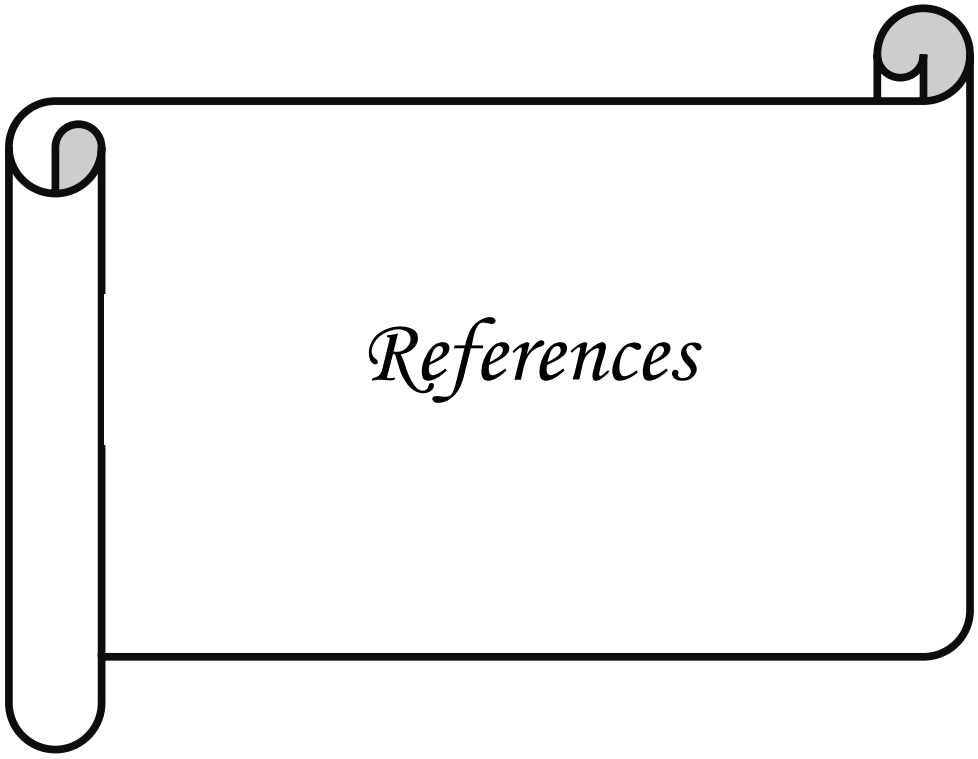

References

REFERENCES

Abdi, G., Alizadeh, A., Zinadini, S., Moradi, G., 2018. Removal of dye and heavy metal ion using a novel synthetic polyethersulfone nano filtration membrane modifi ed by magnetic graphene oxide / metform in hybrid. J. Memb. Sci. 552, 326–335. https://doi.org/10.1016/j.memsci.2018.02.018

Adekunle, A., Raghavan, V., Tartakovsky, B., 2019. A comparison of microbial fuel cell and microbial electrolysis cell biosensors for real-time environmental monitoring. Bioelectrochemistry 126, 105–112. https://doi.org/10.1016/j.bioelechem.2018.11.007

Ahmadpour, T. dye degradation and simultaneous electricity generation in a photoelectrocatalytic microbial fuel cell equipped with A. hybrid photocathode, Aber, S., Hosseini, M.G., 2020. Improved dye degradation and simultaneous electricity generation in a photoelectrocatalytic microbial fuel cell equipped with AgBr/CuO hybrid photocathode. J. Power Sources 474, 228589. https://doi.org/10.1016/j.jpowsour.2020.228589

Ahn, Y., Logan, B.E., 2012. A multi-electrode continuous flow microbial fuel cell with separator electrode assembly design. Appl. Microbiol. Biotechnol. 93, 2241–2248. https://doi.org/10.1007/s00253-012-3916-4

Aiyer, K.S., Rai, R., Vijayakumar, B.S., 2020. Dye reduction-based electron-transfer activity monitoring assay for assessing microbial electron transfer activity of microbial fuel cell inocula. J. Environ. Sci. 96, 171–177. https://doi.org/10.1016/j.jes.2020.04.037

Anantha, M.S., Olivera, S., Hu, C., Jayanna, B.K., 2020. Comparison of the photocatalytic , adsorption and electrochemical methods for the removal of cationic dyes from aqueous solutions. Environ. Technol. Innov. 17, 100612.

https://doi.org/10.1016/j.eti.2020.100612

Angelaalincy, M.J., Krishnaraj, R.N., Shakambari, G., 2018. Biofilm Engineering Approaches for Improving the Performance of Microbial Fuel Cells and Bioelectrochemical Systems. Front. Energy Reserach 6, 1–12.

https://doi.org/10.3389/fenrg.2018.00063

Angioni, S., Millia, L., Bruni, G., Ravelli, D., Mustarelli, P., Quartarone, E., 2017. Novel composite polybenzimidazole-based proton exchange membranes as efficient and sustainable separators for microbial fuel cells. J. Power Sources 348, 57–65.

https://doi.org/10.1016/j.jpowsour.2017.02.084

Arbianti, R., Utami, T.S., Citrasari, A.E., Hermansyah, H., 2017. Effect of Concentrations of Bacterial Consortia in Culture Medium from Wastewater in Microbial Fuel Cells. J. Environ. Sci. Technol. 10, 276–282.

https://doi.org/10.3923/jest.2017.276.282

Ardakani, M.N., Badalians Gholikandi, G., 2020. Microbial fuel cells (MFCs) in integration with anaerobic treatment processes (AnTPs) and membrane bioreactors (MBRs) for simultaneous efficient wastewater/sludge treatment and energy recovery -A state-of-the-art review. Biomass and Bioenergy 141, 105726.

https://doi.org/10.1016/j.biombioe.2020.105726

Arica, M.Y., Bayramoglu, G., 2007. Biosorption of Reactive Red-120 dye from aqueous solution by native and modified fungus biomass preparations of Lentinus sajor-caju. J. Hazard. Mater. 149, 499–507.

https://doi.org/10.1016/j.jhazmat.2007.04.021

Asgher, M., Yasmeen, Q., Muhammad, H., Iqbal, N., 2013. Enhanced decolorization of Solar brilliant red 80 textile dye by an indigenous white rot fungus Schizophyllum commune IBL-06. Saudi J. Biol. Sci. 20, 347–352.

https://doi.org/10.1016/j.sjbs.2013.03.004

Atalay, S., Ersöz, G., 2015. Advanced Oxidation Processes for Removal of Dyes from Aqueous Media. Scrivener Publishing LLC, Izmir,Turkey.

https://doi.org/10.1002/9781118721001.ch3

Babu, S.S., Mohandass, C., Vijayaraj, A.S., Dhale, M.A., 2015. Ecotoxicology and Environmental Safety Detoxification and color removal of Congo red by a novel Dietzia sp . (DTS26) – A microcosm approach. Ecotoxicol. Environ. Saf. 114, 52–60.

https://doi.org/10.1016/j.ecoenv.2015.01.002

Bharti, V., Shahi, A., Geed, S.R., Kureel, M.K., Rai, B.N., Kumar, S., Giri, B.S., Singh, R.S., 2017. Biodegradation of reactive orange 16 (RO-16) dye in packed bed bioreactor using seeds of Ashoka and Casuarina as packing medium. Indian J. Biotechnol. 16, 216–221.

http://nopr.niscair.res.in/handle/123456789/42920

Bhatia, D., Sharma, N.R., Singh, J., Kanwar, R.S., 2017. Biological methods for textile dye removal from wastewater: A review. Crit. Rev. Environ. Sci. Technol. 47, 1836–1876.

https://doi.org/10.1080/10643389.2017.1393263

Bheemaraddi, M.C., Patil, S., Shivannavar, C.T., Gaddad, S.M., 2014. Isolation and Characterization of Paracoccus sp . GSM2 Capable of Degrading Textile Azo Dye Reactive Violet 5. Sci. World J. 2014, 1–9.

https://doi.org/p://dx.doi.org/10.1155/2014/410704

Biswas, S., Mohapatra, S.S., Kumari, U., Charan, B., Kanti, T., 2020. Journal of Environmental Chemical Engineering Batch and continuous closed circuit semi- fl uidized bed operation : Removal of MB dye using sugarcane bagasse biochar and

alginate composite adsorbents. J. Environ. Chem. Eng. 8, 103637.
https://doi.org/10.1016/j.jece.2019.103637

Borah, D., More, S., Yadvav, R.N.S., 2013. Construction of Double Chambered Microbial Fuel Cell (MFC) Using Household Materials and Bacillus megaterium Isolate from Tea Garden Soil 7, 136–140.
https://doi.org/10.5829/idosi.abr.2013.7.5.1109

Bos, R., Gore, F., Bartram, J., 2008. Safer water, better health: costs, benefits and sustainability of interventions to protect and promote health, in: Geneva:World Health Organisation. pp. 1–60.
https://apps.who.int/iris/handle/10665/43840

Bose, D., Sridharan, S., Dhawan, H., Vijay, P., Gopinath, M., 2019. Biomass derived activated carbon cathode performance for sustainable power generation from Microbial Fuel Cells. Fuel 236, 325–337.
https://doi.org/10.1016/j.fuel.2018.09.002

Buthelezi, S.P., Olaniran, A.O., Pillay, B., 2012. Textile Dye Removal from Wastewater Effluents Using Bioflocculants Produced by Indigenous Bacterial Isolates. Molecules 14260–14274.
https://doi.org/10.3390/molecules171214260

Buyuktuncel, E., Bektas, S., 2001. Poly (vinylalcohol) coated / Cibacron Blue F3GA-attached polypropylene hollow fiber membranes for removal of cadmium ions from aquatic systems. React. Funct. Polym. 47, 1–10.
https://doi.org/10.1016/S1381-5148(00)00054-7

Cao, X., Wang, H., Li, Xiao qi, Fang, Z., Li, Xian ning, 2017. Enhanced degradation of azo dye by a stacked microbial fuel cell-biofilm electrode reactor coupled system. Bioresour. Technol. 227, 273–278.

https://doi.org/10.1016/j.biortech.2016.12.043

Cao, X., Zhang, S., Wang, H., Li, X., 2019. Azo dye as part of co-substrate in a biofilm electrode reactor–microbial fuel cell coupled system and an analysis of the relevant microorganisms. Chemosphere 216, 742–748.

https://doi.org/10.1016/j.chemosphere.2018.10.203

Cao, Y., Hu, Y., Sun, J., Hou, B., 2010. Bioelectrochemistry Explore various co-substrates for simultaneous electricity generation and Congo red degradation in air-cathode single-chamber microbial fuel cell. Bioelectrochemistry 79, 71–76.

https://doi.org/10.1016/j.bioelechem.2009.12.001

Cao, Y., Mu, H., Liu, W., Zhang, R., Guo, J., Xian, M., Liu, H., 2019. Electricigens in the anode of microbial fuel cells : pure cultures versus mixed communities. Microb. Cell Fact. 18, 1–14.

https://doi.org/10.1186/s12934-019-1087-z

Cárcer, D.A. De, Ha, P.T., 2011. Microbial community differences between propionate-fed microbial fuel cell systems under open and closed circuit conditions. Biotechnol. Prod. Process Eng. 89, 605–612.

https://doi.org/10.1007/s00253-010-2903-x

Carreon-Valencia, T., Chung, K.-T., Sanjose, S. De, Freeman, H.S., Fukushima, S., Jameson, C.W., Mannerje, A., 2010. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: Some Aromatic Amines, Organic Dyes, and Related Exposures. International Agency for Research on Cancer, France.

https://monographs.iarc.who.int/wp-content/uploads/2018/06/mono99.pdf

Carvalho, J.R.S., Amaral, F.M., Florencio, L., Kato, M.T., Delforno, T.P., Gavazza, S., 2020. Chemosphere Microaerated UASB reactor treating textile wastewater : The core microbiome and removal of azo dye Direct Black 22. Chemosphere 242,

125157.
https://doi.org/10.1016/j.chemosphere.2019.125157

Çetinkaya, A.Y., Köroğlu, E.O., Demir, N.M., Baysoy, D.Y., Özkaya, B., Çakmakçi, M., 2015. Electricity production by a microbial fuel cell fueled by brewery wastewater and the factors in its membrane deterioration. Cuihua Xuebao/Chinese J. Catal. 36, 1068–1076.
https://doi.org/10.1016/S1872-2067(15)60833-6

Chakraborty, B., 2016. Kinetic study of degradation of p-nitro phenol by a mixed bacterial culture and its constituent pure strains. Mater. Today Proc. 3, 3505–3524.
https://doi.org/10.1016/j.matpr.2016.10.034

Chaudhuri, S.K., Lovley, D.R., 2003. Electricity generation by direct oxidation of glucose in mediatorless microbial fuel cells. Nat. Biotechnol. 21, 1229–1232.
https://doi.org/10.1038/nbt867

Chen, B.Y., Ma, C.M., Han, K., Yueh, P.L., Qin, L.J., Hsueh, C.C., 2016. Influence of textile dye and decolorized metabolites on microbial fuel cell-assisted bioremediation. Bioresour. Technol. 200, 1033–1038.
https://doi.org/10.1016/j.biortech.2015.10.011

Chen, W., Feng, H., Shen, D., Jia, Y., Li, N., Ying, X., Chen, T., Zhou, Y., Guo, J., Zhou, M., 2018. Carbon materials derived from waste tires as high-performance anodes in microbial fuel cells. Sci. Total Environ. 618, 804–809.
https://doi.org/10.1016/j.scitotenv.2017.08.201

Cheng, S., Logan, B.E., 2011. Increasing power generation for scaling up single-chamber air cathode microbial fuel cells. Bioresour. Technol. 102, 4468–73.
https://doi.org/10.1016/j.biortech.2010.12.104

Cho, I., Zoh, K., 2007. Photocatalytic degradation of azo dye (Reactive Red 120) in TiO

2 / UV system : Optimization and modeling using a response surface methodology (RSM) based on the central composite design. Dye. Pigment. 75, 533–543. https://doi.org/10.1016/j.dyepig.2006.06.041

Chojnacka, K., 2010. Biosorption and bioaccumulation – the prospects for practical applications. Environ. Int. 36, 299–307. https://doi.org/10.1016/j.envint.2009.12.001

Chouler, J., Bentley, I., Vaz, F., O'Fee, A., Cameron, P.J., Di Lorenzo, M., 2017. Exploring the use of cost-effective membrane materials for Microbial Fuel Cell based sensors. Electrochim. Acta 231, 319–326. https://doi.org/10.1016/j.electacta.2017.01.195

Chouler, J., Di Lorenzo, M., 2015. Water quality monitoring in developing countries; Can microbial fuel cells be the answer? Biosensors 5, 450–470. https://doi.org/10.3390/bios5030450

Chouler, J., Padgett, G.A., Cameron, P.J., Preuss, K., Titirici, M.M., Ieropoulos, I., Di Lorenzo, M., 2016. Towards effective small scale microbial fuel cells for energy generation from urine. Electrochim. Acta 192, 89–98. https://doi.org/10.1016/j.electacta.2016.01.112

Chowdhury, M.F., Khandaker, S., Sarker, F., Islam, A., Rahman, M.T., Awual, M.R., 2020. Current treatment technologies and mechanisms for removal of indigo carmine dyes from wastewater: A review. J. Mol. Liq. 318, 114061. https://doi.org/10.1016/j.molliq.2020.114061

Christwardana, M., Kwon, Y., 2017. Yeast and carbon nanotube based biocatalyst developed by synergetic effects of covalent bonding and hydrophobic interaction for performance enhancement of membraneless microbial fuel cell. Bioresour. Technol. 225, 175–182.

https://doi.org/10.1016/j.biortech.2016.11.051

Dai, H., Yang, H., Liu, X., Zhao, Y., Liang, Z., 2016. Performance of sodium bromate as cathodic electron acceptor in microbial fuel cell. Bioresour. Technol. 202, 220–225. https://doi.org/10.1016/j.biortech.2015.12.008

Dai, Q., Zhang, S., Liu, H., Huang, J., Li, L., 2020. Sulfide-mediated azo dye degradation and microbial community analysis in a single-chamber air cathode microbial fuel cell. Bioelectrochemistry 131, 1–11. https://doi.org/10.1016/j.bioelechem.2019.107349

Dalvi, A.D., Mohandas, N., Shinde, O.A., Kininge, P.T., 2011. Microbial Fuel Cell for Production of Bioelectricity From Whey and Biological Waste Treatment. Int. J. Adv. Biotechnol. Res. 2, 263–268. http://www.bipublication.com

Daneshvar, E., Kousha, M., Salar, M., Khataee, A., Converti, A., 2012. Biosorption of three acid dyes by the brown macroalga Stoechospermum marginatum : Isotherm , kinetic and thermodynamic studies. Chem. Eng. J. 195–196, 297–306. https://doi.org/10.1016/j.cej.2012.04.074

Daries Bella, R.S., Hirankumar, G., Navanietha Krishnaraj, R., Prem Anand, D., 2016. Novel proton conducting polymer electrolyte and its application in microbial fuel cell. Mater. Lett. 164, 551–553. https://doi.org/10.1016/j.matlet.2015.11.066

Das, N., Charumathi, D., 2012. Remediation of synthetic dyes from wastewater using yeast — An overview. Indian J. Biotechnol. 11, 369–380. http://nopr.niscair.res.in/bitstream/123456789/15693/1/IJBT%2011%284%29%20369-380.pdf

Das, S., Mangwani, N., 2010. Recent developments in microbial fuel cells: A review. J.

Sci. Ind. Res. 69, 727–731.
http://nopr.niscair.res.in/bitstream/123456789/10294/1/JSIR%2069%2810%29%20727-731.pdf?trk=right_banner&id=1401393248&ref=083a50db4ac9ba7073d816c1ee783c22

Daud, M., Hai, A., Banat, F., Wazir, M.B., Habib, M., Bharath, G., Al-harthi, M.A., 2019. A review on the recent advances , challenges and future aspect of layered double hydroxides (LDH) – Containing hybrids as promising adsorbents for dyes removal. J. Mol. Liq. 288, 110989.
https://doi.org/10.1016/j.molliq.2019.110989

Daud, S.M., Daud, W.R.W., Kim, B.H., Somalu, M.R., Bakar, M.H.A., Muchtar, A., Jahim, J.M., Lim, S.S., Chang, I.S., 2018. Comparison of performance and ionic concentration gradient of two-chamber microbial fuel cell using ceramic membrane (CM) and cation exchange membrane (CEM) as separators. Electrochim. Acta 259, 365–376.
https://doi.org/10.1016/j.electacta.2017.10.118

Dessie, Y., Tadesse, S., Eswaramoorthy, R., 2020. Review on manganese oxide based biocatalyst in microbial fuel cell: Nanocomposite approach. Mater. Sci. Energy Technol. 3, 136–149.
https://doi.org/10.1016/j.mset.2019.11.001

Du, Z., Li, H., Gu, T., 2007. A state of the art review on microbial fuel cells : A promising technology for wastewater treatment and bioenergy.Biotechnol. Adv. 25, 464–482.
https://doi.org/10.1016/j.biotechadv.2007.05.004

Dziegielowski, J., Metcalfe, B., Villegas-Guzman, P., Martínez-Huitle, C.A., Gorayeb, A., Wenk, J., Di Lorenzo, M., 2020. Development of a functional stack of soil microbial fuel cells to power a water treatment reactor: From the lab to field trials in

North East Brazil. Appl. Energy 278, 115680.
https://doi.org/10.1016/j.apenergy.2020.115680

El-Kassas, H.Y., Mohamed, L.A., 2014. Bioremediation of the textile waste effluent by Chlorella vulgaris. Egypt. J. Aquat. Res. 40, 301–308.
https://doi.org/10.1016/j.ejar.2014.08.003

El-sheekh, M.M., Gharieb, M.M., Abou-el-souod, G.W., 2009. Biodegradation of dyes by some green algae and cyanobacteria International Biodeterioration & Biodegradation Biodegradation of dyes by some green algae and cyanobacteria. Int. Biodeterior. Biodegradation 63, 699–704.
https://doi.org/10.1016/j.ibiod.2009.04.010

Fang, Z., Cao, X., Li, Xuexiao, Wang, H., Li, Xianning, 2018. International Biodeterioration & Biodegradation Biorefractory wastewater degradation in the cathode of constructed wetland-microbial fuel cell and the study of the electrode performance. Int. Biodeterior. Biodegrad. 129, 1–9.
https://doi.org/10.1016/j.ibiod.2017.12.003

Fang, Z., Cao, X., Li, Xuexiao, Wang, H., Li, Xianning, 2017. Electrode and azo dye decolorization performance in microbial-fuel-cell-coupled constructed wetlands with different electrode size during long-term wastewater treatment. Bioresour. Technol. 238, 450–460.
https://doi.org/10.1016/j.biortech.2017.04.075

Feng, C., Tsai, C.C., Ma, C.Y., Yu, C.P., Hou, C.H., 2017. Integrating cost-effective microbial fuel cells and energy-efficient capacitive deionization for advanced domestic wastewater treatment. Chem. Eng. J. 330, 1–10.
https://doi.org/10.1016/j.cej.2017.07.122

Feng, C., Wan, Q., Lv, Z., Yue, X., Chen, Y., Wei, C., 2011. One-step fabrication of

membraneless microbial fuel cell cathode by electropolymerization of polypyrrole onto stainless steel mesh. Biosens. Bioelectron. 26, 3953–3957.
https://doi.org/10.1016/j.bios.2011.02.046

Fernando, E., 2014. Treatment of azo dyes in industrial wastewater using microbial fuel cells . phd thesis.
https://westminsterresearch.westminster.ac.uk/item/8yq85/treatment-of-azo-dyes-in-industrial-wastewater-using-microbial-fuel-cells

Fernando, E., Keshavarz, T., Kyazze, G., 2014a. Complete degradation of the azo dye Acid Orange-7 and bioelectricity generation in an integrated microbial fuel cell, aerobic two-stage bioreactor system in continuous flow mode at ambient temperature. Bioresour. Technol. 156, 155–162.
https://doi.org/10.1016/j.biortech.2014.01.036

Fernando, E., Keshavarz, T., Kyazze, G., 2014b. External resistance as a potential tool for influencing azo dye reductive decolourisation kinetics in microbial fuel cells. Int. Biodeterior. Biodegrad. 89, 7–14.
https://doi.org/10.1016/j.ibiod.2013.12.011

Franks, A.E., Nevin, K.P., 2010. Microbial Fuel Cells, A Current Review. Energies 3, 899–919.
https://doi.org/10.3390/en3050899

Gajda, I., Greenman, J., Ieropoulos, I., 2020. Microbial Fuel Cell stack performance enhancement through carbon veil anode modification with activated carbon powder. Appl. Energy 262, 114475.
https://doi.org/10.1016/j.apenergy.2019.114475

Gajendra, P., Panda, S., 2018. Microbial Fuel Cells : Types of MFC and Different Source of Substrate. Int. J. Latest Technol. Eng. , Manag. Appl. Sience VII, 158–165.

https://www.ijltemas.in/DigitalLibrary/Vol.7Issue5/158-165.pdf

Gandu, B., Rozenfeld, S., Ouaknin Hirsch, L., Schechter, A., Cahan, R., 2020. Immobilization of bacterial cells on carbon-cloth anode using alginate for hydrogen generation in a microbial electrolysis cell. J. Power Sources 455, 227986.

https://doi.org/10.1016/j.jpowsour.2020.227986

Gao, X., Zhang, Y., Li, X., Ye, J., 2013. Novel graphite sheet used as an anodic material for high-performance microbial fuel cells. Mater. Lett. 105, 24–27.

https://doi.org/10.1016/j.matlet.2013.04.044

Gao, Y., Kong, X., Zhou, A., Yue, X., Luo, Y., Defemur, Z., 2020. Enhanced degradation of quinoline by coupling microbial electrolysis cell with anaerobic digestion simultaneous. Bioresour. Technol. 306.

https://doi.org/10.1016/j.biortech.2020.123077

García-Martínez, Y., Bengoa, C., Stüber, F., Fortuny, A., Font, J., Fabregat, A., 2015. Biodegradation of acid orange 7 in an anaerobic-aerobic sequential treatment system. Chem. Eng. Process. Process Intensif. 94, 99–104.

https://doi.org/10.1016/j.cep.2014.12.011

Ghasemi, M., Halakoo, E., Sedighi, M., Alam, J., Sadeqzadeh, M., 2015. Performance comparison of three common proton exchange membranes for sustainable bioenergy production in microbial fuel cell. Procedia CIRP 26, 162–166.

https://doi.org/10.1016/j.procir.2014.07.169

Ghodake, G., Jadhav, U., 2011. Decolorization of Textile Dyes and Degradation of Mono-Azo Dye Amaranth by Acinetobacter calcoaceticus NCIM 2890. Indian J. Microbiol. 51, 501–508.

https://doi.org/10.1007/s12088-011-0131-4

Ghodake, G., Jadhav, U., Tamboli, D., Kagalkar, A., Govindwar, S., 2011. Decolorization

of Textile Dyes and Degradation of Mono-Azo Dye Amaranth by Acinetobacter calcoaceticus NCIM 2890. Indian J. Microbiol. 51, 501–508.
https://doi.org/10.1007/s12088-011-0131-4

Ghoreyshi, A.A., Jafary, T., Najafpour, G.D., Haghparast, F., 2011. Effect of type and concentration of substrate on power generation in a dual chambered microbial fuel cell. Fuel Cells 8–13.
https://ep.liu.se/ecp/057/vol4/006/ecp57vol4_006.pdf

Gnanapragasam, G., Senthilkumar, M., Arutchelvan, V., Velayutham, T., Nagarajan, S., 2011. Bio-kinetic analysis on treatment of textile dye wastewater using anaerobic batch reactor. Bioresour. Technol. 102, 627–632.
https://doi.org/10.1016/j.biortech.2010.08.012

Gregory, P., 1990. Classification of Dyes by Chemical Structure, in: D.R., W., G., H. (Eds.), The Chemistry and Application of Dyes. springer, Bostan, pp. 17–47.
https://link.springer.com/chapter/10.1007/978-1-4684-7715-3_2

Guo, G., Li, X., Tian, F., Liu, T., Yang, F., Ding, K., Liu, C., Chen, J., Wang, C., 2020. Chemosphere Azo dye decolorization by a halotolerant consortium under microaerophilic conditions. Chemosphere 244, 125510.
https://doi.org/10.1016/j.chemosphere.2019.125510

Guo, X., Zhan, Y., Chen, C., Cai, B., Wang, Y., Guo, S., 2016. Influence of packing material characteristics on the performance of microbial fuel cells using petroleum refinery wastewater as fuel. Renew. Energy 87, 437–444.
https://doi.org/10.1016/j.renene.2015.10.041

Haavisto, J.M., Kokko, M.E., Lay, C.H., Puhakka, J.A., 2017. Effect of hydraulic retention time on continuous electricity production from xylose in up-flow microbial fuel cell. Int. J. Hydrogen Energy 42, 27494–27501.

https://doi.org/10.1016/j.ijhydene.2017.05.068

Han, H.X., Shi, C., Yuan, L., Sheng, G.P., 2017. Enhancement of methyl orange degradation and power generation in a photoelectrocatalytic microbial fuel cell. Appl. Energy 204, 382–389.

https://doi.org/10.1016/j.apenergy.2017.07.032

Han, W., Liu, C., Bai, R., 2007. A novel method to prepare high chitosan content blend hollow fiber membranes using a non-acidic dope solvent for highly enhanced adsorptive performance. J. Memb. Sci. 302, 150–159.

https://doi.org/10.1016/j.memsci.2007.06.039

Harry-asobara, J.L., Kamei, I., 2019. Characteristics of White-rot Fungus Phlebia brevispora TMIC33929 and Its Growth-Promoting Bacterium Enterobacter sp . TN3W-14 in the Decolorization of Dye-Contaminated Water. Appl. Biochem. Biotechnol. 1–12.

https://doi.org/ 10.1007/s12010-019-03062-6

Hassan, H., Jin, B., Dai, S., Ma, T., Saint, C., 2016. Chemical impact of catholytes on Bacillus subtilis -catalysed microbial fuel cell performance for degrading 2 , 4-dichlorophenol. Chem. Eng. J. 301, 103–114.

https://doi.org/10.1016/j.cej.2016.04.077

Hassan, S.H.A., Gad El-Rab, S.M.F., Rahimnejad, M., Ghasemi, M., Joo, J.H., Sik-Ok, Y., Kim, I.S., Oh, S.E., 2014. Electricity generation from rice straw using a microbial fuel cell. Int. J. Hydrogen Energy 39, 9490–9496.

https://doi.org/10.1016/j.ijhydene.2014.03.259

Hernández-Fernández, F.J., Pérez de los Ríos, A., Mateo-Ramírez, F., Godínez, C., Lozano-Blanco, L.J., Moreno, J.I., Tomás-Alonso, F., 2015a. New application of supported ionic liquids membranes as proton exchange membranes in microbial fuel

cell for waste water treatment. Chem. Eng. J. 279, 115–119.
https://doi.org/10.1016/j.cej.2015.04.036

Hernández-Fernández, F.J., Pérez De Los Ríos, A., Salar-García, M.J., Ortiz-Martínez, V.M., Lozano-Blanco, L.J., Godínez, C., Tomás-Alonso, F., Quesada-Medina, J., 2015b. Recent progress and perspectives in microbial fuel cells for bioenergy generation and wastewater treatment. Fuel Process. Technol. 138, 284–297.
https://doi.org/10.1016/j.fuproc.2015.05.022

Hernández-Flores, G., Poggi-Varaldo, H.M., Solorza-Feria, O., Romero-Castañón, T., Ríos-Leal, E., Galíndez-Mayer, J., Esparza-García, F., 2015. Batch operation of a microbial fuel cell equipped with alternative proton exchange membrane. Int. J. Hydrogen Energy 40, 17323–17331.
https://doi.org/10.1016/j.ijhydene.2015.06.057

Hiegemann, H., Lübken, M., Schulte, P., Schmelz, K.G., Gredigk-Hoffmann, S., Wichern, M., 2018. Inhibition of microbial fuel cell operation for municipal wastewater treatment by impact loads of free ammonia in bench- and 45 L-scale. Sci. Total Environ. 624, 34–39.
https://doi.org/10.1016/j.scitotenv.2017.12.072

Holmes, D.E., Nevin, K.P., Snoeyenbos-West, O.L., Woodard, T.L., Strickland, J.N., Lovley, D.R., 2015. Protozoan grazing reduces the current output of microbial fuel cells. Bioresour. Technol. 193, 8–14.
https://doi.org/10.1016/j.biortech.2015.06.056

Hou, B., Lu, J., Wang, H., Li, Y., Liu, P., Liu, Y., Chen, J., 2019. Bioelectrochemistry Performance of microbial fuel cells based on the operational parameters of biocathode during simultaneous Congo red decolorization and electricity generation. Bioelectrochemistry 128, 291–297.

https://doi.org/10.1016/j.bioelechem.2019.04.019

Hou, J., Liu, Z., Li, Y., 2015. Polyaniline Modified Stainless Steel Fiber Felt for High-Performance Microbial Fuel Cell Anodes. J. Clean Energy Technol. 3, 165–169.

https://doi.org/10.7763/jocet.2015.v3.189

Hou, Y., Yan, S., Huang, G., Yang, Q., Huang, S., Cai, J., 2020. Fabrication of N-doped carbons from waste bamboo shoot shell with high removal efficiency of organic dyes from water. Bioresour. Technol. 122939.

https://doi.org/10.1016/j.biortech.2020.122939

Hou, Y., Zhang, R., Yu, Z., Huang, L., Liu, Y., Zhou, Z., 2017. Accelerated azo dye degradation and concurrent hydrogen production in the single-chamber photocatalytic microbial electrolysis cell. Bioresour. Technol. 224, 63–68.

https://doi.org/10.1016/j.biortech.2016.10.069

Hui, S., Abbas, M., Zaini, A., 2020. Development of activated carbon pellets using a facile low-cost binder for effective malachite green dye removal. J. Clean. Prod. 253, 119970.

https://doi.org/10.1016/j.jclepro.2020.119970

http://www.pburch.net/dyeing/disperse_dyes.shtml

https://textilelearner.blogspot.com

https://textilelearner.blogspot.com/2012/01/acid-dyes-properties-of-acid-dyes_21.html

Ilamathi, R., Jayapriya, J., 2017. Microbial fuel cells for dye decolorization. Environ. Chem. Lett. 16, 239–250.

https://doi.org/10.1007/s10311-017-0669-4

Ilamathi, R., Sheela, A.M., Gandhi, N.N., 2019. International Biodeterioration & Biodegradation Comparative evaluation of Pseudomonas species in single chamber microbial fuel cell with manganese coated cathode for reactive azo dye removal. Int. Biodeterior. Biodegrad. 144, 104744.

https://doi.org/10.1016/j.ibiod.2019.104744

Inan Beydilli, M., Pavlostathis, S.G., 2005. Decolorization kinetics of the azo dye Reactive Red 2 under methanogenic conditions: effect of long-term culture acclimation. Biodegradation 16, 135–146.

https://doi.org/10.1007/s10532-004-4875-y

Irlinger, F., Loux, V., Bento, P., Gibrat, J.F., Straub, C., Bonnarme, P., Landaud, S., Monnet, C., 2012. Genome sequence of Staphylococcus equorum subsp. equorum Mu2, isolated from a French smear-ripened cheese. J. Bacteriol. 194, 5141–5142.

https://doi.org/10.1128/JB.01038-12

Işik, M., Sponza, D.T., 2007. Fate and toxicity of azo dye metabolites under batch long-term anaerobic incubations. Enzyme Microb. Technol. 40, 934–939.

https://doi.org/10.1016/j.enzmictec.2006.07.032

Jablonska, M.A., Rybarczyk, M.K., Lieder, M., 2016. Electricity generation from rapeseed straw hydrolysates using microbial fuel cells. Bioresour. Technol. 208, 117–122.

https://doi.org/10.1016/j.biortech.2016.01.062

Jain, A.L., Harding, C.M., Assani, K., Shrestha, C.L., Haga, M., Leber, A., Munson, R.S., Kopp, B.T., 2016. Characteristics of invasive Acinetobacter species isolates recovered in a pediatric academic center. BMC Infect. Dis. 16, 1–9.

https://doi.org/10.1034/j.1399-0012.2003.00052.x

Jaiswal, K.K., Kumar, V., Vlaskin, M.S., Sharma, N., Rautela, I., Nanda, M., Arora, N., Singh, A., Chauhan, P.K., 2020. Microalgae fuel cell for wastewater treatment: Recent advances and challenges. J. Water Process Eng. 38, 101549.

https://doi.org/10.1016/j.jwpe.2020.101549

Jayashree, C., Tamilarasan, K., Rajkumar, M., Arulazhagan, P., Yogalakshmi, K.N.,

2016. Treatment of seafood processing wastewater using up fl ow microbial fuel cell for power generation and identi fi cation of bacterial community in anodic bio film. J. Environ. Manage. 180, 351–358.
https://doi.org/10.1016/j.jenvman.2016.05.050

Jegan Durai, N., Gopalakrishna, G.V.T., Padmanaban, V.C., Selvaraju, N., 2020. Oxidative removal of stabilized landfill leachate by Fenton's process: Process modeling, optimization & analysis of degraded products. RSC Adv. 10, 3916–3925.
https://doi.org/10.1039/c9ra09415f

Ji, L., Peng, S.Y., Zheng, Z.G., Zuo, J.L., Zeng, D.C., Qiu, Z.G., Xiao, M., Chen, J.W., Yu, H.Y., 2020. The degradation performance of the Fe 78 Si 13 B 9 and (FeCoNi) 78 Si 13 B 9 high-entropy amorphous alloy ribbons. J. Alloys Compd. 815, 152347.
https://doi.org/10.1016/j.jallcom.2019.152347

Jiang, D., Li, X., Raymond, D., Mooradain, J., Li, B., 2010. Power recovery with multi-anode/cathode microbial fuel cells suitable for future large-scale applications. Int. J. Hydrogen Energy 35, 8683–8689.
https://doi.org/10.1016/j.ijhydene.2010.04.136

Jiang, H., Yang, L., Deng, W., Tan, Y., Xie, Q., 2017. Macroporous graphitic carbon foam decorated with polydopamine as a high-performance anode for microbial fuel cell. J. Power Sources 363, 27–33.
https://doi.org/10.1016/j.jpowsour.2017.07.064

Jiang, Y., Su, M., Li, D., 2014. Removal of Sulfide and Production of Methane from Carbon Dioxide in Microbial Fuel Cells – Microbial Electrolysis Cell (MFCs – MEC) Coupled System.Apllied.Appl. Biochem. Biotechnol 2720–2731.
https://doi.org/10.1007/s12010-013-0718-9

Jiang, Y., Yang, X., Liang, P., Liu, P., Huang, X., 2018. Microbial fuel cell sensors for

water quality early warning systems: Fundamentals, signal resolution, optimization and future challenges. Renew. Sustain. Energy Rev. 81, 292–305.
https://doi.org/10.1016/j.rser.2017.06.099

Jung, S., Regan, J.M., 2011. Influence of external resistance on electrogenesis, methanogenesis, and anode prokaryotic communities in microbial fuel cells. Appl. Environ. Microbiol. 77, 564–571.
https://doi.org/10.1128/AEM.01392-10

Kang, Y.L., Pichiah, S., Ibrahim, S., 2017. Facile reconstruction of microbial fuel cell (MFC) anode with enhanced exoelectrogens selection for intensified electricity generation. Int. J. Hydrogen Energy 42, 1661–1671.
https://doi.org/10.1016/j.ijhydene.2016.09.059

Kardi, S.N., Ibrahim, N., Darzi, G.N., 2017. Erratum to : Dye removal of AR27 with enhanced degradation and power generation in a microbial fuel cell using bioanode of treated clinoptilolite-modified graphite felt 71167.
https://doi.org/10.1007/s11356-017-9678-x

Katheresan, V., Kansedo, J., Lau, S.Y., 2018. Efficiency of various recent wastewater dye removal methods : A review. J. Environ. Chem. Eng. 6, 4676–4697.
https://doi.org/10.1016/j.jece.2018.06.060

Kaur, B., Kumar, B., Garg, N., Kaur, N., 2015. Statistical Optimization of Conditions for Decolorization of Synthetic Dyes by Cordyceps militaris MTCC 3936 Using RSM. Biomed Res. Int. 2015, 1–17.
https://doi.org/10.1155/2015/536745

Khajeh, R.T., Aber, S., Nofouzi, K., 2020. Efficient improvement of microbial fuel cell performance by the modification of graphite cathode via electrophoretic deposition of CuO/ZnO. Mater. Chem. Phys. 240, 122208.

https://doi.org/10.1016/j.matchemphys.2019.122208

Khalik, W.F., Ho, L.N., Ong, S.A., Voon, C.H., Wong, Y.S., Yusuf, S.Y., Yusoff, N.A., Lee, S.L., 2018. Reactive Black 5 as electron donor and/or electron acceptor in dual chamber of solar photocatalytic fuel cell. Chemosphere 202, 467–475.

https://doi.org/10.1016/j.chemosphere.2018.03.113

Khan, M.Z., Singh, S., Sreekrishnan, T.R., Ahammad, S.Z., 2014. Feasibility study on anaerobic biodegradation of azo dye reactive orange 16. RSC Adv. 4, 46851–46859.

https://doi.org/10.1039/c4ra06716a

Khater, D.Z., El-Khatib, K.M., Hassan, R.Y.A., 2018. Effect of vitamins and cell constructions on the activity of microbial fuel cell battery. J. Genet. Eng. Biotechnol. 16, 369–373.

https://doi.org/10.1016/j.jgeb.2018.02.011

Kiayi, Z., Bagheri, T., Heidarinasab, A., Shahcheraghi, F., 2019. Microbial degradation of azo dye carmoisine in aqueous medium using Saccharomyces cerevisiae ATCC 9763. J. Hazard. Mater. 373, 608–619.

https://doi.org/10.1016/j.jhazmat.2019.03.111

Kiely, P.D., Regan, J.M., Logan, B.E., 2011. The electric picnic: Synergistic requirements for exoelectrogenic microbial communities. Curr. Opin. Biotechnol. 22, 378–385.

https://doi.org/10.1016/j.copbio.2011.03.003

Kim, B.H., Park, H.S., Kim, H.J., Kim, G.T., Chang, I.S., Lee, J., Phung, N.T., 2004. Enrichment of microbial community generating electricity using a fuel-cell-type electrochemical cell. Appl. Microbiol. Biotechnol. 63, 672–681.

https://doi.org/10.1007/s00253-003-1412-6

Kim, C., Lee, C.R., Song, Y.E., Heo, J., Choi, S.M., Lim, D.H., Cho, J., Park, C., Jang, M., Kim, J.R., 2017. Hexavalent chromium as a cathodic electron acceptor in a

bipolar membrane microbial fuel cell with the simultaneous treatment of electroplating wastewater. Chem. Eng. J. 328, 703–707.
https://doi.org/10.1016/j.cej.2017.07.077

Kisieliute, A., Popov, A., Apetrei, R.M., Cârâc, G., Morkvenaite-Vilkonciene, I., Ramanaviciene, A., Ramanavicius, A., 2019. Towards microbial biofuel cells: Improvement of charge transfer by self-modification of microoganisms with conducting polymer – Polypyrrole. Chem. Eng. J. 356, 1014–1021.
https://doi.org/10.1016/j.cej.2018.09.026

Koroglu, E.O., Cetinkaya, A.Y., Ozkaya, B., Demir, A., 2016. Simultaneous production of bioelectricity and treatment of membrane concentrate in multitube microbial fuel cell. J. Biosci. Bioeng. 122, 594–600.
https://doi.org/10.1016/j.jbiosc.2016.04.002

Kumar, R., Singh, L., Zularisam, A.W., 2017. Microbial Fuel Cells : Types and Applications, in: Singh, L., Kalia, V.C. (Eds.), Waste Biomass Management-A Holistic Approach. Springer International Publishing, pp. 367–384.
https://doi.org/10.1007/978-3-319-49595-8

Kumar, R., Singh, L., Zularisam, A.W., 2016. Exoelectrogens : Recent advances in molecular drivers involved in extracellular electron transfer and strategies used to improve it for microbial fuel cell applications. Renew. Sustain. Energy Rev. 56, 1322–1336.
https://doi.org/10.1016/j.rser.2015.12.029

Kumar, S.S., Kumar, V., Gnaneswar Gude, V., Malyan, S.K., Pugazhendhi, A., 2020. Alkalinity and salinity favor bioelectricity generation potential of Clostridium, Tetrathiobacter and Desulfovibrio consortium in Microbial Fuel Cells (MFC) treating sulfate-laden wastewater. Bioresour. Technol. 306, 123110.

https://doi.org/10.1016/j.biortech.2020.123110

Kumar, S.S., Malyan, S.K., Bishnoi, N.R., 2017. Performance of buffered ferric chloride as terminal electron acceptor in dual chamber microbial fuel cell. J. Environ. Chem. Eng. 5, 1238–1243.

https://doi.org/10.1016/j.jece.2017.02.010

Lai, C.Y., Liu, S.H., Wu, G.P., Lin, C.W., 2017. Enhanced bio-decolorization of acid orange 7 and electricity generation in microbial fuel cells with superabsorbent-containing membrane and laccase-based bio-cathode. J. Clean. Prod. 166, 381–386.

https://doi.org/10.1016/j.jclepro.2017.08.047

Lai, M.F., Lou, C.W., Lin, J.H., 2017. 3D composite electrodes of microbial fuel cells used in livestock wastewater: Evaluations of coating and performance. Int. J. Hydrogen Energy 42, 27666–27676.

https://doi.org/10.1016/j.ijhydene.2017.07.021

Li, C., Wang, L., Wang, X., Kong, M., Zhang, Q., Li, G., 2017. Synthesis of PVDF-g-PSSA proton exchange membrane by ozone-induced graft copolymerization and its application in microbial fuel cells. J. Memb. Sci. 527, 35–42.

https://doi.org/10.1016/j.memsci.2016.12.065

Li, C., Zhang, L., Ding, L., Ren, H., Cui, H., 2011. Effect of conductive polymers coated anode on the performance of microbial fuel cells (MFCs) and its biodiversity analysis. Biosens. Bioelectron. 26, 4169–4176.

https://doi.org/10.1016/j.bios.2011.04.018

Li, H., Liao, B., Xiong, J., Zhou, X., Zhi, H., Liu, X., Li, X., Li, W., 2018. Power output of microbial fuel cell emphasizing interaction of anodic binder with bacteria. J. Power Sources 379, 115–122.

https://doi.org/10.1016/j.jpowsour.2018.01.040

Li, H., Zhang, S., Yang, X.L., Yang, Y.L., Xu, H., Li, X.N., Song, H.L., 2019. Enhanced degradation of bisphenol A and ibuprofen by an up-flow microbial fuel cell-coupled constructed wetland and analysis of bacterial community structure. Chemosphere 217, 599–608.

https://doi.org/10.1016/j.chemosphere.2018.11.022

Li, M., Zhou, S., Xu, Y., Liu, Z., Ma, F., Zhi, L., Zhou, X., 2018. Simultaneous Cr(VI) reduction and bioelectricity generation in a dual chamber microbial fuel cell. Chem. Eng. J. 334, 1621–1629.

https://doi.org/10.1016/j.cej.2017.11.144

Li, W., Mu, B., Yang, Y., 2019. Feasibility of industrial-scale treatment of dye wastewater via bio- adsorption technology. Bioresour. Technol. 277, 157–170.

https://doi.org/10.1016/j.biortech.2019.01.002

Li, W.W., Yu, H.Q., 2015. Stimulating sediment bioremediation with benthic microbial fuel cells. Biotechnol. Adv. 33, 1–12.

https://doi.org/10.1016/j.biotechadv.2014.12.011

Li, X., Zheng, R., Zhang, Xuwu, Liu, Z., Zhu, R., Zhang, Xiaoyu, Gao, D., 2019. A novel exoelectrogen from microbial fuel cell: Bioremediation of marine petroleum hydrocarbon pollutants. J. Environ. Manage. 235, 70–76.

https://doi.org/10.1016/j.jenvman.2019.01.007

Li, Y., Tabassum, S., Zhang, Z., 2016. An advanced anaerobic biofilter with effluent recirculation for phenol removal and methane production in treatment of coal gasification wastewater. J. Environ. Sci. (China) 47, 23–33.

https://doi.org/10.1016/j.jes.2016.03.012

Lin, X.Q., Li, Z.L., Liang, B., Nan, J., Wang, A.J., 2019. Identification of biofilm formation and exoelectrogenic population structure and function with

graphene/polyanliline modified anode in microbial fuel cell. Chemosphere 219, 358–364.
https://doi.org/10.1016/j.chemosphere.2018.11.212

Liu, F., Sun, L., Wan, J., Shen, L., Yu, Y., Hu, L., Zhou, Y., 2020. Performance of different macrophytes in the decontamination of and electricity generation from swine wastewater via an integrated constructed wetland-microbial fuel cell process. J. Environ. Sci. (China) 89, 252–263.
https://doi.org/10.1016/j.jes.2019.08.015

Liu, H., Cheng, S., Logan, B.E., 2005. Power Generation in Fed-Batch Microbial Fuel Cells as a Function of Ionic Strength, Temperature, and Reactor Configuration. Environ. Sci. Technol. 39, 5488–5493.
https://doi.org/10.1021/es050316c

Liu, H., Logan, B.E., 2004. Electricity Generation Using an Air-Cathode Single Chamber Microbial Fuel Cell in the Presence and Absence of a Proton Exchange Membrane. Environ. Sci. Technol. 38, 4040–4046.
https://sites.psu.edu/microbialfuelcells/files/2019/08/2004-LiuLogan-PEM-noPEM-EST.pdf

Liu, H., Ramnarayanan, R., Logan, B.E., 2004. Production of Electricity during Wastewater Treatment Using a Single Chamber Microbial Fuel Cell. Enviorn. Sci. Technol. 38, 2281–2285.
https://doi.org/10.1021/es034923g

Liu, H., Zhang, Z., Xu, Y., Tan, X., Yue, Z., Ma, K., Wang, Y., 2020. Reduced graphene oxide @ polydopamine decorated carbon cloth as an anode for a high-performance microbial fuel cell in Congo red / saline wastewater removal. Bioelectrochemistry 107675.

https://doi.org/10.1016/j.bioelechem.2020.107675

Liu, J., Chen, T., Yang, Y., Bai, Z., Xia, L., Wang, M., Lv, X., Li, L., 2020. Removal of heavy metal ions and anionic dyes from aqueous solutions using amide-functinalised - cellulose-based adsorbents. Carbohydrate Polymers 230 (2020) 115619

https://doi.org/10.1016/j.carbpol.2019.115619

Liu, L., Cai, Y., Li, H., Zhao, S., He, M., 2019. Bio-detoxification Bacteria Isolated from Dye-Polluted Soils Promote Lactic Acid Production from Ammonia Pretreated Corn Stover. Appl. Biochem. Biotechnol. 189, 129–143.

https://doi.org/10.1007/s12010-019-02993-4

Liu, L., Zhang, B., Zhang, Y., He, Y., Huang, L., Tan, S., Cai, X., 2015. Simultaneous Removal of Cationic and Anionic Dyes from Environmental Water Using Montmorillonite-Pillared Graphene Oxide. J. chemiical Eng. data 60, 1270–1278.

https://doi.org/10.1021/je5009312

Liu, S., Tsai, S., Guo, P., Lin, C., 2020. Chemosphere Inducing laccase activity in white rot fungi using copper ions and improving the ef fi ciency of azo dye treatment with electricity generation using microbial fuel cells. Chemosphere 243, 125304.

https://doi.org/10.1016/j.chemosphere.2019.125304

Liu, S.H., Fu, S.H., Chen, C.Y., Lin, C.W., 2020. Enhanced processing of exhaust gas and power generation by connecting mini-tubular microbial fuel cells in series with a biotrickling filter. Renew. Energy 156, 342–348.

https://doi.org/10.1016/j.renene.2020.04.028

Liu, Y.M., Lee, Y.T., Kuo, S.C., Chen, T.L., Liu, C.P., Liu, C.E., 2017. Comparison between bacteremia caused by Acinetobacter pittii and Acinetobacter nosocomialis. J. Microbiol. Immunol. Infect. 50, 62–67.

https://doi.org/10.1016/j.jmii.2015.01.003

Logan, B.E., 2009. Exoelectrogenic bacteria that power microbial fuel cells. Nat. Rev. Microbiol. 7, 375–381.
https://doi.org/10.1038/nrmicro2113

Logan, B.E., Bert, H., Rene, R., Uwe, S., Jurg, K., Stefano, F., Peter, A., Willy, V., Rabaey, K., 2006. Critical Review Microbial Fuel Cells : Methodology and Technology. Enviornmental Sience Technol. 40, 5181–5192.
https://blogs.epfl.ch/biofuelcells/documents/interesting.pdf

Logan, B.E., Logan, B.E., 2016. Logan BE.. Exoelectrogenic bacteria that power microbial fuel cells. Nat Rev Microbiol 7: 375- 381 375–381.
https://doi.org/10.1038/nrmicro2113

Logan, B.E., Rabaey, K., 2014. Conversion of wastes into Bioelectriicity and chemicals by using Microbial Electrochemical Technologies. Science (80). 686, 686–690.
https://doi.org/10.1126/science.1217412

Logan, B.E., Regan, J.M., 2006. Electricity-producing bacterial communities in microbial fuel cells. Trends Microbiol. 14, 512–8.
https://doi.org/10.1016/j.tim.2006.10.003

Long, X., Wang, H., Wang, C., Cao, X., Li, X., 2019. Enhancement of azo dye degradation and power generation in a photoelectrocatalytic microbial fuel cell by simple cathodic reduction on titania nanotube arrays electrode. J. Power Sources 415, 145–153.
https://doi.org/10.1016/j.jpowsour.2019.01.069

Lucas, M.S., Dias, A.A., Sampaio, A., Amaral, C., 2007. Degradation of a textile reactive Azo dye by a combined chemical – biological process : Fenton ' s reagent-yeast. Water Res. 41, 1103–1109.
https://doi.org/10.1016/j.watres.2006.12.013

Ma, J., Guo, X., Ying, Y., Liu, D., Zhong, C., 2016. Composite ultrafiltration membrane tailored by MOF @ GO with highly improved water purification performance. Chem. Eng. J. 890–898.

https://doi.org/10.1016/j.cej.2016.10.127

Ma, L., Zhuo, R., Liu, H., Yu, D., Jiang, M., Zhang, X., Yang, Y., 2014. Efficient decolorization and detoxification of the sulfonated azo dye Reactive Orange 16 and simulated textile wastewater containing Reactive Orange 16 by the white-rot fungus Ganoderma sp. En3 isolated from the forest of Tzu-chin Mountain in China. Biochem. Eng. J. 82, 1–9.

https://doi.org/10.1016/j.bej.2013.10.015

Mahmoud, M.S., 2016. Decolorization of certain reactive dye from aqueous solution using Baker ' s Yeast (Saccharomyces cerevisiae) strain. HBRC J. 12, 88–98.

https://doi.org/10.1016/j.hbrcj.2014.07.005

Malvankar, N.S., Lovley, D.R., 2012. Microbial nanowires: A new paradigm for biological electron transfer and bioelectronics. ChemSusChem 5, 1039–1046. https://doi.org/10.1002/cssc.201100733

Malvankar, N.S., Yalcin, S.E., Tuominen, M.T., Lovley, D.R., 2014. Visualization of charge propagation along individual pili proteins using ambient electrostatic force microscopy. Nat. Nanotechnol. 9, 1012–1017.

https://doi.org/10.1038/nnano.2014.236

Martinez, C.M., Zhu, X., Logan, B.E., 2017. AQDS immobilized solid-phase redox mediators and their role during bioelectricity generation and RR2 decolorization in air-cathode single-chamber microbial fuel cells. Bioelectrochemistry 118, 123–130.

https://doi.org/10.1016/j.bioelechem.2017.07.007

Martinez, S.M., Di Lorenzo, M., 2019. Electricity generation from untreated fresh

digestate with a cost-effective array of floating microbial fuel cells. Chem. Eng. Sci. 198, 108–116.
https://doi.org/10.1016/j.ces.2018.12.039

Mei, X., Xing, D., Yang, Y., Liu, Q., Zhou, H., Guo, C., Ren, N., 2017. Bioelectrochemistry Adaptation of microbial community of the anode bio fi lm in microbial fuel cells to temperature. Bioelectrochemistry 117, 29–33.
https://doi.org/10.1016/j.bioelechem.2017.04.005

Menicucci, J., Beyenal, H., Marsili, E., Veluchamy, R.A., Demir, G., Lewandowski, Z., 2006. Procedure for determining maximum sustainable power generated by microbial fuel cells. Environ. Sci. Technol. 40, 1062–1068.
https://doi.org/10.1021/es051180l

Milner, E.M., Popescu, D., Curtis, T., Head, I.M., Scott, K., Yu, E.H., 2016. Microbial fuel cells with highly active aerobic biocathodes. J. Power Sources 324, 8–16.
https://doi.org/10.1016/j.jpowsour.2016.05.055

Min, B., Cheng, S., Logan, B.E., 2005. Electricity generation using membrane and salt bridge microbial fuel cells. Water Res. 39, 1675–86.
https://doi.org/10.1016/j.watres.2005.02.002

Misal, S.A., Gawai, K.R., 2018. Azoreductase : a key player of xenobiotic metabolism. Bioresour. Bioprocess. 5, 1–9.
https://doi.org/10.1186/s40643-018-0206-8

Mishra, S., Nayak, J.K., Maiti, A., 2020. Bacteria-mediated bio-degradation of reactive azo dyes coupled with bio-energy generation from model wastewater. Clean Technol. Environ. Policy 22, 651–667.
https://doi.org/10.1007/s10098-020-01809-y

Moghaddam, S.S., Moghaddam, M.R.A., Arami, M., 2010. Coagulation / flocculation

process for dye removal using sludge from water treatment plant : Optimization through response surface methodology. J. Hazard. Mater. 175, 651–657.
https://doi.org/10.1016/j.jhazmat.2009.10.058

Mohanakrishna, G., Abu-Reesh, I.M., Al-Raoush, R.I., He, Z., 2018. Cylindrical graphite based microbial fuel cell for the treatment of industrial wastewaters and bioenergy generation. Bioresour. Technol. 247, 753–758.
https://doi.org/10.1016/j.biortech.2017.09.174

Mona, S., Kaushik, A., Kaushik, C.P., 2011. Biosorption of reactive dye by waste biomass of Nostoc linckia. Ecol. Eng. 37, 1589–1594.
https://doi.org/10.1016/j.ecoleng.2011.04.005

Muniyasamy, A., Sivaporul, G., Gopinath, A., Lakshmanan, R., Altaee, A., Achary, A., Velayudhaperumal Chellam, P., 2020. Process development for the degradation of textile azo dyes (mono-, di-, poly-) by advanced oxidation process - Ozonation: Experimental & partial derivative modelling approach. J. Environ. Manage. 265, 110397.
https://doi.org/10.1016/j.jenvman.2020.110397

Muthuraman, G., Teng, T.T., Leh, C.P., Norli, I., 2009. Extraction and recovery of methylene blue from industrial wastewater using benzoic acid as an extractant. J. Hazard. Mater. 163, 363–369.
https://doi.org/10.1016/j.jhazmat.2008.06.122

Natarajan, S., Bajaj, H.C., Tayade, R.J., 2017. Recent advances based on the synergetic effect of adsorption for removal of dyes from waste water using photocatalytic process. J. Environ. Sci. 65, 201–222.
https://doi.org/10.1016/j.jes.2017.03.011

Neifar, M., Sghaier, I., Guembri, M., Chouchane, H., Mosbah, A., Ouzari, H.I., Jaouani,

A., Cherif, A., 2019. Recent advances in textile wastewater treatment using microbial consortia. J. Text. Eng. Fash. Technol. 5, 134–146.
https://doi.org/10.15406/jteft.2019.05.00194

Nevin, K.P., Richter, H., Covalla, S.F., Johnson, J.P., Woodard, T.L., Orloff, A.L., Jia, H., Zhang, M., Lovley, D.R., 2008. Power output and columbic efficiencies from biofilms of Geobacter sulfurreducens comparable to mixed community microbial fuel cells. Environ. Microbiol. 10, 2505–2514.
https://doi.org/10.1111/j.1462-2920.2008.01675.x

Nidheesh, P. V., Zhou, M., Oturan, M.A., 2018. An overview on the removal of synthetic dyes from water by electrochemical advanced oxidation processes. Chemosphere 197, 210–227.
https://doi.org/10.1016/j.chemosphere.2017.12.195

Nisar, N., Aleem, A., Saleem, F., Aslam, F., Shahid, A., Chaudhry, H., Malik, K., Albaser, A., Iqbal, A., Qadri, R., 2017. Reduction of reactive red 241 by oxygen insensitive azoreductase purified from a novel strain Staphylococcus KU898286. PLoS One 1–18.
https://doi.org/. https://doi.org/10.1371/journal. pone.0175551 Editor:

Nováková, D., Sedláček, I., Pantůček, R., Štětina, V., Švec, P., Petráš, P., 2006. Staphylococcus equorum and Staphylococcus succinus isolated from human clinical specimens. J. Med. Microbiol. 55, 523–528.
https://doi.org/10.1099/jmm.0.46246-0

O'Neill, C., Hawkes, F.R., Hawkes, D.L., Lourenço, N.D., Pinheiro, H.M., Delée, W., 1999. Colour in textile effluents - Sources, measurement, discharge consents and simulation: A review. J. Chem. Technol. Biotechnol. 74, 1009–1018.
https://doi.org/10.1002/(SICI)1097-4660(199911)74:11<1009::AID-

JCTB153>3.0.CO;2-N

Oliot, M., Galier, S., Roux de Balmann, H., Bergel, A., 2016. Ion transport in microbial fuel cells: Key roles, theory and critical review. Appl. Energy 183, 1682–1704. https://doi.org/10.1016/j.apenergy.2016.09.043

Oliveira, J.M.S., Lima, M.R. De, Issa, C.G., Corbi, J.J., Damianovic, M.H.R.Z., Foresti, E., 2020. Intermittent aeration strategy for azo dye biodegradation : A suitable alternative to conventional biological treatments ? J. Hazard. Mater. 385, 121558. https://doi.org/10.1016/j.jhazmat.2019.121558

Oon, Y.L., Ong, S.A., Ho, L.N., Wong, Y.S., Dahalan, F.A., Oon, Y.S., Teoh, T.P., Lehl, H.K., Thung, W.E., 2020. Constructed wetland–microbial fuel cell for azo dyes degradation and energy recovery: Influence of molecular structure, kinetics, mechanisms and degradation pathways. Sci. Total Environ. 720, 137370. https://doi.org/10.1016/j.scitotenv.2020.137370

Oon, Y.S., Ong, S.A., Ho, L.N., Wong, Y.S., Oon, Y.L., Lehl, H.K., Thung, W.E., Nordin, N., 2018. Disclosing the synergistic mechanisms of azo dye degradation and bioelectricity generation in a microbial fuel cell. Chem. Eng. J. 344, 236–245. https://doi.org/10.1016/j.cej.2018.03.060

Oon, Y.S., Ong, S.A., Ho, L.N., Wong, Y.S., Oon, Y.L., Lehl, H.K., Thung, W.E., Nordin, N., 2017. Microbial fuel cell operation using monoazo and diazo dyes as terminal electron acceptor for simultaneous decolourisation and bioelectricity generation. J. Hazard. Mater. 325, 170–177. https://doi.org/10.1016/j.jhazmat.2016.11.074

Oon, Y., Ong, S., Ho, L., Wong, Y., Oon, Yoong-ling, 2018. Disclosing the synergistic mechanisms of azo dye degradation and bioelectricity generation in a microbial fuel cell. Chem. Eng. J. 344, 236–245.

https://doi.org/10.1016/j.cej.2018.03.060

Oturkar, C.C., Nemade, H.N., Mulik, P.M., Patole, M.S., Hawaldar, R.R., Gawai, K.R., 2011. Bioresource Technology Mechanistic investigation of decolorization and degradation of Reactive Red 120 by Bacillus lentus BI377. Bioresour. Technol. 102, 758–764.

https://doi.org/10.1016/j.biortech.2010.08.094

Padmanaban, V.C., Rameshrao, S., Achary, A., Singh, R.S., 2016. Bioresource Technology Kinetic studies on degradation of Reactive Red 120 dye in immobilized packed bed reactor by Bacillus cohnii RAPT1. Bioresour. Technol. 213, 39–43.

https://doi.org/10.1016/j.biortech.2016.02.126

Padmanaban, V.C., Selvaraju, N., Vasudevan, V.N., Achary, A., 2018. Augmented radiolytic (60Co Γ) degradation of direct red 80 (Polyazo dye): optimization, reaction kinetics & G-value interpretation. React. Kinet. Mech. Catal. 125, 433–447.

https://doi.org/10.1007/s11144-018-1410-4

Pandey, P., Shinde, V.N., Deopurkar, R.L., Kale, S.P., Patil, S.A., Pant, D., 2016. Recent advances in the use of different substrates in microbial fuel cells toward wastewater treatment and simultaneous energy recovery. Appl. Energy 168, 706–723.

https://doi.org/10.1016/j.apenergy.2016.01.056

Pandit, P., Basu, S., 2004. Dye and solvent recovery in solvent extraction using reverse micelles for the removal of ionic dyes. Ind. Eng. Chem. Res. 43, 7861–7864.

https://doi.org/10.1021/ie0402160

Parmar, N.D., Shukla, S.R., 2018. Decolourization of dye wastewater by microbial methods- A review. Indian J. Chem. Biotechnol. 25, 315–323.

http://nopr.niscair.res.in/handle/123456789/44961

Passos, V.F., Aquino Neto, S., Andrade, A.R. de, Reginatto, V., 2016. Energy generation

in a Microbial Fuel Cell using anaerobic sludge from a wastewater treatment plant. Sci. Agric. 73, 424–428.
https://doi.org/10.1590/0103-9016-2015-0194

Paul, J., Rawat, K.P., Sarma, K.S.S., Sabharwal, S., 2011. Decoloration and degradation of Reactive Red-120 dye by electron beam irradiation in aqueous solution. Appl. Radiat. Isot. 69, 982–987.
https://doi.org/10.1016/j.apradiso.2011.03.009

Pavithra, K.G., Kumar, P.S., Jaikumar, V., Rajan, P.S., 2019. Removal of colorants from wastewater : A review on sources and treatment strategies. J. Ind. Eng. Chem. 75, 1–19.
https://doi.org/10.1016/j.jiec.2019.02.011

Pazarlioglu, N.K., Kaymaz, Y., Babaoğlu, A., 2012. Biodegradation kinetics of o-cresol by Pseudomonas putida DSM 548 (pJP4) and o-cresol removal in a batch-recirculation bioreactor system. Electron. J. Biotechnol. 15.
https://doi.org/10.2225/vol15-issue1-fulltext-4

Pazzetto, R., Barbosa, S., Ferreira, D.S., James, E., Santos, S., Moriwaki, C., Guedes, T.A., Matioli, G., 2012. Preservation of Bacillus firmus Strain 37 and Optimization of Cyclodextrin Biosynthesis by Cells Immobilized on Loofa Sponge. Molecules 17, 9476–9488.
https://doi.org/10.3390/molecules17089476

Pe, A., Jose, F., Ramı, F.M., 2015. Microbial Fuel Cell Application for Azoic Dye Decolorization with Simultaneous Bioenergy Production Using Stenotrophomonas sp . Chem. Eng. Technol. 38,1511–1518.
https://doi.org/10.1002/ceat.201400608

Pereira, A.R., Costa, R.S., Yokoyama, L., 2014. Evaluation of Textile Dye Degradation

Due to the Combined Action of Enzyme Horseradish Peroxidase and Hydrogen Peroxide. Appl. Biochem. Biotechnol. 174, 2741–2747.
https://doi.org/10.1007/s12010-014-1222-6

Pereira, I.C., Carvalho, K.Q., Passig, F.H., Ferreira, R.C., Rizzo-domingues, R.C.P., Hoppen, M.I., Macioski, G., Nagalli, A., Perretto, F., 2018. Journal of Environmental Chemical Engineering Thermal and thermal-acid treated sewage sludge for the removal of dye reactive Red 120 : Characteristics , kinetics , isotherms , thermodynamics and response surface methodology design. J. Environ. Chem. Eng. 6, 7233–7246.
https://doi.org/10.1016/j.jece.2018.10.060

Ping, Q., Abu-Reesh, I.M., He, Z., 2016. Enhanced boron removal by electricity generation in a microbial fuel cell. Desalination 398, 165–170.
https://doi.org/10.1016/j.desal.2016.07.031

Pirkarami, A., Olya, M.E., 2014. Removal of dye from industrial wastewater with an emphasis on improving economic efficiency and degradation mechanism. J. SAUDI Chem. Soc.
https://doi.org/10.1016/j.jscs.2013.12.008

Potivichayanon, S., Pokethitiyook, P., Kruatrachue, M., 2006. Hydrogen sulfide removal by a novel fixed-film bioscrubber system. Process Biochem. 41, 708–715.
https://doi.org/10.1016/j.procbio.2005.09.006

Potter, M.C., 1911. Electrical Effects accompanying the Decomposition o f Organic Compounds. Proceeding te R. Soc. B Biol. Sci. 84, 260–276.

Prakash, O., Pushkar, P., Mungray, A.K., Mungray, A., Kailasa, S.K., 2018. Effect of geometrical position of a multi-anode system in power output and nutritional variation in benthic microbial fuel cells. J. Environ. Chem. Eng. 6, 1558–1568.

https://doi.org/10.1016/j.jece.2018.01.058

Priya, R., Stanly, S., Dhanalekshmi, S.B., Mohammad, F., Al-lohedan, H.A., Chun, W., Sagadevan, S., 2020. Comparative studies of crystal violet dye removal between semiconductor nanoparticles and natural adsorbents. Opt. - Int. J. Light Electron Opt. 206, 164281.

https://doi.org/10.1016/j.ijleo.2020.164281

Quan, X., Xu, H., Sun, B., Xiao, Z., 2018. International Biodeterioration & Biodegradation Anode modi fi cation with palladium nanoparticles enhanced Evans Blue removal and power generation in microbial fuel cells. Int. Biodeterior. Biodegrad. 132, 94–101.

https://doi.org/10.1016/j.ibiod.2018.01.001

Rabaey, K., Boon, N., Siciliano, S.D., Verhaege, M., Verstraete, W., 2004. Biofuel Cells Select for Microbial Consortia That Self-Mediate Electron Transfer. Appl. Environ. Microbiol. 70, 5373–5382.

https://doi.org/10.1128/AEM.70.9.5373

Rabaey, K., Lissens, G., Siciliano, S.D., Verstraete, W., 2003. A microbial fuel cell capable of converting glucose to electricity at high rate and efficiency. Biotechnol. Lett. 25, 1531–1535.

https://doi.org/10.1023/A:1025484009367

Rabaey, K., Verstraete, W., 2005. Microbial fuel cells: novel biotechnology for energy generation. Trends Biotechnol. 23, 291–298.

https://doi.org/10.1016/j.tibtech.2005.04.008

Radhakrishnan, I., Jayaprakash, J., 2018. Microbial fuel cells for dye decolorization. Environ. Chem. Lett. 16, 239-250

https://doi.org/10.1007/s10311-017-0669-4

Raj, D.S., Prabha, R.J., Leena, R., 2012. Analysis of bacterial degradation of Azo dye Congo Red using HPLC. J. Indus. Pollut. Cont. 28, 57-62

https://www.icontrolpollution.com/articles/analysis-of-bacterial-degradation-ofazo-dye-congo-red-using-hplc-.pdf

Rajamanickam, R., Kaliyamoorthi, K., Ramachandran, N., Baskaran, D., Krishnan, J., 2017. Batch biodegradation of toluene by mixed microbial consortia and its kinetics. Int. Biodeterior. Biodegrad. 119, 282–288.

https://doi.org/10.1016/j.ibiod.2016.11.014

Rajeswari, S., Vidhya, S., Navanietha Krishnaraj, R., Saravanan, P., Sundarapandiyan, S., Maruthamuthu, S., Ponmariappan, S., Vijayan, M., 2016. Utilization of soak liquor in microbial fuel cell. Fuel 181, 148–156.

https://doi.org/10.1016/j.fuel.2016.04.121

Ramya, M., Iyappan, S., Manju, A., Jiffe, J.S., 2010. Biodegradation and Decolorization of Acid Red by Acinetobacter radioresistens. J. Bioremediation Biodegrad. 01, 1-6.

https://doi.org/10.4172/2155-6199.1000105

Razo-Flores, E., Luijten, M., Donlon, B., Lettinga, G., Field, J., 1997. Biodegradtion of selected azo dyes under methanogenic conditions. Pergamon 65–72.

http://library1.nida.ac.th/termpaper6/sd/2554/19755.pdf

Roessler, A., Crettenand, D., 2004. Direct electrochemical reduction of vat dyes in a fixed bed of graphite granules. Dye. Pigment. 63, 29–37.

https://doi.org/10.1016/j.dyepig.2004.01.005

Rossi, R., Evans, P.J., Logan, B.E., 2019. Impact of flow recirculation and anode dimensions on performance of a large scale microbial fuel cell. J. Power Sources 412, 294–300.

https://doi.org/10.1016/j.jpowsour.2018.11.054

Roy, D.C., Biswas, S.K., Saha, A.K., Sikdar, B., Rahman, M., Roy, A.K., Hossain, Z., 2018. Biodegradation of Crystal Violet dye by bacteria isolated from textile industry effluents. PeerJ 1–15.

https://doi.org/10.7717/peerj.5015

Roy, U., Sengupta, S., Banerjee, P., Das, P., Bhowal, A., Datta, S., 2018. Assessment on the decolourization of textile dye (Reactive Yellow) using Pseudomonas sp. immobilized on fly ash: Response surface methodology optimization and toxicity evaluation. J. Environ. Manage. 223, 185–195.

https://doi.org/10.1016/j.jenvman.2018.06.026

Saba, B., Christy, A.D., Park, T., Yu, Z., Li, K., Tuovinen, O.H., 2018. Decolorization of Reactive Black 5 and Reactive Blue 4 Dyes in Microbial Fuel Cells. Appl. Biochem. Biotechnol. 1017–1033.

https://doi.org/10.1007/s12010-018-2774-7

Saba, B., Christy, A.D., Yu, Z., Co, A.C., 2017. Sustainable power generation from bacterio-algal microbial fuel cells (MFCs): An overview. Renew. Sustain. Energy Rev. 73, 75–84.

https://doi.org/10.1016/j.rser.2017.01.115

Saha, P., Rao, K.V.B., 2019. Biotransformation of Reactive Orange 16 by alkaliphilic bacterium Bacillus flexus VITSP6 and toxicity assessment of biotransformed metabolites. Int. J. Environ. Sci. Technol.

https://doi.org/10.1007/s13762-019-02256-z

Sahinkaya, E., Sahin, A., Yurtsever, A., Kitis, M., 2018. Concentrate minimization and water recovery enhancement using pellet precipitator in a reverse osmosis process treating textile wastewater. J. Environ. Manage. 222, 420–427.

https://doi.org/10.1016/j.jenvman.2018.05.057

Saini, R.D., 2017. Textile Organic Dyes: Polluting effects and Elimination Methods from Textile Waste Water. Int. J. Chem. Eng. Res. 9, 975–6442. https://www.ripublication.com/ijcher17/ijcherv9n1_10.pdf

Sameera, S., Padma, P.N., 2014. Studies On Immobilized Yeast For Decolorization Of Azo Dyes. Int. J. Sci. Technol. Res. 3, 3–6. http://www.ijstr.org/final-print/apr2014/Studies-On-Immobilized-Yeast-For-Decolorization-Of-Azo-Dyes.pdf

Sarayu, K., Sandhya, S., 2010. Aerobic biodegradation pathway for remazol orange by pseudomonas aeruginosa. Appl. Biochem. Biotechnol. 160, 1241–1253. https://doi.org/10.1007/s12010-009-8592-1

Sarkar, S., Banerjee, A., Halder, U., Biswas, R., Bandopadhyay, R., 2017. Degradation of Synthetic Azo Dyes of Textile Industry: a Sustainable Approach Using Microbial Enzymes. Water Conserv. Sci. Eng. 2, 121–131. https://doi.org/10.1007/s41101-017-0031-5

Shabaan, O.A., Jahin, H.S., Mohamed, G.G., 2020. Removal of anionic and cationic dyes from wastewater by adsorption using multiwall carbon nanotubes. Arab. J. Chem. 4797–4810. https://doi.org/10.1016/j.arabjc.2020.01.010

Shahi, A., Rai, B.N., Singh, R.S., 2017. Short communication A comparative study of a bio fuel cell with two different proton exchange membrane for the production of electricity from waste water. Resour. Technol. 3, 78–81. https://doi.org/10.1016/j.reffit.2017.01.006

Sharma, S., Kaur, A., 2018. Various Methods for Removal of Dyes from Industrial Effluents - A Review. indian J. Sci. Technol. 11, 1–21. https://doi.org/10.17485/ijst/2018/v11i12/120847

Shen, H.B., Yong, X.Y., Chen, Y.L., Liao, Z.H., Si, R.W., Zhou, J., Wang, S.Y., Yong, Y.C., OuYang, P.K., Zheng, T., 2014. Enhanced bioelectricity generation by improving pyocyanin production and membrane permeability through sophorolipid addition in pseudomonas aeruginosa-inoculated microbial fuel cells. Bioresour. Technol. 167, 490–494.

https://doi.org/10.1016/j.biortech.2014.05.093

Shen, J., Wang, C., Liu, Y., Hu, C., Xin, Y., Ding, N., Su, S., 2017. Effect of ultrasonic pretreatment of the dairy manure on the electricity generation of microbial fuel cell. Biochem. Eng. J. 129, 44–49.

https://doi.org/10.1016/j.bej.2017.10.013

Shi, B., Li, G., Wang, D., Feng, C., Tang, H., 2007. Removal of direct dyes by coagulation : The performance of preformed polymeric aluminum species. J. Hazard. Mater. 143, 567–574.

https://doi.org/10.1016/j.jhazmat.2006.09.076

Shobana, S., hangam, B.T., 2012. Biodegradation and Decolorization of Reactive Orange 16 by Nocardiopsis alba Soil Isolate. J. Bioremediation Biodegrad. 03.

https://doi.org/10.4172/2155-6199.1000155

Singh, S., Chatterji, S., Nandini, P.T., Prasad, A.S.A., Rao, K.V.B., 2015. Biodegradation of azo dye Direct Orange 16 by Micrococcus luteus. Int. J. Environ. Sci. Technol. 2161–2168.

https://doi.org/10.1007/s13762-014-0588-x

Sivashankar, R., Sathya, A.B., Vasantharaj, K., Sivasubramanian, V., 2014. Environmental Nanotechnology , Monitoring & Management Magnetic composite an environmental super adsorbent for dye sequestration – A review. Environ. Nanotechnology, Monit. Manag. 1–2, 36–49.

https://doi.org/10.1016/j.enmm.2014.06.001

Šlosarčíková, P., Plachá, D., Malachová, K., Rybková, Z., Novotný, Č., 2020. Biodegradation of Reactive Orange 16 azo dye by simultaneous action of Pleurotus ostreatus and the yeast Candida zeylanoides. Folia Microbiol. (Praha). 1–10.

https://doi.org/10.1007/s12223-019-00767-3

Solanki, K., Subramanian, S., Basu, S., 2013. Microbial fuel cells for azo dye treatment with electricity generation: A review. Bioresour. Technol. 131, 564–571.

ttps://doi.org/10.1016/j.biortech.2012.12.063

Solís, M., Solís, A., Pérez, H.I., Manjarrez, N., Flores, M., 2012. Microbial decolouration of azo dyes: A review. Process Biochem. 47, 1723–1748.

https://doi.org/10.1016/j.procbio.2012.08.014

Sonawane, P.R., Bhostekar, H.G., Moharir, S.R., Suryawanshi, M.A., Mane, V.B., 2017. Experimental Study on Solvent Extraction of Crystal Violet Dye. Int. J. Adv. Eng. Res. Dev. 4, 1074–1077.

https://doi.org/10.21090/ijaerd.26018

Sotres, A., Tey, L., Bonmatí, A., Viñas, M., 2016. Bioelectrochemistry Microbial community dynamics in continuous microbial fuel cells fed with synthetic wastewater and pig slurry. Bioelectrochemistry 111, 70–82.

https://doi.org/10.1016/j.bioelechem.2016.04.007

Spagni, A., Grilli, S., Casu, S., Mattioli, D., 2010. Treatment of a simulated textile wastewater containing the azo-dye reactive orange 16 in an anaerobic-biofilm anoxic-aerobic membrane bioreactor. Int. Biodeterior. Biodegrad. 64, 676–681.

https://doi.org/10.1016/j.ibiod.2010.08.004

Sponza, D.T., Mustafa, I., 2018. Decolorization and inhibition kinetic of Direct Black 38 azo dye with granulated anaerobic sludge Decolorization and inhibition kinetic of

Direct Black 38 azo dye with granulated anaerobic sludge.
https://doi.org/10.1016/j.enzmictec.2003.10.006

Srikantan, C., Suraishkumar, G.K., Srivastava, S., 2018. Effect of light on the kinetics and equilibrium of the textile dye (Reactive Red 120) adsorption by Helianthus annuus hairy roots. Bioresour. Technol. 257, 84–91.
https://doi.org/10.1016/j.biortech.2018.02.075

Srinivasan, R., Kathiravan, M.N., Gopinath, K.P., 2011. Bioresource Technology Degradation of Tectilon Yellow 2G by hybrid technique : Combination of sonolysis and biodegradation using mutant Pseudomonas putida. Bioresour. Technol. 102, 2242–2247.
https://doi.org/10.1016/j.biortech.2010.10.022

Subbaiah, V., Wen, Jet-chau, Pan, C., Gutha, Y., Wen, Jyh-horng, 2019. Enhanced adsorption performance of Reactive Red 120 azo dye from aqueous solution using quaternary amine modi fi ed orange peel powder. J. Mol. Liq. 285, 375–385.
https://doi.org/10.1016/j.molliq.2019.04.081

Sulonen, M.L.K., Kokko, M.E., Lakaniemi, A.M., Puhakka, J.A., 2014. Electricity generation from tetrathionate in microbial fuel cells by acidophiles. J. Hazard. Mater. 284, 182–189.
https://doi.org/10.1016/j.jhazmat.2014.10.045

Sun, G., Kang, K., Qiu, L., Guo, X., Zhu, M., 2019. Electrochemical performance and microbial community analysis in air cathode microbial fuel cells fuelled with pyroligneous liquor. Bioelectrochemistry 126, 12–19.
https://doi.org/10.1016/j.bioelechem.2018.11.006

Sun, H., Zhang, Y., Wu, S., Dong, R., Angelidaki, I., 2019. Innovative operation of microbial fuel cell-based biosensor for selective monitoring of acetate during

anaerobic digestion. Sci. Total Environ. 655, 1439–1447.
https://doi.org/10.1016/j.scitotenv.2018.11.336

Suzuki, K., Kato, Y., Yui, A., Yamamoto, S., Ando, S., Rubaba, O., Tashiro, Y., Futamata, H., 2018. Bacterial communities adapted to higher external resistance can reduce the onset potential of anode in microbial fuel cells. J. Biosci. Bioeng. xx.
https://doi.org/10.1016/j.jbiosc.2017.12.018

Svobodová, K., Senholdt, M., Novotný, Č., Rehorek, A., 2007. Mechanism of Reactive Orange 16 degradation with the white rot fungus Irpex lacteus. Process Biochem. 42, 1279–1284.
https://doi.org/10.1016/j.procbio.2007.06.002

Swarnkumar, B., Osborne, W.J., 2020. Biodegradation and Biosorption of Reactive Red 120 dye by immobilized Pseudomonas guariconensis: Kinetic and toxicity study. water enviornment Res. 1–30.
https://doi.org/https://doi.org/10.1002/wer.1319

Syafiuddin, A., Fulazzaky, M.A., 2020. Decolorization kinetics and mass transfer mechanism of Remazol Brilliant Blue R dye mediated by different fungi. Biotechnol. Reports 1–55.
https://doi.org/10.1016/j.btre.2020.e00573

Takeuchi, Y., Khawdas, W., Aso, Y., Ohara, H., 2017. Microbial fuel cells using Cellulomonas spp. with cellulose as fuel. J. Biosci. Bioeng. 123, 358–363.
https://doi.org/10.1016/j.jbiosc.2016.10.009

Tamilarasan, K., Banu, J.R., Jayashree, C., Yogalakshmi, K.N., Gokulakrishnan, K., 2017. Effect of organic loading rate on electricity generating potential of upflow anaerobic microbial fuel cell treating surgical cotton industry wastewater. J. Environ. Chem. Eng. 5, 1021–1026.

https://doi.org/10.1016/j.jece.2017.01.025

Tan, L., Ning, S., Zhang, X., Shi, S., 2013. Aerobic decolorization and degradation of azo dyes by growing cells of a newly isolated yeast Candida tropicalis TL-F1. Bioresour. Technol. 138, 307–313.

https://doi.org/10.1016/j.biortech.2013.03.183

Tantak, N.P., Chaudhari, S., 2006. Degradation of azo dyes by sequential Fenton ' s oxidation and aerobic biological treatment 136, 698–705.

https://doi.org/10.1016/j.jhazmat.2005.12.049

Tao, M., Guan, L., Jing, Z., Tao, Z., Wang, Yue, Luo, H., Wang, Yin, 2020. Enhanced denitrification and power generation of municipal wastewater treatment plants (WWTPs) effluents with biomass in microbial fuel cell coupled with constructed wetland. Sci. Total Environ. 709, 136159.

https://doi.org/10.1016/j.scitotenv.2019.136159

Thung, W.E., Ong, S.A., Ho, L.N., Wong, Y.S., Ridwan, F., Lehl, H.K., Oon, Y.L., Oon, Y.S., 2018. Biodegradation of Acid Orange 7 in a combined anaerobic-aerobic up-flow membrane-less microbial fuel cell: Mechanism of biodegradation and electron transfer. Chem. Eng. J. 336, 397–405.

https://doi.org/10.1016/j.cej.2017.12.028

Thung, W.E., Ong, S.A., Ho, L.N., Wong, Y.S., Ridwan, F., Oon, Y.L., Oon, Y.S., Lehl, H.K., 2015. A highly efficient single chambered up-flow membrane-less microbial fuel cell for treatment of azo dye Acid Orange 7-containing wastewater. Bioresour. Technol. 197, 284–288.

https://doi.org/10.1016/j.biortech.2015.08.078

Tizaoui, C., Grima, N., 2011. Kinetics of the ozone oxidation of Reactive Orange 16 azo-dye in aqueous solution. Chem. Eng. J. 173, 463–473.

https://doi.org/10.1016/j.cej.2011.08.014

Tommasi, T., Lombardelli, G., 2017. Energy sustainability of Microbial Fuel Cell (MFC): A case study. J. Power Sources 356, 438–447.

https://doi.org/10.1016/j.jpowsour.2017.03.122

Tyagi, U., 2020. Groundwater for Sustainable Development Adsorption of dyes using activated carbon derived from pyrolysis of vetiveria zizanioides in a fixed bed reactor. Groundw. Sustain. Dev. 10, 100303.

https://doi.org/10.1016/j.gsd.2019.100303

Ucar, D., Zhang, Y., Angelidaki, I., 2017. An overview of electron acceptors in microbial fuel cells. Front. Microbiol. 8, 1–14.

https://doi.org/10.3389/fmicb.2017.00643

Unnikrishnan, S., Khan, M.H., Ramalingam, K., 2018. Dye-tolerant marine Acinetobacter baumannii-mediated biodegradation of reactive red. Water Sci. Eng. 11, 265–275.

https://doi.org/10.1016/j.wse.2018.08.001

Vaez, M., Karami-Rad, S., Tavakkoli, S., Diba, H., 2015. Microbial Fuel Cells, Features and Developments. Curr. World Environ. 10, 637–643.

https://doi.org/10.12944/CWE.10.Special-Issue1.77

Velasquez-Orta, S.B., Werner, D., Varia, J.C., Mgana, S., 2017. Microbial fuel cells for inexpensive continuous in-situ monitoring of groundwater quality. Water Res. 117, 9–17.

https://doi.org/10.1016/j.watres.2017.03.040

Vijay, A., Arora, S., Gupta, S., Chhabra, M., 2018. Halophilic starch degrading bacteria isolated from Sambhar Lake, India, as potential anode catalyst in Microbial fuel cell: A promising process for saline water treatment. Bioresour. Technol. 256, 391–398.

https://doi.org/10.1016/j.biortech.2018.02.044

Vilas Boas, J., Oliveira, V.B., Marcon, L.R.C., Pinto, D.P., Simões, M., Pinto, a. M.F.R., 2015. Effect of operating and design parameters on the performance of a microbial fuel cell with Lactobacillus pentosus. Biochem. Eng. J. 104, 34–40.

https://doi.org/10.1016/j.bej.2015.05.009

Waghmode, T.R., Kurade, M.B., Sapkal, R.T., Bhosale, C.H., 2019. Sequential photocatalysis and biological treatment for the enhanced degradation of the persistent azo dye methyl red. J. Hazard. Mater. 371, 115–122.

https://doi.org/10.1016/j.jhazmat.2019.03.004

Wang, H., Wang, Q., Li, X., Wang, Y., Jin, P., Zheng, Y., Huang, J., Li, Q., 2019. Bioelectricity generation from the decolorization of reactive blue 19 by using microbial fuel cell. J. Environ. Manage. 248, 109310.

https://doi.org/10.1016/j.jenvman.2019.109310

Wang, J., Song, X., Wang, Y., Abayneh, B., Ding, Y., Yan, D., Bai, J., 2016. Microbial community structure of different electrode materials in constructed wetland incorporating microbial fuel cell. Bioresour. Technol. 221, 697–702.https://doi.org/10.1016/j.biortech.2016.09.116

Wang, Q.Q., Wu, X.Y., Yu, Y.Y., Sun, D.Z., Jia, H.H., Yong, Y.C., 2017. Facile in-situ fabrication of graphene/riboflavin electrode for microbial fuel cells. Electrochim. Acta 232, 439–444.

https://doi.org/10.1016/j.electacta.2017.03.008

Wang, Z.W., Liang, J.S., Liang, Y., 2013. International Biodeterioration & Biodegradation Decolorization of Reactive Black 5 by a newly isolated bacterium Bacillus sp . YZU1. Int. Biodeterior. Biodegradation 76, 41–48.

https://doi.org/10.1016/j.ibiod.2012.06.023

Wen, Q., Wu, Y., Zhao, L., Sun, Q., Kong, F., 2010. Electricity generation and brewery wastewater treatment from sequential anode-cathode microbial fuel cell. J. Zhejiang Univ. Sci. B 11, 87–93.
https://doi.org/10.1631/jzus.B0900272

Wu, J., Li, Q., Li, W., Li, Y., Wang, G., Li, A., Li, H., 2020. Efficient removal of acid dyes using permanent magnetic resin and its preliminary investigation for advanced treatment of dyeing effluents. J. Clean. Prod. 251, 1–8.
https://doi.org/10.1016/j.jclepro.2019.119694

Wu, Y., Yang, Q., Zeng, Q., Ngo, H.H., Guo, W., Zhang, H., 2017. Enhanced low C/N nitrogen removal in an innovative microbial fuel cell (MFC) with electroconductivity aerated membrane (EAM) as biocathode. Chem. Eng. J. 316, 315–322.
https://doi.org/10.1016/j.cej.2016.11.141

Xie, T., Jing, Z., Hu, J., Yuan, P., Liu, Y., Cao, S., 2018. Degradation of nitrobenzene-containing wastewater by a microbial-fuel-cell-coupled constructed wetland. Ecol. Eng. 112, 65–71.
https://doi.org/10.1016/j.ecoleng.2017.12.018

Xu, H., Quan, X., Xiao, Z., Chen, L., 2017. Cathode modification with peptide nanotubes (PNTs) incorporating redox mediators for azo dyes decolorization enhancement in microbial fuel cells. Int. J. Hydrogen Energy 42, 8207–8215.
https://doi.org/10.1016/j.ijhydene.2017.01.025

Xu, L., Wang, B., Liu, X., Yu, W., Zhao, Y., 2018. Maximizing the energy harvest from a microbial fuel cell embedded in a constructed wetland. Appl. Energy 214, 83–91.
https://doi.org/10.1016/j.apenergy.2018.01.071

Yagub, M.T., Sen, T.K., Afroze, S., Ang, H.M., 2014. Dye and its removal from aqueous solution by adsorption : A review. Adv. Colloid Interface Sci. 209, 172–184. https://doi.org/10.1016/j.cis.2014.04.002

Yang, W., Li, J., Ye, D., Zhang, L., Zhu, X., Liao, Q., 2016. A hybrid microbial fuel cell stack based on single and double chamber microbial fuel cells for self-sustaining pH control. J. Power Sources 306, 685–691. https://doi.org/10.1016/j.jpowsour.2015.12.073

Yang, W., Rossi, R., Tian, Y., Kim, K.Y., Logan, B.E., 2017. Mitigating external and internal cathode fouling using a polymer bonded separator in microbial fuel cells. Bioresour. Technol. 0–1. https://doi.org/10.1016/j.biortech.2017.10.109

Yaqoob, A.A., Khatoon, A., Hamidah, S., Setapar, M., Umar, K., 2020. Outlook on the Role of Microbial Fuel Cells in Remediation of Environmental Pollutants with electricity generation. catalysts 10, 1–34. http://dx.doi.org/10.3390/catal10080819

Yee, R.S.L., Rozendal, R.A., Zhang, K., Ladewig, B.P., 2012. Cost effective cation exchange membranes: A review. Chem. Eng. Res. Des. 90, 950–959. https://doi.org/10.1016/j.cherd.2011.10.015

Yi, H., Nevin, K.P., Kim, B., Franks, A.E., Klimes, A., Tender, L.M., Lovley, D.R., 2009. Biosensors and Bioelectronics Selection of a variant of Geobacter sulfurreducens with enhanced capacity for current production in microbial fuel cells. Biosens. Bioelectron. 24, 3498–3503. https://doi.org/10.1016/j.bios.2009.05.004

Yien, L., Sie, L., Mubarak, N.M., Han, C., Pan, S., Danquah, M.K., Abdullah, E.C., Khalid, M., 2019. Journal of Environmental Chemical Engineering An overview of

immobilized enzyme technologies for dye and phenolic removal from wastewater. J. Environ. Chem. Eng. 7, 102961.
https://doi.org/10.1016/j.jece.2019.102961

Yousefi, V., Mohebbi-Kalhori, D., Samimi, A., 2020. Start-up investigation of the self-assembled chitosan/montmorillonite nanocomposite over the ceramic support as a low-cost membrane for microbial fuel cell application. Int. J. Hydrogen Energy 45, 4804–4820.
https://doi.org/10.1016/j.ijhydene.2019.11.216

Yuan, Y., Ahmed, J., Kim, S., 2011. Polyaniline/carbon black composite-supported iron phthalocyanine as an oxygen reduction catalyst for microbial fuel cells. J. Power Sources 196, 1103–1106.
https://doi.org/10.1016/j.jpowsour.2010.08.112

Zee, F.P. Van Der, Villaverde, S., 2005. Combined anaerobic – aerobic treatment of azo dyes — A short review of bioreactor studies. Water Res. 39, 1425–1440.
https://doi.org/10.1016/j.watres.2005.03.007

Zhang, L., Fu, G., Zhang, Z., 2019. Electricity generation and microbial community in long-running microbial fuel cell for high-salinity mustard tuber wastewater treatment. Bioelectrochemistry 126, 20–28.
https://doi.org/10.1016/j.bioelechem.2018.11.002

Zhang, L., Yin, X., Li, S.F.Y., 2015. Bio-electrochemical degradation of paracetamol in a microbial fuel cell-Fenton system. Chem. Eng. J. 276, 185–192.
https://doi.org/10.1016/j.cej.2015.04.065

Zhang, M., Wang, Y., Liang, P., Zhao, X., Liang, M., Zhou, B., 2019. Combined photoelectrocatalytic microbial fuel cell (PEC-MFC) degradation of refractory organic pollutants and in-situ electricity utilization. Chemosphere 214, 669–678.

https://doi.org/10.1016/j.chemosphere.2018.09.085

Zhang, Q., Zhang, Y., Li, D., 2017. Cometabolic degradation of chloramphenicol via a meta-cleavage pathway in a microbial fuel cell and its microbial community. Bioresour. Technol. 229, 104–110.

https://doi.org/10.1016/j.biortech.2017.01.026

Zhang, S., Yang, X.L., Li, H., Song, H.L., Wang, R.C., Dai, Z.Q., 2017. Degradation of sulfamethoxazole in bioelectrochemical system with power supplied by constructed wetland-coupled microbial fuel cells. Bioresour. Technol. 244, 345–352.

https://doi.org/10.1016/j.biortech.2017.07.143

Zhang, S., You, J., Chen, H., Ye, J., Cheng, Z., Chen, J., 2020. Gaseous toluene, ethylbenzene, and xylene mixture removal in a microbial fuel cell: Performance, biofilm characteristics, and mechanisms. Chem. Eng. J. 386, 123916.

https://doi.org/10.1016/j.cej.2019.123916

Zhang, X., Miao, X., Li, J., Li, Z., 2019. Evaluation of electricity production from Fenton oxidation pretreated sludge using a two-chamber microbial fuel cell. Chem. Eng. J. 361, 599–608.

https://doi.org/10.1016/j.cej.2018.12.117

Zhao, C.C., Shang, D.W., Zou, Y.L., Du, Y. Da, Wang, Q., Xu, F., Ren, L., Kong, Q., 2020. Changes in electricity production and microbial community evolution in constructed wetland-microbial fuel cell exposed to wastewater containing Pb(II). Sci. Total Environ. 732, 139127.

https://doi.org/10.1016/j.scitotenv.2020.139127

Zhou, M., Chi, M., Luo, J., He, H., Jin, T., 2011. An overview of electrode materials in microbial fuel cells. J. Power Sources 196, 4427–4435.

https://doi.org/10.1016/j.jpowsour.2011.01.012

Zhou, X., Xu, Y., Mei, X., Du, N., Jv, R., Hu, Z., Chen, S., 2018. Polyaniline/B-MnO2nanocomposites as cathode electrocatalyst for oxygen reduction reaction in microbial fuel cells. Chemosphere 198, 482–491.

https://doi.org/10.1016/j.chemosphere.2018.01.058

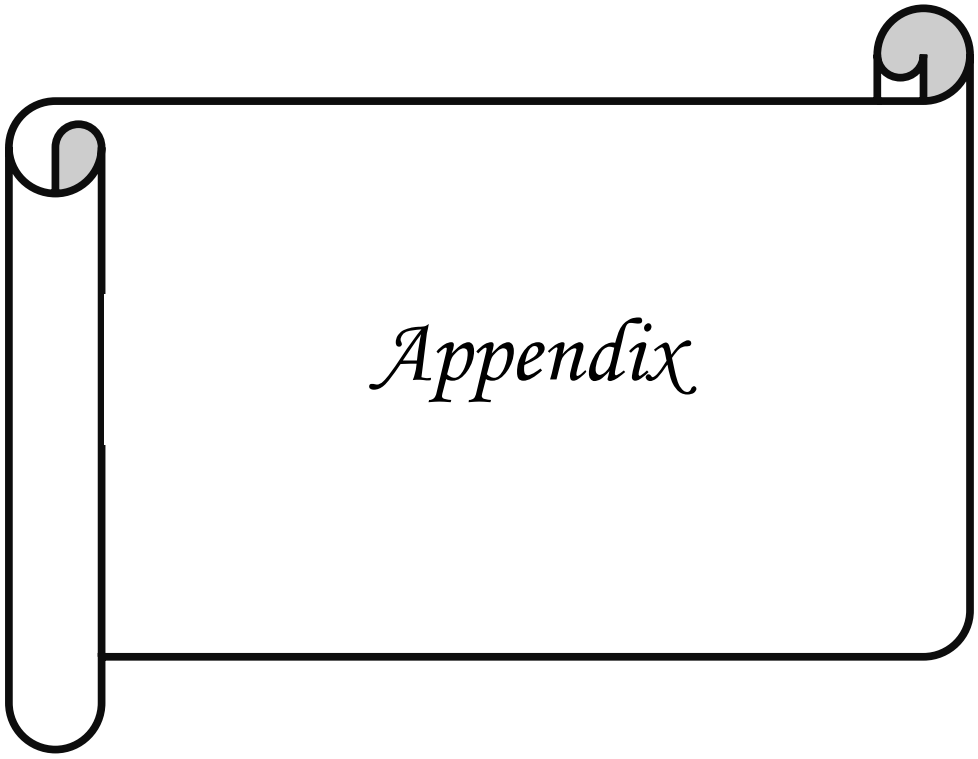
Zhu, Y., Wang, W., Ni, J., Hu, B., 2020. Cultivation of granules containing anaerobic decolorization and aerobic degradation cultures for the complete mineralization of azo dyes in wastewater. Chemosphere 246, 125753.

https://doi.org/10.1016/j.chemosphere.2019.125753

Zou, H., Wang, Y., 2017. Azo dyes wastewater treatment and simultaneous electricity generation in a novel process of electrolysis cell combined with microbial fuel cell. Bioresour. Technol. 235, 167–175.

https://doi.org/10.1016/j.biortech.2017.03.093

Zuraida, S., Halim, K., Hamid, K., 2013. Removal of Synthetic Dyes from Wastewater by Using Bacteria , Lactobacillus delbruckii 2, 1–7.


Appendix

APPENDIX 1

Chapter 4

Table 1: Sequence Producing Significant Alignments (LO)

Description	Scientific Name	Max Score	Total Score	Query Cover	E value	Per. ident	Accession
Staphylococcus equorum strain RAP2 16S ribosomal RNA gene, partial sequence	Staphylococcus equorum	2712	2712	100%	0	100	MW365319.1
Staphylococcus sp. strain LJ40 16S ribosomal RNA gene, partial sequence	Staphylococcus sp.	2566	2566	97%	0	98.96	MG049771.1
Staphylococcus sp. NCCP 255 gene for 16S rRNA, partial sequence	Staphylococcus sp. NCCP 255	2566	2566	97%	0	98.96	AB619597.1
Staphylococcus sp. B2-46 16S ribosomal RNA gene, partial sequence	Staphylococcus sp. B2-46	2566	2566	98%	0	98.82	FJ386519.1
Staphylococcus sp. strain XIXJ303 16S ribosomal RNA gene, partial sequence	Staphylococcus sp.	2564	2564	97%	0	99.02	MH801105.1
Staphylococcus haemolyticus strain yangyueP6 16S ribosomal RNA gene, partial sequence	Staphylococcus haemolyticus	2564	2564	98%	0	98.75	KU977137.1
Staphylococcus haemolyticus strain yangyueP14 16S ribosomal RNA gene, partial sequence	Staphylococcus haemolyticus	2560	2560	97%	0	98.95	KU977129.1
Staphylococcus sp. C29(2011) 16S ribosomal RNA gene, partial sequence	Staphylococcus sp. C29(2011)	2560	2560	97%	0	98.95	JN224983.1
Staphylococcus equorum strain Y15 16S ribosomal RNA gene, partial sequence	Staphylococcus equorum	2560	2560	97%	0	98.95	JX134628.1

Table 2: Sequence Producing Significant Alignments (DO)

Description	Scientific Name	Max Score	Total Score	Query Cover	E value	Per. ident	Acc. Len	Accession
Uncultured bacterium clone ncd614d12c1 16S ribosomal RNA gene, partial sequence	uncultured bacterium	1914	1914	76%	0	98.09	1359	HM285475.1
Uncultured bacterium clone ncd166b01c1 16S ribosomal RNA gene, partial sequence	uncultured bacterium	1914	1914	76%	0	98.09	1359	HM264272.1
Acinetobacter rhizosphaerae strain HlW1200907 16S ribosomal RNA gene, partial sequence	Acinetobacter rhizosphaerae	1910	1910	76%	0	98	1446	MG011547.1
Acinetobacter rhizosphaerae strain Atecer9I 16S ribosomal RNA gene, partial sequence	Acinetobacter rhizosphaerae	1908	1908	76%	0	98	1396	MT386200.1
Acinetobacter rhizosphaerae strain Atecer5I 16S ribosomal RNA gene, partial sequence	Acinetobacter rhizosphaerae	1908	1908	76%	0	98	1379	MT386156.1
Acinetobacter rhizosphaerae strain Atecer4J 16S ribosomal RNA gene, partial sequence	Acinetobacter rhizosphaerae	1908	1908	76%	0	98	1393	MT386147.1
Acinetobacter rhizosphaerae strain Atecer4B 16S ribosomal RNA gene, partial sequence	Acinetobacter rhizosphaerae	1908	1908	76%	0	98	1386	MT386139.1
Acinetobacter calcoaceticus strain 7 16S	Acinetobacter	1908	1908	76%	0	98	1439	MN911371.1

ribosomal RNA gene, partial sequence	calcoaceticus							
Acinetobacter pittii strain A1254 chromosome, complete genome	Acinetobacter pittii	1908	11452	76%	0	98	4065905	CP049806.1
Acinetobacter calcoaceticus strain PHN4a 16S ribosomal RNA gene, partial sequence	Acinetobacter calcoaceticus	1908	1908	76%	0	98	1313	MT199278.1
Acinetobacter pittii strain C5 16S ribosomal RNA gene, partial sequence	Acinetobacter pittii	1908	1908	76%	0	98	1400	MT186756.1

Chapter 7

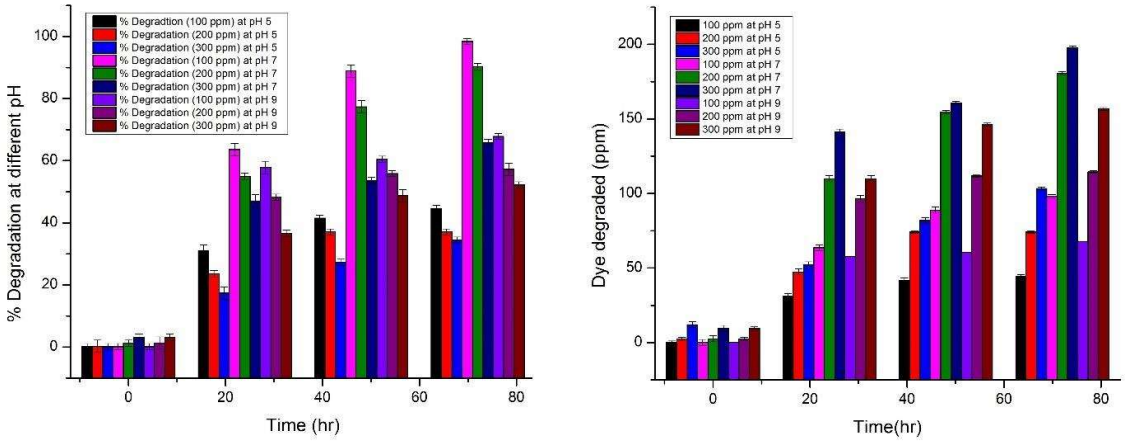


Figure 1 (a)Degradation of dye at different pH and concentration, and (b) % Degradation of dye at different pH and concentration

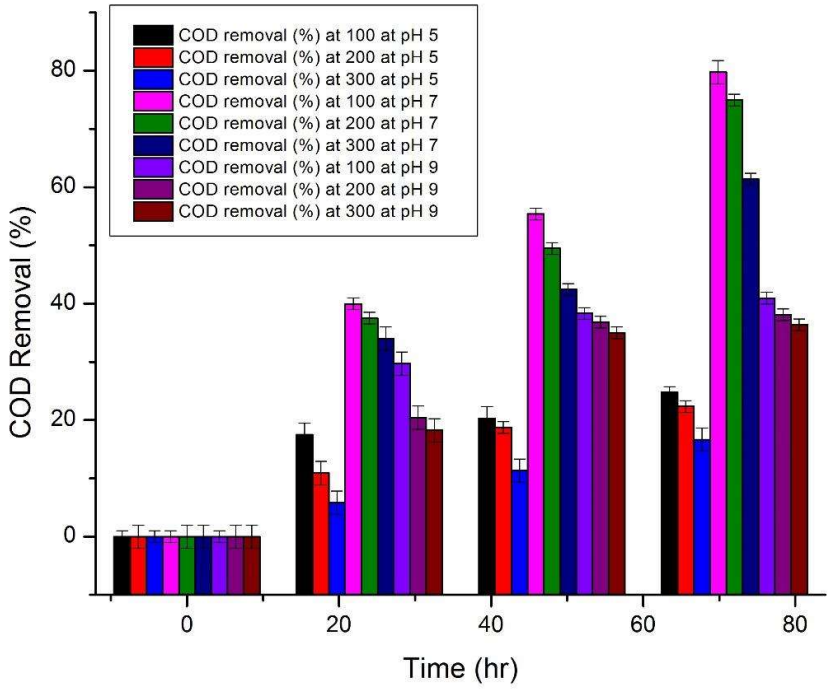


Figure 2 COD removal efficiency

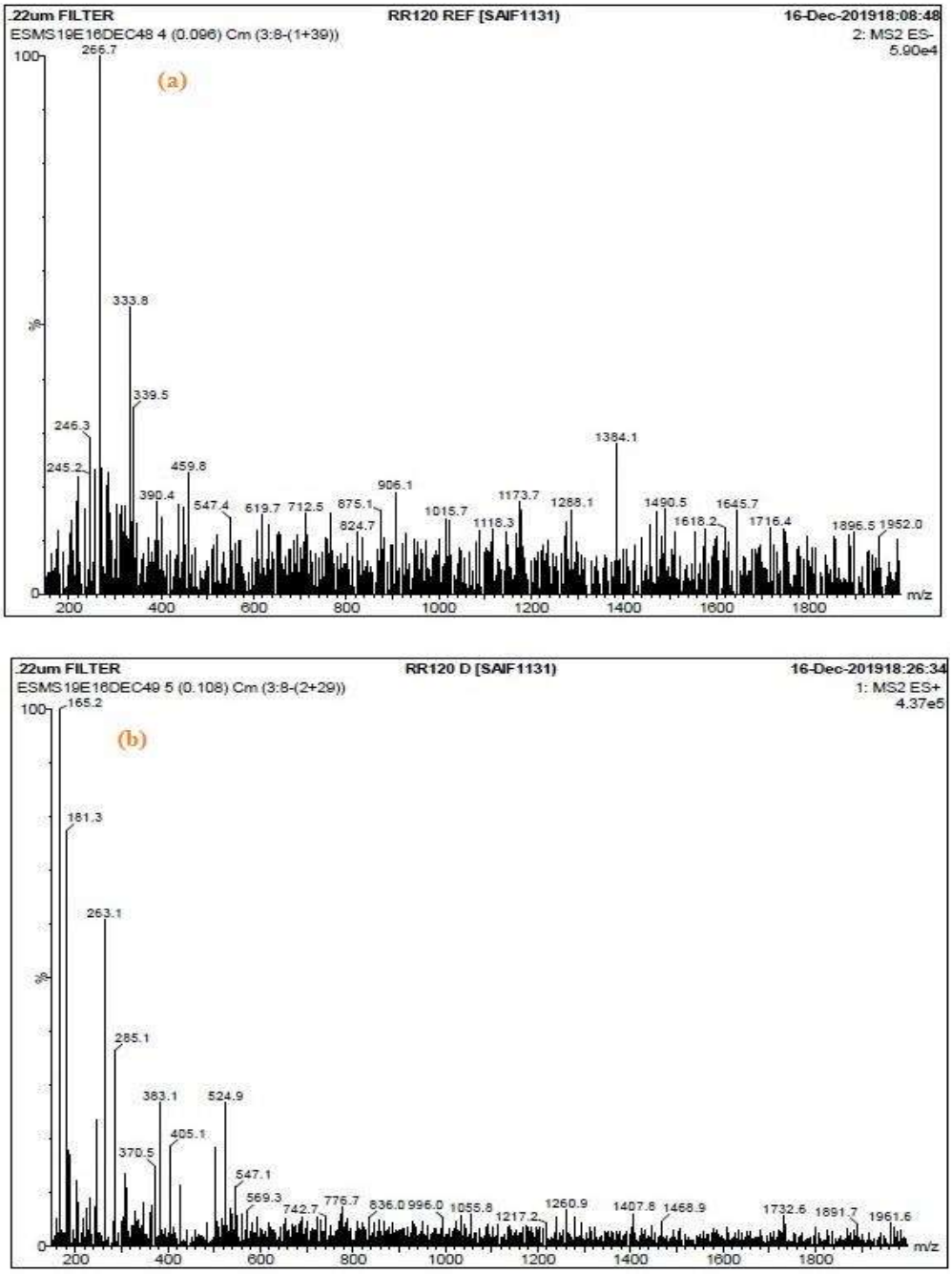


Figure 3 LCMS spectra of (a) RR120 dye (Control); (b) degraded metabolites

Chapter 8

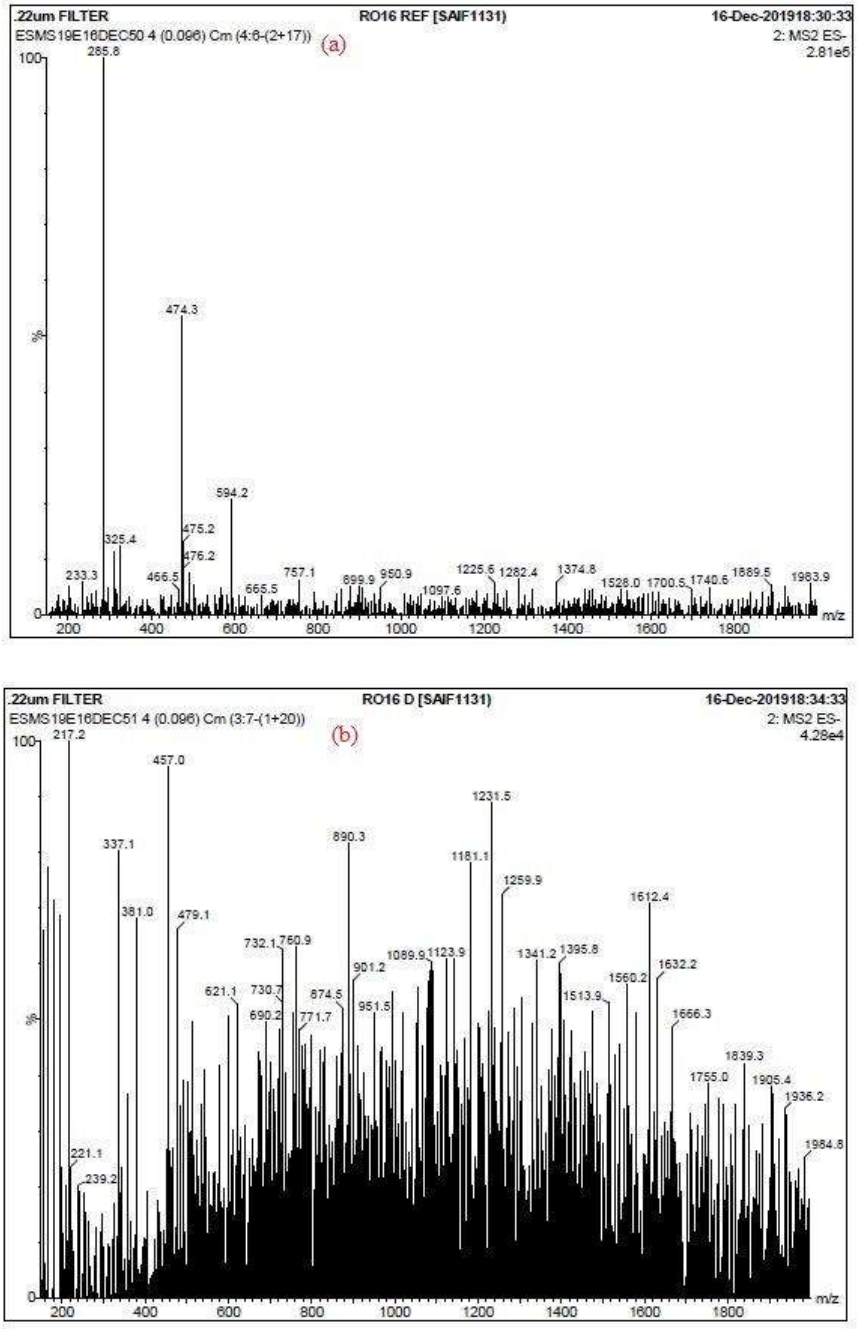


Figure 2 (a) LCMS spectra for control reactive orange 16 and

(b) decolorized reactive orange 16


List of Publications
&
Conferences

LIST OF PUBLICATIONS

1. **Amrita Shahi, V.C. Padmanaban, R.S.Singh,Ankur Verma (2021),** **"**Biodegradation of reactive red 120 in the microbial fuel cell by Staphylococcus equorum strain RAP2: Statistical modeling and process optimization**", Journal of Water Process Engineering.** Volume 40, 101913
2. **Amrita Shahi, V.C. Padmanaban, R.S.Singh,Ankur Verma (2021),** Comparative study on the performance of MFC for the treatment of Reactive Orange 16 dye using mixed and pure bacterial species and its optimization using response surface methodology, **Sustainable Energy Technologies and Assessments**. Volume 48,101667
3. **Amrita Shahi, B. N. Rai and R. S. Singh (2021),** "Effect of Different Substrate on the Performance of Microbial Fuel Cell Using Nafion as Membrane", **Journal of International Academy of Physical Sciences.** Volume 25,193-205
4. **Amrita Shahi, B.N.Rai, R.S.Singh (2020), "**Biodegradation of Reactive Orange 16 Dye in MFC: An Innovative Way to Minimize Waste along with Electricity Production**", Applied Biochemistry and Biotechnology.** Volume 192, 196–210
5. **Amrita Shahi, B.N.Rai, R.S.Singh (2017), "**A comparative study of a biofuel cell with two difference proton exchange membrane for production of electricity from wastewater**", Resource Efficient of Technologies**. Volume 3, 78-81.
6. **Amrita Shahi, B.N.Rai, R.S.Singh (2016),"**Analysis of metabolites and Carbon Balance in the Biofiltration of cumene using loofa sponge as Biofilter Media**", Applied Biochemistry and Biotechnology**. Volume 180, 338–348 (2016).
7. **Kiran Singh, B.S.Giri, Amrita Shahi, S.R Geed, M.K. Kureel, Sanjay Singh, S.K. Dubey, B.N.Rai, R.S.Singh, (2017), "**Biofiltration of xylene using wood

charcoal as the biofilter media under transient & high loading conditions**",** **Bioresource Technology.** Volume 242,351-358.

8. **Vikas Bharati, Amrita Shahi, S.R.Geed, M.K.Kureel, B.N.Rai, B.S.Giri, R.S.Singh (2017),** Biodegradation of Reactive orange dye 16 in Packed bed bioreactor using seeds of Ashoka & Casuarina as packing of the medium, **India Journal of Biotechnology**. Volume 16, 216-221.

CONFERENCES

1. **CONIAPS 2020**, **International Conference of International Academy of Physical Sciences (CONIAPS XXVI)** "Simultaneous degradation of ReactiveRed 120 dye and current generation in Nafion based Proton exchange membrane in Microbial Fuel Cell using Staphylococcus equoruma and its statistical optimization".
2. **ICSDEE 2019, International Conference on Sustainable Development in Energy & Environment,** "Biodegradation of Reactive Orange 16 dye in MFC".
3. **TECHNOSCAPE 2018, An International Conference on Sustainable Water Resources-Innovation & Impacts,** "Effect of different substrates on the performance of MFC using Nafion as membrane".
4. **BEHSD 2018, An International Conference on Bio-Innovation for Environmental and Heath Sustainable Development**," Biodegradation of Reactive Red 120 dye in MFC"
5. **TECHNOSCAPE 2016, An International Conference on Separation Technique in Chemical, Biochemical, Petroleum, and Environmental Engineering,** " A comparative study of a biofuel cell with two different proton exchange membrane for production of electricity".