular Liquids*, 221, 1063–1070. <https://doi.org/10.1016/j.molliq.2016.06.064>
- Vasanth, S. B., & Kurian, G. A. (2017). Toxicity evaluation of silver nanoparticles synthesized by chemical and green route in different experimental models. *Artificial Cells, Nanomedicine and Biotechnology*, 45(8), 1721–1727. <https://doi.org/>

- 10.1080/21691401.2017.1282500
- Velayutham, K., Ramanibai, R., & Umadevi, M. (2016). Green synthesis of silver nanoparticles using Manihot esculenta leaves against Aedes aegypti and Culex quinquefasciatus. *The Journal of Basic & Applied Zoology*, 74, 37–40. <https://doi.org/10.1016/j.jobaz.2016.06.002>
- Velidandi, A., Dahariya, S., Pabbathi, N. P. P., Kalivarathan, D., & Baadhe, R. R. (2020). A review on synthesis, applications, toxicity, risk assessment and limitations of plant extracts synthesized silver nanoparticles. *NanoWorld Journal*, 6(3), 35–60. <https://doi.org/10.17756/nwj.2020-079>
- Velu, V., Das, M., Raj N, A. N., Dua, K., & Malipeddi, H. (2017). Evaluation of in vitro and in vivo anti-urolithiatic activity of silver nanoparticles containing aqueous leaf extract of *Tragia involucrata*. *Drug Delivery and Translational Research*, 7(3), 439–449. <https://doi.org/10.1007/s13346-017-0363-x>
- Venkatachalam, C. M., Jiang, X., Oldfield, T., & Waldman, M. (2003). LigandFit: A novel method for the shape-directed rapid docking of ligands to protein active sites. *Journal of Molecular Graphics and Modelling*, 21(4), 289–307. [https://doi.org/10.1016/S1093-3263\(02\)00164-X](https://doi.org/10.1016/S1093-3263(02)00164-X)
- Venkatadri, B., Shanparvish, E., Rameshkumar, M. R., Arasu, M. V., Al-Dhabi, N. A., Ponnusamy, V. K., & Agastian, P. (2020). Green synthesis of silver nanoparticles using aqueous rhizome extract of *Zingiber officinale* and *Curcuma longa*: In-vitro anti-cancer potential on human colon carcinoma HT-29 cells. *Saudi Journal of Biological Sciences*, 27(11), 2980–2986. <https://doi.org/10.1016/j.sjbs.2020.09.021>
- Verma, S., Rao, B. T., Srivastava, A. P., Srivastava, D., Kaul, R., & Singh, B. (2017). A facile synthesis of broad plasmon wavelength tunable silver nanoparticles in citrate aqueous solutions by laser ablation and light irradiation. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 527(April), 23–33. <https://doi.org/10.1016/j.colsurfa.2017.05.003>
- Vidhu, V. K., & Philip, D. (2014). Catalytic degradation of organic dyes using biosynthesized silver nanoparticles. *Micron*, 56, 54–62. <https://doi.org/10.1016/j.micron.2013.10.006>
- Vijayakumar, M., Priya, K., Nancy, F. T., Noorlidah, A., & Ahmed, A. B. A. (2013). Biosynthesis, characterisation and anti-bacterial effect of plant-mediated silver nanoparticles using *Artemisia nilagirica*. *Industrial Crops and Products*, 41(1), 235–240. <https://doi.org/10.1016/j.indcrop.2012.04.017>
- Vinod, V. T. P., Saravanan, P., Sreedhar, B., Devi, D. K., & Sashidhar, R. B. (2011). A facile synthesis and characterization of Ag, Au and Pt nanoparticles using a natural hydrocolloid gum kondagogu (*Cochlospermum gossypium*). *Colloids and Surfaces B: Biointerfaces*, 83(2), 291–298. <https://doi.org/10.1016/j.colsurfb.2010.11.035>
- W. Thefeld, H. Hoffmeister, E.-W. Busch, P. U. K. und J. V. (1974). Reference values for the determination of GOT, GPT, and alkaline phosphatase in serum with optimal standard methods, 99(8), 343–351.
- Walter M, G. H. (1970). Ultramicromethod for the determination of conjugated and total bilirubin in serum or plasma. *Microchem J*, 15, 231–236.
- Wang, L., Lu, F., Liu, Y., Wu, Y., & Wu, Z. (2018). Photocatalytic degradation of organic dyes and antimicrobial activity of silver nanoparticles fast synthesized by flavonoids fraction of *Psidium guajava* L. leaves. *Journal of Molecular Liquids*, 263(November),

- 187–192. <https://doi.org/10.1016/j.molliq.2018.04.151>
- Wang, X., Zheng, Y. F., Yin, H. Y., & Song, X. C. (2011). Green synthesis and catalytic function of tungsten oxide nanoparticles. *Journal of Nanoscience and Nanotechnology*, 11(3), 2501–2505. <https://doi.org/10.1166/jnn.2011.3593>
- Wang, Yating, Qiao, Y., Wang, P., Li, Q., Xia, C., & Ju, M. (2018). Bio fabrication of silver nanoparticles as an effective wound healing agent in the wound care after anorectal surgery. *Journal of Photochemistry and Photobiology B: Biology*, 178, 457–462. <https://doi.org/10.1016/j.jphotobiol.2017.10.024>
- Wang, Yu, Cao, H., Chen, J., & McNiven, M. A. (2011). A direct interaction between the large GTPase dynamin-2 and FAK regulates focal adhesion dynamics in response to active Src. *Molecular Biology of the Cell*, 22(9), 1529–1538. <https://doi.org/10.1091/mbc.E10-09-0785>
- Wei, Z., Zhou, M., Qiao, H., Zhu, L., Yang, H., & Xia, T. (2009). Particle size and pore structure characterization of silver nanoparticles prepared by confined arc plasma. *Journal of Nanomaterials*, 2009, 5–10. <https://doi.org/10.1155/2009/968058>
- Wen, M. M., El-Salamouni, N. S., El-Refaie, W. M., Hazzah, H. A., Ali, M. M., Tosi, G., ... Hanafy, A. S. (2017). Nanotechnology-based drug delivery systems for Alzheimer's disease management: Technical, industrial, and clinical challenges. *Journal of Controlled Release*, 245, 95–107. <https://doi.org/10.1016/j.jconrel.2016.11.025>
- Wilke, C. M., Wunderlich, B., Gaillard, J. F., & Gray, K. A. (2018). Synergistic Bacterial Stress Results from Exposure to Nano-Ag and Nano-TiO₂ Mixtures under Light in Environmental Media. *Environmental Science and Technology*, 52(5), 3185–3194. <https://doi.org/10.1021/acs.est.7b05629>
- William T Friedewald, Robert I Levy, D. S. F. (1972). Estimation of the Concentration of Low-Density Lipoprotein Cholesterol in Plasma, Without Use of the Preparative Ultracentrifuge. *Clinical Chemistry*, 18(6), 499–502. <https://doi.org/https://doi.org/10.1093/clinchem/18.6.499>
- Wintrobe, M. M., & Greer, J. P. (2009). *Wintrobe's clinical hematology*. Wolters Kluwer Health/Lippincott Williams & Wilkins.
- Wiseman, J. S., & Nichols, J. S. (1984). Purification and properties of diaminopimelic acid epimerase from Escherichia coli. *Journal of Biological Chemistry*, 259(14), 8907–8914. [https://doi.org/10.1016/s0021-9258\(17\)47241-3](https://doi.org/10.1016/s0021-9258(17)47241-3)
- Wongrat, E., Wongkrajang, S., Chuejetton, A., Bhoomanee, C., & Choopun, S. (2019). Rapid synthesis of Au, Ag and Cu nanoparticles by DC arc-discharge for efficiency enhancement in polymer solar cells. *Materials Research Innovations*, 23(2), 66–72. <https://doi.org/10.1080/14328917.2017.1376786>
- Wu, J., Zan, X., Li, S., Liu, Y., Cui, C., Zou, B., ... Huo, F. (2014). In situ synthesis of large-area single sub-10 nm nanoparticle arrays by polymer pen lithography. *Nanoscale*, 6(2), 749–752. <https://doi.org/10.1039/c3nr05033e>
- Wu, K., Yang, Y., Zhang, Y., Deng, J., & Lin, C. (2015). Antimicrobial activity and cytocompatibility of silver nanoparticles coated catheters via a biomimetic surface functionalization strategy. *International Journal of Nanomedicine*, 10, 7241–7252. <https://doi.org/10.2147/IJN.S92307>
- Xiang, H., Zhang, L., Xi, L., Yang, Y., Wang, X., Lei, D., ... Liu, X. (2018). Phytochemical

- profiles and bioactivities of essential oils extracted from seven Curcuma herbs. *Industrial Crops and Products*, 111(October 2017), 298–305. <https://doi.org/10.1016/j.indcrop.2017.10.035>
- Xiang, H., Zhang, L., Yang, Z., Chen, F., Zheng, X., & Liu, X. (2017). Chemical compositions, antioxidative, antimicrobial, anti-inflammatory and antitumor activities of Curcuma aromatica Salisb. essential oils. *Industrial Crops and Products*, 108(May), 6–16. <https://doi.org/10.1016/j.indcrop.2017.05.058>
- Xie, H., Yin, X., Chen, P., Liu, J., Yang, C., Que, W., & Wang, G. (2019). Solvothermal synthesis of highly crystalline SnO₂ nanoparticles for flexible perovskite solar cells application. *Materials Letters*, 234, 311–314. <https://doi.org/10.1016/j.matlet.2018.09.117>
- Xing, T., Sunarso, J., Yang, W., Yin, Y., Glushenkov, A. M., Li, L. H., ... Chen, Y. (2013). Ball milling: A green mechanochemical approach for synthesis of nitrogen doped carbon nanoparticles. *Nanoscale*, 5(17), 7970–7976. <https://doi.org/10.1039/c3nr02328a>
- Xu, W., Doshi, A., Lei, M., Eck, M. J., & Harrison, S. C. (1999). Crystal structures of c-Src reveal features of its autoinhibitory mechanism. *Molecular Cell*, 3(5), 629–638. [https://doi.org/10.1016/S1097-2765\(00\)80356-1](https://doi.org/10.1016/S1097-2765(00)80356-1)
- Yakop, F., Abd Ghafar, S. A., Yong, Y. K., Saiful Yazan, L., Mohamad Hanafiah, R., Lim, V., & Eshak, Z. (2018). Silver nanoparticles Clinacanthus Nutans leaves extract induced apoptosis towards oral squamous cell carcinoma cell lines. *Artificial Cells, Nanomedicine and Biotechnology*, 46(sup2), 131–139. <https://doi.org/10.1080/21691401.2018.1452750>
- Yan, Z., Fu, L., Zuo, X., & Yang, H. (2018). Green assembly of stable and uniform silver nanoparticles on 2D silica nanosheets for catalytic reduction of 4-nitrophenol. *Applied Catalysis B: Environmental*, 226, 23–30. <https://doi.org/10.1016/j.apcatb.2017.12.040>
- Yang, C., Jung, S., & Yi, H. (2014). A biofabrication approach for controlled synthesis of silver nanoparticles with high catalytic and antibacterial activities. *Biochemical Engineering Journal*, 89, 10–20. <https://doi.org/10.1016/j.bej.2013.12.008>
- Yari, S., Abbasizadeh, S., Mousavi, S. E., Moghaddam, M. S., & Moghaddam, A. Z. (2015). Adsorption of Pb(II) and Cu(II) ions from aqueous solution by an electrospun CeO₂ nanofiber adsorbent functionalized with mercapto groups. *Process Safety and Environmental Protection*, 94(C), 159–171. <https://doi.org/10.1016/j.psep.2015.01.011>
- Yasni, S., Imaizumi, K., Sin, K., Sugano, M., Nonaka, G., & Sidik. (1994). Identification of an active principle in essential oils and hexane-soluble fractions of Curcuma xanthorrhiza Roxb. Showing triglyceride-lowering action in rats. *Food and Chemical Toxicology*, 32(3), 273–278. [https://doi.org/10.1016/0278-6915\(94\)90200-3](https://doi.org/10.1016/0278-6915(94)90200-3)
- Yokel, R. A., & MacPhail, R. C. (2011). Engineered nanomaterials: Exposures, hazards, and risk prevention. *Journal of Occupational Medicine and Toxicology*, 6(1), 1–27. <https://doi.org/10.1186/1745-6673-6-7>
- Young, M., Willits, D., Uchida, M., & Douglas, T. (2008). Plant viruses as biotemplates for materials and their use in nanotechnology. *Annual Review of Phytopathology*, 46, 361–384. <https://doi.org/10.1146/annurev.phyto.032508.131939>
- Young, V. R., Fajardo, L., Murray, E., Rand, W. M., & Scrimshaw, N. S. (1975). Protein requirements of man: comparative nitrogen balance response within the submaintenance to maintenance range of intakes of wheat and beef proteins. *Journal of Nutrition*, 105(5),

- 534–542. <https://doi.org/10.1093/jn/105.5.534>
- Zhang, H., Zou, G., Liu, L., Tong, H., Li, Y., Bai, H., & Wu, A. (2017). Synthesis of silver nanoparticles using large-area arc discharge and its application in electronic packaging. *Journal of Materials Science*, 52(6), 3375–3387. <https://doi.org/10.1007/s10853-016-0626-9>
- Zhang, K. X., Wen, X., Yao, C. B., Li, J., Zhang, M., Li, Q. H., ... Wu, J. Da. (2018). Synthesis, structural and optical properties of silver nanoparticles uniformly decorated ZnO nanowires. *Chemical Physics Letters*, 698, 147–151. <https://doi.org/10.1016/j.cplett.2018.03.018>
- Zhang, K., Zhao, Q., Qin, S., Fu, Y., Liu, R., Zhi, J., & Shan, C. (2019). Nanodiamonds conjugated upconversion nanoparticles for bio-imaging and drug delivery. *Journal of Colloid and Interface Science*, 537, 316–324. <https://doi.org/10.1016/j.jcis.2018.11.028>
- Zhang, W., Qiao, X., & Chen, J. (2007). Synthesis of nanosilver colloidal particles in water/oil microemulsion. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 299(1–3), 22–28. <https://doi.org/10.1016/j.colsurfa.2006.11.012>
- Zhang, X. F., Liu, Z. G., Shen, W., & Gurunathan, S. (2016). Silver nanoparticles: Synthesis, characterization, properties, applications, and therapeutic approaches. *International Journal of Molecular Sciences*, 17(9). <https://doi.org/10.3390/ijms17091534>
- Zhang, Y. J., Gan, R. Y., Li, S., Zhou, Y., Li, A. N., Xu, D. P., ... Kitts, D. D. (2015). Antioxidant phytochemicals for the prevention and treatment of chronic diseases. *Molecules*, 20(12), 21138–21156. <https://doi.org/10.3390/molecules201219753>
- Zhao, F., Chen, S., Hu, Q., Xue, G., Ni, Q., Jiang, Q., & Qiu, Y. (2017). Antimicrobial three dimensional woven filters containing silver nanoparticle doped nanofibers in a membrane bioreactor for wastewater treatment. *Separation and Purification Technology*, 175, 130–139. <https://doi.org/10.1016/j.seppur.2016.11.024>
- Zhou, Z., Yang, L., Gao, J., & Chen, X. (2019). Structure–Relaxivity Relationships of Magnetic Nanoparticles for Magnetic Resonance Imaging. *Advanced Materials*, 31(8), 1–32. <https://doi.org/10.1002/adma.201804567>
- Zhu, W., Webster, T. J., & Zhang, L. G. (2018). How can 3D printing be a powerful tool in nanomedicine? *Nanomedicine*, 13(3), 251–253. <https://doi.org/10.2217/nmm-2017-0369>