

## REFERENCES

- [1] R. V. Radadiya, T. N. Shaikh, and B. H. Patel, "Reinforcing Biomedical Gadgets with Nano-Composite Textiles Present Scenario at a glance'," *Man Made Textiles in India*, vol. 48, no. 4, pp. 115-120, 2020.
- [2] T. N. Shaikh, P Poonia & B. H. Patel , "Characterization of Green Synthesized Silver Nanoparticles Using Azadirachta Indica (Neem) Leave Extract'," *International Journal of Advance Research in Science & Engineering*, vol. 6, no. 9, pp. 1127- 113, Sept 2017.
- [3] B H Patel, M Z Chhaniwala, S B Chaudhari, and A A Mandot, "Green synthesis of silver nano-sols by leave extract of ocimum sanctum and their efficacy against human pathogenic bacterium'," *Journal of green science and technology*, vol. 2, no. 1, 2015.
- [4] Zahedi P, Rezaeian I, Ranaei Siadat S O, "A review on wound dressings with an emphasis on electrospun nanofibrous polymeric bandages'," *Polymers for Advanced Technologies*, pp. 77-95, 2010.
- [5] S Iravani, H Korbekandi, S V Mirmohammadi , and B Zolfaghari, "Synthesis of silver nanoparticles: chemical, physical and biological methods," *Research in Pharmaceutical Sciences*, vol. 9, no. 6, p. 385–406, Nov-Dec 2014.
- [6] Karthik R., Hou Y S., Chen S M., Elangovan A., Gan, "Eco-friendly synthesis of Ag-NPs using Cerasus serrulata plant extract—Its catalytic, electrochemical reduction of 4-NPh and antibacterial activity'," *Journal of Industrial and Engineering Chemistry*, vol. 37, p. 330–339, 2016.
- [7] Perelshtein I., Applerot, G., Perkas, N., Guibert, "Sonochemical coating of silver nanoparticles on textile fabrics (nylon, polyester and cotton) and their antibacterial activit'," *Nanotechnology*, vol. 19, no. 24, 2008.
- [8] Ikram Ullah et al., "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*, vol. 5, Oct 2020.

- 
- [9] M. Vaneechoutte, S. Jennes, and T. Pitt, "The Effect of Microbes on Textile Material: A Review on the Way-out so Far," *The International Journal of Engineering and Science*, vol. 24, no. 1, pp. 09-13, 2013.
- [10] S. Rajendran and S.C. Anand, "Contribution of Textiles to Medical and Healthcare Products and Developing Innovative Medical Devices," *Indian Journal of Fibre & Textile Research*, vol. 31, pp. 215-229, 2006.
- [11] S.K. Chinta and K.V. Veena, "Impact of Textiles in Medical Field," *International Journal of Latest Trends in Engineering and Technology*, vol. 2, no. 1, pp. 142-145, January 2013.
- [12] D. McCall, D. Stock, and P. Achey, *Introduction to Microbiology*.: Malden, MA : Blackwell Science, 2001.
- [13] G.F. Brooks, J.S. Butel, and S.A. Morse, 'Normal Microbial Flora of the human body' In Jawetz, Melnick and Adelberg's *Medical Microbiology*, 2nd ed.: The McGraw-Hill Companies, 2001.
- [14] W. Huang and K.K. Leonas, "Evaluating a one-bath process for imparting antimicrobial activity and repellency to nonwoven surgical gown fabrics," *Textile Research Journal*, vol. 70, no. 9, pp. 774-782, 2000.
- [15] L.M. Prescott, J.P. Harley, and D.A. Klein, *Microbiology*, 5th ed.: McGraw-Hill, 2002.
- [16] P.R. Murray, A.C. Niles, and R.L. Heeren, "Microbial inhibition on hospital garments treated with Dow Corning 5700 antimicrobial agent," *Journal of Clinical Microbiology*, vol. 26, no. 9, pp. 1884-1886, 1988.
- [17] W. Whyte, D. Vesley, and R. Hodgson, "Bacterial dispersion in relation to operating room clothing," *The Journal of Hygiene*, vol. 76, no. 3, pp. 367-378, 1976.
- [18] J.R. Appidi, D.S. Grierson, and A.J. Afolayan, "Ethnobotanical Study of Plants Used for the Treatment of Diarrhoea in the Eastern Cape, South Africa," *Pakistan Journal of Biological Sciences*, vol. 11, p. 1961–1963.
- [19] K.A. Erdem and S. N.O. Yurudu, "The Evaluation of Antimicrobial Activity of Fabrics Impregnated with Dimethyltetradecyl (3-(Trimethoxysilyl) Propyl)

- Ammonium Chloride," Journal of Biology Research Article, vol. 67, no. 2, pp. 115-122.
- [20] R. Tijana et al., "Antimicrobial Efficiency of Functionalized Cellulose Fibres as Potential Medical Textiles.Science Against Microbial Pathogens," Communicating Current Research and Technological Advances, vol. 1, pp. 36-51, 2011.
- [21] E. Yi and E.S. Yoo, "A Novel Bioactive Fabric Dyed With Unripe Citrus Grandis Osbeck Extract Part I: Dyeing Properties and Antimicrobial Activity on, Cotton Knit Fabrics," Textile Research Journal, vol. 80, pp. 2117-2123, 2010.
- [22] S. Sumathi, A. Thomas, and E. Wesely, "Study on Antimicrobial Activity of Organic Cotton Fabric Treated with Microencapsulated Herbal Extract ," International Journal of Biological & Pharmaceutical Research , vol. 6, no. 4, pp. 259-263.
- [23] M. Sumithra and V. N. Raaja, "Antimicrobial Finishing of Denim Fabrics with Herbal Extracts," American Journal of Medical and Biological Research, vol. 2, no. 1, pp. 26-30.
- [24] S. Mahesh, M.A.H. Reddy, and V.G. Kumar, "Studies on Antimicrobial Textile Finish Using Certain Plant Natural Products," International Conference on Advances in Biotechnology and International Conference on Advances in Biotechnology and Pharmaceutical Sciences, vol. 6, no. 3, pp. 253-258, 2011.
- [25] M.N. Singh, K.S. Hemant, M. Ram, and H. G. Shivakumar, "Microencapsulation: A Promising Technique for Controlled Drug Delivery," Research in Pharmaceutical Sciences, vol. 5, no. 2, p. 65–77.
- [26] W.B Achwal, "Factors Influencing the Biofinishing Process," Colourage, vol. 4, no. 50, pp. 58-59, 2003.
- [27] Z.G Jin and Z.Z. Yang, "Synthesis and Properties of Paraffin Capsules as Phase Change Materials," Polymer, vol. 49, no. 12, pp. 2903-2910.
- [28] B.S. Butola and S. Mishra, "Nano Technology in Textiles," Asian Dyer, vol. 4, no. 1, pp. 70-76, 2007.

- 
- [29] J. Cho, M.S. Joshi, and C.T Sun, "Effect of Inclusion Size on Mechanical Properties of Polymeric Composites with Micro and Nano Particles," *Composites Science and Technology*, vol. 66, no. 13, pp. 1941-1952, 2006.
- [30] A. Yadav et al., "Functional Finishing in Cotton Fabrics Using Zinc oxide Nanoparticles," *Bulletin of Materials Science*, vol. 29, no. 6, pp. 641-645.
- [31] P. Radhakishnaiah, H. Jingwu, C.L. Fred, and G.B. Diller, "INFLUENCE OF ENZYMATIC TREATMENT ON MECHANICAL PROPERTIES OF WOVEN COTTON KHADI FABRICS," *Textile Research Journal*, vol. 75, no. 3, pp. 265-293, 2005.
- [32] B. Mahltig and T. Textor, "Combination of Silica Sol and Dye on Textiles," *Journal of Sol-Gel Science and Technology*, vol. 39, no. 2, pp. 111-118, 2006.
- [33] Roger W Whatmore, "Nanotechnology—what is it? Should we be worried?," *Occupational Medicine*, vol. 56, p. 295–299, 2006.
- [34] Jr. Charles P Poole and Frank J Owens, *INTRODUCTION TO NANOTECHNOLOGY*. New Jersey, United States of America: A JOHN WILEY & SONS, INC., PUBLICATION, 2003.
- [35] "Nanoscience and nanotechnologies: opportunities and uncertainties," The Royal Society & The Royal Academy of Engineering, UK, ISBN 0 85403 604 0, 2004.
- [36] Ibrahim Khan, Khalid Saeed, and Idrees Khan, "Nanoparticles: Properties, applications and toxicities," *Arabian Journal of Chemistry*, vol. 12, p. 908–931, 2019.
- [37] "Nanoparticles – Vocabulary," BSI Standards Publication, ISBN 978 0 580 70137 5, 2011.
- [38] A. Alagarasi, "INTRODUCTION TO NANOMATERIALS," in *INTRODUCTION TO NANOMATERIALS.*, 2011, ch. 1, pp. 1-24.
- [39] S. S. Shankar, A. Ahmad, and M. Sastry, "Geranium leave assisted biosynthesis of silver nanoparticles.," *Biotechnology progress*, vol. 19, no. 6, pp. 1627-1631, 2003.

- 
- [40] Antonios N Papadopoulos and Hamid R Taghiyar, "Innovative Wood Surface Treatments Based on Nanotechnology," *Coatings*, vol. 9, no. 866, pp. 1-14, December 2019.
- [41] Mangala Joshi and Bapan Adak, "Advances in Nanotechnology Based Functional, Smart and Intelligent Textiles: A Review," *Comprehensive Nanoscience and Nanotechnology (Second Edition)*, vol. 5, pp. 253-290, 2019.
- [42] David Alcantara and Lee Josephson, "Magnetic Nanoparticles for Application in Biomedical Sensing," *Frontiers of Nanoscience*, vol. 4, pp. 269-289, 2012.
- [43] Pavankumar Naik, Rajeshwari Gamanagatti, Jagadeesh Meti, and Nagaraj Telkar, "Importance of Nano-Technology in Different discipline," *International Journal of Technology*, vol. 7, no. 1, pp. 56-68, 2017.
- [44] Haleema Saleem and Syed Javaid Zaidi, "Sustainable Use of Nanomaterials in Textiles and Their Environmental Impact," *materials*, vol. 13, no. 5134, pp. 1-28, November 2020.
- [45] Phuong Nguyen-Tri, Tuan Anh Nguyen, Pascal Carriere, and Cuong Ngo Xuan, "Nanocomposite Coatings: Preparation, Characterization, Properties, and Applications," *International Journal of Corrosion*, vol. 2018, pp. 1-19, February 2018.
- [46] Li Xu et al., "Silver nanoparticles: Synthesis, medical applications and biosafety," *Theranostics*, vol. 10, no. 20, pp. 8996-9031, July 2020.
- [47] Jyothi U Menon et al., "Nanomaterials for Photo-Based Diagnostic and Therapeutic Applications," *Theranostics*, vol. 3, no. 3, pp. 152-166, 2013.
- [48] Artur Y Prilepskii, Nikita S Serov, Daniil V Kladko, and Vladimir V Vinogradov, "Nanoparticle-Based Approaches towards the Treatment of Atherosclerosis," *Pharmaceutics*, vol. 12, no. 1056, pp. 1-31, November 2020.
- [49] Yanxiao Feng, Yuechuan Zhang, Cuifeng Ying, Deqiang Wang, and Chunlei Du, "Nanopore-based Fourth-generation DNA Sequencing Technology," *Genomics Proteomics Bioinformatics*, vol. 13, pp. 4-16, March 2015.
- [50] Jayanta Kumar Patra et al., "Nano based drug delivery systems: recent developments and future prospects," *Journal of Nanobiotechnology*, vol. 16, pp. 1-33, 2018.

- 
- [51] Abiodun Solanke, D M Ajayi, and A O Arigbede, "Nanotechnology and its Application in Dentistry," *Annals of Medical and Health Sciences Research*, vol. 4, no. 3, pp. 171-177, 2014.
- [52] Carmine D'Amico, Flavia Fontana, Ruoyu Cheng, and Helder A Santos, "Development of vaccine formulations: past, present, and future," *Drug Delivery and Translational Research*, vol. 11, p. 353–372, February 2021.
- [53] A. Aqel, K.M.M.A. El-Nour, R.A.A. Ammar, and A. Al-Warthan, "Carbon nanotubes, science and technology part (I) structure, synthesis and characterisation.," *Arabian Journal of Chemistry*, vol. 5, pp. 1-23, 2012.
- [54] A. Astefanei, O. Nunez, and M. T. Galceran, "Characterisation and determination of fullerenes: a critical review," *Analytica Chimica Acta*, vol. 882, pp. 1-28, 2015.
- [55] E. C. Dreaden, A. M. Alkilany, X. Huang, C. J. Murphy, and M. A. El-Sayed, "The golden age: gold nanoparticles for biomedicine.," *Chemical Society Reviews*, vol. 41, p. 2740–2779, 2012.
- [56] A. GOLDSTEIN, Y. SOROKA, M. FRUSIC-ZLOTKIN, I. POPOV, and R. KOHEN, "High resolution SEM imaging of gold nanoparticles in cells and tissues," *Journal of Microscopy*, vol. 256, no. 3, p. 237–247, 2014.
- [57] S. Thomas, B.S.P. Harshita, P. Mishra, and S. Talegaonkar, "Ceramic nanoparticles: fabrication methods and applications in drug delivery.," *Current Pharmaceutical Design*, vol. 21, p. 6165–6188, 2015.
- [58] T. Hisatomi, J. Kubota, and K. Domen, "Recent advances in semiconductors for photocatalytic and photoelectrochemical water splitting.," *Chemical Society Reviews*, vol. 43, p. 7520–7535, 2014.
- [59] M. Mansha, I. Khan, N. Ullah, and A. Qurashi, "Synthesis, characterization and visible-light-driven photoelectrochemical hydrogen evolution reaction of carbazole-containing conjugated polymers.," *International Journal of Hydrogen Energy*, vol. 42, no. 16, pp. 10952-10961, 2017.

- 
- [60] M. Gujrati et al., "Multifunctional cationic lipid-based nanoparticles facilitate endosomal escape and reduction-triggered cytosolic siRNA release.," *Molecular Pharmaceutics*, vol. 11, p. 2734–2744, 2014.
- [61] V. Singh, P. Yadav, and V. Mishra, "Recent Advances on Classification, Properties, Synthesis, and Characterization of Nanomaterials," *Green Synthesis of Nanomaterials for Bioenergy Applications*, vol. 1, pp. 83-97, 2020.
- [62] J. Jeevanandam, A. Barhoum, Y. S. Chan, A. Dufresne, and M. K. Danquah, "Review on nanoparticles and nanostructured materials: history, sources, toxicity and regulations," *Beilstein Journal of Nanotechnology*, vol. 9, p. 1050–1074, 2018.
- [63] Vikas Sarsar, Krishan Selwal, and Manjit K Selwal, "African Journal of Biotechnology Nanosilver: Potent antimicrobial agent and its biosynthesis," *AFRICAN JOURNAL OF BIOTECHNOLOGY*, vol. 13, no. 4, pp. 546-554, January 2014.
- [64] J. Sarkar, S. Saha, D. Chattopadhyay, S. Patra, and K. Acharya, "Mycosynthesis of silver nanoparticles and investigation of their antimicrobial activity.," *Journal of Nanoscience, Nanoengineering & Applications*, vol. 1, p. 17–26, 2011.
- [65] V. K. Sharma, R. A. Yngard, and Y. Lin, "Silver nanoparticles: Green synthesis and their antimicrobial activities.," *Advances in Colloid and Interface Science*, vol. 145, p. 83–96, 2009.
- [66] P. V. Kamat, "Photophysical, photochemical and photocatalytic aspects of metal nanoparticles," *The Journal of Physical Chemistry B*, vol. 106, pp. 7729-7744, 2002.
- [67] Thomas G Slama, "Gram-negative antibiotic resistance: there is a price to pay," *Critical Care*, vol. 12, no. 4, pp. 1-4, 2008.
- [68] P. Sanpui, A. Murugadoss, P. V. Prasad, S. S. Ghosh, and A. Chattopadhyay, "The Antibacterial Properties of a Novel Chitosan-Ag-Nanoparticle Composite," *International Journal of Food Microbiology*, vol. 124, no. 2, p. 142–146, 2008.
- [69] Rik M. Brydson and Chris Hammond, "Generic methodologies for nanotechnology: classification and fabrication," in *Nanoscale Science and Technology*, Robert W.

- Kelsall, Ian W. Hamley, and Mark Geoghegan, Eds. West Sussex, England: John Wiley & Sons Ltd, 2005, ch. 1, pp. 32-51.
- [70] P. Pattekari et al., "Top-down and bottom-up approaches in production of aqueous nanocolloids of low solubility drug paclitaxel," *Physical Chemistry Chemical Physics*, vol. 13, p. 9014–9019, 2011.
- [71] Jack R. Brent, Nicky Savjani, and Paul O'Brien, "Synthetic approaches to two-dimensional transition metal dichalcogenide nanosheets," *Progress in Materials Science*, vol. 89, p. 411–478, 2017.
- [72] Hazrat Al, Ezzat Khan, and Ikram Ilahi, "Environmental Chemistry and Ecotoxicology of Hazardous Heavy Metals: Environmental Persistence, Toxicity, and Bioaccumulation," *Journal of Chemistry*, vol. 2019, pp. 1-14, 2019.
- [73] Mazeyar Parvinzadeh Gashti, Farbod Alimohammadi, Guowen Song, and Amir Kiumarsi, "Characterization of nanocomposite coatings on textiles: a brief review on Microscopic technology," *Current Microscopy Contributions to Advances in Science and Technology*, pp. 1424-1437, December 2012.
- [74] Rudeerat Suntako, "Effect of synthesized ZnO nanograins using a precipitation method for the enhanced cushion rubber properties," *Materials Letters*, vol. 158, pp. 399-402, 2015.
- [75] V. V. Ursaki et al., "Multiphonon resonant Raman scattering in ZnO crystals and nanostructured layers," *PHYSICAL REVIEW B*, vol. 70, pp. 155204-155212, 2004.
- [76] Syed Md Humayun Akhter, Faiz Mohammad, and Shamim Ahmad, "Green Synthesis of Metal Oxide Nanoparticles and Studies of Their Antibacterial Efficacy against Common Pathogens," *Advances in Nanoscience and Nanotechnology*, vol. 3, no. 1, pp. 1-7, 2019.
- [77] M M Kholoud, El Nour Abou , Eftaiha Ala'a, Abdulrhman Al Warthan, and Reda A Ammar, "Synthesis and applications of silver nanoparticles," *Arabian Journal of Chemistry*, vol. 3, pp. 135-140, 2010.
- [78] Zhi Zhang et al., "Recent advances in synthetic methods and applications of silver nanostructures," *Nanoscale Research Letters*, vol. 13, no. 54, pp. 1-18, 2018.



- 
- [79] off Evan and G. Chumanov, "Size-controlled synthesis of nanoparticles. 2. measurement of extinction, scattering, and absorption cross sections.," *The Journal of Physical Chemistry B*, vol. 108, p. 13957–13962, 2004.
- [80] M. Oliveira, D. Ugarte, D. Zanchet, and A. Zarbin, "Influence of synthetic parameters on the size, structure, and stability of dodecanethiol stabilized silver nanoparticles.," *Journal of Colloid and Interface Science*, vol. 292, p. 429–435, 2005.
- [81] J.P. Sylvestre, A.V. Kabashin, E. Sacher, M. Meunier, and J.H.T. Luong, "Stabilization and size control of gold nanoparticles during laser ablation in aqueous cyclodextrins," *Journal of the American Chemical Society*, vol. 2004, no. 126, p. 7176–7177, 2004.
- [82] M. Kawasaki and N. Nishimura, "1064-nm laser fragmentation of thin Au and Ag flakes in acetone for highly productive pathway to stable metal nanoparticles," *Applied Surface Science*, vol. 2006, no. 253, p. 2208–2216, 2006.
- [83] S. Link, C. Burda, B. Nikoobakht, and M. El-Sayed, "Laser-Induced shape changes of colloidal gold nanorods using femtosecond and nanosecond laser pulses," *The Journal of Physical Chemistry B*, vol. 104, p. 6152–6163, 2000.
- [84] H. Huang and Y. Yang, "Preparation of silver nanoparticles in inorganic clay suspensions," *Composites Science and Technology*, vol. 68, p. 2948–2953, 2008.
- [85] Y. Zhou et al., "A Novel ultraviolet irradiation photoreduction technique for the preparation of single- crystal Ag nanorods and Ag dendrites," *Advanced Materials*, vol. 11, p. 850–852, 1999.
- [86] Y. Krutyakov, A. Olenin, A. Kudrinskii, P. Dzhurik, and G. Lisichkin, "Aggregative stability and polydispersity of silver nanoparticles prepared using two-phase aqueous organic systems," *Nanotechnologies in Russia*, vol. 3, p. 303–310, 2008.
- [87] Y. Socol et al., "Suspensive electrode for- mation in pulsed sonoelectrochemical synthesis of silver nanoparticles," *Langmuir*, vol. 18, p. 4736–4740, 2002.
- [88] D.G. Shchukin, I.L. Radtchenko, and G. Sukhorukov, "Photoinduced reduction of silver inside microscale polyelectrolyte capsules," *Chem Phys Chem*, vol. 4, p. 1101–1103, 2003.

- 
- [89] R. Jin et al., "Controlling anisotropic nanoparticle growth through plasmon excitation," *Nature*, vol. 425, p. 487–490, 2003.
- [90] R. Sato-Berru, R. Redon, A. Vazquez-Olmos, and J. Saniger, "Silver nanoparticles synthesized by direct photoreduction of metal salts- Application in surface-enhanced Raman spectroscopy," *Journal of Raman Spectroscopy*, vol. 40, p. 376–380, 2009.
- [91] M.N. Nadagouda, T.F. Speth, and R. Varma, "Microwave-assisted green synthesis of silver nanostructures," *Accounts of Chemical Research*, vol. 44, p. 469–478, 2011.
- [92] V. Polshettiwar, M.N. Nadagouda, and R. Varma, "Microwave assisted chemistry: A rapid and sustainable route to synthesis of organics and nanomaterials," *Australian Journal of Chemistry*, vol. 62, p. 16–26, 2009.
- [93] J.P. Abid, A.W. Wark, P.F. Brevet, and H.H. Girault, "Preparation of silver nanoparticles in solution from a silver salt by laser irradiation," *Chemical Communications*, no. 7, p. 792–793, 2002.
- [94] S. Eutis et al., "Growth and fragmentation of silver nanoparticles in their synthesis with a fs laser and CW light by photo-sensitization with benzophenone," *Photochemical & Photobiological Sciences*, vol. 4, p. 154–159, 2005.
- [95] C. Johans, J. Clohessy, S. Fantini, K. Kontturi, and V.J. Cunnane, "Electrosynthesis of polyphenylpyrrole coated silver particles at a liquid-liquid interface," *Electrochemistry Communications*, vol. 4, p. 227–230, 2002.
- [96] Y. Zhang et al., "Synthesis of silver nanoparticles via electrochemical reduction on compact zeolite film modified electrodes," *Chemical Communications*, vol. 24, p. 2814–2815, 2002.
- [97] H. Ma et al., "Synthesis of silver and gold nanoparticles by a novel electrochemical method," *Chem Phys Chem*, vol. 24, p. 68–75, 2004.
- [98] Jin Chang and Eric R. Waclawik, "Colloidal semiconductor nanocrystals: controlled synthesis and surface chemistry in organic media," *RSC Advances*, vol. 4, p. 23505–23527, 2014.

- 
- [99] Luca Guerrini, Ramon A. Alvarez-Puebla, and Nicolas Pazos-Perez, "Surface Modifications of Nanoparticles for Stability in Biological Fluids," *materials*, vol. 11, no. 1154, pp. 1-28, 2018.
- [100] Ana Luísa Daniel-da-Silva and Tito Trindade, *Nanoscience & Nanotechnology- Surface Chemistry of Colloidal Nanocrystals*. United Kingdom: Royal Society of Chemistry, 2021.
- [101] Nurul Akmal Che Lah and Sonia Trigueros, "Synthesis and modelling of the mechanical properties of Ag, Au and Cu nanowires," *Engineering and Structural Materials*, vol. 20, no. 1, pp. 225-261, 2019.
- [102] M. Oliveira, D. Ugarte, D. Zanchet, and A. Zarbin, "Influence of synthetic parameters on the size, structure, and stability of dodecanethiol stabilized silver nanoparticles," *Journal of Colloid and Interface Science*, vol. 292, p. 429–435, 2005.
- [103] M. Brust and C. Kiely, "Some recent advances in nanostructure preparation from gold and silver particles: a short topical review," *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, vol. 202, p. 175–186, 2002.
- [104] M. Chen et al., "Silver nanoparticles capped by oleylamine: formation, growth, and self organization," *Langmuir*, vol. 23, p. 5296–5304, 2007.
- [105] D. Kim, S. Jeong, and J. Moon, "Synthesis of silver nanoparticles using the polyol process and the influence of precursor injection," *Nanotechnology*, vol. 17, no. 16, pp. 4019-4024, 2006.
- [106] Y. Zhang, H. Peng, W. Huang, Y. Zhou, and D. Yan, "Facile preparation and characterization of highly antimicrobial colloid Ag or Au nanoparticles," *Journal of Colloid and Interface Science*, vol. 325, p. 371–376, 2008.
- [107] A. Troupis, A. Hiskia, and E. Papaconstantinou, "Synthesis of metal nanoparticles by using polyoxometalates as photocatalysts and stabilizers," *Angewandte Chemie International Edition*, vol. 41, p. 1911–1914, 2002.
- [108] Jayanta Kumar Patra and Kwang-Hyun Baek, "Green Nanobiotechnology: Factors Affecting Synthesis and Characterization Techniques," *Journal of Nanomaterials*, vol. 2014, pp. 1-12, 2014.

- 
- [109] Kholoud M.M., Abou El-Nour, Alaa Eftaiha, Abdulrhman Al-Warthan, and Reda A.A. Ammar, "Synthesis and applications of silver nanoparticles," *Arabian Journal of Chemistry*, vol. 3, p. 135–140, 2010.
- [110] Duan H, Wang D, and Li Y, "'Green chemistry for nanoparticle synthesis'," *Chemical Society Reviews*, vol. 44, no. 16, p. 5778–5792, 2015.
- [111] K Paulkumar et al., "Eco-friendly Synthesis of Silver Chloride Nanoparticles using *Klebsiella planticola* (MTCC 2277)," *International Journal of Green Chemistry and Bioprocess*, vol. 3, no. 1, pp. 12-16, 2013.
- [112] Jose L. Adrio and Arnold L. Demain, "Microbial Enzymes: Tools for Biotechnological Processes," *Biomolecules*, vol. 4, pp. 117-139, 2014.
- [113] Asmaa Mohamed El Shafey, "Green synthesis of metal and metal oxide nanoparticles from plant leaf extracts and their applications: A review," *Green Processing and Synthesis*, vol. 9, p. 304–339, 2020.
- [114] Pietro Tundo et al., "Synthetic pathways and processes in green chemistry. Introductory overview," *Pure and Applied Chemistry*, vol. 72, no. 7, pp. 1207-1228, 2000.
- [115] Oxana V. Kharissova, Boris I. Kharisov, Cesar Maximo Oliva Gonzalez, Yolanda Pena Mendez, and Israel Lopez, "Greener synthesis of chemical compounds and materials," *Royal Society Open Science*, vol. 6, no. 11, pp. 1-41, 2019.
- [116] Deepti Mittal, Gurjeet Kaur, Parul Singh, Karmveer Yadav, and Syed Azmal Ali, "Nanoparticle-Based Sustainable Agriculture and Food Science: Recent Advances and Future Outlook," *Frontiers in Nanotechnology*, vol. 2, pp. 1-38, 2020.
- [117] Siddhant Jain and Mohan Singh Mehata, "Medicinal Plant Leaf Extract and Pure Flavonoid Mediated Green Synthesis of Silver Nanoparticles and their Enhanced Antibacterial Property," *Scientific Reports*, vol. 7, pp. 1-13, 2017.
- [118] Prathap S. Chandran, Minakshi Chaudhary, Renu Pasricha, Absar Ahmad, and Murali Sastry, "Synthesis of Gold Nanotriangles and Silver Nanoparticles Using Aloe vera Plant Extract," *Biotechnology progress*, vol. 22, no. 2, pp. 577-583, 2006.

- 
- [119] S. Maensiri et al., "Indium oxide ( $\text{In}_2\text{O}_3$ ) nanoparticles using Aloe vera plant extract: Synthesis and optical properties," *Optoelectronics and Advanced Materials*, vol. 2, no. 3, pp. 161-165, 2008.
- [120] J. Kasthuri, S. Veerapandian, and N. Rajendiran, "Biological synthesis of silver and gold nanoparticles using apiin as reducing agent," *Colloids and Surfaces B: Biointerfaces*, vol. 68, no. 1, p. 55–60, 2009.
- [121] S. S. Shankar, A. Rai, A. Ahmad, and M. Sastry, "Rapid synthesis of Au, Ag, and bimetallic Au core Ag shell nanoparticles using Neem (*Azadirachta indica*) leaf broth," *Journal of Colloid and Interface Science*, vol. 275, no. 2, pp. 496-502, 2004.
- [122] Sadhan Kumar Chaudhuri and Lalit Malodia, "Biosynthesis of zinc oxide nanoparticles using leaf extract of *Calotropis gigantea*: characterization and its evaluation on tree seedling growth in nursery stage," *Applied Nanoscience*, vol. 7, p. 501–512, 2017.
- [123] K. B. Narayanan and N. Sakthivel, "Coriander leaf mediated biosynthesis of gold nanoparticles.," *Materials Letters*, vol. 62, p. 4588–4590, 2008.
- [124] S. S. Shankar, A. Rai, A. Ahmad, and M. Sastry, "Controlling the optical properties of lemongrass extract synthesized gold nanotriangles and potential application in infrared-absorbing optical coatings.," *Chemistry of Materials*, vol. 17, p. 566–572, 2005.
- [125] D. Phili and C. Unni, "Extracellular biosynthesis of gold and silver nanoparticles using Krishna tulsi (*Ocimum sanctum*) leaf," *Physica E: Low-dimensional Systems and Nanostructures*, vol. 43, p. 1318–1322, 2011.
- [126] S. P. Dubey, M. Lahtinen, and M. Sillanpaa, "Tansy fruit mediated greener synthesis of silver and gold nanoparticles," *Process Biochemistry*, vol. 45, p. 1065–1071, 2010.
- [127] B. Ankamwar, "Biosynthesis of gold nanoparticles (green-gold) using leaf extract of *Terminalia catappa*," *Journal of Chemistry*, vol. 7, p. 1334–1339, 2010.
- [128] Protima Rauwel, Siim Kuunal, Stanislav Ferdov, and Erwan Rauwel, "A Review on the Green Synthesis of Silver Nanoparticles and Their Morphologies Studied via TEM," *Advances in Materials Science and Engineering*, vol. 2015, pp. 1-9, 2015.

- 
- [129] Pritam Kumar Dikshit et al., "Green Synthesis of Metallic Nanoparticles: Applications and Limitations," *catalysts*, vol. 11, no. 902, pp. 1-35, 2021.
- [130] I.M. Banat, P. Nigam, D. Singh, and R. Marchant, "Biomimetic Synthesis of Silver Nanoparticles for Breast Cancer Therapeutics and Its Mechanism," *International Journal of Nanotechnology and Nanomedicine*, vol. 3, no. 1, pp. 1-9, 2018.
- [131] K. Kalimuthu, R.S. Babu, D. Venkataraman, M. Bilal, and S. Gurunathan, "Biosynthesis of silver nanocrystals by *Bacillus licheniformis*," *Colloids and Surfaces B*, vol. 65, pp. 150-153, 2008.
- [132] Fu J.K. et al., "Characterization of adsorption and reduction of noble metal ions by bacteria," *Chem. J. Chinese Universities*, vol. 20, pp. 1452-1454, 1999.
- [133] K.C. Bhainsa and S.F. D'Souza, "Extracellular synthesis using the fungus *Aspergillus fumigates*," *Colloids and Surfaces B*, vol. 47, pp. 152-157, 2006.
- [134] N. Vigneshwaran, A. Kathe, P.V. Nacache, and R.H. Balasubramanya, "Biomimetics of silver nanoparticles by white rot fungus, *Phaenerochaete chrysosporium*," *Colloids and Surfaces B*, vol. 53, pp. 55-59, 2006.
- [135] S. Basavaraja, S.D. Balaji, A. Lagashetty, A.H. Rajasab, and A. Venkataraman, "Extracellular biosynthesis of silver nanoparticles using the fungus *Fusarium semitectum*," *Materials Research Bulletin*, vol. 43, pp. 1164- 1170, 2008.
- [136] K. Kathiresan, S. Manivannan, M.A. Nabeal, and B. Dhivya, "Studies on silver nanoparticles synthesized by a marine fungus, *Penicillium fellutanum* isolated from coastal mangrove sediment," *Colloids and Surfaces B*, vol. 71, pp. 133-137, 2009.
- [137] K.K. Selwal, V. Sarsar, and M.K. Selwal, "Green synthesis of silver nanoparticles using leaf extract of *Mangifera indica* and evaluation of their antimicrobial activity," *Journal of Microbiology and Biotechnology Research*, vol. 3, no. 5, pp. 27-32, 2013.
- [138] A. Singh, D. Jain, M. Upadhyay, and N. Khandelwal, "Green synthesis of silver nanoparticles using *Argemone mexicana* leaf extract and evaluation of their antimicrobial activities," *Journal of Nanomaterials*, vol. 5, pp. 483-489, 2010.

- 
- [139] M. Dubey, S. Bhadauria, and B.S. Kushwah, "Green synthesis of nanosilver particles from extract of Eucalyptus hybrid (Safeda) leaf," *Digest Journal of Nanomaterials and Biostructures*, vol. 4, pp. 537-543, 2009.
- [140] A Banso, "Phytochemical and antibacterial investigation of bark extracts of *Acacia nilotica*," *Journal of Medicinal Plant Research*, vol. 3, no. 5, pp. 82-85, 2009.
- [141] Erdman M D, Erdman B A, "'Calotropis procera as a source of plant hydrocarbons'," *Economic Botany*, vol. 35, no. 4, pp. 467-472, 1981.
- [142] R. G. Haverkamp and A. T. Marshall, "The mechanism of metal nanoparticle formation in plants: limits on accumulation.," *Journal of Nanoparticle Research*, vol. 11, p. 1453–1463, 2009.
- [143] A.R. Shahverdi, S. Minaeian, H.R. Shahverdi, H. Jamalifar, and A. Nohi, "Rapid synthesis of silver nanoparticles using culture supernatants of *Enterobacteria*: A novel biological approach," *Process Biochemistry*, vol. 42, p. 919–923, 2007.
- [144] K. Govindaraju, S.K. Basha, V.G. Kumar, and G. Singaravelu, "Silver gold and bimetallic nanoparticles production using single-cell protein (*Spirulina platensis*) Geitler," *Journal of Materials Science*, vol. 43, p. 5115–5122, 2008.
- [145] T. Klaus, R. Joerger, E. Olsson, and C.G. Granqvist, "Silver-based crystalline nanoparticles, microbially fabricated," *Proceedings of the National Academy of Sciences of the USA*, vol. 96, p. 13611–13614, 1999.
- [146] T. Klaus, R. Joerger, E. Olsson, and C.G. Granqvist, "Silver-based crystalline nanoparticles, microbially fabricated," in *Proceedings of the National Academy of Sciences, USA*, 1999, p. 13611–13614.
- [147] R.M. Slawson, D.M. Van, H. Lee, and J. Trevor, "Germanium and silver resistance, accumulation and toxicity in microorganisms," *Plasmid*, vol. 27, p. 73–79, 1992.
- [148] T. Klaus-Joerger, R. Joerger, E. Olsson, and C.G. Granqvist, "Bacteria as workers in the living factory: metal-accumulating bacteria and their potential for materials science," *Trends in Biotechnology*, vol. 19, p. 15–20, 2001.

- 
- [149] K. Kalishwaralal, V. Deepak, S. Ramkumarpandian, H. Nellaiah, and G. Sangiliyandi, "Extracellular biosynthesis of silver nanoparticles by the culture supernatant of *Bacillus licheniformis*," *Materials Letters*, vol. 62, p. 4411–4413, 2008.
- [150] K. Kalishwaralal, V. Deepak, S. Ramkumarpandian, M. Bilal, and S. Gurunathan, "Biosynthesis of silver nanocrystals by *Bacillus licheniformis*," *Colloids and Surfaces B*, vol. 65, p. 150–153, 2008.
- [151] A. Ahmad et al., "Extracellular biosynthesis of silver nanoparticles using the fungus *Fusarium oxysporum*," *Colloids and surfaces B: Biointerfaces*, vol. 28, no. 4, p. 313–318, 2003.
- [152] I.D.G. Macdonald and W. Smith, "Orientation of Cytochrome c adsorbed on a citrate-reduced silver colloid surface," *Langmuir*, vol. 12, p. 706–713, 1996.
- [153] C.D. Keating, K.K. Kovalski, and M. Natan, "Heightened electromagnetic fields between metal nanoparticles: surface enhanced Raman scattering from metal-Cytochrome c-metal sandwiches," *The Journal of Physical Chemistry B*, vol. 102, p. 9414–9425, 1998.
- [154] A. Jebali, F. Ramezani, and B. Kazemi, "Biosynthesis of silver nanoparticles by *Geotricum* sp.," *Journal of Cluster Science*, vol. 22, p. 225–232, 2011.
- [155] S.A. Kumar et al., "Nitrate reductase-mediated synthesis of silver nanoparticles from  $\text{AgNO}_3$ ," *Biotechnology Letters*, vol. 29, p. 439–445, 2007.
- [156] K. Kathiresan, S. Manivannan, M.A. Nabeel, and B. Dhivya, "Studies on silver nanoparticles synthesized by a marine fungus, *Penicillium fellutanum* isolated from coastal mangrove sediment," *Colloids and Surfaces B: Biointerfaces*, vol. 71, p. 133–137, 2009.
- [157] I. Maliszewska, K. Szewczyk, and Waszak. K, "Biological synthesis of silver nanoparticles," *Journal of Physics: Conference Series*, vol. 146, p. 1–6, 2009.
- [158] Z. Sadowski, I.H. Maliszewska, B. Grochowalska, I. Polowczyk, and T. Kozlecki, "Synthesis of silver nanoparticles using microorganisms," *Materials Science-Poland*, vol. 26, p. 419–424, 2008.



- 
- [159] E. Żymańczyk-Duda, M. Brzezińska-Rodak, M. Klimek-Ochab, M. Duda, and A. Zerka, "Yeast as a versatile tool in biotechnology," *Yeast - Industrial Applications*, vol. 1, p. 3–40, 2017.
- [160] S. Siddiquee et al., "Heavy metal contaminants removal from wastewater using the potential filamentous fungi biomass: a review," *Journal of Microbial & Biochemical Technology*, vol. 7, no. 6, p. 384–393, 2015.
- [161] A. Rana, K. Yadav, and S. Jagadevan, "A comprehensive review on green synthesis of nature-inspired metal nanoparticles: mechanism, application and toxicity," *Journal of Cleaner Production*, vol. 272, no. 5, pp. 1-22, 2020.
- [162] S.S. Salem and A. Fouda, "Green synthesis of metallic nanoparticles and their prospective biotechnological applications: an overview," *Biological Trace Element Research*, vol. 199, p. 344–370, 2020.
- [163] F. Elahian, R. Heidari, V.R. Charghan, E. Asadbeik, and S.A. Mirzaei, "Genetically modified *Pichia pastoris*, a powerful resistant factory for gold and palladium bioleaching and nanostructure heavy metal biosynthesis," *Artificial Cells, Nanomedicine, and Biotechnology*, vol. 48, no. 1, p. 259–265, 2020.
- [164] A. Mourato, M. Gadanho, A.R. Lino, and R. Tenreiro, "Biosynthesis of crystalline silver and gold nanoparticles by extremophilic yeasts," *Bioinorganic Chemistry and Applications*, vol. 2011, pp. 1-8, 2011.
- [165] J.G. Fernández et al., "Production of silver nanoparticles using yeasts and evaluation of their antifungal activity against phytopathogenic fungi," *Process Biochemistry*, vol. 51, no. 9, p. 1306–1313, 2016.
- [166] A. Sukhwai, D. Jain, A. Joshi, P. Rawal, and H.S. Kushwaha, "Biosynthesised silver nanoparticles using aqueous leaf extract of *Tagetes patula* L. and evaluation of their antifungal activity against phytopathogenic fungi," *IET Nanobiotechnology*, vol. 11, no. 5, p. 531–537, 2016.
- [167] S. Iravani, "Green synthesis of metal nanoparticles using plants," *Green Chemistry*, vol. 13, p. 2638–2650, 2011.

- [168] R. Sharma et al., "Therapeutic Potential of Calotropis procera: A giant milkweed," IOSR Journal of Pharmacy and Biological Sciences, vol. 4, no. 2, pp. 42-57, 2012.
- [169] H. Firdous and S. Marwah. (2021, August) A lybrate web site. [Online]. HYPERLINK "<https://www.lybrate.com/topic/chirata-swertia-chirata-benefits-and-side-effects>" <https://www.lybrate.com/topic/chirata-swertia-chirata-benefits-and-side-effects>
- [170] (2021, august) A Sydler Group of Companies web site. [Online]. HYPERLINK "<http://www.sydlerindia.com/herbal-extract-phytochemicals/triphala/>" <http://www.sydlerindia.com/herbal-extract-phytochemicals/triphala/>
- [171] C.P. Khare, Indian Medicinal Plants: An Illustrated Dictionary, Springer reference ed., C.P. Khare, Ed. Springer, Verlag Berlin/Heidelberg: Springer Science+BusinessMedia, LLC., 2007.
- [172] G. Sagratini et al., "Phytochemical and antioxidant analysis of eight Hypericum taxa from Central Italy," vol. 79, no. 3, pp. 210-213, 2008.
- [173] M. Saxena, J. Saxena, and S. Khare, "A brief review on: Therapeutical values of Lantana camara plant," International Journal of Pharmacy & Life Sciences, vol. 3, no. 3, pp. 1551-1554, 2012.
- [174] K.B. Narayanan and N. Sakthivel, "Green synthesis of biogenic metal nanoparticles by terrestrial and aquatic phototrophic and heterotrophic eukaryotes and biocompatible agents," Advances in Colloid and Interface Science, vol. 169, no. 2, pp. 59-79, 2011.
- [175] C. Krishnaraj et al., "Synthesis of silver nanoparticles using Acalypha indica leaf extracts and its antibacterial activity against water borne pathogens," Colloids and Surfaces B: Biointerfaces, vol. 76, no. 1, pp. 50-56, 2010.
- [176] J. Sivakumar, C. Premkumar, P. Santhanam, and N. Saraswathi, "Biosynthesis of Silver Nanoparticles Using Calotropis gigantean Leaf," African Journal of Basic & Applied Sciences, vol. 3, no. 6, pp. 265-270, 2011.
- [177] Suresh Sagadevan et al., "Exploring the therapeutic potentials of phyto-mediated silver nanoparticles formed via Calotropis procera (Ait.) R. Br. root extract,"

- JOURNAL OF EXPERIMENTAL NANOSCIENCE, vol. 15, no. 1, p. 217–232, 2020.
- [178] N. Mude, A. Ingle, A. Gade, and M. Rai, "Synthesis of silver nanoparticles using callus extract of *Carica papaya*—a first report," *Journal of Plant Biochemistry and Biotechnology*, vol. 18, p. 83–86, 2009.
- [179] T. C. Prathna, N. Chandrasekaran, A. M. Raichur, and A. Mukherjee, "Biomimetic synthesis of silver nanoparticles by Citrus limon (lemon) aqueous extract and theoretical prediction of particle size," *Colloids and Surfaces B: Biointerfaces*, vol. 82, p. 152–159, 2011.
- [180] S. Ravindra, Murali Y. Mohan, Narayana N. Reddy, and Mohana K. Raju, "Fabrication of antibacterial cotton fibres loaded with silver nanoparticles via “green approach”," *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, vol. 367, pp. 31–40, 2010.
- [181] M. Dubey, S. Bhaduria, and B. S. Kushwah, "Green synthesis of nanosilver particles from extract of *Eucalyptus hybrida* (Safeda) leaf," *Digest Journal of Nanomaterials and Biostructures*, vol. 4, p. 537–543, 2009.
- [182] Ravichandran Veerasamy et al., "Biosynthesis of silver nanoparticles using mangosteen leaf extract and evaluation of their antimicrobial activities," *Journal of Saudi Chemical Society*, vol. 15, no. 2, pp. 113–120, 2010.
- [183] Harekrishna Bar et al., "Green synthesis of silver nanoparticles using latex of *Jatropha curcas*," *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, vol. 339, no. 1–3, pp. 134–139, 2009.
- [184] T. Mochochoko, O. S. Oluwafemi, D. N. Jumbam, and S. P. Songca, "Green synthesis of silver nanoparticles using cellulose extracted from an aquatic weed; water hyacinth," *Carbohydrate Polymers*, vol. 98, p. 290–294, 2013.
- [185] U. K. Parashar and P. S. Saxena, "Bioinspired synthesis of silver nanoparticles," *Journal of Nanomaterials*, vol. 4, p. 159–166, 2009.
- [186] Jagpreet Singh, Navalpreet Singh, Aditi Rathi, Deepak Kukkar, and Mohit Rawat, "Facile approach to synthesize and characterization of silver nanoparticles by using

- mulberry leaves extract in aqueous medium and its application in antimicrobial activity," *Journal of Nanostructures*, vol. 7, no. 2, p. 134–140, 2017.
- [187] Santhoshkumar Thirunavukkarasu et al., "Synthesis of silver nanoparticles using *Nelumbo nucifera* leaf extract and its larvicidal activity against malaria and filariasis vectors," *Parasitology Research*, vol. 108, p. 693–702, 2011.
- [188] J. Singh, A. Mehta, M. Rawat, and S. Basu, "Green synthesis of silver nanoparticles using sun dried tulsi leaves and its catalytic application for 4-nitrophenol reduction," *Journal of Environmental Chemical Engineering*, vol. 6, p. 1468–1474, 2018.
- [189] A.R. Vilchis-Nestor et al., "Solventless synthesis and optical properties of Au and Ag nanoparticles using *Camellia sinensis* extract," *Materials Letters*, vol. 62, p. 3103–3105, 2008.
- [190] N.A. Begum, S. Mondal, S. Basu, R.A. Laskar, and D. Mandal, "Biogenic synthesis of Au and Ag nanoparticles using aqueous solutions of Black Tea leaf extracts," *Colloids and Surfaces B: Biointerfaces*, vol. 71, p. 113–118, 2009.
- [191] J. Kesharwani, K.Y. Yoon, J. Hwang, and M. Rai, "Phytofabrication of silver nanoparticles by leaf extract of *datura metel*: hypothetical mechanism involved in synthesis," *Journal of Bionanoscience*, vol. 3, p. 1–6, 2009.
- [192] S. Li et al., "Green synthesis of silver nanoparticles using *Capsicum annuum* L. extract," *Green Chemistry*, vol. 9, p. 852–858, 2007.
- [193] E.K. Elumalai et al., "Extracellular synthesis of silver nanoparticles using leaves of *Euphorbia hirta* and their antibacterial activities," *Journal of Pharmaceutical Sciences and Research*, vol. 2, p. 549–554, 2010.
- [194] C. Krishnaraj et al., "Synthesis of silver nanoparticles using *Acalypha indica* leaf extracts and its antibacterial activity against water borne pathogens," *Colloids and Surfaces B: Biointerfaces*, vol. 76, p. 50–56, 2010.
- [195] T.N.V.K.V. Prasad and E. Elumalai, "Biofabrication of Ag nanoparticles using *Moringa oleifera* leaf extract and their antimicrobial activity," in *Asian Pacific Journal of Tropical Biomedicine*, 2011, p. 439–442.

- 
- [196] J. Huang et al., "Biogenic Silver nanoparticles by cacumen platycladi extract: synthesis, formation mechanism, and antibacterial activity," *Industrial & Engineering Chemistry Research*, vol. 50, p. 9095–9106, 2011.
- [197] M. Sathishkumar et al., "Cinnamon zeylanicum bark extract and powder mediated green synthesis of nano-crystalline silver particles and its bactericidal activity," *Colloids and Surfaces B: Biointerfaces*, vol. 73, p. 332–338, 2009.
- [198] J. Kasthuri, S. Veerapandian, and N. Rajendiran, "Biological synthesis of silver and gold nanoparticles using apiin as reducing agent," *Colloids and Surfaces B: Biointerfaces*, vol. 68, p. 55–60, 2009.
- [199] M. Safaepour, A.R. Shahverdi, H.R. Shahverdi, M.R. Khorramizadeh, and A.R. Gohari, "Green synthesis of small silver nanoparticles using geraniol and its cytotoxicity against fibrosarcoma-Wehi 164," *Avicenna Journal of Medical Biotechnology*, vol. 1, p. 111–115, 2009.
- [200] A.J. Kora, R.B. Sashidhar, and J. Arunachalam, "Gum kondagogu (*Cochlospermum gossypium*): A template for the green synthesis and stabilization of silver nanoparticles with antibacterial application," *Carbohydrate Polymers*, vol. 82, p. 670–679, 2010.
- [201] Mazen A. M. Al Sulaibi, C. Thiemann, and T. Thiemann, "Chemical Constituents and Uses of *Calotropis Procera* and *Calotropis Gigantea* – A Review (Part I – The Plants as Material and Energy Resources)," *Open Chemistry Journal*, vol. 7, pp. 1-15, 2020.
- [202] S.K. Arya and V.D Agarwal, "Antiquity of arka kalpna in Ayurvedic classics," *Sacitra Ayurveda*, vol. 38, pp. 477-480, 1985.
- [203] V. N. Verma, "The Chemical Study of *Calotropis*," *International Letters of Chemistry, Physics and Astronomy*, vol. 20, pp. 74-90, 2014.
- [204] B. Ebbell, "A contribution to the earliest history of leprosy," *International Journal of Leprosy*, vol. 3, pp. 257-263, 1935.
- [205] A.M.E Greiss, "Anatomical identification of plant remains materials from (1) El-Omari excavation at Helwan from the firstand other dynasty," *Bulletin Institute of Egypt*, vol. 36, pp. 227-235, 1955.

- 
- [206] A.M. Dieye, M.A. Tidjani, A. Diouf, E. Bassene, and B. Faye, "Senegalese pharmacopeia: study of acute toxicity and antitussive activity of *C. procera* (Ait.)," *Dakar Medical*, vol. 38, pp. 69-72, 1993.
- [207] A.A. Qureshi, O. Shaista, D.B. Sanghai, S.R. Setty, and N.S. Bhajipale, "Phytochemical constituents and pharmacological activities of *Calotropis procera*," *Plant Archives*, vol. 8, pp. 23-27, 2008.
- [208] T. Juncker, M. Schumacher, M. Dicato, and M. Diederich, "UNBS1450 from *Calotropis procera* as a regulator of signaling pathways involved in proliferation and cell death," *Biochemical Pharmacology*, vol. 78, no. 1, pp. 1-10, 2009.
- [209] J. Himanshu, M.P. Gururaja, and S. Divya, "*Calotropis gigantea* R. Br. (Asclepiadaceae)," *International Journal of Pharmaceutical Research*, vol. 3, pp. 10-14, 2011.
- [210] S. Quazi, K. Mathur, and S. Arora, "*Calotropis procera*: an overview of its phytochemistry and pharmacology," *Indian Journal of Drugs*, vol. 1, pp. 63-69, 2013.
- [211] M. Kadiyala, S. Ponnusankar, and K. Elango, "*Calotropis gigantea* (L.) R. Br (Apocynaceae): a phytochemical and pharmacological review," *Journal of Ethnopharmacology*, vol. 150, no. 1, pp. 32-50, 2013.
- [212] A. Krings, F. Areces Berazain, and J.C. Lazcano Lara, "New and rediscovered milkweeds from Cuba: *Calotropis gigantea* and *Gonolobus stephanotrichus*," *Willdenowia*, vol. 35, pp. 315-318, 2005.
- [213] A Cavalcante and I. Major, "Invasion of alien plants in the Caatinga biome," *Ambio*, vol. 35, no. 3, pp. 141-143, 2006.
- [214] C. A. Gracia, N. Rangel-Buitrago, and J. D. Castro-Barros, "Non-native plant species in the Atlantico Department Coastal Dune Systems, Caribbean of Colombia: A new management challenge," *Marine Pollution Bulletin*, vol. 141, pp. 603-610, 2019.
- [215] S. Quazi, K. Mathur, and S. Arora, "CALOTROPIS PROCERA: AN OVERVIEW OF ITS PHYTOCHEMISTRY AND PHARMACOLOGY," *Indian Journal of Drugs*, vol. 1, no. 2, pp. 63-69, 2013.

- 
- [216] M. Rajani and S. K. Gupta, "Anti-tumor studies with extracts of *Calotropis procera* (Ait.) R.Br. root employing Hep2 cells and their possible mechanism of action," *Indian Journal of Experimental Biology*, vol. 47, no. 5, pp. 343-348, 2009.
- [217] A. Perwez and A. Mohammad, "Phytochemical investigation of *Calotropis procera* roots," *Indian Journal of Chemistry*, vol. 48, no. 3, pp. 443-446, 2009.
- [218] U.A.M. Ahmed et al., "Evaluation of insecticidal potentialities of aqueous extracts from *Calotropis procera* Ait. Against *Henosepilachna elaterii* Rossi.," *Journal of Applied Sciences*, vol. 6, no. 1, pp. 2466-2470, 2006.
- [219] S.N. Yoganarasimhan, "Medicinal plants of India. Regional research institute (Ay.) Bangalore, Tamil Ayurvedic uses and Pharmacological activities of *Calotropis procera* Linn.," *Asian Journal of Traditional Medicines*, vol. 2, no. 1, p. 97, 2011.
- [220] V. V. Gawade, N. L. Gavade, H. M. Shinde, S. B. Babar, and A. N. Kadam, "Green synthesis of ZnO nanoparticles by using *Calotropis procera* leaves for the photodegradation of methyl orange," *Journal of Materials Science*, vol. 28, p. 14033–14039, 2017.
- [221] D. Ayodhya and G. Veerabhadram, "One-pot green synthesis, characterization, photocatalytic, sensing and antimicrobial studies of *Calotropis gigantea* leaf extract capped CdS NPs," *Materials Science and Engineering B*, vol. 225, p. 33–44, 2017.
- [222] E. M. Ali and B. M. Abdallah, "Effective Inhibition of Candidiasis Using an Eco-Friendly Leaf Extract of *Calotropis-gigantea*-Mediated Silver Nanoparticles," *Nanomaterials*, vol. 10, no. 422, pp. 1-16, February 2020.
- [223] N. H. Mohamed, M. A. Ismail, W. M. Abdel-Mageed, and A. A. Mohamed Shoreit, "Antimicrobial activity of green silver nanoparticles from endophytic fungi isolated from *Calotropis procera* (Ait) latex," *Microbiology*, vol. 2019, no. 165, p. 967–975, 2019.
- [224] S. Mourdikoudis, R. M. Pallares, and N. T. K. Thanh, "Characterization techniques for nanoparticles: comparison and complementarity upon studying nanoparticle properties," *Nanoscale*, vol. 2018, no. 10, p. 12871–12934, 2018.

- 
- [225] S. B. Chaudhari, "INVESTIGATION OF STRUCTURAL AND MECHANICAL PROPERTIES OF POLYMER-SILICA NANOCOMPOSITE," The Maharaja Sayajirao University of Baroda, PhD Thesis 2014.
- [226] D. Krishnaiah, T. Devi, A. Bono, and R. Sarbatly, "Studies on Phytochemical Constituents of Six Malaysian Medicinal Plants," *Journal of Medicinal Plants Research*, vol. 3, no. 2, pp. 67-72, 2009.
- [227] R.N. Okigbo, U.E. Eme, and S. Ogbogu, "Biodiversity and Conservation of Medicinal and Aromatic Plants in Africa," *Biotechnology Microbiology and Molecular Biology Reviews*, vol. 3, no. 6, pp. 127-134, 2008.
- [228] M.M. Cowan, "Plant Products as Antimicrobial Agents," *Clinical Microbiology Reviews*, vol. 12, no. 4, p. 564–582, 1999.
- [229] N. Grover, R. Meena, and V. Patni, "Physiochemical Evaluation, Phytochemical Screening and Chromato-graphic Fingerprint Profile of *Woodfordia fruticosa* (L.) Kurz Extracts," *International Journal of Pharmaceutical Sciences and Research*, vol. 5, no. 7, pp. 2772-2782, 2014.
- [230] S.A. Preetha, "DEVELOPING HERBAL ANTIMICROBIAL FINISHED COTTON FABRIC FOR WOUND DRESSING," Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, PhD Thesis 2019.
- [231] O.D. Sparkman, Z. Penton, and F.G. Kitson, *Gas Chromatography and Mass Spectrometry: A Practical Guide*, 2nd ed. California, United States of America: Academic Press, 2011.
- [232] A.V. Giri, J. Byun, and S. Pennathur, "Quantitative Analysis of Amino Acid Oxidation Markers by Tandem Mass Spectrometry," *Methods in Enzymology*, vol. 491, pp. 73-89, 2011.
- [233] Mahendran Vanaja, Dr. Gnanadhas Gnanajobitha, Rajeshkumar Shanmugam, and Malarkodi Chelladurai, "Phytosynthesis of silver nanoparticles by '*Cissus quadrangularis*', influence of physiochemical factors," *Journal Of Nanostructure in Chemistry*, vol. 17, no. 3, 2013.



- 
- [234] P Mulvaney, "Surface plasmon spectroscopy of nanosized metal particles," *Langmuir*, vol. 12, p. 788–800, 1996.
- [235] R. Augustine, N. Kalarikkal, and S. Thomas, "A facile and rapid method for the black pepper leaf mediated green synthesis of silver nanoparticles and the antimicrobial study," *Applied Nanoscience*, vol. 4, p. 809–818, 2014.
- [236] C. Mühlfeld et al., "Visualization and quantitative analysis of nanoparticles in the respiratory tract by transmission electron microscopy," *Particle and Fibre Toxicology*, vol. 4, no. 11, pp. 1-17, 2007.
- [237] E. Rodríguez-León et al., "Synthesis of silver nanoparticles using reducing agents obtained from natural sources (*Rumex hymenosepalus* extracts)," *Nanoscale Research Letters*, vol. 8, no. 318, pp. 1-9, 2013.
- [238] K.L. Goh, M.K. Aswathi, R.T. De Silva, and S. Thomas, *Interfaces in Particle and Fibre Reinforced Composites*. United Kingdom: Woodhead Publishing, 2020.
- [239] Thomas J. Hughes, "Plug Formation and Dissociation of Mixed Gas Hydrates and Methane Semi-Clathrate Hydrate Stability," UNIVERSITY OF CANTERBURY, Australia, PhD Thesis 2008.
- [240] F.S. Rocha, A.J. Gomes, C.N. Lunardi, S. Kaliaguine, and G.S. Patience, "Experimental methods in chemical engineering: Ultraviolet visible spectroscopy—UV-Vis," *The Canadian Journal of Chemical Engineering*, vol. 96, no. 12, pp. 2512-2517, 2018.
- [241] M.R. Sharpe, "Stray light in UV-VIS spectrophotometers," *Analytical Chemistry*, vol. 56, no. 2, pp. 339A-356A, 1984.
- [242] M. Picollo, M. Aceto, and T. Vitorino, "UV-Vis spectroscopy," *Physical Sciences Reviews*, vol. 4, no. 4, pp. 1-8, 2019.
- [243] M. Deepty et al., "XRD, EDX, FTIR and ESR spectroscopic studies of co-precipitated Mn-substituted Zn-ferrite nanoparticles," *Ceramics International*, vol. 45, no. 6, pp. 8037-8044, 2019.

- 
- [244] Xiangqian Li, Huizhong Xu, Zhe-Sheng Chen, and Guofang Chen, "Biosynthesis of Nanoparticles by Microorganisms and Their Applications," *Journal of Nanomaterials*, vol. 2011, pp. 1-16, 2011.
- [245] S.S. Leong, W.M. Ng, J.K. Lim, and S.P. Yeap, *Handbook of Materials Characterization*.: Springer, Cham, 2018.
- [246] R. Sandhu, N. Singh, J. Dhankhar, K. Gandhi, and R. Sharma, "Dynamic light scattering (DLS) technique, principle, theoretical considerations and applications," in *Nanotechnological and Biochemical Techniques for Assessing the Quality and Safety of Milk and Milk Products*.: ICAR-NDRI, ICAR-NDRI 2018, pp. 135-137.
- [247] L. Filippini and D. Sutherland, "NANOYOU Teachers Training Kit in nanoscience," Aarhus University, Denmark, Chapter 6 Characterisation Methods 2010.
- [248] U. Phromsuwan, C. Sirisathitkul, Y. Sirisathitkul, B. Uyyanonvara, and P. Muneesawang, "Application of Image Processing to Determine Size Distribution of Magnetic Nanoparticles," *Journal of Magnetism*, vol. 18, no. 3, pp. 311-316, 2013.
- [249] Y. C. Wang, M. H. Engelhard, D. R. Baer, and D.G. Castner, "Quantifying the Impact of Nanoparticle Coatings and Nonuniformities on XPS Analysis: Gold/Silver Core-Shell Nanoparticles," *Analytical Chemistry*, vol. 88, no. 7, p. 3917–3925, 2016.
- [250] S. Agnihotri and N. K. Dhiman, "Development of Nano-Antimicrobial Biomaterials for Biomedical Applications," in *Advances in Biomaterials for Biomedical Applications*, *Advanced Structured Materials* ed. Singapore: Springer, 2017, vol. 66, pp. 479-545.
- [251] N. Mao, "6Methods for characterisation of nonwoven structure, property, and performance," in *Advances in Technical Nonwovens*.: Woodhead Publishing, 2016, ch. 6, pp. 155-211.
- [252] L. Milenković, P. Škundrić, R. Sokolović, and T. Nikolić, "Comfort Properties of Defense Protective Clothings," *Working and Living Environmental Protection*, vol. 1, no. 4, p. 101–106, 1999.
- [253] O. Pamuk, "e-Journal of New World Sciences Academy," *New World Sciences Academy*, vol. 3, no. 1, pp. 69-74, 2008.

- 
- [254] A. D. Gun, "Dimensional, physical and thermal comfort properties of plain knitted fabrics made from modal viscose yarns having microfibers and conventional fibers," *Fibers and Polymers*, vol. 12, no. 2, pp. 258-267, 2011.
- [255] "Standard test method for air permeability of textile fabrics," ASTM International, ASTM D737, 2018.
- [256] C. N. Joshi, "DEVELOPMENT OF SUN PROTECTIVE FABRIC BY ENHANCING UV SHIELDING PROPERTY," The Maharaja Sayajirao University of Baroda, PhD Thesis 2016.
- [257] S. Motlogelwa, "Comfort and durability in high-performance clothing," in *High-Performance Apparel - Materials, Development, and Applications*.: Woodhead Publishing Series in Textiles, 2018, ch. 10, pp. 209-219.
- [258] M. Basuk, M. Choudhari, S. Maiti, and R. V. Adivarekar, "Moisture Management Properties of Textiles and Its Evaluation," *Current Trends in Fashion Technology & Textile Engineering*, vol. 3, no. 3, pp. 50-55, 2018.
- [259] M.D. Sharma and A. Kumar, "Antimicrobial Management of Sepsis and Septic Shock," *Elsevier*, vol. 29, no. 4, pp. 677-687, 2008.
- [260] S. Chaman, G.S. Shalini, and K.R. Anil, "Study of Antimicrobial Properties Of Medicinal Plants By Agar Well Diffusion Method," *World Journal of Pharmaceutical Research*, vol. 2, no. 3, pp. 713-722, 2013.
- [261] A. De Pasquale, "Pharmacognosy: The Oldest Modern Science," *Journal of Ethnopharmacol*, vol. 11, no. 1, pp. 1-16, 1984.
- [262] H.W. Swofford, "An overview of antimicrobial testing for textile applications," *AATCC Review*, vol. 2010, no. 6, pp. 51-55, 2010.
- [263] C. Mohanasundari, D. Natarajan, K. Srinivasan, S. Umamaheswari, and A. Ramachandran, "Antimicrobial properties of *Passiflora foetida* L. – a common exotic medicinal plant," *African Journal of Biotechnology*, vol. 6, no. 23, pp. 2650-2653, 2007.
- [264] T. Ramachandran, K. Rajendra kumar, and R. Rajendran, "Decontamination of Hospital and Healthcare," *Indian Journal of Engineering*, vol. 84, pp. 42-47, 2004.

- 
- [265] AATCC Test Method 147, "Antibacterial Activity Assessment of Textile Materials - AATCC Test Method 147," AATCC technical Manual, pp. 261-262, 1998.
- [266] "Test Method for Antibacterial Activity of Textile Materials: Parallel Streak," AATCC Committee, Manual of International Test Methods and Procedures/2021 AATCC TM147-2011(2016)e, 2021.
- [267] J. Hudzicki, "Kirby-Bauer Disk Diffusion Susceptibility Test Protocol," American Society for Microbiology, ASM Test Protocol 2009.
- [268] JAMES J BIEMER, "Antimicrobial Susceptibility Testing by the Kirby-Bauer Disc Diffusion Method," Annals of Clinical Laboratory Science, vol. 3, no. 2, pp. 135-140, 1973.
- [269] Tijana Ristic et al., "Antimicrobial efficiency of functionalized cellulose fibres as potential medical textiles," Science against microbial pathogens: communicating current research and technological advances, vol. 1, no. 1, pp. 36-51, January 2011.
- [270] C. Delahaye et al., "Antimicrobial and Antifungal Analysis of Crude Extracts from the Leaves of *Callistemon viminalis*," Journal of Medical and Biological Sciences, vol. 3, no. 1, pp. 1-7, 2009.
- [271] M. Balouiri, M. Sadiki, and S. K. Ibnsouda, "Methods for in vitro evaluating antimicrobial activity: A review," Journal of Pharmaceutical Analysis, vol. 2016, no. 6, pp. 71-79, 2016.
- [272] "TM100-TM 100 Test Method for Antibacterial Finishes on Textile Materials," American Association of Textile Chemists and Colorists, North Carolina, USA, AATCC test method AATCC TM 100, 2019.
- [273] S. JAYAPRIYA and G. BAGYALAKSHMI, "TEXTILE ANTIMICROBIAL TESTING AND STANDARDS," International Journal of Textile and Fashion Technology, vol. 4, no. 1, pp. 1-10, 2013.
- [274] S. JAYAPRIYA, "EFFICACY OF ECO-FRIENDLY ANTIMICROBIAL FINISH ON ORGANIC COTTON AND BAMBOO KNIT FABRICS," Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, PhD Thesis 2018.

- 
- [275] S. J. Sturla et al., "Systems Toxicology: From Basic Research to Risk Assessment," *Chemical Research in Toxicology*, vol. 27, no. 3, p. 314–329, 2014.
- [276] S. Parasuraman, "Toxicological screening," *Journal of Pharmacology & Pharmacotherapeutics*, vol. 2, no. 2, p. 74–79, 2011.
- [277] Abramov, O. V., Gedanken, A., Koltypin, Y., and Perkas, N., Perelshtein, I., Joyce, E., & Mason, T, "'Pilot scale sonochemical coating of nanoparticles onto textiles to produce biocidal fabrics. *Surface and Coatings Technology*, 204(5), 718–722," 2009.
- [278] M. A. Alam, M. R. Habib, and R. Nikkon, "Antimicrobial activity of akanda (*Calotropis gigantea* L.) on some pathogenic bacteria," *Bangladesh Journal of Scientific and Industrial Research*, vol. 43, p. 397–404, 2008.
- [279] Pant R & Chaturvedi K, "'Chemical analysis of *Calotropis procera* latex'," *Curr Sci*, vol. 58, no. 13, pp. 740-724, 1989.
- [280] Ali A. and Shahid M. A., "'Polyvinyl Alcohol (PVA)–*Azadirachta indica* (Neem) Nanofibrous Mat for Biomedical Application: Formation and Characterization'," *Journal of Polymers and the Environment*, pp. 1-10, 2019.
- [281] W Ibrahim, Z Sarwar, S Abid, U Munir, and A Azeem, "Aloe Vera Leaf Gel Extract for Antibacterial and Softness Properties of Cotton," *Journal of Textile Science & Engineering*, vol. 7, no. 3, pp. 1-6, 2017.
- [282] T.B Selvi, R. Rajendren, B. Nithyalakshmi, and S. Gayathirignaneswari, "Antimicrobial Activity of Cotton Fabric Treated with Aloevera Extract," *International Journal of Applied Environmental Sciences*, vol. 6, no. 2, pp. 127-131, 2011.
- [283] Krishnamoorthy P and Jayalakshmi T. , "'Preparation, characterization and synthesis of silver nanoparticles by using *phyllanthusniruri* for the antimicrobial activity and cytotoxic effects', *Journal of Chemical and Pharmaceutical Research*, 4(11), 4783-4794," 2012.
- [284] Fan K., & Granville, A., "'Surface property modification of silver nanoparticles with Dopamine-functionalized poly (pentafluorostyrene) via RAFT polymerization'," *Polymers*, vol. 8, no. 3, 2016.
-

- 
- [285] M.U. Rashid, Md. K.H. Bhuiyan, and E.M. Quayum, "Synthesis of Silver Nano Particles (Ag-NPs) and their uses for Quantitative Analysis of Vitamin C Tablets," Dhaka Univ. J. Pharm. Sci., vol. 12, no. 1, pp. 29-33, June 2013.
- [286] Jain S C, Sharma R, Jain R, Sharma R A, "'Antimicrobial activity of Calotropis procera'," Fitoterapia, pp. 275-276, 1996.
- [287] B H Patel, M Z Channiwala, S B Chaudhari, and A A Mandot, "'Biosynthesis of copper nanoparticles; its characterization and efficacy against human pathogenic bacterium'," Journal of Environmental Chemical Engineering, vol. 4, no. 2, pp. 2163-2169, 2016.
- [288] Asta ŠILEIKAITĖ, Judita PUIŠO, Igoris PROSYČEVAS, and Sigitas TAMULEVIČIUS, "Investigation of Silver Nanoparticles Formation Kinetics During Reduction of Silver Nitrate with Sodium Citrate," MATERIALS SCIENCE (MEDŽIAGOTYRA), vol. 15, no. 1, pp. 21-27, 2009.
- [289] "Liquid moisture management properties of textile fabrics," AATCC Committee, Test Method Manual AATCC 195-2011, 2011.
- [290] R. V. Radadiya, T. N. Shaikh, and B. H. Patel, "Effect of silver nano particles synthesized by milkweed (Calotropis) leaves extract on antibacterial activities of bio-medical composites textile materials," in Industrial Textiles (Products, Applications and Prospects). New Delhi: Woodhead Publishing India Pvt. Ltd., 2022, ch. 4, pp. 33-54.
- [291] Sourav Bhattacharjee, "DLS and zeta potential – What they are and what they are not?," Journal of Controlled Release, vol. 235, pp. 337-351, 2016.
- [292] A. Banso, "Phytochemical and antibacterial investigation of bark extracts of Acacia nilotica," Journal of Medicinal Plant Research, vol. 3, no. 5, p. 082 – 085, 2009.
- [293] Kalpesh B Ishnava, Jenabhai B Chauhan, Akanksha A Garg, and Arpit M Thakkar, "Antibacterial and phytochemical studies on Calotropis gigantia (L.) R. Br. latex against selected cariogenic bacteria," Saudi Journal of Biological Sciences, vol. 19, pp. 87-91, 2012.

- 
- [294] Kaisa Klemola, John Pearson, Jyrki Liesivuori, and Pirjo Lindstrom, "Evaluating the toxicity of fabric extracts using the hepa-1 cytotoxicity test, the HaCaT cytotoxicity test and the spermatozoa motility inhibition test," *The Journal of The Textile Institute*, vol. 100, no. 4, pp. 330-337, 2009.
- [295] S. Chaudhuri and L. Malodia, "Biosynthesis of zinc oxide nanoparticles using leaf extract of *Calotropis gigantea*: characterization and its evaluation on tree seedling growth in nursery stage," *Applied Nanoscience*, vol. 7, p. 501–512, 2017.
- [296] L. Rastegar, M. Montazer, and H. Gaminian, "Clean low-temperature in situ synthesis of durable silvernanoparticles along with aminolysis of polyester fabric usingdopamine hydrochloride," *Clean Technologies and Environmental Policy*, vol. 18, no. 6, pp. 2019-2026, 2016.
- [297] V. K. Midha and A. Dakuri, "Spun bonding technology and fabric properties: A review," *Journal of Textile Engineering & Fashion Technology*, vol. 1, no. 4, pp. 126-133, 2017.
- [298] D. Saravanan, "UV PROTECTION TEXTILE MATERIALS," *AUTEX Research Journal*, vol. 7, no. 1, pp. 53-62, March 2007.
- [299] T. N. Shaikh, S. B. Chaudhari, B. H. Patel, and M. Patel, "Gauging performance of biosynthesized silver nanoparticles loaded polypropylene nonwoven based textile electrodes for 3-lead health monitoring electro cardiogram on analogous system," *Journal of Industrial Textiles*, June 2021.
- [300] M. P. Cohen et al., "Apple of Sodom (*Calatropis procera*) Callus Extract, a Novel Skincare Active and Its Biological Activity in Skin Models When Combined with Dead Sea Water," *Journal of Cosmetics, Dermatological Sciences and Applications*, vol. 8, pp. 73-91, 2018.
- [301] R. P. Pawar, "SEPARATION AND IDENTIFICATION OF ACTIVE CONSTITUENTS OF CALOTROPIS GIGANTEA LATEX, BY HPLC, FTIR, UV-VISIBLE AND CLASSICAL TECHNIQUES.," *World Journal of Pharmaceutical and Life Sciences*, vol. 2, no. 6, pp. 590-596, 2016.

- 
- [302] M. Ndikau, N. M. Noah, D. M. Andala, and E. Masika, "Green Synthesis and Characterization of Silver Nanoparticles Using Citrullus lanatus Fruit Rind Extract," *International Journal of Analytical Chemistry*, vol. 2017, pp. 1-9, 2017.
- [303] M. Parlinska-Wojtan, M. Kus-Liskiewicz, J. Depciuch, and O. Sadik, "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*, vol. 39, p. 1213–1223, 2016.
- [304] S. Sumathi, A. Thomas, and E. Wesely, "Study on Antimicrobial Activity of Organic Cotton Fabric Treated with Microencapsulated Herbal Extract," *International Journal of Biological & Pharmaceutical Research*, vol. 6, no. 4, pp. 259-263, 2015.
- [305] Jaison Jeevanandam, Ahmed Barhoum, Yen S Chan, Alain Dufresne, and Michael K Danquah, "Review on nanoparticles and nanostructured materials: history, sources, toxicity and regulations," *Beilstein Journal of Nanotechnology*, vol. 9, p. 1050–1074, 2018.
- [306] S. K. Khanzada et al., "Analysis of fatty acid, elemental and total protein of *Calotropis procera*," *Pakistan Journal of Botany*, vol. 40, no. 5, pp. 1913-1921, 2008.
- [307] (2022, May) PubChem. [Online]. HYPERLINK  
["https://pubchem.ncbi.nlm.nih.gov/compound/Decanoic-acid"](https://pubchem.ncbi.nlm.nih.gov/compound/Decanoic-acid) \l"section=Structures"
- [308] G. Nenaah, "Antimicrobial activity of *Calotropis procera* Ait. (Asclepiadaceae) and isolation of four flavonoid glycosides as the active constituents," *World Journal of Microbiology and Biotechnology*, vol. 29, p. 1255–1262, 2013.
- [309] S. Heneidak, R. Grayer, G. Kite, and M.S.J. Simmonds, "Flavonoid glycosides from Egyptian species of the tribe Asclepiadeae (Apocynaceae, subfamily Asclepiadoideae)," *Biochemical Systematics and Ecology*, vol. 34, p. 575–584, 2006.
- [310] (2022, May) PubChem. [Online]. HYPERLINK  
["https://pubchem.ncbi.nlm.nih.gov/compound/Decyl-alpha-D-glucopyranoside"](https://pubchem.ncbi.nlm.nih.gov/compound/Decyl-alpha-D-glucopyranoside) \l  
 "section=2D-Structure" <https://pubchem.ncbi.nlm.nih.gov/compound/Decyl-alpha-D-glucopyranoside#section=2D-Structure>
-



- 
- [311] A. Mungole et al., "Active phytochemical potentiality of in- vitro regenerated plantlets of *Canscora decurrens* (Dalzell)," *Indian Journal of Science and Technology*, vol. 3, no. 6, p. 679 – 683, 2010.
- [312] O. A. Sodipo, M. A. Akanji, F. B. Kolawole, and A. A. Odutuga, "Saponin is the active antifungal principle in *Garcinia kola*, heckle seed," *Bioscience Biotechnology Research Communications*, vol. 3, p. 171, 1991.
- [313] J. N. Ogbulie, C. C. Ogueke, L. C. Okoli, and B. N. Anyanwu, "Antibacterial activities and toxicological potential of crude ethanolic extract of *euphorbia hirta*," *African Journal of Biotechnology*, vol. 6, no. 13, p. 1544 – 1548, 2007.
- [314] A. J. Afolayan and A. O. T. Ashafa, "Chemical composition and antimicrobial activity of the oil from *Chrysocoms ciliata* L Leaves," *Journal of Medicinal Plant Research*, vol. 3, no. 5, p. 390 – 394, 2009.
- [315] E. G. Hoag et al., "Degradation of bromothymol blue using nano iron synthesized through greener method," *Journal of Materials Chemistry*, vol. 19, pp. 8671-8677, 2009.
- [316] A. Richardson, B. C. Chan, R. D. Crouch, and A. Janiec, "Synthesis of silver nanoparticles: an under -graduate laboratory using green approach," *Journal of Chemical Education*, vol. 11, p. 331–333, 2006.
- [317] A. M. Shafey, "Green synthesis of metal and metal oxide nanoparticles from plant leaf extracts and their applications: A review," *Green Processing and Synthesis*, vol. 9, p. 304–339, 2020.
- [318] J. Kesharwani, K. Y. Yoon, J. Hwang, and M. Rai, "Phytofabrication of silver nanoparticles by leaf extract of *datura metal*: hypothetical mechanism involved in synthesis," *Journal of Bionanoscience*, vol. 3, no. 1, p. 39–44, 2009.
- [319] O O Shobowale, N J Ogbulie, E E Itoandon, M O Oresegun, and S O Olatope, "Phytochemical and Antimicrobial Evaluation of Aqueous and Organic Extracts of *Calotropis procera* Ait Leaf and Latex," *Nigerian Food Journal*, vol. 31, no. 1, p. 77 – 82, 2013.
- [320] A. O. Dada, O. J. Ojediran, F. E. Dada, A. P. Olalekan, and O. J. Awaka, "GREEN SYNTHESIS AND CHARACTERIZATION OF SILVER NANOPARTICLES USING *Calotropis procera* EXTRACT," *Journal of Applied Chemical Science International*, vol. 8, no. 4, pp. 137-143, 2017.