

DAFTAR PUSTAKA

- Abdi, M., Balagabri, M., Karimi, H., Hossini, H., & Rastegar, S. O., 2020, Degradation of crystal violet (CV) from aqueous solutions using ozone, peroxone, electroperoxone, and electrolysis processes: a comparison study. *Applied Water Science* **10**: 1-10.
- Abouri, M., Benzaouak, A., Elouardi, M., El Hamdaoui, L., Zaaboul, F., Azzaoui, K., Hammouti, B., Sabbahi, R., Jodeh, S., El Belghiti, M. A., & El Hamidi, A., 2025, Enhanced photocatalytic degradation of Rhodamine B using polyaniline-coated XTiO₃(X = Co, Ni) nanocomposites. *Scientific Reports* **15**: 3595. <https://doi.org/10.1038/s41598-024-83610-1>
- Al-Ansari, S. H., Gomaa, H., Abdel-Rahim, R. D., Ali, G. A. M., & Nagiub, A. M., 2024, Recycled gold-reduced graphene oxide nanocomposite for efficient adsorption and photocatalytic degradation of crystal violet. *Scientific Reports* **14**: 4379. <https://doi.org/10.1038/s41598-024-54580-1>
- Al-Shehri, H. S., Eyad, A., Q., A. A., S., A. H., S., A. A., & Alharthi, F. A., 2021, Effective adsorption of crystal violet from aqueous solutions with effective adsorbent: equilibrium, mechanism studies and modeling analysis. *Environmental Pollutants and Bioavailability* **33**: 214-226. <https://10.1080/26395940.2021.1960199>
- Azad, F. N., Ghaedi, M., Dashtian, K., Hajati, S., & Pezeshkpour, V., 2016, Ultrasonically assisted hydrothermal synthesis of activated carbon–HKUST-1-MOF hybrid for efficient simultaneous ultrasound-assisted removal of ternary organic dyes and antibacterial investigation: Taguchi optimization. *Ultrasonics Sonochemistry* **31**: 383-393. <https://doi.org/10.1016/j.ultsonch.2016.01.024>
- Bibi, S., Shah, S. S., Muhammad, F., Siddiq, M., Kiran, L., Aldossari, S. A., Sheikh Saleh Mushab, M., & Sarwar, S., 2023, Cu-doped mesoporous TiO₂ photocatalyst for efficient degradation of organic dye via visible light photocatalysis. *Chemosphere* **339**: 139583. <https://doi.org/10.1016/j.chemosphere.2023.139583>
- Chakravorty, A., & Roy, S., 2024, A review of photocatalysis, basic principles, processes, and materials. *Sustainable Chemistry for the Environment* **8**: 100155. <https://doi.org/10.1016/j.scenv.2024.100155>
- Chen, X., Yao, L., He, J., Li, J., Xu, S., Li, N., Zhu, Y., Chen, X., & Zhu, R., 2023, Enhanced degradation of tetracycline under natural sunlight through the synergistic effect of Ag₃PO₄/MIL-101(Fe) photocatalysis and Fenton catalysis: Mechanism, pathway, and toxicity assessment. *Journal of Hazardous Materials* **449**: 131024. <https://doi.org/10.1016/j.jhazmat.2023.131024>

- Clark, J. H., Dyer, M. S., Palgrave, R. G., Ireland, C. P., Darwent, J. R., Claridge, J. B., & Rosseinsky, M. J., 2011, Visible Light Photo-oxidation of Model Pollutants Using CaCu₃Ti₄O₁₂: An Experimental and Theoretical Study of Optical Properties, Electronic Structure, and Selectivity. *Journal of the American Chemical Society* **133**: 1016-1032. <https://10.1021/ja1090832>
- Deng, P., Xiong, J., Lei, S., Wang, W., Ou, X., Xu, Y., Xiao, Y., & Cheng, B., 2019, Nickel formate induced high-level: In situ Ni-doping of g-C₃N₄ for a tunable band structure and enhanced photocatalytic performance. *Journal of Materials Chemistry A* **7**: 22385-22397. <https://10.1039/c9ta04559g>
- Devi, L. V., Selvalakshmi, T., Sellaiyan, S., Uedono, A., Sivaji, K., & Sankar, S., 2017, Effect of La doping on the lattice defects and photoluminescence properties of CuO. *Journal of Alloys and Compounds* **709**: 496-504. <https://doi.org/10.1016/j.jallcom.2017.03.148>
- Do, J. Y., Park, N.-K., Seo, M. W., Lee, D., Ryu, H.-J., & Kang, M., 2020, Effective thermocatalytic carbon dioxide methanation on Ca-inserted NiTiO₃ perovskite. *Fuel* **271**: 117624. <https://doi.org/10.1016/j.fuel.2020.117624>
- El Desouky, F. G., Abdel Rehim, M. H., & Turkey, G., 2024, Fabrication of TiO₂/CuTiO₃/ sodium alginate nanocomposites of tuned structural, optical, fluorescence and dielectric properties. *Physica Scripta* **99**: 1059a1059. <https://10.1088/1402-4896/ad7aae>
- Goksu, A., & Tanaydin, M. K., 2017, Adsorption of hazardous crystal violet dye by almond shells and determination of optimum process conditions by Taguchi method. *Desalination and Water Treatment* **88**: 189-199. <https://doi.org/10.5004/dwt.2017.21364>
- Ha, J., Engler, C. R., & Wild, J. R., 2009, Biodegradation of coumaphos, chlorferon, and diethylthiophosphate using bacteria immobilized in Ca-alginate gel beads. *Bioresource Technology* **100**: 1138-1142.
- Jia, W. L., Li, W. J., Yuan, H. Y., Wu, X., Liu, Y., Dai, S., Cheng, Q., Liu, P. F., & Yang, H. G., 2022, Surface Cu⁺ modified ZnIn₂S₄ for promoted visible-light photocatalytic hydrogen evolution. *Journal of Energy Chemistry* **74**: 341-348. <https://10.1016/j.jechem.2022.07.022>
- Jiang, K., Jung, H., Pham, T.-T., Dao, D. Q., Nguyen, T. K. A., Yu, H., Men, Y., & Shin, E. W., 2021, Modification of NiTiO₃ visible light-driven photocatalysts by Nb doping and NbO_x heterojunction: Oxygen vacancy in the Nb-doped NiTiO₃ structure. *Journal of Alloys and Compounds* **861**: 158636. <https://doi.org/10.1016/j.jallcom.2021.158636>
- Kalia, S., Jasrotia, R., & Singh, V. P. (2023). *Magnetic Nanoferrites and Their Composites: Environmental and Biomedical Applications*: Elsevier.

- Kolhe, P. S., Shinde, A. B., Kulkarni, S. G., Maiti, N., Koinkar, P. M., & Sonawane, K. M., 2018, Gas sensing performance of Al doped ZnO thin film for H₂S detection. *Journal of Alloys and Compounds* **748**: 6-11. <https://doi.org/10.1016/j.jallcom.2018.03.123>
- Lellis, B., Fávaro-Polonio, C. Z., Pamphile, J. A., & Polonio, J. C., 2019, Effects of textile dyes on health and the environment and bioremediation potential of living organisms. *Biotechnology Research and Innovation* **3**: 275-290. <https://doi.org/10.1016/j.biori.2019.09.001>
- Li, H., Gong, H., Hao, X., Wang, G., & Jin, Z., 2022, Phosphating MIL-53(Fe) as cocatalyst modified porous NiTiO₃ for photocatalytic hydrogen production. *Renewable Energy* **188**: 132-144. <https://doi.org/10.1016/j.renene.2022.02.009>
- Liang, Y., Xu, W., Fang, J., Liu, Z., Chen, D., Pan, T., Yu, Y., & Fang, Z., 2021, Highly dispersed bismuth oxide quantum dots/graphite carbon nitride nanosheets heterojunctions for visible light photocatalytic redox degradation of environmental pollutants. *Applied Catalysis B: Environmental* **295**: 120279. <https://doi.org/10.1016/j.apcatb.2021.120279>
- Liu, C., Zhu, X., Wang, L., Feng, C., Rong, J., Li, Z., & Xu, S., 2024, Construction of NiTiO₃/g-C₃N₄ heterojunction with preferable photocatalytic performance for tetracycline degradation. *Journal of Solid State Chemistry* **339**: 124953. <https://doi.org/10.1016/j.jssc.2024.124953>
- Liu, J., Yang, Y., & Zheng, X. (2022). Chapter 2 - The fundamentals of metal oxides for electrocatalytic water splitting. In J. Qi & G. Korotcenkov (Eds.), *Metal Oxides and Related Solids for Electrocatalytic Water Splitting* (pp. 25-60): Elsevier.
- Mancuso, A., Blangetti, N., Sacco, O., Freyria, F. S., Bonelli, B., Esposito, S., Sannino, D., & Vaiano, V., 2023, Photocatalytic Degradation of Crystal Violet Dye under Visible Light by Fe-Doped TiO₂ Prepared by Reverse-Micelle Sol-Gel Method. *Nanomaterials* **13**: 270. <https://doi.org/10.3390/nano13020270>
- Mehmandost, N., Goudarzi, N., Arab Chamjangali, M., & Bagherian, G., 2022, Application of random forest for modeling batch and continuous fixed-bed removal of crystal violet from aqueous solutions using Gypsophila aretioides stem-based biosorbent. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* **265**: 120292. <https://doi.org/10.1016/j.saa.2021.120292>
- Mohanty, K., Naidu, J. T., Meikap, B., & Biswas, M., 2006, Removal of crystal violet from wastewater by activated carbons prepared from rice husk. *Industrial & engineering chemistry research* **45**: 5165-5171.

- Munawar, S., Khalid, M. H., Anwar, H., & Jamil, Y. (2024). Absorption and fluorescence properties of transition metal compounds *Modern Luminescence from Fundamental Concepts to Materials and Applications: Volume 2: Luminescence in Materials* (Vol. 2, pp. 3-29).
- Murtaza, G., Khan, M. S., Tahir, K., Khan, A. U., Zaki, M. E. A., Almarhoon, Z. M., Alanazi, A. A., Al-Shehri, H. S., Al-Saeedi, S. I., & Hassan, H. M. A., 2024, Photocatalytic applications of A5-mPmH-Zr/CuTiO₃ nanocomposite synthesized by simple hydrothermal method. *Journal of Environmental Chemical Engineering* **12**: 113345. <https://doi.org/10.1016/j.jece.2024.113345>
- Ososki, G. (2022). *Optimising spin-coated titanium dioxide photocatalysts*. Cardiff University.
- Peng, D., Wang, Y., Shi, H., Jiang, W., Jin, T., Jin, Z., & Chen, Z., 2022, Fabrication of novel Cu₂WS₄/NiTiO₃ heterostructures for efficient visible-light photocatalytic hydrogen evolution and pollutant degradation. *Journal of Colloid and Interface Science* **613**: 194-206. <https://doi.org/10.1016/j.jcis.2021.10.179>
- Qin, J., Liu, Z., Xu, W., Zhu, X., Liang, F., Yu, Y., Zheng, Y., Yao, L., Zhang, H., Lin, K., Fang, J., & Fang, Z., 2023, Heterogeneous photocatalysis coupled with Fenton-Like reaction for fluoroquinolone antibiotics degradation by poly (Triazine Imide): From mechanism to application in a continuous flow catalytic system. *Chemical Engineering Journal* **476**: 146856. <https://doi.org/10.1016/j.cej.2023.146856>
- Qin, L., Gao, H., & Meng, F. (2023). Perovskite-Structured NiTiO₃ Modified NiO Gas Sensor for Xylene Detection. *Chemosensors*, *11*(5). Retrieved from doi:<https://10.3390/chemosensors11050264>
- Sahoo, C., Gupta, A. K., & Pal, A., 2005, Photocatalytic degradation of Crystal Violet (C.I. Basic Violet 3) on silver ion doped TiO₂. *Dyes and Pigments* **66**: 189-196. <https://doi.org/10.1016/j.dyepig.2004.09.003>
- Sanakousar, F., Vidyasagar, C., Shikandar, D., Viswanatha, C., & Swapna, S. C., 2024, Electrocatalytic and photocatalytic activity of CuTiO₃ perovskites for complete degradation of methylene blue under sunlight irradiation. *Reaction Chemistry & Engineering* **9**: 388-409. DOI <https://doi.org/10.1039/D3RE00408B>
- Sasi, S., Fathima Fasna, P. H., Bindu Sharmila, T. K., Julie Chandra, C. S., Antony, J. V., Raman, V., Nair, A. B., & Ramanathan, H. N., 2022, Green synthesis of ZnO nanoparticles with enhanced photocatalytic and antibacterial activity. *Journal of Alloys and Compounds* **924**: 166431. <https://doi.org/10.1016/j.jallcom.2022.166431>

- Sekar, S., Rabani, I., Bathula, C., Kumar, S., Govindaraju, S., Yun, K., Seo, Y.-S., Kim, D. Y., & Lee, S., 2022, Graphitic carbon-encapsulated V2O5 nanocomposites as a superb photocatalyst for crystal violet degradation. *Environmental Research* **205**: 112201. <https://doi.org/10.1016/j.envres.2021.112201>
- Shah, A. H., & Rather, M. A., 2021, Effect of calcination temperature on the crystallite size, particle size and zeta potential of TiO2 nanoparticles synthesized via polyol-mediated method. *Materials Today: Proceedings* **44**: 482-488. <https://doi.org/10.1016/j.matpr.2020.10.199>
- Shukla, S. K., Pandey, S., Saha, S., Singh, H. R., Mishra, P. K., Kumar, S., & Jha, S. K., 2021, Removal of crystal violet by Cu-chitosan nano-biocomposite particles using Box–Behnken design. *Journal of Environmental Chemical Engineering* **9**: 105847. <https://doi.org/10.1016/j.jece.2021.105847>
- Sifat, M., Shin, E., Schevon, A., Ramos, H., Pophali, A., Jung, H.-J., Halada, G., Meng, Y., Olynik, N., & Sprouster, D. J., 2024, Photocatalytic Degradation of Crystal Violet (CV) Dye over Metal Oxide (MOx) Catalysts. *Catalysts* **14**: 377.
- Soares, L. G., & Alves, A. K. (2021). Photochromic Nanomaterials with Photocatalytic Application *Environmental Applications of Nanomaterials* (pp. 33-53): Springer.
- Sugashini, S., Gomathi, T., Devi, R. A., Sudha, P. N., Rambabu, K., & Banat, F., 2022, Nanochitosan/carboxymethyl cellulose/TiO2 biocomposite for visible-light-induced photocatalytic degradation of crystal violet dye. *Environmental Research* **204**: 112047. <https://doi.org/10.1016/j.envres.2021.112047>
- Sun, X., He, K., Chen, Z., Yuan, H., Guo, F., & Shi, W., 2023, Construction of visible-light-response photocatalysis-self-Fenton system for the efficient degradation of amoxicillin based on industrial waste red mud/CdS S-scheme heterojunction. *Separation and Purification Technology* **324**: 124600. <https://doi.org/10.1016/j.seppur.2023.124600>
- Surender, S., Kavipriyah, M. N., & Balakumar, S., 2023, Synergistic effect in g-C3N4/CuO nanohybrid structures as efficient electrode material for supercapacitor applications. *Inorganic Chemistry Communications* **150**: 110557. <https://doi.org/10.1016/j.inoche.2023.110557>
- Takabi, A. S., Shirani, M., & Semnani, A., 2021, Apple stem as a high performance cellulose based biosorbent for low cost and eco-friendly adsorption of crystal violet from aqueous solutions using experimental design: Mechanism, kinetic and thermodynamics. *Environmental Technology & Innovation* **24**: 101947. <https://doi.org/10.1016/j.eti.2021.101947>

- Wang, Y., Duan, W., Liu, B., Chen, X., Yang, F., & Guo, J., 2014, The effects of doping copper and mesoporous structure on photocatalytic properties of TiO₂. *Journal of Nanomaterials* **2014**: 178152. <https://doi.org/10.1155/2014/178152>
- Zhang, P., Peng, C., Li, H., Huang, J., Wang, Y., Yu, Y., Ding, S., Liu, S., & Zhao, Y., 2022, Wavelength-dependent generation of reactive species in the photodegradation process over pure and C-doped Nb₂O₅. *Separation and Purification Technology* **286**: 120406.