REFERENCES

World Health Organization. (2011). Nitrate and nitrite in drinking-water: Background document for development of WHO Guidelines for Drinking-water Quality (WHO/SDE/WSH/07.01/16/Rev/1). World Health Organization.

WWAP- World Water Assessment Program. (2009). The United Nations World Water Development Report 3: Water in a Changing World. 2009: UNESCO and London: Earthscan.

CDPH. (2013). California Department of Public Health. Retrieved from Drinking water contaminants: Nitrate: http://www.ehib.org/page.jsp?page_key=14

Acharya, S., Khandegar, V., & Sharma, S. K. (2022). Nitrate removal from synthetic and real groundwater by electrocoagulation : effect of operating parameters and electrolytes. *International Journal of Environmental Analytical Chemistry*, *00*(00), 1–19. https://doi.org/10.1080/03067319.2021.2023513

Adimalla, N., Qian, H., & Tiwari, D. M. (2021). Groundwater chemistry, distribution and potential health risk appraisal of nitrate enriched groundwater: A case study from the semi-urban region of South India. *Ecotoxicology and Environmental Safety*, *207*(126), 111277. https://doi.org/10.1016/j.ecoenv.2020.111277

Al-Nuaim, M. A., Alwasiti, A. A., & Shnain, Z. Y. (2023). The photocatalytic process in the treatment of polluted water. *Chemical Papers*, *77*(2), 677–701. https://doi.org/10.1007/s11696-022-02468-7

Ali, A., Wu, Z., Li, M., & Su, J. (2021). Carbon to nitrogen ratios influence the removal performance of calcium, fluoride, and nitrate by Acinetobacter H12 in a quartz sand-filled biofilm reactor. *Bioresource Technology*, *333*(February), 125154. https://doi.org/10.1016/j.biortech.2021.125154

Ali, M. E. A., Zaghlool, E., Khalil, M., & Kotp, Y. H. (2022). Surface and internal modification of composite ion exchange membranes for removal of molybdate , phosphate , and nitrate from polluted groundwater. *Arabian Journal of Chemistry*, *15*(4), 103747.

https://doi.org/10.1016/j.arabjc.2022.103747

Amarine, M., Lekhlif, B., Sinan, M., El Rharras, A., & Echaabi, J. (2020). Treatment of nitrate-rich groundwater using electrocoagulation with aluminum anodes. *Groundwater for Sustainable Development*, *11*(March), 100371. https://doi.org/10.1016/j.gsd.2020.100371

Apshankar, K. R., & Goel, S. (2020). Nitrate removal from drinking water using direct current or solar powered electrocoagulation. *SN Applied Sciences*, *2*(2). https://doi.org/10.1007/s42452-020-2069-9

Archna, Sharma, S. K., & Sobti, R. C. (2012). Nitrate removal from ground water: A review. *E-Journal of Chemistry*, *9*(4), 1667–1675. https://doi.org/10.1155/2012/154616

Baba, T., Tohjo, Y., Takahashi, T., Sawada, H., & Ono, Y. (2001). Properties of chemisorbed hydrogen species on Ag-A zeolite partially reduced with hydrogen as studied by 1H MAS NMR. *Catalysis Today*, *66*(1), 81–89. https://doi.org/10.1016/S0920-5861(00)00607-6

Bahadori, E., Compagnoni, M., Tripodi, A., Freyria, F., Armandi, M., Bonelli, B., Ramis, G., & Rossetti, I. (2018). Photoreduction of nitrates from waste and drinking water. *Materials Today: Proceedings*, *5*(9), 17404–17413. https://doi.org/10.1016/j.matpr.2018.06.042

Beltrame, T. F., Carvalho, D., Marder, L., Ulla, M. A., Marchesini, F. A., & Bernardes, A. M. (2020). Comparison of different electrode materials for the nitrate electrocatalytic reduction in a dual-chamber cell. *Journal of Environmental Chemical Engineering*, *8*(5), 104120. https://doi.org/10.1016/j.jece.2020.104120

Beltrame, T. F., Zoppas, F. M., Marder, L., Marchesini, F. A., Miró, E., & Bernardes, A. M. (2020). Use of a two-step process to denitrification of synthetic brines: electroreduction in a dual-chamber cell and catalytic reduction. *Environmental Science and Pollution Research*, *27*(2), 1956–1968. https://doi.org/10.1007/s11356-019-06763-x

Bhatnagar, A., & Sillanpää, M. (2011). A review of emerging adsorbents for nitrate removal from water. *Chemical Engineering Journal*, *168*(2), 493–504. https://doi.org/10.1016/j.cej.2011.01.103

BIS. (2012). Indian Standard Drinking Water Specification (Second Revision). *Bureau of Indian*

Standards, *IS 10500*(May), 1–11. http://cgwb.gov.in/Documents/WQ-standards.pdf

Bondonno, C. P., Blekkenhorst, L. C., Liu, A. H., Bondonno, N. P., Ward, N. C., Croft, K. D., & Hodgson, J. M. (2018). Vegetable-derived bioactive nitrate and cardiovascular health. *Molecular Aspects of Medicine*, *61*, 83–91. https://doi.org/10.1016/j.mam.2017.08.001

Bosko, M. L., Rodrigues, M. A. S., Ferreira, J. Z., Miró, E. E., & Bernardes, A. M. (2014). Nitrate reduction of brines from water desalination plants by membrane electrolysis. *Journal of Membrane Science*, *451*, 276–284. https://doi.org/10.1016/j.memsci.2013.10.004

Bosman, C. (2009). The hidden dragon: nitrate pollution from open-pit mines - a case study from the Limpopo province, South Africa. *Abstracts of the International Mine Water Conference*, *October*, 849–857.

Brkić, D., Bošnir, J., Bevardi, M., Bošković, A. G., Miloš, S., Lasić, D., Krivohlavek, A., Racz, A., Ćuić, A. M., & Trstenjak, N. U. (2017). Brkic et al ., Afr J Tradit Complement Altern Med ., (2017) 14 (3): 31-41 Brkic et al ., Afr J Tradit Complement Altern Med ., (2017) 14 (3): 31-41. *African Journal of Traditional, Complementary and Alternative Medicines*, *14*(3), 31–41.

Chanakya, V., & Jeevan Rao, K. (2010). Impact of industrial effluents on groundwater quality. *Journal of Environmental Science and Engineering*, *52*(1), 41–46.

Chang, Q., Ali, A., Su, J., Wen, Q., Bai, Y., & Gao, Z. (2021). *Bioresource Technology Simultaneous removal of nitrate , manganese , and tetracycline by Zoogloea sp . MFQ7 : Adsorption mechanism of tetracycline by biological precipitation*. *340*(July).

Chauhan, R., & Srivastava, V. C. (2019). Electrochemical denitrification of highly contaminated actual nitrate wastewater by Ti/RuO2 anode and iron cathode. *Chemical Engineering Journal*, *386*(xxxx), 122065. https://doi.org/10.1016/j.cej.2019.122065

Chauhan, R., & Srivastava, V. C. (2022). Mechanistic kinetic modeling of simultaneous electrochemical nitrate reduction and ammonium ion oxidation in wastewater. *Chemical Engineering Science*, *247*, 117025. https://doi.org/10.1016/j.ces.2021.117025

Chen, G., & Liu, H. (2020). Photochemical removal of hexavalent chromium and nitrate from ion- exchange brine waste using carbon-centered radicals. *Chemical Engineering Journal*, *396*(April), 125136. https://doi.org/10.1016/j.cej.2020.125136

Cheng, H. Y., Xu, A. A., Kumar Awasthi, M., Kong, D. D., Chen, J. S., Wang, Y. F., & Xu, P. (2020). Aerobic denitrification performance and nitrate removal pathway analysis of a novel fungus Fusarium solani RADF-77. *Bioresource Technology*, *295*. https://doi.org/10.1016/j.biortech.2019.122250

Cho, D., Song, H., Schwartz, F. W., Kim, B., & Jeon, B. (2015). Chemosphere The role of magnetite nanoparticles in the reduction of nitrate in groundwater by zero-valent iron. *CHEMOSPHERE*, *125*, 41–49. https://doi.org/10.1016/j.chemosphere.2015.01.019

Choi, J., Choi, J., Du, H. L., Du, H. L., Nguyen, C. K., Nguyen, C. K., Suryanto, B. H. R., Simonov, A. N., Simonov, A. N., MacFarlane, D. R., & MacFarlane, D. R. (2020). Electroreduction of Nitrates, Nitrites, and Gaseous Nitrogen Oxides: A Potential Source of Ammonia in Dinitrogen Reduction Studies. *ACS Energy Letters*, *5*(6), 2095–2097. https://doi.org/10.1021/acsenergylett.0c00924

Choudhary, M., Muduli, M., & Ray, S. (2022). A comprehensive review on nitrate pollution and its remediation : conventional and recent approaches. *Sustainable Water Resources Management*, *8*(4), 1–25. https://doi.org/10.1007/s40899-022-00708-y

Çirmi, D., Aydin, R., & Köleli, F. (2015). The electrochemical reduction of nitrate ion on polypyrrole coated copper electrode. *Journal of Electroanalytical Chemistry*, *736*, 101–106. https://doi.org/10.1016/j.jelechem.2014.10.024

Colla, G., Kim, H. J., Kyriacou, M. C., & Rouphael, Y. (2018). Nitrate in fruits and vegetables. *Scientia Horticulturae*, *237*(April), 221–238. https://doi.org/10.1016/j.scienta.2018.04.016

Couto, A. B., Oishi, S. S., & Ferreira, N. G. (2016). Enhancement of nitrate electroreduction using BDD anode and metal modified carbon fiber cathode. *Journal of Industrial and Engineering Chemistry*, *39*(3), 210–217. https://doi.org/10.1016/j.jiec.2016.05.028

Cyplik, P., Marecik, R., Piotrowska-Cyplik, A., Olejnik, A., Drozdzyńska, A., & Chrzanowski, Ł. (2012). Biological denitrification of high nitrate processing wastewaters from explosives production plant. *Water, Air, and Soil Pollution*, *223*(4), 1791–1800. https://doi.org/10.1007/s11270-011-0984-5

Dash, B. P., & Chaudhari, S. (2005). Electrochemical denitrificaton of simulated ground water. *Water Research*, *39*(17), 4065–4072. https://doi.org/10.1016/j.watres.2005.07.032

Deng, M., Dai, Z., Senbati, Y., Li, L., Song, K., & He, X. (2020). Aerobic Denitrification Microbial Community and Function in Zero-Discharge Recirculating Aquaculture System Using a Single Biofloc-Based Suspended Growth Reactor: Influence of the Carbon-to-Nitrogen Ratio. *Frontiers in Microbiology*, *11*(August), 1–11. https://doi.org/10.3389/fmicb.2020.01760

Devaraj, N., Chidambaram, S., Vasudevan, U., Pradeep, K., Nepolian, M., Prasanna, M. V., Adithya, V. S., Thilagavathi, R., Thivya, C., & Panda, B. (2020). Determination of the major geochemical processes of groundwater along the Cretaceous-Tertiary boundary of Trichinopoly, Tamilnadu, India. *Acta Geochimica*, *39*(5), 760–781. https://doi.org/10.1007/s11631-020-00399-2

Dhamole, P. B., Nair, R. R., D'Souza, S. F., & Lele, S. S. (2007). Denitrification of high strength nitrate waste. *Bioresource Technology*, *98*(2), 247–252. https://doi.org/10.1016/j.biortech.2006.01.019

Dima, G. E., De Vooys, A. C. A., & Koper, M. T. M. (2003). Electrocatalytic reduction of nitrate at low concentration on coinage and transition-metal electrodes in acid solutions. *Journal of Electroanalytical Chemistry*, *554–555*(1), 15–23. https://doi.org/10.1016/S0022-0728(02)01443-2

Ding, J., Li, W., Zhao, Q. L., Wang, K., Zheng, Z., & Gao, Y. Z. (2015). Electroreduction of nitrate in water: Role of cathode and cell configuration. *Chemical Engineering Journal*, *271*, 252–259. https://doi.org/10.1016/j.cej.2015.03.001

Djouadi Belkada, F., Kitous, O., Drouiche, N., Aoudj, S., Bouchelaghem, O., Abdi, N., Grib, H., & Mameri, N. (2018). Electrodialysis for fluoride and nitrate removal from synthesized photovoltaic industry wastewater. *Separation and Purification Technology*, *204*(October 2017), 108–115. https://doi.org/10.1016/j.seppur.2018.04.068

Duan, W., Li, G., Lei, Z., Zhu, T., Xue, Y., Wei, C., & Feng, C. (2019). Highly active and durable carbon electrocatalyst for nitrate reduction reaction. *Water Research*, *161*, 126–135. https://doi.org/10.1016/j.watres.2019.05.104

El-Nahhal, Y. (2018). Nitrate Residues in Fruits, Vegetables and Bread Samples and Their Health Consequences. *Health*, *10*(04), 487–501. https://doi.org/10.4236/health.2018.104039

Eltigani, O. M. O., Abdallaziz, A. A., & Eltigani, O. M. O. (2013). Nitrate Contamination of Public Drinking Water Sources in Shendi Locality, River Nile State Sudan. *Greener Journal of Epidemiology and Public Health*, *1*(1), 006–009. https://doi.org/10.15580/gjeph.2013.1.021813474

Epsztein, R., Nir, O., Lahav, O., & Green, M. (2015). Selective nitrate removal from groundwater using a hybrid nanofiltration – reverse osmosis filtration scheme. *CHEMICAL ENGINEERING JOURNAL*, *279*, 372–378. https://doi.org/10.1016/j.cej.2015.05.010

Favarini Beltrame, T., Gomes, M. C., Marder, L., Marchesini, F. A., Ulla, M. A., & Moura Bernardes, A. (2020a). Use of copper plate electrode and Pd catalyst to the nitrate reduction in an electrochemical dual-chamber cell. *Journal of Water Process Engineering*, *35*(November 2019), 101189. https://doi.org/10.1016/j.jwpe.2020.101189

Favarini Beltrame, T., Gomes, M. C., Marder, L., Marchesini, F. A., Ulla, M. A., & Moura Bernardes, A. (2020b). Use of copper plate electrode and Pd catalyst to the nitrate reduction in an electrochemical dual-chamber cell. *Journal of Water Process Engineering*, *35*(April 2019), 101189. https://doi.org/10.1016/j.jwpe.2020.101189

Fernández-Nava, Y., Marañón, E., Soons, J., & Castrillón, L. (2008). Denitrification of wastewater containing high nitrate and calcium concentrations. *Bioresource Technology*, *99*(17), 7976–7981. https://doi.org/10.1016/j.biortech.2008.03.048

Gabaldón, C., Izquierdo, M., Martínez-Soria, V., Marzal, P., Penya-roja, J. M., & Javier Alvarez-Hornos, F. (2007). Biological nitrate removal from wastewater of a metal-finishing industry. *Journal of Hazardous Materials*, *148*(1–2), 485–490. https://doi.org/10.1016/j.jhazmat.2007.02.071

Gao, W., Gao, L., Li, D., Huang, K., Cui, L., Meng, J., & Liang, J. (2018). Removal of nitrate from water by the electrocatalytic denitrification on the Cu-Bi electrode. *Journal of Electroanalytical Chemistry*, *817*, 202–209.

https://doi.org/10.1016/j.jelechem.2018.04.006

Garcia-Segura, S., Lanzarini-Lopes, M., Hristovski, K., & Westerhoff, P. (2018). Electrocatalytic reduction of nitrate: Fundamentals to full-scale water treatment applications. *Applied Catalysis B: Environmental*, *236*, 546–568. https://doi.org/10.1016/j.apcatb.2018.05.041

Gayen, P., Spataro, J., Avasarala, S., Ali, A. M., Cerrato, J. M., & Chaplin, B. P. (2018). Electrocatalytic Reduction of Nitrate Using Magnéli Phase TiO2 Reactive Electrochemical Membranes Doped with Pd-Based Catalysts. *Environmental Science and Technology*, *52*(16), 9370–9379. https://doi.org/10.1021/acs.est.8b03038

Genders, J. D., Hartsough, D., & Hobbs, D. T. (1996). Electrochemical reduction of nitrates and nitrites in alkaline nuclear waste solutions. *Journal of Applied Electrochemistry*, *26*(1), 1–9. https://doi.org/10.1007/BF00248182

Georgeaud, V., Diamand, A., Borrut, D., Grange, D., & Coste, M. (2011). Electrochemical treatment of wastewater polluted by nitrate: Selective reduction to N2on Boron-Doped Diamond cathode. *Water Science and Technology*, *63*(2), 206–212. https://doi.org/10.2166/wst.2011.034

González-Morales, C., Fernández, B., Molina, F. J., Naranjo-Fernández, D., Matamoros-Veloza, A., & Camargo-Valero, M. A. (2021). Influence of ph and temperature on struvite purity and recovery from anaerobic digestate. *Sustainability (Switzerland)*, *13*(19), 1–14. https://doi.org/10.3390/su131910730

Govindan, K., Noel, M., & Mohan, R. (2015). Removal of nitrate ion from water by electrochemical approaches. *Journal of Water Process Engineering*, *6*, 58–63. https://doi.org/10.1016/j.jwpe.2015.02.008

Guo, X., Yang, Z., Liu, H., Lv, X., Tu, Q., Ren, Q., & Xia, X. (2015). Common oxidants activate the reactivity of zero-valent iron (ZVI) and hence remarkably enhance nitrate reduction from water. *SEPARATION AND PURIFICATION TECHNOLOGY*, *146*, 227–234. https://doi.org/10.1016/j.seppur.2015.03.059

Ha, H., & Payer, J. (2011). The effect of silver chloride formation on the kinetics of silver dissolution in chloride solution. *Electrochimica Acta*, *56*(7), 2781–2791.

https://doi.org/10.1016/j.electacta.2010.12.050

Hamam, A., & Maiza, M. (2022). Electrocatalytic reduction of nitrate to nitrogen on silver nanoparticles-polypyrrole composite film grown on cellulosic paper substrate. *International Journal of Environmental Analytical Chemistry*, 1–9. https://doi.org/10.1080/03067319.2022.2118588

Hao, X. D., Wang, C. C., Lan, L., & Van Loosdrecht, M. C. M. (2008). Struvite formation, analytical methods and effects of pH and Ca 2+. *Water Science and Technology*, *58*(8), 1687–1692. https://doi.org/10.2166/wst.2008.557

Herschy, R. W. (2012). Water quality for drinking: WHO guidelines. *Encyclopedia of Earth Sciences Series*, 876–883. https://doi.org/10.1007/978-1-4020-4410-6_184

Hirata, A., Nakamura, Y., & Tsuneda, S. (2001). Biological nitrogen removal from industrial wastewater discharged from metal recovery processes. *Water Science and Technology*, *44*(2–3), 171–179. https://doi.org/10.2166/wst.2001.0767

Hord, N. G., Tang, Y., & Bryan, N. S. (2009). Food sources of nitrates and nitrites: The physiologic context for potential health benefits. *American Journal of Clinical Nutrition*, *90*(1), 1–10. https://doi.org/10.3945/ajcn.2008.27131

Hôrold, S., Tacke, T., & Vorlop, K. D. (1993). Catalytical removal of nitrate and nitrite from drinking water: 1. screening for hydrogenation catalysts and influence of reaction conditions on activity and selectivity. *Environmental Technology (United Kingdom)*, *14*(10), 931–939. https://doi.org/10.1080/09593339309385367

Hou, Z., Chu, J., Liu, C., Wang, J., Li, A., Lin, T., & François-xavier, C. P. (2021). High efficient photocatalytic reduction of nitrate to N 2 by Core-shell Ag / SiO 2 @ c TiO 2 with synergistic effect of light scattering and surface plasmon resonance. *Chemical Engineering Journal*, *415*(February), 128863. https://doi.org/10.1016/j.cej.2021.128863

Hu, S., Wu, Y., Zhang, Y., & Zhou, B. (2018). *Nitrate Removal from Groundwater by Heterotrophic / Autotrophic Denitrification Using Easily Degradable Organics and Nano-Zero Valent Iron as Co-Electron Donors*.

Huang, Q., Alengebawy, A., Zhu, X., Raza, A. F., Chen, L., Chen, W., Guo, J., Ai, P., & Li, D.

(2022). Performance of Paracoccus pantotrophus MA3 in heterotrophic nitrification–anaerobic denitrification using formic acid as a carbon source. *Bioprocess and Biosystems Engineering*, *45*(10), 1661–1672. https://doi.org/10.1007/s00449-022-02771-3

Huno, S. K. M., Rene, E. R., Van Hullebusch, E. D., & Annachhatre, A. P. (2018). Nitrate removal from groundwater: A review of natural and engineered processes. *Journal of Water Supply: Research and Technology - AQUA*, *67*(8), 885–902. https://doi.org/10.2166/aqua.2018.194

Huo, X., Van Hoomissen, D. J., Liu, J., Vyas, S., & Strathmann, T. J. (2017). Hydrogenation of aqueous nitrate and nitrite with ruthenium catalysts. *Applied Catalysis B: Environmental*, *211*, 188–198. https://doi.org/10.1016/j.apcatb.2017.04.045

Hurtado-Martinez, M., Muñoz-Palazon, B., Robles-Arenas, V. M., Gonzalez-Martinez, A., & Gonzalez-Lopez, J. (2021). Biological nitrate removal from groundwater by an aerobic granular technology to supply drinking water at pilot-scale. *Journal of Water Process Engineering*, *40*(October). https://doi.org/10.1016/j.jwpe.2020.101786

Ingle, J., & Patel, U. (2022). Electrochemical Reduction of Nitrate in the Presence of Silver-Coated Polyvinyl Alcohol Beads as Spatially Suspended Catalyst. *SSRN Electronic Journal*, *49*(August), 103082. https://doi.org/10.2139/ssrn.4116310

Jabr, G., Saidan, M., & Al-Hmoud, N. (2019). Phosphorus recovery by struvite formation from al samra municipal wastewater treatment plant in jordan. *Desalination and Water Treatment*, *146*(April), 315–325. https://doi.org/10.5004/dwt.2019.23608

Jaworski, M. A., Navas, M., Bertolini, G. R., Peroni, M. B., Cabello, C. I., Gazzoli, D., & Casella, M. L. (2020). Catalytic hydrogenation of nitrate in water. Improvement of the activity and selectivity to N2 by using Rh(III)-hexamolybdate supported on ZrO2-Al2O3. *Environmental Technology (United Kingdom)*, *0*(0), 1–37. https://doi.org/10.1080/09593330.2020.1797895

Jonoush, Z. A., Rezaee, A., & Ghaffarinejad, A. (2020). Electrocatalytic nitrate reduction using Fe0/Fe3O4 nanoparticles immobilized on nickel foam: Selectivity and energy consumption studies. *Journal of Cleaner Production*, *242*, 118569. https://doi.org/10.1016/j.jclepro.2019.118569

Jung, S., Kwon, E. E., & Park, Y. K. (2021). Catalytic hydrodeoxygenation for upgrading of lignin-derived bio-oils. *Biomass, Biofuels, Biochemicals: Lignin Biorefinery*, 129–145. https://doi.org/10.1016/B978-0-12-820294-4.00010-7

Kapil, V., Weitzberg, E., Lundberg, J. O., & Ahluwalia, A. (2014). Clinical evidence demonstrating the utility of inorganic nitrate in cardiovascular health. *Nitric Oxide - Biology and Chemistry*, *38*(1), 45–57. https://doi.org/10.1016/j.niox.2014.03.162

Koparal, A. S., & Öütveren, Ü. B. (2002). Removal of nitrate from water by electroreduction and electrocoagulation. *Journal of Hazardous Materials*, *89*(1), 83–94. https://doi.org/10.1016/S0304-3894(01)00301-6

Kshetrimayum, K. S., & Thokchom, L. (2017). A hydrogeochemical approach to evaluate the occurrence and source of salinization in the shallow aquifers of the southeastern Imphal valley in the Indo-Myanmar range of Northeast India. *Environmental Earth Sciences*, *76*(20). https://doi.org/10.1007/s12665-017-7036-4

Kumar, R., & Pal, P. (2015). Assessing the feasibility of N and P recovery by struvite precipitation from nutrient-rich wastewater: a review. *Environmental Science and Pollution Research*, *22*(22), 17453–17464. https://doi.org/10.1007/s11356-015-5450-2

Labarca, F., & Bórquez, R. (2020). Science of the Total Environment Comparative study of nano fi ltration and ion exchange for nitrate reduction in the presence of chloride and iron in groundwater. *Science of the Total Environment*, *723*, 137809. https://doi.org/10.1016/j.scitotenv.2020.137809

Lacasa, E., Cañizares, P., Sáez, C., Fernández, F. J., & Rodrigo, M. A. (2011). Removal of nitrates from groundwater by electrocoagulation. *Chemical Engineering Journal*, *171*(3), 1012–1017. https://doi.org/10.1016/j.cej.2011.04.053

Lan, H., Liu, X., Liu, H., Liu, R., Hu, C., & Qu, J. (2016). Efficient Nitrate Reduction in a Fluidized Electrochemical Reactor Promoted by Pd-Sn/AC Particles. *Catalysis Letters*, *146*(1), 91–99. https://doi.org/10.1007/s10562-015-1615-3

Le Moal, M., Gascuel-Odoux, C., Ménesguen, A., Souchon, Y., Étrillard, C., Levain, A., Moatar, F., Pannard, A., Souchu, P., Lefebvre, A., & Pinay, G. (2019). Eutrophication: A new wine in an old bottle? *Science of the Total Environment*, *651*, 1–11.

https://doi.org/10.1016/j.scitotenv.2018.09.139

Lee, E. Y., Oh, M. H., Yang, S. H., & Yoon, T. H. (2015). Struvite crystallization of anaerobic digestive fluid of swine manure containing highly concentrated nitrogen. *Asian-Australasian Journal of Animal Sciences*, *28*(7), 1053–1060. https://doi.org/10.5713/ajas.14.0679

Lei, F., Li, K., Yang, M., Yu, J., Xu, M., Zhang, Y., Xie, J., Hao, P., Cui, G., & Tang, B. (2022). Electrochemical reduction of nitrate on silver surface and an in situ Raman spectroscopy study. *Inorganic Chemistry Frontiers*, *9*(11), 2734–2740. https://doi.org/10.1039/d2qi00489e

Lejarazu-larrañaga, A., Ortiz, J. M., Molina, S., & Pawlowski, S. (2022). *Nitrate Removal by Donnan Dialysis and Anion-Exchange Membrane Bioreactor Using Upcycled End-of-Life Reverse Osmosis Membranes*.

Li, W., Xiao, C., Zhao, Y., Zhao, Q., Fan, R., & Xue, J. (2016). Electrochemical Reduction of High-Concentrated Nitrate Using Ti/TiO2 Nanotube Array Anode and Fe Cathode in Dual-Chamber Cell. *Catalysis Letters*, *146*(12), 2585–2595. https://doi.org/10.1007/s10562-016-1894-3

Li, X., Gu, Y., Wu, S., Chen, S., Quan, X., & Yu, H. (2021). Selective reduction of nitrate to ammonium over charcoal electrode derived from natural wood. *Chemosphere*, *285*(March), 131501. https://doi.org/10.1016/j.chemosphere.2021.131501

Liao, R., Shen, K., Li, A. M., Shi, P., Li, Y., Shi, Q., & Wang, Z. (2013). High-nitrate wastewater treatment in an expanded granular sludge bed reactor and microbial diversity using 454 pyrosequencing analysis. *Bioresource Technology*, *134*, 190–197. https://doi.org/10.1016/j.biortech.2012.12.057

Liu, J., Su, J., Ali, A., Wang, Z., Chen, C., & Xu, L. (2021). Role of porous polymer carriers and iron-carbon bioreactor combined micro-electrolysis and biological denitrification in efficient removal of nitrate from wastewater under low carbon to nitrogen ratio. *Bioresource Technology*, *321*(October 2020), 124447. https://doi.org/10.1016/j.biortech.2020.124447

Liu, Z., Luo, X., Shao, S., & Xia, X. (2023). Electrocatalytic reduction of nitrate using Pd-Cu modified carbon nanotube membranes. *Frontiers of Environmental Science and Engineering*, *17*(4), 1–11. https://doi.org/10.1007/s11783-023-1640-1

Ma, L., Hu, L., Feng, X., & Wang, S. (2018). Nitrate and nitrite in health and disease. *Aging and Disease*, *9*(5), 938–945. https://doi.org/10.14336/AD.2017.1207

Matei, A., & Racoviteanu, G. (2021). Review of the technologies for nitrates removal from water intended for human consumption. *IOP Conference Series: Earth and Environmental Science*, *664*(1). https://doi.org/10.1088/1755-1315/664/1/012024

Mendrinou, P., Hatzikioseyian, A., Kousi, P., Oustadakis, P., Tsakiridis, P., & Remoundaki, E. (2021). Simultaneous Removal of Soluble Metal Species and Nitrate from Acidic and Saline Industrial Wastewater in a Pilot-Scale Biofilm Reactor. *Environmental Processes*, *8*(4), 1481–1499. https://doi.org/10.1007/s40710-021-00536-w

Mirzaei, P., Bastide, S., Aghajani, A., Bourgon, J., Zlotea, C., Laurent, M., Latroche, M., & Cachet-Vivier, C. (2018). Electrocatalytic Reduction of Nitrate and Nitrite at CuRh Nanoparticles/C Composite Electrodes. *Electrocatalysis*, *9*(3), 343–351. https://doi.org/10.1007/s12678-017-0437-z

Mohseni-Bandpi, A., Elliott, D. J., & Zazouli, M. A. (2013). Biological nitrate removal processes from drinking water supply - A review. *Journal of Environmental Health Science and Engineering*, *11*(1), 1–11. https://doi.org/10.1186/2052-336X-11-35

Moloantoa, K. M., Khetsha, Z. P., van Heerden, E., Castillo, J. C., & Cason, E. D. (2022). Nitrate Water Contamination from Industrial Activities and Complete Denitrification as a Remediation Option. *Water (Switzerland)*, *14*(5), 1–31. https://doi.org/10.3390/w14050799

Mpongwana, N., Rathilal, S., & Tetteh, E. K. (2022). Recovery Strategies for Heavy Metal-Inhibited Biological Nitrogen Removal from Wastewater Treatment Plants: A Review. *Microorganisms*, *10*(9). https://doi.org/10.3390/microorganisms10091834

Ng, L. Y., Mohammad, A. W., Rohani, R., & Hairom, N. H. H. (2016). Development of a nanofiltration membrane for humic acid removal through the formation of polyelectrolyte multilayers that contain nanoparticles. *Desalination and Water Treatment*, *57*(17), 7627–7636. https://doi.org/10.1080/19443994.2015.1029009

Nur, T., Shim, W. G., Loganathan, P., Vigneswaran, S., & Kandasamy, J. (2014). *Nitrate removal using Purolite A520E ion exchange resin : batch and fixed-bed column adsorption modelling*. https://doi.org/10.1007/s13762-014-0510-6

Ohlinger, K. N., Young, T. M., & Schroeder, E. D. (1998). Predicting struvite formation in digestion. *Water Research*, *32*(12), 3607–3614. https://doi.org/10.1016/S0043-1354(98)00123-7

Pang, Y., & Wang, J. (2021). Various electron donors for biological nitrate removal: A review. *Science of the Total Environment*, *794*, 148699. https://doi.org/10.1016/j.scitotenv.2021.148699

Panneerselvam, B., Muniraj, K., Duraisamy, K., Pande, C., Karuppannan, S., & Thomas, M. (2022). An integrated approach to explore the suitability of nitrate-contaminated groundwater for drinking purposes in a semiarid region of India. *Environmental Geochemistry and Health*, *0123456789*. https://doi.org/10.1007/s10653-022-01237-5

Pant, D., Keesari, T., Rishi, M., Jaryal, A., Sharma, D. A., Thakur, N., Singh, G., Kamble, S. N., Sangwan, P., Sinha, U. K., & Tripathi, R. M. (2020). Quality and Quantity of Groundwater in Highly Exploited Aquifers of Northwest India. *Journal of Hazardous, Toxic, and Radioactive Waste*, *24*(2), 1–16. https://doi.org/10.1061/(asce)hz.2153-5515.0000483

Park, J., Park, S. H., Jeong, S. H., Lee, J. Y., & Song, J. Y. (2023). Corrosion behavior of silver-coated conductive yarn. *Frontiers in Chemistry*, *11*(March), 1–10. https://doi.org/10.3389/fchem.2023.1090648

Parsons, S. A., & Doyle, J. D. (2002). Struvite formation, control and recovery. *Water Research*, *36*(16), 3925–3940.

Parvizishad, M., Dalvand, A., Mahvi, A. H., & Goodarzi, F. (2017). A Review of Adverse Effects and Benefits of Nitrate and Nitrite in Drinking Water and Food on Human Health. *Health Scope*, *In Press*(In Press). https://doi.org/10.5812/jhealthscope.14164

Patel, N., Lal, A., Akansha, S., Anurag, P., Shailendra, S., & Singh, K. (2022). Nitrate contamination in water resources , human health risks and its remediation through adsorption : a focused review. *Environmental Science and Pollution Research*. https://doi.org/10.1007/s11356-022-22377-2

Patel, U. D., & Suresh, S. (2008). Effects of solvent, pH, salts and resin fatty acids on the dechlorination of pentachlorophenol using magnesium-silver and magnesium-palladium bimetallic systems. *Journal of Hazardous Materials*, *156*(1–3), 308–316. https://doi.org/10.1016/j.jhazmat.2007.12.021

Patel, U., & Suresh, S. (2006). Dechlorination of chlorophenols by magnesium-silver bimetallic system. *Journal of Colloid and Interface Science*, *299*(1), 249–259. https://doi.org/10.1016/j.jcis.2006.01.047

Pazhuparambil Jayarajan, S. K., & Kuriachan, L. (2021). Exposure and health risk assessment of nitrate contamination in groundwater in Coimbatore and Tirupur districts in Tamil Nadu, South India. *Environmental Science and Pollution Research*, *28*(8), 10248–10261. https://doi.org/10.1007/s11356-020-11552-y

Perera, M. K., Englehardt, J. D., & Dvorak, A. C. (2019). Technologies for Recovering Nutrients from Wastewater: A Critical Review. *Environmental Engineering Science*, *36*(5), 511–529. https://doi.org/10.1089/ees.2018.0436

Pérez-Gallent, E., Figueiredo, M. C., Katsounaros, I., & Koper, M. T. M. (2017). Electrocatalytic reduction of Nitrate on Copper single crystals in acidic and alkaline solutions. *Electrochimica Acta*, *227*, 77–84. https://doi.org/10.1016/j.electacta.2016.12.147

Picetti, R., Deeney, M., Pastorino, S., Miller, M. R., Shah, A., Leon, D. A., Dangour, A. D., & Green, R. (2022). Nitrate and nitrite contamination in drinking water and cancer risk: A systematic review with meta-analysis. *Environmental Research*, *210*(February), 112988. https://doi.org/10.1016/j.envres.2022.112988

Popli, S. A., Patel, P., Date, M., Ruparelia, J., & Patel, U. D. (2021). Rapid electro-catalytic reduction of azo dyes and phenolic compounds in the presence of metallic palladium. *Separation and Purification Technology*, *254*(September 2020), 117658. https://doi.org/10.1016/j.seppur.2020.117658

Popli, S., & Patel, U. D. (2017). Mechanistic aspects of electro-catalytic reduction of Reactive Black 5 dye in a divided cell in the presence of silver nano-particles. *Separation and Purification Technology*, *179*, 494–503. https://doi.org/10.1016/j.seppur.2017.02.005

Puchongkawarin, C., Gomez-Mont, C., Stuckey, D. C., & Chachuat, B. (2015). Optimization-based methodology for the development of wastewater facilities for energy and nutrient recovery. *Chemosphere*, *140*, 150–158. https://doi.org/10.1016/j.chemosphere.2014.08.061

Qi, L., Li, L., Yin, L., & Zhang, W. (2022). Study on the properties of denitrifying carbon sources from cellulose plants and their nitrogen removal mechanisms. *Water Science and Technology*, *85*(2), 719–730. https://doi.org/10.2166/wst.2021.626

Rahimi, S., Modin, O., & Mijakovic, I. (2020). Technologies for biological removal and recovery of nitrogen from wastewater. *Biotechnology Advances*, *43*(June), 107570. https://doi.org/10.1016/j.biotechadv.2020.107570

Rahman, A., Mondal, N. C., & Tiwari, K. K. (2021). Anthropogenic nitrate in groundwater and its health risks in the view of background concentration in a semi arid area of Rajasthan, India. *Scientific Reports*, *11*(1), 1–13. https://doi.org/10.1038/s41598-021-88600-1

Rao, X., Shao, X., Xu, J., Yi, J., Qiao, J., Li, Q., Wang, H., Chien, M., Inoue, C., Liu, Y., & Zhang, J. (2019). Efficient nitrate removal from water using selected cathodes and Ti/PbO2 anode: Experimental study and mechanism verification. *Separation and Purification Technology*, *216*(December 2018), 158–165. https://doi.org/10.1016/j.seppur.2019.02.009

Reyter, D., Bélanger, D., & Roué, L. (2011). Optimization of the cathode material for nitrate removal by a paired electrolysis process. *Journal of Hazardous Materials*, *192*(2), 507–513. https://doi.org/10.1016/j.jhazmat.2011.05.054

Roy, A., Keesari, T., Mohokar, H., Pant, D., Sinha, U. K., & Mendhekar, G. N. (2020). Geochemical evolution of groundwater in hard-rock aquifers of South India using statistical and modelling techniques. *Hydrological Sciences Journal*, *65*(6), 951–968. https://doi.org/10.1080/02626667.2019.1708914

Roy, C., Deschamps, J., Martin, M. H., Bertin, E., Reyter, D., Garbarino, S., Roué, L., & Guay, D. (2016). Identification of Cu surface active sites for a complete nitrate-to-nitrite conversion with nanostructured catalysts. *Applied Catalysis B: Environmental*, *187*(3), 399–407. https://doi.org/10.1016/j.apcatb.2016.01.043

Ryu, H. D., Lim, C. S., Kang, M. K., & Lee, S. I. (2012). Evaluation of struvite obtained from semiconductor wastewater as a fertilizer in cultivating Chinese cabbage. *Journal of*

Hazardous Materials, *221–222*, 248–255. https://doi.org/10.1016/j.jhazmat.2012.04.038

Sacchi, E., Acutis, M., Bartoli, M., Brenna, S., Delconte, C. A., Laini, A., & Pennisi, M. (2013). Origin and fate of nitrates in groundwater from the central Po plain: Insights from isotopic investigations. *Applied Geochemistry*, *34*, 164–180. https://doi.org/10.1016/j.apgeochem.2013.03.008

Sahu, O., Mazumdar, B., & Chaudhari, P. K. (2014). Treatment of wastewater by electrocoagulation: A review. *Environmental Science and Pollution Research*, *21*(4), 2397–2413. https://doi.org/10.1007/s11356-013-2208-6

Santos, A. S. G. G., Restivo, J., Orge, C. A., Pereira, M. F. R., & Soares, O. S. G. P. (2020). Nitrate Catalytic Reduction over Bimetallic Catalysts: Catalyst Optimization. *C*, *6*(4), 78. https://doi.org/10.3390/c6040078

Shaban, Y. A., El, A. A., Kh, R., & Farawati, A. (2016). Journal of Photochemistry and Photobiology A : Chemistry Photocatalytic reduction of nitrate in seawater using C / TiO 2 nanoparticles. *"Journal of Photochemistry & Photobiology, A: Chemistry," 328*, 114–121. https://doi.org/10.1016/j.jphotochem.2016.05.018

Shen, J., He, R., Han, W., Sun, X., Li, J., & Wang, L. (2009). Biological denitrification of high-nitrate wastewater in a modified anoxic/oxic-membrane bioreactor (A/O-MBR). *Journal of Hazardous Materials*, *172*(2–3), 595–600. https://doi.org/10.1016/j.jhazmat.2009.07.045

Shih, Y. J., Wu, Z. L., Huang, Y. H., & Huang, C. P. (2020). Electrochemical nitrate reduction as affected by the crystal morphology and facet of copper nanoparticles supported on nickel foam electrodes (Cu/Ni). *Chemical Engineering Journal*, *383*(July), 123157. https://doi.org/10.1016/j.cej.2019.123157

Siebert, S., Burke, J., Faures, J. M., Frenken, K., Hoogeveen, J., Döll, P., & Portmann, F. T. (2010). Groundwater use for irrigation - A global inventory. *Hydrology and Earth System Sciences*, *14*(10), 1863–1880. https://doi.org/10.5194/hess-14-1863-2010

Sim, J., Seo, H., & Kim, J. (2012). Electrochemical denitrification of metal-finishing wastewater: Influence of operational parameters. *Korean Journal of Chemical Engineering*, *29*(4), 483–488. https://doi.org/10.1007/s11814-011-0202-6

Soares, M. I. M. (2000). Biological denitrification of groundwater. *Water, Air, and Soil Pollution*, *123*(1–4), 183–193. https://doi.org/10.1007/978-94-011-4369-1_16

Song, N., Xu, J., Cao, Y., Xia, F., Zhai, J., Ai, H., Shi, D., Gu, L., & He, Q. (2020). *Journal Pre-proof*. https://doi.org/10.1016/j.chemosphere.2020.125986

Sontakke, S., Modak, J., & Madras, G. (2011). Effect of inorganic ions, H2O2 and pH on the photocatalytic inactivation of Escherichia coli with silver impregnated combustion synthesized TiO2 catalyst. *Applied Catalysis B: Environmental*, *106*(3–4), 453–459. https://doi.org/10.1016/j.apcatb.2011.06.003

Sousa, M. R., Rudolph, D. L., & Frind, E. O. (2014). Threats to groundwater resources in urbanizing watersheds: The Waterloo Moraine and beyond. *Canadian Water Resources Journal*, *39*(2), 193–208. https://doi.org/10.1080/07011784.2014.914801

Stone, A. E. C., & Edmunds, W. M. (2014). Naturally-high nitrate in unsaturated zone sand dunes above the Stampriet Basin, Namibia. *Journal of Arid Environments*, *105*, 41–51. https://doi.org/10.1016/j.jaridenv.2014.02.015

Su, J. F., Ahmad, M. S., Kuan, W. F., Chen, C. L., & Rasheed, T. (2024). Corrigendum to "Electrochemical nitrate reduction over bimetallic Pd–Sn nanocatalysts with tunable selectivity toward benign nitrogen" [350 (2024) 141182] (Chemosphere (2024) 350, (S0045653524000754), (10.1016/j.chemosphere.2024.141182)). *Chemosphere*, *352*(January), 141292. https://doi.org/10.1016/j.chemosphere.2024.141292

Su, L., Li, K., Zhang, H., Fan, M., Ying, D., Sun, T., Wang, Y., & Jia, J. (2017). Electrochemical nitrate reduction by using a novel Co3O4/Ti cathode. *Water Research*, *120*(3), 1–11. https://doi.org/10.1016/j.watres.2017.04.069

Sun, C., Li, F., An, H., Li, Z., Bond, A. M., & Zhang, J. (2018). Facile electrochemical co-deposition of metal (Cu, Pd, Pt, Rh) nanoparticles on reduced graphene oxide for electrocatalytic reduction of nitrate/nitrite. *Electrochimica Acta*, *269*, 733–741. https://doi.org/10.1016/j.electacta.2018.03.005

Sun, H., Zhou, Q., Zhao, L., & Wu, W. (2021). Enhanced simultaneous removal of nitrate and phosphate using novel solid carbon source / zero-valent iron composite. *Journal of Cleaner Production*, *289*, 125757. https://doi.org/10.1016/j.jclepro.2020.125757

Sychev, M., Lozovski, A., Prihod'ko, R., Erdmann, K., & Goncharuk, V. (2008). *Photoreduction of Nitrate Ions Over Ag/TiO2 System*. 453–458. https://doi.org/10.1007/978-1-4020-8514-7_42

Talboys, P. J., Heppell, J., Roose, T., Healey, J. R., Jones, D. L., & Withers, P. J. A. (2016). Struvite: a slow-release fertiliser for sustainable phosphorus management? *Plant and Soil*, *401*(1–2), 109–123. https://doi.org/10.1007/s11104-015-2747-3

Tanwer, N., Deswal, M., Khyalia, P., Laura, J. S., & Khosla, B. (2023). Fluoride and nitrate in groundwater: a comprehensive analysis of health risk and potability of groundwater of Jhunjhunu district of Rajasthan, India. *Environmental Monitoring and Assessment*, *195*(2). https://doi.org/10.1007/s10661-022-10886-z

Terezo, A. J., & Pereira, E. C. (2002). Preparation and characterisation of Ti/RuO2 anodes obtained by sol-gel and conventional routes. *Materials Letters*, *53*(4–5), 339–345. https://doi.org/10.1016/S0167-577X(01)00504-3

Tong, X., Yang, Z., Xu, P., Li, Y., & Niu, X. (2017). Nitrate adsorption from aqueous solutions by calcined ternary Mg-Al-Fe hydrotalcite. *Water Science and Technology*, *75*(9), 2194–2203. https://doi.org/10.2166/wst.2017.082

Wan, Y., Zhou, L., Wang, S., Liao, C., Li, N., Liu, W., & Wang, X. (2018). Syntrophic growth of Geobacter sulfurreducens accelerates anaerobic denitrification. *Frontiers in Microbiology*, *9*(JUL), 1–8. https://doi.org/10.3389/fmicb.2018.01572

Wang, X., Chen, Y.-P., Liu, S.-Y., Guo, J.-S., Fang, F., & Yan, P. (2023). The effect of silver nanoparticles on aerobic denitrifying bacteria during biological nitrogen removal: A new perspective based on morphological effects. *Chemical Engineering Journal*, *471*, 144538. https://doi.org/10.1016/J.CEJ.2023.144538

Wang, Z., Richards, D., & Singh, N. (2021). Recent discoveries in the reaction mechanism of heterogeneous electrocatalytic nitrate reduction. *Catalysis Science and Technology*, *11*(3), 705–725. https://doi.org/10.1039/d0cy02025g

Ward, M. H., Id, R. R. J., Brender, J. D., Kok, T. M. De, Weyer, P. J., Nolan, B. T., Villanueva, C. M., & Breda, S. G. Van. (2018). *Drinking Water Nitrate and Human Health : An Updated Review*. 1–31. https://doi.org/10.3390/ijerph15071557

Watanabe, T., Motoyama, H., & Kuroda, M. (2001). Denitrification and neutralization treatment by direct feeding of an acidic wastewater containing copper ion and high-strength nitrate to a bio-electrochemical reactor process. *Water Research*, *35*(17), 4102–4110. https://doi.org/10.1016/S0043-1354(01)00158-0

Wei, A., Ma, J., Chen, J., Zhang, Y., Song, J., & Yu, X. (2018). Enhanced nitrate removal and high selectivity towards dinitrogen for groundwater remediation using biochar-supported nano zero-valent iron. *Chemical Engineering Journal*. https://doi.org/10.1016/j.cej.2018.07.127

West, P. W., & Ramachandran, T. P. (1966). Spectrophotometric determination of nitrate using chromotropic acid. *Analytica Chimica Acta*, *35*(C), 317–324. https://doi.org/10.1016/S0003-2670(01)81682-2

Wu, L. K., Shi, Y. J., Su, C., Cao, H. Z., & Zheng, G. Q. (2019). Efficient Electrochemical Reduction of High Concentration Nitrate by a Stepwise Method. *Catalysis Letters*, *149*(5), 1216–1223. https://doi.org/10.1007/s10562-019-02715-9

Xue, Z. H., Shen, H. C., Chen, P., Pan, G. X., Zhang, W. W., Zhang, W. M., Zhang, S. N., Li, X. H., & Yavuz, C. T. (2023). Boronization of Nickel Foam for Sustainable Electrochemical Reduction of Nitrate to Ammonia. *ACS Energy Letters*, *8*(9), 3843–3851. https://doi.org/10.1021/acsenergylett.3c01139

Yang, L., Yang, M., Xu, P., Zhao, X., Bai, H., & Li, H. (2017). Characteristics of nitrate removal from aqueous solution by modified steel slag. *Water (Switzerland)*, *9*(10). https://doi.org/10.3390/w9100757

Yang, S., Wang, L., Jiao, X., & Li, P. (2017). Electrochemical reduction of nitrate on different Cu-Zn oxide composite cathodes. *International Journal of Electrochemical Science*, *12*(5), 4370–4383. https://doi.org/10.20964/2017.05.80

Yao, F., Jia, M., Yang, Q., Chen, F., Zhong, Y., Chen, S., He, L., Pi, Z., Hou, K., Wang, D., & Li, X. (2021). Highly selective electrochemical nitrate reduction using copper phosphide selfsupported copper foam electrode: Performance, mechanism, and application. *Water Research*, *193*(3). https://doi.org/10.1016/j.watres.2021.116881

Yazici Karabulut, B., Atasoy, A. D., Can, O. T., & Yesilnacar, M. I. (2021). Electrocoagulation for nitrate removal in groundwater of intensive agricultural region: a case study of Harran plain, Turkey. *Environmental Earth Sciences*, *80*(5), 1–9. https://doi.org/10.1007/s12665-021-09488-8

Ye, W., Zhang, W., Hu, X., Yang, S., & Liang, W. (2020). Efficient electrochemical-catalytic reduction of nitrate using Co/AC0.9-AB0.1 particle electrode. *Science of the Total Environment*, *732*, 139245. https://doi.org/10.1016/j.scitotenv.2020.139245

Yin, D., Liu, Y., Song, P., Chen, P., Liu, X., Cai, L., & Zhang, L. (2019). In situ growth of copper/reduced graphene oxide on graphite surfaces for the electrocatalytic reduction of nitrate. *Electrochimica Acta*, *324*, 134846. https://doi.org/10.1016/j.electacta.2019.134846

Zala, S. L., Ayyer, J., & Desai, A. J. (2004). Nitrate removal from the effluent of a fertilizer industry using a bioreactor packed with immobilized cells of Pseudomonas stutzeri and Comamonas testosteroni. *World Journal of Microbiology and Biotechnology*, *20*(7), 661–665. https://doi.org/10.1007/s11274-004-9982-8

Zeng, Y., Priest, C., Wang, G., & Wu, G. (2020). Restoring the Nitrogen Cycle by Electrochemical Reduction of Nitrate: Progress and Prospects. *Small Methods*, *4*(12), 1–28. https://doi.org/10.1002/smtd.202000672

Zhang, T., Wu, J., Chen, J., Pan, Q., Wang, X., Zhong, H., Tao, R., Yan, J., Hu, Y., Ye, X., Chen, C., & Chen, J. (2021). Activating Titanium Metal with H2Plasma for the Hydrogen Evolution Reaction. *ACS Applied Materials and Interfaces*. https://doi.org/10.1021/acsami.1c02646

Zhang, Y., Zhao, Y., Chen, Z., Wang, L., Wu, P., & Wang, F. (2018). Electrochemical reduction of nitrate via Cu/Ni composite cathode paired with Ir-Ru/Ti anode: High efficiency and N2 selectivity. *Electrochimica Acta*, *291*, 151–160. https://doi.org/10.1016/j.electacta.2018.08.154

Zhang, Z., Xu, Y., Shi, W., Wang, W., Zhang, R., Bao, X., Zhang, B., Li, L., & Cui, F. (2016).

Electrochemical-catalytic reduction of nitrate over Pd-Cu/γAl2O3 catalyst in cathode chamber: Enhanced removal efficiency and N2 selectivity. *Chemical Engineering Journal*, *290*, 201–208. https://doi.org/10.1016/j.cej.2016.01.063

Zhao, J., Shang, B., & Zhai, J. (2021). N-doped graphene as an efficient metal-free electrocatalyst for indirect nitrate reduction reaction. *Nanomaterials*, *11*(9). https://doi.org/10.3390/nano11092418

Zhao, X., Zhao, K., Quan, X., Chen, S., Yu, H., Zhang, Z., Niu, J., & Zhang, S. (2021). Efficient electrochemical nitrate removal on Cu and nitrogen doped carbon. *Chemical Engineering Journal*, *415*(February). https://doi.org/10.1016/j.cej.2021.128958

Zhou, S., & Wu, Y. (2012). Improving the prediction of ammonium nitrogen removal through struvite precipitation. *Environmental Science and Pollution Research*, *19*(2), 347–360. https://doi.org/10.1007/s11356-011-0520-6

Zou, X., Chen, C., Wang, C., Zhang, Q., Yu, Z., Wu, H., Zhuo, C., & Zhang, T. C. (2021). Combining electrochemical nitrate reduction and anammox for treatment of nitrate-rich wastewater: A short review. *Science of the Total Environment*, *800*, 149645. https://doi.org/10.1016/j.scitotenv.2021.149645