

DAFTAR PUSTAKA

- Abedini, A., Daud, A. R., Hamid, M. A. A., & Othman, N. K. (2014). Radiolytic formation of Fe₃O₄ nanoparticles: Influence of radiation dose on structure and magnetic properties. *PLoS ONE*, 9(3). <https://doi.org/10.1371/journal.pone.0090055>
- Adam, F., Himawan, A., Aswad, M., Ilyas, S., Heryanto, Anugrah, M. A., & Tahir, D. (2021). Green synthesis of zinc oxide nanoparticles using Moringa oleifera l. water extract and its photocatalytic evaluation. *Journal of Physics: Conference Series*, 1763(1). <https://doi.org/10.1088/1742-6596/1763/1/012002>
- Adyani, S. H., & Soleimani, E. (2019). Green synthesis of Ag/Fe₃O₄/RGO nanocomposites by Punica Granatum peel extract: Catalytic activity for reduction of organic pollutants. *International Journal of Hydrogen Energy*, 44(5), 2711–2730. <https://doi.org/10.1016/j.ijhydene.2018.12.012>
- Alqadami, A. A., Naushad, M., Ahamad, T., Algamdi, M., Alshahrani, A., Uslu, H., & Shukla, S. K. (2020). Removal of highly toxic cd(ii) metal ions from aqueous medium using magnetic nanocomposite: Adsorption kinetics, isotherm and thermodynamics. *Desalination and Water Treatment*, 181, 355–361. <https://doi.org/10.5004/dwt.2020.25108>
- Altaf, S., Zafar, R., Zaman, W. Q., Ahmad, S., Yaqoob, K., Syed, A., Khan, A. J., Bilal, M., & Arshad, M. (2021). Removal of levofloxacin from aqueous solution by green synthesized magnetite (Fe₃O₄) nanoparticles using Moringa olifera: Kinetics and reaction mechanism analysis. *Ecotoxicology and Environmental Safety*, 226, 112826. <https://doi.org/10.1016/j.ecoenv.2021.112826>
- Arcudi, F., Đordjević, L., & Prato, M. (2019). Design, Synthesis, and Functionalization Strategies of Tailored Carbon Nanodots. *Accounts of Chemical Research*, 52(8), 2070–2079. <https://doi.org/10.1021/acs.accounts.9b00249>
- Arora, R. (2019). Adsorption of heavy metals-a review. *Materials Today: Proceedings*, 18(1), 4745–4750. <https://doi.org/10.1016/j.matpr.2019.07.462>
- Astafiev, A. A., Shakhov, A. M., Tskhovrebov, A. G., Shatov, A., Gulin, A., Shepel, D., & Nadtochenko, V. A. (2022). Nitrogen-Doped Carbon Nanodots Produced by Femtosecond Laser Synthesis for Effective Fluorophores. *ACS Omega*, 7(8), 6810–6823. <https://doi.org/10.1021/acsomega.1c06413>
- Atchudan, R., Edison, T. N. J. I., Perumal, S., Muthuchamy, N., & Lee, Y. R. (2020). Hydrophilic nitrogen-doped carbon dots from biowaste using dwarf banana peel for environmental and biological applications. *Fuel*, 275(January), 117821. <https://doi.org/10.1016/j.fuel.2020.117821>
- Atchudan, R., Jebakumar Immanuel Edison, T. N., Shanmugam, M., Perumal, S.,

- Somanathan, T., & Lee, Y. R. (2021). Sustainable synthesis of carbon quantum dots from banana peel waste using hydrothermal process for in vivo bioimaging. *Physica E: Low-Dimensional Systems and Nanostructures*, 126(September 2020), 114417. <https://doi.org/10.1016/j.physe.2020.114417>
- Bahadur, A., Saeed, A., Shoaib, M., Iqbal, S., Bashir, M. I., Waqas, M., Hussain, M. N., & Abbas, N. (2017). Eco-friendly synthesis of magnetite (Fe₃O₄) nanoparticles with tunable size: Dielectric, magnetic, thermal and optical studies. *Materials Chemistry and Physics*, 198, 229–235. <https://doi.org/10.1016/j.matchemphys.2017.05.061>
- Bahrulolum, H., Nooraei, S., Javanshir, N., Tarrahimofrad, H., Mirbagheri, V. S., Easton, A. J., & Ahmadian, G. (2021). Green synthesis of metal nanoparticles using microorganisms and their application in the agrifood sector. *Journal of Nanobiotechnology*, 19(1), 1–26. <https://doi.org/10.1186/s12951-021-00834-3>
- Ballarin, B., Boanini, E., Montalto, L., Mengucci, P., Nanni, D., Parise, C., Ragazzini, I., Rinaldi, D., Sangiorgi, N., Sanson, A., & Cassani, M. C. (2019). PANI/Au/Fe₃O₄ nanocomposite materials for high performance energy storage. *Electrochimica Acta*, 322, 134707. <https://doi.org/10.1016/j.electacta.2019.134707>
- Bayu, A., Nandiyanto, D., Chelvina, G., Girsang, S., Maryanti, R., Ragadhita, R., Anggraeni, S., Fauzi, M., Sakinah, P., Astuti, A. P., Usdiyana, D., Fiandini, M., Dewi, W., & Al-Obaidi, S. M. (2020). COMMUNICATIONS IN SCIENCE AND TECHNOLOGY Isotherm adsorption characteristics of carbon microparticles prepared from pineapple peel waste. *Communications in Science and Technology*, 5(1), 31–39.
- Bean, C. P., & Livingston, J. D. (1959). Superparamagnetism. *Journal of Applied Physics*, 30(4), S120–S129. <https://doi.org/10.1063/1.2185850>
- Behera, M., Nayak, J., Banerjee, S., Chakraborty, S., & Tripathy, S. K. (2021). A review on the treatment of textile industry waste effluents towards the development of efficient mitigation strategy: An integrated system design approach. *Journal of Environmental Chemical Engineering*, 9(4), 105277. <https://doi.org/10.1016/j.jece.2021.105277>
- Behera, S. K., Sahni, S., Tiwari, G., Rai, A., Mahanty, B., Vinati, A., Rene, E. R., & Pugazhendhi, A. (2020). Removal of chromium from synthetic wastewater using modified maghemite nanoparticles. *Applied Sciences (Switzerland)*, 10(9). <https://doi.org/10.3390/app10093181>
- Bhunja, S., Ghorai, N., Burai, S., Purkayastha, P., Ghosh, H. N., & Mondal, S. (2021). Unraveling the Carrier Dynamics and Photocatalytic Pathway in Carbon Dots and Pollutants of Wastewater System. *Journal of Physical Chemistry C*, 125(49), 27252–27259. <https://doi.org/10.1021/acs.jpcc.1c06135>
- Bindhu, M. R., Umadevi, M., Esmail, G. A., Al-Dhabi, N. A., & Arasu, M. V.

- (2020). Green synthesis and characterization of silver nanoparticles from *Moringa oleifera* flower and assessment of antimicrobial and sensing properties. *Journal of Photochemistry and Photobiology B: Biology*, 205(February), 111836. <https://doi.org/10.1016/j.jphotobiol.2020.111836>
- Bunaciu, A. A., Udriștioiu, E. gabriela, & Aboul-Enein, H. Y. (2015). X-Ray Diffraction: Instrumentation and Applications. *Critical Reviews in Analytical Chemistry*, 45(4), 289–299. <https://doi.org/10.1080/10408347.2014.949616>
- Cameron, J. M., Bruno, C., Parachalil, D. R., Baker, M. J., Bonnier, F., Butler, H. J., & Byrne, H. J. (2020). Vibrational spectroscopic analysis and quantification of proteins in human blood plasma and serum. In *Vibrational Spectroscopy in Protein Research*. <https://doi.org/10.1016/b978-0-12-818610-7.00010-4>
- Chahal, S., Macairan, J. R., Yousefi, N., Tufenkji, N., & Naccache, R. (2021). Green synthesis of carbon dots and their applications. *RSC Advances*, 11(41), 25354–25363. <https://doi.org/10.1039/d1ra04718c>
- Chai, W. S., Cheun, J. Y., Kumar, P. S., Mubashir, M., Majeed, Z., Banat, F., Ho, S. H., & Show, P. L. (2021). A review on conventional and novel materials towards heavy metal adsorption in wastewater treatment application. *Journal of Cleaner Production*, 296, 126589. <https://doi.org/10.1016/j.jclepro.2021.126589>
- Chandra, S., Chowdhuri, A. R., Mahto, T. K., & Sahu, S. K. (2017). Nanostructured Fe₃O₄@Fe₂O₃/carbon dots heterojunction for efficient photocatalyst under visible light. *Journal of Nanoscience and Nanotechnology*, 17(2), 1116–1124. <https://doi.org/10.1166/jnn.2017.12580>
- Cherdchoo, W., Nithettham, S., & Charoenpanich, J. (2019). Removal of Cr(VI) from synthetic wastewater by adsorption onto coffee ground and mixed waste tea. *Chemosphere*, 221, 758–767. <https://doi.org/10.1016/j.chemosphere.2019.01.100>
- Cincotto, F. H., Carvalho, D. A. S., Canevari, T. C., Toma, H. E., Fatibello-Filho, O., & Moraes, F. C. (2018). A nano-magnetic electrochemical sensor for the determination of mood disorder related substances. *RSC Advances*, 8(25), 14040–14047. <https://doi.org/10.1039/c8ra01857j>
- Cristofolini, L., Szczepanowicz, K., Orsi, D., Rimoldi, T., Albertini, F., & Warszynski, P. (2016). Hybrid Polyelectrolyte/Fe₃O₄ Nanocapsules for Hyperthermia Applications. *ACS Applied Materials and Interfaces*, 8(38), 25043–25050. <https://doi.org/10.1021/acsami.6b05917>
- Cuana, R., Panre, A.M., Istiqomah, N.I., Tumbelaka, R.M., Sunaryono, Wicaksono, S. T., & Suharyadi, E. (2022). Green Synthesis of Fe₃O₄/Chitosan Nanoparticles Utilizing *Moringa oleifera* Extracts and Their Surface Plasmon Resonance Properties. *ECS J. Solid State Sci. Technol.*, 11, 083015.
- Dachriyanus. (2004). *Analisis struktur senyawa organik secara spektroskopi*. Lembaga Pengembangan Teknologi Informasi dan Komunikasi, Universitas Andalas, Indonesia.

- Das, G. S., Shim, J. P., Bhatnagar, A., Tripathi, K. M., & Kim, T. Y. (2019). Biomass-derived Carbon Quantum Dots for Visible-Light-Induced Photocatalysis and Label-Free Detection of Fe(III) and Ascorbic acid. *Scientific Reports*, 9(1), 1–9. <https://doi.org/10.1038/s41598-019-49266-y>
- Das, S. K., Chakrabarty, S., Gawas, R., & Jasuja, K. (2022). Serendipitous formation of photoluminescent carbon quantum dots by mere immersion of a polymer in an organic solvent. *Carbon Trends*, 8, 100183. <https://doi.org/10.1016/j.cartre.2022.100183>
- Dwandaru, W. S. B., Sari, E. K., Widyawidura, W., Khaerudini, D. S., Pratidhina, E., Agustin, M., Purnamasari, L., Silfiyani, W., & Yongga, T. A. (2021). Carbon nanodots from watermelon peel as CO₂ absorbents in biogas. *Voprosy Khimii i Khimicheskoi Tekhnologii*, 2021(4), 41–49. <https://doi.org/10.32434/0321-4095-2021-137-4-41-49>
- El Shafey, A. M. (2020). Green synthesis of metal and metal oxide nanoparticles from plant leaf extracts and their applications: A review. *Green Processing and Synthesis*, 9(1), 304–339.
- Epp, J. (2016). X-Ray Diffraction (XRD) Techniques for Materials Characterization. In *Materials Characterization Using Nondestructive Evaluation (NDE) Methods*. Elsevier Ltd. <https://doi.org/10.1016/B978-0-08-100040-3.00004-3>
- Fahmi, M. Z., Chen, J. K., Huang, C. C., Ling, Y. C., & Chang, J. Y. (2015). Phenylboronic acid-modified magnetic nanoparticles as a platform for carbon dot conjugation and doxorubicin delivery. *Journal of Materials Chemistry B*, 3(27), 5532–5543. <https://doi.org/10.1039/c5tb00289c>
- Fini, S. A. F., Niasari, M. S., & Ghanbari, D. (2018). Hydrothermal green synthesis of magnetic Fe₃O₄-carbon dots by lemon and grape fruit extracts and as a photoluminescence sensor for detecting of *E. coli* bacteria. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, 203(2017), 481–493. <https://doi.org/10.1016/j.saa.2018.06.021>
- Fouad, D., Bachra, Y., Ayoub, G., Ouaket, A., Bennamara, A., Knouzi, N., & Berrada, M. (2020). A Novel Drug Delivery System Based on Nanoparticles of Magnetite Fe₃O₄ Embedded in an Auto Cross-Linked Chitosan. *Chitin and Chitosan - Physicochemical Properties and Industrial Applications [Working Title]*, November. <https://doi.org/10.5772/intechopen.94873>
- Fournier-Salaün, M. C., & Salaün, P. (2007). Quantitative determination of hexavalent chromium in aqueous solutions by UV-Vis spectrophotometer. *Central European Journal of Chemistry*, 5(4), 1084–1093. <https://doi.org/10.2478/s11532-007-0038-4>
- Gafur, A., & Abbas, H. H. (2022). Kontaminasi Logam Berat Kadmium dan Kromium serta Batas Konsumsi Kerang Darah (*Anadara granosa*) di Muara Sungai Tallo Kota Makassar. *Higiene*, 8(1), 20–25.
- Ganapathe, L. S., Mohamed, M. A., Yunus, R. M., & Berhanuddin, D. D. (2020).

Magnetite (Fe₃O₄) nanoparticles in biomedical application: From synthesis to surface functionalisation. *Magnetochemistry*, 6(4), 1–35. <https://doi.org/10.3390/magnetochemistry6040068>

Gangwar, A., Varghese, S. S., sharma, A., Meena, S. S., Prajapat, C. L., Viswanadh, M. K., Neogi, K., Muthu, M. S., & Prasad, N. K. (2020). Physical and in-vitro evaluation of ϵ -Fe₃N@Fe₃O₄ nanoparticles for bioapplications. *Ceramics International*, 46(8), 10952–10962. <https://doi.org/10.1016/j.ceramint.2020.01.110>

Ge, J., Lian, L., Wang, X., Cao, X., Gao, W., & Lou, D. (2022). Coating layered double hydroxides with carbon dots for highly efficient removal of multiple dyes. *Journal of Hazardous Materials*, 424(PC), 127613. <https://doi.org/10.1016/j.jhazmat.2021.127613>

Ghereghlou, M., Esmaeili, A. A., & Darroudi, M. (2021). Preparation of Fe₃O₄@C-dots as a recyclable magnetic nanocatalyst using *Elaeagnus angustifolia* and its application for the green synthesis of formamidines. *Applied Organometallic Chemistry*, 35(11), 1–15. <https://doi.org/10.1002/aoc.6387>

Ghereghlou, M., Esmaeili, A. A., & Darroudi, M. (2022). Adsorptive Removal of Methylene Blue from Aqueous Solutions Using Magnetic Fe₃O₄@C-dots: Removal and kinetic studies. *Separation Science and Technology (Philadelphia)*, 57(13), 2005–2023. <https://doi.org/10.1080/01496395.2022.2029490>

Gossman Forensics. (2012). How Does Scanning Electron Microscope / Energy Dispersive X-ray (SEM / EDX) Work? *Gossman Forensics*, 1. <https://www.gossmanforensics.com/pdf-library/pdf-analytical-methods/sem-edx.pdf>

Haryadi, Purnama, M. R. W., & Wibowo, A. (2018). C dots derived from waste of biomass and their photocatalytic activities. *Indonesian Journal of Chemistry*, 18(4), 594–599. <https://doi.org/10.22146/ijc.26652>

Hasany, S., Ahmed, I., J, R., & Rehman, A. (2013). Systematic Review of the Preparation Techniques of Iron Oxide Magnetic Nanoparticles. *Nanoscience and Nanotechnology*, 2(6), 148–158. <https://doi.org/10.5923/j.nn.20120206.01>

He, M., Zhang, J., Wang, H., Kong, Y., Xiao, Y., & Xu, W. (2018). Material and Optical Properties of Fluorescent Carbon Quantum Dots Fabricated from Lemon Juice via Hydrothermal Reaction. *Nanoscale Research Letters*, 13. <https://doi.org/10.1186/s11671-018-2581-7>

Hu, Y., Wang, P., Bunker, C. E., Teisl, L. R., Reibold, M., Yan, S., Qian, H., He, D., & Sun, Y. P. (2017). Preparation and optical properties of magnetic carbon/iron oxide hybrid dots. *RSC Advances*, 7(65), 41304–41310. <https://doi.org/10.1039/c7ra07220a>

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>

- Imran, M., Alam, M. M., Hussain, S., Ali, M. A., Shkir, M., Mohammad, A., Ahamad, T., Kaushik, A., & Irshad, K. (2021). Highly photocatalytic active r-GO/Fe₃O₄ nanocomposites development for enhanced photocatalysis application: A facile low-cost preparation and characterization. *Ceramics International*, 47(22), 31973–31982. <https://doi.org/10.1016/j.ceramint.2021.08.083>
- Jabbar, K. Q., Barzinjy, A. A., & Hamad, S. M. (2022). Iron oxide nanoparticles: Preparation methods, functions, adsorption and coagulation/flocculation in wastewater treatment. *Environmental Nanotechnology, Monitoring and Management*, 17(February), 100661. <https://doi.org/10.1016/j.enmm.2022.100661>
- Javed, N., & O'Carroll, D. M. (2021). Long-term effects of impurities on the particle size and optical emission of carbon dots. *Nanoscale Advances*, 3(1), 182–189. <https://doi.org/10.1039/d0na00479k>
- Jenkins, R. (2000). (1) Jenkins, R. Encycl. Anal. Chem. 2000, 13269–13288. X-ray Techniques : Overview. *Encyclopedia of Analytical Chemistry*, 13269–13288.
- Jesus, A. C. B., Jesus, J. R., Lima, R. J. S., Moura, K. O., Almeida, J. M. A., Duque, J. G. S., & Meneses, C. T. (2020). Synthesis and magnetic interaction on concentrated Fe₃O₄ nanoparticles obtained by the co-precipitation and hydrothermal chemical methods. *Ceramics International*, 46(8), 11149–11153. <https://doi.org/10.1016/j.ceramint.2020.01.135>
- Jiao, X. Y., Li, L. shuang, Qin, S., Zhang, Y., Huang, K., & Xu, L. (2019). The synthesis of fluorescent carbon dots from mango peel and their multiple applications. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 577(April), 306–314. <https://doi.org/10.1016/j.colsurfa.2019.05.073>
- Johannes, A. Z., Pingak, R. K., & Bukit, M. (2020). Tauc Plot Software: Calculating energy gap values of organic materials based on Ultraviolet-Visible absorbance spectrum. *IOP Conference Series: Materials Science and Engineering*, 823(1). <https://doi.org/10.1088/1757-899X/823/1/012030>
- Juang, R. S., Ju, Y. C., Liao, C. S., Lin, K. S., Lu, H. C., Wang, S. F., & Sun, A. C. (2017). Synthesis of Carbon Dots on Fe₃O₄ Nanoparticles as Recyclable Visible-Light Photocatalysts. *IEEE Transactions on Magnetics*, 53(11), 12–15. <https://doi.org/10.1109/TMAG.2017.2710541>
- Kalam, A., Al-Sehemi, A. G., Assiri, M., Du, G., Ahmad, T., Ahmad, I., & Pannipara, M. (2018). Modified solvothermal synthesis of cobalt ferrite (CoFe₂O₄) magnetic nanoparticles photocatalysts for degradation of methylene blue with H₂O₂/visible light. *Results in Physics*, 8, 1046–1053. <https://doi.org/10.1016/j.rinp.2018.01.045>
- Karpinsky, D. V., Silibin, M. V., Trukhanov, A. V., Zhaludkevich, A. L., Maniecki, T., Maniukiewicz, W., Sikolenko, V., Paixão, J. A., & Khomchenko, V. A.

- (2019). A correlation between crystal structure and magnetic properties in co-doped BiFeO₃ ceramics. *Journal of Physics and Chemistry of Solids*, 126(October 2018), 164–169. <https://doi.org/10.1016/j.jpcs.2018.11.006>
- Kgatitsoe, M. M., Ncube, S., Tutu, H., Nyambe, I. A., & Chimuka, L. (2019). Synthesis and characterization of a magnetic nanosorbent modified with Moringa oleifera leaf extracts for removal of nitroaromatic explosive compounds in water samples. *Journal of Environmental Chemical Engineering*, 7(3), 103128. <https://doi.org/10.1016/j.jece.2019.103128>
- Khalil, M. I. (2015). Co-precipitation in aqueous solution synthesis of magnetite nanoparticles using iron(III) salts as precursors. *Arabian Journal of Chemistry*, 8(2), 279–284. <https://doi.org/10.1016/j.arabjc.2015.02.008>
- Khan, I., Saeed, K., Zekker, I., Zhang, B., Hendi, A. H., Ahmad, A., Ahmad, S., Zada, N., Ahmad, H., Shah, L. A., Shah, T., & Khan, I. (2022). Review on Methylene Blue: Its Properties, Uses, Toxicity and Photodegradation. *Water (Switzerland)*, 14(2). <https://doi.org/10.3390/w14020242>
- Kiwumulo, H. F., Muwonge, H., Ibingira, C., Lubwama, M., Kirabira, J. B., & Ssekitoileko, R. T. (2022). Green synthesis and characterization of iron-oxide nanoparticles using Moringa oleifera: a potential protocol for use in low and middle income countries. *BMC Research Notes*, 15(1), 1–8. <https://doi.org/10.1186/s13104-022-06039-7>
- Kouotou, P. M., Kasmi, A. El, Wu, L. N., Waqas, M., & Tian, Z. Y. (2018). Particle size-band gap energy-catalytic properties relationship of PSE-CVD-derived Fe₃O₄ thin films. *Journal of the Taiwan Institute of Chemical Engineers*, 93, 427–435. <https://doi.org/10.1016/j.jtice.2018.08.014>
- Krishnan, K. M. (2010). Biomedical nanomagnetism: A spin through possibilities in imaging, diagnostics, and therapy. *IEEE Transactions on Magnetics*, 46(7), 2523–2558. <https://doi.org/10.1109/TMAG.2010.2046907>
- Ku, Y., & Jung, I. L. (2001). Photocatalytic reduction of Cr(VI) in aqueous solutions by UV irradiation with the presence of titanium dioxide. *Water Research*, 35(1), 135–142. [https://doi.org/10.1016/S0043-1354\(00\)00098-1](https://doi.org/10.1016/S0043-1354(00)00098-1)
- Kumar, H., Bhardwaj, K., Dhanjal, D. S., Nepovimova, E., Şen, F., Regassa, H., Singh, R., Verma, R., Kumar, V., Kumar, D., Bhatia, S. K., & Kuča, K. (2020). Fruit extract mediated green synthesis of metallic nanoparticles: A new avenue in pomology applications. *International Journal of Molecular Sciences*, 21(22), 1–18. <https://doi.org/10.3390/ijms21228458>
- Kumar, N., Singh, R. K., & Satyapal, H. K. (2020). Structural, optical, and magnetic properties of non-stoichiometric lithium substituted magnesium ferrite nanoparticles for multifunctional applications. *Journal of Materials Science: Materials in Electronics*, 31(12), 9231–9241. <https://doi.org/10.1007/s10854-020-03454-z>
- Kumar Prajapati, A., & Kumar Mondal, M. (2022). Green synthesis of Fe₃O₄-onion peel biochar nanocomposites for adsorption of Cr(VI), methylene blue

and congo red dye from aqueous solutions. *Journal of Molecular Liquids*, 349, 118161. <https://doi.org/10.1016/j.molliq.2021.118161>

Latha, K. P., & Sundar, S. M. (2020). Synthesis of Chromium Oxide Nanoparticles at Different pH and Their Structural and Optical Properties, 11(1), 111–122.

Lei, Y., Chen, F., Luo, Y., & Zhang, L. (2014). Three-dimensional magnetic graphene oxide foam/Fe₃O₄ nanocomposite as an efficient absorbent for Cr(VI) removal. *Journal of Materials Science*, 49(12), 4236–4245. <https://doi.org/10.1007/s10853-014-8118-2>

Li, J., Li, Y., Chen, X., Kierzek, K., Shi, X., Chu, P. K., Tang, T., & Mijowska, E. (2019). Selective Synthesis of Magnetite Nanospheres with Controllable Morphologies on CNTs and Application to Lithium-Ion Batteries. *Physica Status Solidi (A) Applications and Materials Science*, 216(11), 1–6. <https://doi.org/10.1002/pssa.201800924>

Ling, J., Zhang, W., Cheng, Z., & Ding, Y. (2022). Recyclable Magnetic Fluorescence Sensor Based on Fe₃O₄ and Carbon Dots for Detection and Purification of Methcathinone in Sewage. *ACS Applied Materials and Interfaces*, 14(3), 3752–3761. <https://doi.org/10.1021/acsami.1c20170>

Liu, M. L., Chen, B. Bin, Li, C. M., & Huang, C. Z. (2019). Carbon dots: Synthesis, formation mechanism, fluorescence origin and sensing applications. *Green Chemistry*, 21(3), 449–471. <https://doi.org/10.1039/c8gc02736f>

Liu, S., Yu, B., Wang, S., Shen, Y., & Cong, H. (2020). Preparation, surface functionalization and application of Fe₃O₄ magnetic nanoparticles. *Advances in Colloid and Interface Science*, 281, 102165. <https://doi.org/10.1016/j.cis.2020.102165>

Lone, I. H., Aslam, J., Radwan, N. R. E., Bashal, A. H., Ajlouni, A. F. A., & Akhter, A. (2019). Multiferroic ABO₃ Transition Metal Oxides: a Rare Interaction of Ferroelectricity and Magnetism. *Nanoscale Research Letters*, 14, 1–12. <https://doi.org/10.1186/s11671-019-2961-7>

Long, C., Jiang, Z., Shangguan, J., Qing, T., Zhang, P., & Feng, B. (2021). Applications of carbon dots in environmental pollution control: A review. *Chemical Engineering Journal*, 406(September 2020), 126848. <https://doi.org/10.1016/j.cej.2020.126848>

López, Y. C., & Antuch, M. (2020). Morphology control in the plant-mediated synthesis of magnetite nanoparticles. *Current Opinion in Green and Sustainable Chemistry*, 24, 32–37. <https://doi.org/10.1016/j.cogsc.2020.02.001>

Lu, M., Duan, Y., Song, Y., Tan, J., & Zhou, L. (2018). Green preparation of versatile nitrogen-doped carbon quantum dots from watermelon juice for cell imaging, detection of Fe³⁺ ions and cysteine, and optical thermometry. *Journal of Molecular Liquids*, 269, 766–774. <https://doi.org/10.1016/j.molliq.2018.08.101>

- Luo, W., Hu, F., Hu, Y., Dai, H., Xu, L., Xu, G., Jian, Y., & Peng, X. (2019). Persulfate enhanced visible light photocatalytic degradation of organic pollutants by construct magnetic hybrid heterostructure. *Journal of Alloys and Compounds*, 806, 1207–1219. <https://doi.org/10.1016/j.jallcom.2019.07.329>
- Mabarroh, N., Alfansuri, T., Wibowo, N. A., Istiqomah, N. I., Tumbelaka, R. M., Suharyadi, E. (2022). Detection of green-synthesized magnetite nanoparticles using spin-valve GMR-based sensor and their potential as magnetic labels. *Journal of Magnetism and Magnetic Materials*, 560, 169645.
- Makula, P., Pacia, M., & Macyk, W. (2018). How To Correctly Determine the Band Gap Energy of Modified Semiconductor Photocatalysts Based on UV-Vis Spectra. *Journal of Physical Chemistry Letters*, 9(23), 6814–6817. <https://doi.org/10.1021/acs.jpcelett.8b02892>
- Maruthapandi, M., Das, P., Saravanan, A., Natan, M., Banin, E., Kannan, S., Michaeli, S., Luong, J. H. T., & Gedanken, A. (2021). Biocompatible N-doped carbon dots for the eradication of methicillin-resistant *S. aureus* (MRSA) and sensitive analysis for europium (III). *Nano-Structures and Nano-Objects*, 26, 100724. <https://doi.org/10.1016/j.nanoso.2021.100724>
- Mateus, G. A. P., Paludo, M. P., Dos Santos, T. R. T., Silva, M. F., Nishi, L., Fagundes-Klen, M. R., Gomes, R. G., & Bergamasco, R. (2018). Obtaining drinking water using a magnetic coagulant composed of magnetite nanoparticles functionalized with Moringa oleifera seed extract. *Journal of Environmental Chemical Engineering*, 6(4), 4084–4092. <https://doi.org/10.1016/j.jece.2018.05.050>
- Matinise, N., Fuku, X. G., Kaviyarasu, K., Mayedwa, N., & Maaza, M. (2017). ZnO nanoparticles via Moringa oleifera green synthesis: Physical properties & mechanism of formation. *Applied Surface Science*, 406, 339–347. <https://doi.org/10.1016/j.apsusc.2017.01.219>
- Mehmood, S., Mahmood, M., Núñez-Delgado, A., Alatalo, J. M., Elrys, A. S., Rizwan, M., Weng, J., Li, W., & Ahmed, W. (2022). A green method for removing chromium (VI) from aqueous systems using novel silicon nanoparticles: Adsorption and interaction mechanisms. *Environmental Research*, 213(May). <https://doi.org/10.1016/j.envres.2022.113614>
- Meng, L. Y., Wang, B., Ma, M. G., & Lin, K. L. (2016). The progress of microwave-assisted hydrothermal method in the synthesis of functional nanomaterials. *Materials Today Chemistry*, 1–2, 63–83. <https://doi.org/10.1016/j.mtchem.2016.11.003>
- Meng, W., Bai, X., Wang, B., Liu, Z., Lu, S., & Yang, B. (2019). Biomass-Derived Carbon Dots and Their Applications. *Energy and Environmental Materials*, 2(3), 172–192. <https://doi.org/10.1002/eem2.12038>
- Miao, S., Liang, K., Zhu, J., Yang, B., Zhao, D., & Kong, B. (2020). Hetero-atom-doped carbon dots: Doping strategies, properties and applications. *Nano Today*, 33, 100879. <https://doi.org/10.1016/j.nantod.2020.100879>

- Mihai, A. D., Chircov, C., Grumezescu, A. M., & Holban, A. M. (2020). Magnetite nanoparticles and essential oils systems for advanced antibacterial therapies. *International Journal of Molecular Sciences*, 21(19), 1–24. <https://doi.org/10.3390/ijms21197355>
- Mondal, S., De Anda Reyes, M. E., & Pal, U. (2017). Plasmon induced enhanced photocatalytic activity of gold loaded hydroxyapatite nanoparticles for methylene blue degradation under visible light. *RSC Advances*, 7(14), 8633–8645. <https://doi.org/10.1039/C6RA28640B>
- Mutalib, M. A., Rahman, M. A., Othman, M. H. D., Ismail, A. F., & Jaafar, J. (2017). Scanning Electron Microscopy (SEM) and Energy-Dispersive X-Ray (EDX) Spectroscopy. In *Membrane Characterization*. Elsevier B.V. <https://doi.org/10.1016/B978-0-444-63776-5.00009-7>
- Najafabadi, A. H., Mansoorianfar, M., Liang, T., Shahin, K., Wen, Y., Bahrami, A., Karaman, C., Zare, N., Karimi-Maleh, H., & Vasseghian, Y. (2022). Magnetic-MXene-based nanocomposites for water and wastewater treatment: A review. *Journal of Water Process Engineering*, 47, 102696. <https://doi.org/10.1016/j.jwpe.2022.102696>
- Nasiri-Tabrizi, B. (2014). Thermal treatment effect on structural features of mechano-synthesized fluorapatite-titania nanocomposite: A comparative study. *Journal of Advanced Ceramics*, 3(1), 31–42. <https://doi.org/10.1007/s40145-014-0090-4>
- Nayl, A. A., Abd-Elhamid, A. I., Aly, A. A., & Bräse, S. (2022). Recent progress in the applications of silica-based nanoparticles. *RSC Advances*, 12(22), 13706–13726. <https://doi.org/10.1039/d2ra01587k>
- Nguyen, M. D., Tran, H.-V., Xu, S., & Lee, T. R. (2021). *applied sciences Fe₃O₄ Nanoparticles : Structures , Synthesis , Magnetic Properties , Surface Functionalization , and.*
- Nguyen, T. N., Le, P. A., & Phung, V. B. T. (2022). Facile green synthesis of carbon quantum dots and biomass-derived activated carbon from banana peels: synthesis and investigation. *Biomass Conversion and Biorefinery*, 12(7), 2407–2416. <https://doi.org/10.1007/s13399-020-00839-2>
- Park, S. J., & Jang, Y. S. (2002). Pore structure and surface properties of chemically modified activated carbons for adsorption mechanism and rate of Cr(VI). *Journal of Colloid and Interface Science*, 249(2), 458–463. <https://doi.org/10.1006/jcis.2002.8269>
- Patil, S. V., Mohite, B. V., Marathe, K. R., Salunkhe, N. S., Marathe, V., & Patil, V. S. (2022). Moringa Tree, Gift of Nature: a Review on Nutritional and Industrial Potential. *Current Pharmacology Reports*, 8(4), 262–280. <https://doi.org/10.1007/s40495-022-00288-7>
- Polte, J. (2015). Fundamental growth principles of colloidal metal nanoparticles - a new perspective. *CrystEngComm*, 17(36), 6809–6830. <https://doi.org/10.1039/c5ce01014d>

- Pour, M. L., Kazemeini, M., & Sadjadi, S. (2021). Nanocomposite of functionalized halloysite and Ag(0) decorated magnetic carbon dots as a reusable catalyst for reduction of dyes in water. *Journal of Physics and Chemistry of Solids*, 152. <https://doi.org/10.1016/j.jpcs.2021.109949>
- Prabakaran, M., Kim, S. H., Sasireka, A., Chandrasekaran, M., & Chung, I. M. (2018). Polyphenol composition and antimicrobial activity of various solvent extracts from different plant parts of *Moringa oleifera*. *Food Bioscience*, 26(February), 23–29. <https://doi.org/10.1016/j.fbio.2018.09.003>
- Prasad, C., Sreenivasulu, K., Gangadhara, S., & Venkateswarlu, P. (2017). Bio inspired green synthesis of Ni/Fe₃O₄ magnetic nanoparticles using *Moringa oleifera* leaves extract: A magnetically recoverable catalyst for organic dye degradation in aqueous solution. *Journal of Alloys and Compounds*, 700, 252–258. <https://doi.org/10.1016/j.jallcom.2016.12.363>
- Prasad, C., Yuvaraja, G., & Venkateswarlu, P. (2017). Biogenic synthesis of Fe₃O₄ magnetic nanoparticles using *Pisum sativum* peels extract and its effect on magnetic and Methyl orange dye degradation studies. *Journal of Magnetism and Magnetic Materials*, 424(May 2016), 376–381. <https://doi.org/10.1016/j.jmmm.2016.10.084>
- Pudza, M. Y., Abidin, Z. Z., Rashid, S. A., Yasin, F. M., Noor, A. S. M., & Issa, M. A. (2020). Eco-friendly sustainable fluorescent carbon dots for the adsorption of heavy metal ions in aqueous environment. *Nanomaterials*, 10(2). <https://doi.org/10.3390/nano10020315>
- Rahman, M. W., Ali, M. Y., Saha, I., Al Raihan, M., Moniruzzaman, M., Alam, M. J., Deb, A., & Khan, M. M. R. (2017). Date palm fiber as a potential low-cost adsorbent to uptake chromium (VI) from industrial wastewater. *Desalination and Water Treatment*, 88(November), 169–178. <https://doi.org/10.5004/dwt.2017.21402>
- Ramesh, A. V., Rama Devi, D., Mohan Botsa, S., & Basavaiah, K. (2018). Facile green synthesis of Fe₃O₄ nanoparticles using aqueous leaf extract of *Zanthoxylum armatum* DC. for efficient adsorption of methylene blue. *Journal of Asian Ceramic Societies*, 6(2), 145–155. <https://doi.org/10.1080/21870764.2018.1459335>
- Rana, A., Yadav, K., & Jagadevan, S. (2020). A comprehensive review on green synthesis of nature-inspired metal nanoparticles: Mechanism, application and toxicity. *Journal of Cleaner Production*, 272, 122880. <https://doi.org/10.1016/j.jclepro.2020.122880>
- Rani, S., & Varma, G. D. (2015). Superparamagnetism and metamagnetic transition in Fe₃O₄ nanoparticles synthesized via co-precipitation method at different pH. *Physica B: Condensed Matter*, 472, 66–77. <https://doi.org/10.1016/j.physb.2015.05.016>
- Raza, A., Altaf, S., Ali, S., Ikram, M., & Li, G. (2022). Recent advances in carbonaceous sustainable nanomaterials for wastewater treatments.

Sustainable Materials and Technologies, 32(November 2021), e00406.
<https://doi.org/10.1016/j.susmat.2022.e00406>

Rehman, A., Daud, A., Warsi, M. F., Shakir, I., Agboola, P. O., Sarwar, M. I., & Zulfiqar, S. (2020). Nanostructured maghemite and magnetite and their nanocomposites with graphene oxide for photocatalytic degradation of methylene blue. *Materials Chemistry and Physics*, 256(May), 123752.
<https://doi.org/10.1016/j.matchemphys.2020.123752>

Rong, S., Tang, X., Liu, H., Xu, J., Yuan, Z., Peng, X., Niu, J., Wu, Y., He, L., & Qian, K. (2021). Synthesis of carbon dots@Fe₃O₄ and their photocatalytic degradation properties to hexaconazole. *NanoImpact*, 22(2), 100304.
<https://doi.org/10.1016/j.impact.2021.100304>

Roy, S. D., Das, K. C., & Dhar, S. S. (2021). Conventional to green synthesis of magnetic iron oxide nanoparticles; its application as catalyst, photocatalyst and toxicity: A short review. *Inorganic Chemistry Communications*, 134(November), 109050. <https://doi.org/10.1016/j.inoche.2021.109050>

Ruíz-Baltazar, Á. de J., Reyes-López, S. Y., Mondragón-Sánchez, M. de L., Robles-Cortés, A. I., & Pérez, R. (2019). Eco-friendly synthesis of Fe₃O₄ nanoparticles: Evaluation of their catalytic activity in methylene blue degradation by kinetic adsorption models. *Results in Physics*, 12(October 2018), 989–995. <https://doi.org/10.1016/j.rinp.2018.12.037>

Saini, R. K., Sivanesan, I., & Keum, Y. S. (2016). Phytochemicals of Moringa oleifera: a review of their nutritional, therapeutic and industrial significance. *3 Biotech*, 6(2), 1–14. <https://doi.org/10.1007/s13205-016-0526-3>

Sajjad, S., Leghari, S. A. K., Ryma, N. U. A., & Farooqi, S. A. (2018). Green synthesis of metal-based nanoparticles and their applications. In *The Macabresque: Human Violation and Hate in Genocide, Mass Atrocity and Enemy-Making* (Issue November).
<https://doi.org/10.1002/9781119418900.ch2>

Sakdaronnarong, C., Sangjan, A., Boonsith, S., Kim, D. C., & Shin, H. S. (2020). Recent developments in synthesis and photocatalytic applications of carbon dots. *Catalysts*, 10(3). <https://doi.org/10.3390/catal10030320>

Saleh, H. (2020). Green Synthesis of Magnetite Nanoparticles using MyrtuscommunisL. Grown in Egypt. *International Research Journal of Innovations in Engineering and Technology*, 4(9), 06–13.
<https://doi.org/10.47001/irjiet/2020.409002>

Sharma, S., Umar, A., Sood, S., Mehta, S. K., & Kansal, S. K. (2018). Photoluminescent C-dots: An overview on the recent development in the synthesis, physiochemical properties and potential applications. *Journal of Alloys and Compounds*, 748, 818–853.
<https://doi.org/10.1016/j.jallcom.2018.03.001>

Shawky, A., Alahmadi, N., Mohamed, R. M., & Zaki, Z. I. (2022). Bi₂S₃-sensitized TiO₂ nanostructures prepared by solution process for highly efficient

- photoreduction of hexavalent chromium ions in water under visible light. *Optical Materials*, 124(December 2021), 111964. <https://doi.org/10.1016/j.optmat.2021.111964>
- Shi, Y., Xu, H., Yuan, T., Meng, T., Wu, H., Chang, J., Wang, H., Song, X., Li, Y., Li, X., Zhang, Y., Xie, W., & Fan, L. (2022). Carbon dots: An innovative luminescent nanomaterial. *Aggregate*, 3(3), 1–18. <https://doi.org/10.1002/agt2.108>
- Shibu, E. S., Ono, K., Sugino, S., Nishioka, A., Yasuda, A., Shigeri, Y., Wakida, S. I., Sawada, M., & Biju, V. (2013). Photocatalytic nanoparticles for MRI and fluorescence imaging in vitro and in vivo. *ACS Nano*, 7(11), 9851–9859. <https://doi.org/10.1021/nn4043699>
- Singh, J., Dutta, T., Kim, K. H., Rawat, M., Samddar, P., & Kumar, P. (2018). “Green” synthesis of metals and their oxide nanoparticles: Applications for environmental remediation. *Journal of Nanobiotechnology*, 16(1), 1–24. <https://doi.org/10.1186/s12951-018-0408-4>
- Suharyadi, E., Muzakki, A., Istiqomah, N. I., Puspitarum, D. L., Purnama, B., & Djuhana, D. (2022). Reusability of Photocatalytic CoFe₂O₄@ZnO Core–Shell Nanoparticles for Dye Degradation. *ECS Journal of Solid State Science and Technology*, 11(2), 023004. <https://doi.org/10.1149/2162-8777/ac4c7c>
- Sun, A. C. (2018). Synthesis of magnetic carbon nanodots for recyclable photocatalytic degradation of organic compounds in visible light. *Advanced Powder Technology*, 29(3), 719–725. <https://doi.org/10.1016/j.apt.2017.12.013>
- Sung, H. W. F., & Rudowicz, C. (2003). Physics behind the magnetic hysteresis loop - A survey of misconceptions in magnetism literature. *Journal of Magnetism and Magnetic Materials*, 260(1–2), 250–260. [https://doi.org/10.1016/S0304-8853\(02\)01339-2](https://doi.org/10.1016/S0304-8853(02)01339-2)
- Sutanto, H., Alkian, I., Romanda, N., Lewa, I. W. L., Marhaendrajaya, I., & Triadyaksa, P. (2020). High green-emission carbon dots and its optical properties: Microwave power effect. *AIP Advances*, 10(5). <https://doi.org/10.1063/5.0004595>
- Taib, S., & Suharyadi, E. (2015). Sintesis Nanopartikel Magnetite (Fe₃O₄) dengan Template silika (SiO₂) dan Karakterisasi Sifat Kemagnetannya. *Indonesian Journal of Applied Physics*, 5(01), 23. <https://doi.org/10.13057/ijap.v5i01.256>
- Tang, C. Y., & Yang, Z. (2017). Transmission Electron Microscopy (TEM). In *Membrane Characterization*. Elsevier B.V. <https://doi.org/10.1016/B978-0-444-63776-5.00008-5>
- Titchou, F. E., Zazou, H., Afanga, H., El Gaayda, J., Ait Akbour, R., Nidheesh, P. V., & Hamdani, M. (2021). Removal of organic pollutants from wastewater by advanced oxidation processes and its combination with membrane processes. *Chemical Engineering and Processing - Process Intensification*, 169(September), 108631. <https://doi.org/10.1016/j.cep.2021.108631>

- Torres Landa, S. D., Reddy Bogireddy, N. K., Kaur, I., Batra, V., & Agarwal, V. (2022). Heavy metal ion detection using green precursor derived carbon dots. *IScience*, 25(2), 103816. <https://doi.org/10.1016/j.isci.2022.103816>
- Trouillas, P., Marsal, P., Siri, D., Lazzaroni, R., & Duroux, J. L. (2006). A DFT study of the reactivity of OH groups in quercetin and taxifolin antioxidants: The specificity of the 3-OH site. *Food Chemistry*, 97(4), 679–688. <https://doi.org/10.1016/j.foodchem.2005.05.042>
- Tuantranont, A. (2013). Applications of Nanomaterials in Sensors and Diagnostics. In *Springer Ser. Chem. Sens. Biosens* (Vol. 14). <https://link.springer.com/10.1007/978-3-642-36025-1>
- Tumbelaka, R. M., Istiqomah, N. I., Kato, T., Oshima, D., dan Suharyadi, E. (2022). High reusability of green-synthesized Fe₃O₄/TiO₂ photocatalyst nanoparticles for efficient degradation of methylene blue dye. *Materials Today Communications*, 33, 104450.
- Üner, O., Geçgel, Ü., & Bayrak, Y. (2016). Adsorption of Methylene Blue by an Efficient Activated Carbon Prepared from Citrullus lanatus Rind: Kinetic, Isotherm, Thermodynamic, and Mechanism Analysis. *Water, Air, and Soil Pollution*, 227(7). <https://doi.org/10.1007/s11270-016-2949-1>
- Vedula, S. S., & Yadav, G. D. (2022). Wastewater treatment containing methylene blue dye as pollutant using adsorption by chitosan lignin membrane: Development of membrane, characterization and kinetics of adsorption. *Journal of the Indian Chemical Society*, 99(1), 100263. <https://doi.org/10.1016/j.jics.2021.100263>
- Vongsak, B., Sithisarn, P., Mangmool, S., Thongpraditchote, S., Wongkrajang, Y., & Gritsanapan, W. (2013). Maximizing total phenolics, total flavonoids contents and antioxidant activity of Moringa oleifera leaf extract by the appropriate extraction method. *Industrial Crops and Products*, 44, 566–571. <https://doi.org/10.1016/j.indcrop.2012.09.021>
- Vuong, P. (2018). Optical spectroscopy of boron nitride heterostructures. *HAL Archives - Ouvertes*.
- Wang, F. T., Wang, L. N., Xu, J., Huang, K. J., & Wu, X. (2021). Synthesis and modification of carbon dots for advanced biosensing application. *Analyst*, 146(14), 4418–4435. <https://doi.org/10.1039/d1an00466b>
- Wang, Z., Zhang, L., Zhang, K., Lu, Y., Chen, J., Wang, S., Hu, B., & Wang, X. (2022). Application of carbon dots and their composite materials for the detection and removal of radioactive ions: A review. *Chemosphere*, 287(August 2021). <https://doi.org/10.1016/j.chemosphere.2021.132313>
- Xu, L., Kim, M. J., Kim, K. Do, Choa, Y. H., & Kim, H. T. (2009). Surface modified Fe₃O₄ nanoparticles as a protein delivery vehicle. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 350(1–3), 8–12. <https://doi.org/10.1016/j.colsurfa.2009.08.022>

- Yang, G., & Park, S. J. (2019). Conventional and microwave hydrothermal synthesis and application of functional materials: A review. *Materials*, 12(7). <https://doi.org/10.3390/ma12071177>
- Yang, X., Chen, W., Huang, J., Zhou, Y., Zhu, Y., & Li, C. (2015). Rapid degradation of methylene blue in a novel heterogeneous Fe₃O₄@rGO@TiO₂-catalyzed photo-Fenton system. *Scientific Reports*, 5(May), 1–10. <https://doi.org/10.1038/srep10632>
- Yousefinejad, S., Rasti, H., Hajebi, M., Kowsari, M., Sadravi, S., & Honarasa, F. (2017). Design of C-dots/Fe₃O₄ magnetic nanocomposite as an efficient new nanozyme and its application for determination of H₂O₂ in nanomolar level. *Sensors and Actuators, B: Chemical*, 247, 691–696. <https://doi.org/10.1016/j.snb.2017.02.145>
- Yu, B. Y., & Kwak, S. Y. (2012). Carbon quantum dots embedded with mesoporous hematite nanospheres as efficient visible light-active photocatalysts. *Journal of Materials Chemistry*, 22(17), 8345–8353. <https://doi.org/10.1039/c2jm16931b>
- Zahoor, M., Ullah, A., Alam, S., Muhammad, M., Setyobudi, R. H., Zekker, I., & Sohail, A. (2022). Novel Magnetite Nanocomposites (Fe₃O₄/C) for Efficient Immobilization of Ciprofloxacin from Aqueous Solutions through Adsorption Pretreatment and Membrane Processes. *Water (Switzerland)*, 14(5). <https://doi.org/10.3390/w14050724>
- Zelinka, M. (2012). *Recombination centers in semiinsulating CdTe*.
- Zhang, Jin, Lin, S., Han, M., Su, Q., Xia, L., & Hui, Z. (2020). Adsorption properties of magnetic magnetite nanoparticle for coexistent Cr(VI) and Cu(II) in mixed solution. *Water (Switzerland)*, 12(2), 1–13. <https://doi.org/10.3390/w12020446>
- Zhang, Jinlong, Tian, B., Wang, L., Xing, M., & Lei, J. (2018). *Photocatalysis (Vol. 100)*. <http://www.springer.com/series/632>
- Zhang, L. Z., Sun, W., & Cheng, P. (2003). Spectroscopic and theoretical studies of quantum and electronic confinement effects in nanostructured materials. *Molecules*, 8(1), 207–222. <https://doi.org/10.3390/80100207>
- Zhang, Y., Zhang, H., Zhang, Z., Liu, C., Sun, C., Zhang, W., & Marhaba, T. (2018). PH Effect on Heavy Metal Release from a Polluted Sediment. *Journal of Chemistry*, 2018. <https://doi.org/10.1155/2018/7597640>
- Zhao, G. (2011). Sorption of Heavy Metal Ions from Aqueous Solutions: A Review. *The Open Colloid Science Journal*, 4(1), 19–31. <https://doi.org/10.2174/1876530001104010019>
- Zhou, J., Sheng, Z., Han, H., Zou, M., & Li, C. (2012). Facile synthesis of fluorescent carbon dots using watermelon peel as a carbon source. *Materials Letters*, 66(1), 222–224. <https://doi.org/10.1016/j.matlet.2011.08.081>
- Zhou, S., Du, Z., Li, X., Zhang, Y., He, Y., & Zhang, Y. (2019). Degradation of

methylene blue by natural manganese oxides: Kinetics and transformation products. *Royal Society Open Science*, 6(7).
<https://doi.org/10.1098/rsos.190351>

Zhu, Z., Huo, P., Lu, Z., Yan, Y., Liu, Z., Shi, W., Li, C., & Dong, H. (2018). Fabrication of magnetically recoverable photocatalysts using g-C₃N₄ for effective separation of charge carriers through like-Z-scheme mechanism with Fe₃O₄ mediator. *Chemical Engineering Journal*, 331(September 2017), 615–625. <https://doi.org/10.1016/j.cej.2017.08.131>

Zuo, R., Du, G., Zhang, W., Liu, L., Liu, Y., Mei, L., & Li, Z. (2014). Photocatalytic degradation of methylene blue using TiO₂ impregnated diatomite. *Advances in Materials Science and Engineering*, 2014. <https://doi.org/10.1155/2014/170148>