

DAFTAR PUSTAKA

- Ali, H., Khan, E., & Sajad, M. A. (2013). Phytoremediation of Heavy Metals- Concepts and Applications. *Chemosphere*, 91(7), 869–881. <https://doi.org/10.1016/j.chemosphere.2013.01.075>
- Amari, T., Ghnaya, T., & Abdelly, C. (2017). Nickel, Cadmium and Lead Phytotoxicity and Potential of Halophytic Plants in Heavy Metal Extraction. *South African Journal of Botany*, 111(7), 99–110. <https://doi.org/10.1016/j.sajb.2017.03.011>
- Amiruddin, A., & Lubis, F. A. (2018). Analisa Pengujian Lelah Material Tembaga dengan Menggunakan Rotary Bending Fatigue Machine. *Jurnal Ilmiah “MEKANIK” Teknik Mesin ITM*, 4(2), 93–99. <https://jurnal.mesin.itm.ac.id/index.php/jm/article/view/79/68>
- Andriani, Y. (2017). *Pembuatan Adsorben dari Rumput Gajah (Pennisetum Purpureum) untuk Menurunkan Kadar Logam Kadmium (Cd) dalam Limbah Cair Sebagai Sumber Belajar Siswa Sekolah Menengah Kejuruan Negeri 2 Pekanbaru*. Universitas Islam Negeri Sultan Syarif Kasim Riau.
- Ardiatma, D., Ilman Ilyas, N., & Ulfani Sara, N. (2023). Efektivitas Metode Fitoremediasi dengan Tanaman Kayu Apu (*Pistia Stratiotes* L.) terhadap Penurunan Kadar BOD dalam Limbah Domestik di Jakarta. *Jurnal Sains & Teknologi Lingkungan*, 15(2), 121–133. <https://doi.org/10.20885/jstl.vol15.iss2.art2>
- Aris, M., Ibrahim, T. A., & Nasir, L. (2020). Kontaminasi Logam Nikel (Ni) Pada Struktur Jaringan Ikan. *E-Journal BUDIDAYA PERAIRAN*, 9(1), 64–72.
- Asati, A., Pichhode, M., & Nikhil, K. (2016). Effect of Heavy Metals on Plants: An Overview. *International Journal of Application or Innovation in Engineering & Management*, 5(3), 56–66. <https://doi.org/10.13140/RG.2.2.27583.87204>
- Asril, A. M. (2022). *Fitoremediasi air Limbah Penatu Menggunakan Tanaman Rumput Gajah (Pennisetum pupureum)*. Universitas Islam Negeri Ar-Raniry.
- Astuti, T. T. (2017). *Pemanfaatan Akar Alang-Alang (Imperata cylindrica) sebagai*

Adsorben untuk Menurunkan Kadar Magnesium dalam Air Sadah dan Aplikasinya pada Materi Kimia Unsur di Sekolah Menengah Kejuruan Negeri 2 Pekanbaru. Universitas Islam Negeri Sultan Syarif Kasim Riau.

- Babu, S. M. O. F., Hossain, M. B., Rahman, M. S., Rahman, M., Ahmed, A. S. S., Hasan, M. M., Rakib, A., Emran, T. B., Xiao, J., & Simal-Gandara, J. (2021). Phytoremediation of Toxic Metals: A Sustainable Green Solution for Clean Environment. In *Applied Sciences* (Vol. 11, Issue 21). <https://doi.org/10.3390/app112110348>
- Edward, E., Munawir, K., Yogaswara, D., Falahuddin, D., Kusnadi, A., Triandiza, T., Helfinalis, H., Wulandari, I., Lestari S, L. S., & Pesilette, R. N. (2021). Kandungan Logam Berat Pb, Cd, Cu, Zn, Ni dan Senyawa Polisiklik Aromatik Hidrokarbon (PAH) dalam Sedimen di Teluk Jakarta. *Jurnal Sumberdaya Akuatik Indopasifik*, 5(1), 1. <https://doi.org/10.46252/jsai-fpik-unipa.2021.vol.5.no.1.104>
- Ejaz, U., Khan, S. M., Khalid, N., Ahmad, Z., Jehangir, S., Fatima Rizvi, Z., Lho, L. H., Han, H., & Raposo, A. (2023). Detoxifying The Heavy Metals: A Multipronged Study of Tolerance Strategies Against Heavy Metals Toxicity in Plants. *Frontiers in Plant Science*, 14(05), 1–17. <https://doi.org/10.3389/fpls.2023.1154571>
- Ent, A. Van Der, Mak, R., De Jonge, M. D., & Harris, H. H. (2018). Simultaneous Hyperaccumulation of Nickel and Cobalt in the Tree *Glochidion cf. sericeum* (Phyllanthaceae): Elemental Distribution and Chemical Speciation. *Scientific Reports*, 8(1), 1–15. <https://doi.org/10.1038/s41598-018-26891-7>
- Hana, G. (2021). *Pengaruh Temperatur dan Waktu pada Proses Pemanfaatan Cangkang Kepiting Menjadi Kitosan dalam Menyisihkan Logam Berat Terlarut (Cu²⁺)*. Universitas Pembangunan Nasional “Veteran” Jawa Timur.
- Hapsari, R. I., & Lestari, S. U. (2017). Fitoremediasi Logam Berat Kadmium (Cd) pada Tanah Yang Tercemar dengan Tanaman Biduri (*Calotropis gigantea*) dan Rumput Gajah (*Panicum maximum*). *Jurnal Hijau Cendekia*, 2(1), 9–14.

- Hidayati, N. (2005). Fitoremediasi dan Potensi Tumbuhan Hiperakumulator. *HAYATI Journal of Biosciences*, 12(1), 35–40. [https://doi.org/10.1016/S1978-3019\(16\)30321-7](https://doi.org/10.1016/S1978-3019(16)30321-7)
- Jayampathi, T., Atugoda, T., & Jayasinghe, C. (2019). Uptake and Accumulation of Pharmaceuticals and Personal Care Products in Leafy Vegetables. In M. N. V. Prasad, M. Vithanage, & A. B. T.-P. and P. C. P. W. M. and T. T. Kapley (Eds.), *Pharmaceuticals and Personal Care Products: Waste Management and Treatment Technology Emerging Contaminants and Micro Pollutants* (pp. 87–113). Butterworth-Heinemann. <https://doi.org/10.1016/B978-0-12-816189-0-0.00004-4>
- Jiang, M., Liu, S., Li, Y., Li, X., Luo, Z., Song, H., & Chen, Q. (2019). EDTA-Facilitated Toxic Tolerance, Absorption and Translocation and Phytoremediation of Lead by Dwarf Bamboos. *Ecotoxicology and Environmental Safety*, 170, 502–512. <https://doi.org/10.1016/j.ecoenv.2018.12.020>
- Juel, M. A. I., Dey, T. K., Akash, M. I. S., & Das, K. K. (2021). Heavy Metals Phytoremediation Potential of Napier Grass Cultivated on Tannery Sludge in Bangladesh. *Journal of Engineering Science*, 12(1), 35–41. <https://doi.org/10.3329/jes.v12i1.53099>
- Kementerian Lingkungan Hidup. (2015). Pengolahan & Pemanfaatan Limbah Elektroplating. *Informasi Lingkungan Hidup*, No 2, Jakarta.
- Khairani, S., Rahmadini, K., & Muslim, A. (2024). Efisiensi Adsorpsi Ion Logam Cu (II) Menggunakan Biosorben Jarum Cemara Teraktivasi NaOH. *Jurnal Inovasi Ramah Lingkungan (JIRL)*, 5(1), 6–9.
- Khan, A. H. A., Kiyani, A., Santiago-Herrera, M., Ibáñez, J., Yousaf, S., Iqbal, M., Martel-Martín, S., & Barros, R. (2023). Sustainability of Phytoremediation: Post-harvest Stratagems and Economic Opportunities for The Produced Metals Contaminated Biomass. *Journal of Environmental Management*, 326, 116700. <https://doi.org/10.1016/j.jenvman.2022.116700>

- Kogbara, R. B., Badom, B. K., & Ayotamuno, J. M. (2018). Tolerance and Phytoremediation Potential of Four Tropical Grass Species to Land-applied Drill Cuttings. *International Journal of Phytoremediation*, 20(14), 1446–1455. <https://doi.org/10.1080/15226514.2018.1501337>
- Kurniawan, F., Cahyadi, T., Ernawati, R., Waterman, & Amri, N. (2022). Overview Metode Fitoremediasi Terhadap Penyerapan Logam Berat Pada Air Terkontaminasi Menggunakan Jenis Tumbuhan Air. *Rekayasa Teknologi Industri Dan Informasi (ReTII)*, 17(1), 247–254.
- Li, B., Li, Y., Jiang, M., Chen, J. J., Wang, J. X., Li, T. G., & Zhan, F. D. (2018). Accumulation and Distribution of Heavy Metals in *Imperata Cylindrica* at Lead-zinc Mining Area. *IOP Conference Series: Earth and Environmental Science*, 199(4). <https://doi.org/10.1088/1755-1315/199/4/042050>
- Luo, J., He, W., Wu, J., & Sophie Gu, X. (2019). Sensitivity of *Eucalyptus Globulus* to Red and Blue Light with Different Combinations and Their Influence on its Efficacy for Contaminated Soil Phytoremediation. *Journal of Environmental Management*, 241(7), 235–242. <https://doi.org/10.1016/j.jenvman.2019.04.045>
- Muthusaravanan, S., Sivarajasekar, N., Vivek, J. S., Vasudha Priyadharshini, S., Paramasivan, T., Dhakal, N., & Naushad, M. (2020). Research Updates on Heavy Metal Phytoremediation: Enhancements, Efficient Post-harvesting Strategies and Economic Opportunities BT - Green Materials for Wastewater Treatment. In M. Naushad & E. Lichtfouse (Eds.), *Green Materials for Wastewater Treatment* (pp. 191–222). Springer International Publishing. https://doi.org/10.1007/978-3-030-17724-9_9
- Mutmainnah, F. (2015). Fitoremediasi Logam Timbal (Pb) dengan Menggunakan *Hydrilla Verticillata* dan *Najas Indica*. *Jurnal Dampak*, 12(2), 90. <https://doi.org/10.25077/dampak.12.2.90-103.2015>
- Nababan, D. J., & Ali, M. (2021). Pengaruh Pemberian Sludge Industri Penyamakan Kulit Terhadap Perkembangan Tanaman Pucuk Merah

- (*Syzygium Oleana*). *Jurnal Envirous*, 1(2), 10–18.
- Nagajyoti, P. C., Lee, K. D., & Sreekanth, T. V. M. (2010). Heavy Metals, Occurrence and Toxicity for Plants: A Review. *Environmental Chemistry Letters*, 8(3), 199–216. <https://doi.org/10.1007/s10311-010-0297-8>
- Nanik, A. (2016). Adsorpsi Timbal (Pb) dalam Larutan Menggunakan Adsorben Radix Alang-Alang (*Imperata cylindrica*) Termodifikasi Asam Sitrat. *Prosiding Sains Nasional Dan Teknologi*, 1(1), 23–27.
- Novi, C., Sartika, S., & Shobah, A. N. (2019). Fitoremediasi Logam Seng (Zn) Menggunakan Hydrilla sp. Pada Limbah Industri Kertas. *Jurnal Kimia Valensi*, 5(1), 108–114. <https://doi.org/10.15408/jkv.v5i1.8814>
- Nugroho, A. P., Butar, E. S. B., Priantoro, E. A., Sriwuryandari, L., Pratiwi, Z. B., & Sembiring, T. (2021). Phytoremediation of Electroplating Wastewater by Vetiver Grass (*Chrysopogon zizanoides* L.). *Scientific Reports*, 11(1), 14482. <https://doi.org/10.1038/s41598-021-93923-0>
- Oktaviani, L., Nilandita, W., & Suprayogi, D. (2020). Fitoremediasi Tanaman Apu-Apu (*Pistia Stratiotes*) terhadap Kadar Logam Zn Berdasarkan Variasi Jumlah Tanaman. *Al-Ard: Jurnal Teknik Lingkungan*, 6(1), 44–52. <https://doi.org/10.29080/alard.v6i1.981>
- Pandey, V. C., Singh, D. P., Patel, D., & Jasrotia, S. (2020). Potential of Napier Grass (*Pennisetum purpureum* Schumach.) for Phytoremediation and Biofuel Production. *Phytoremediation Potential of Perennial Grasses*, 283–302. <https://doi.org/10.1016/B978-0-12-817732-7.00014-6>
- Pratika, A. R., & Widiono, B. (2020). Studi Literatur Pengolahan Limbah Cair Elektroplating untuk Mengurangi Kadar Logam Nikel dan TSS (Total Suspended Solid) Menggunakan Elektrokoagulator. *Jurnal Teknologi Separasi*, 6(9), 346–353.
- Pratiwi, A. (2021). The Use of Phytoremediation with an Up-flow System to Reduce Pollutants at Anaerobic Pond Outlets II Palm Oil Mill Effluent (*Elaeis guineensis* Jacq.). *Agrosains: Jurnal Penelitian Agronomi*, 23(2), 89.

<https://doi.org/10.20961/agsjpa.v23i2.50101>

- Primadika, M. P. (2017). *Fitoremediasi Penurunan Logam Berat Cu, Ni dan Pb dalam Tanah Tercemar Minyak Pelumas Bekas Menggunakan Alang-Alang (Imperata cylindrica) dan Bibit Pohon Pepaya (Carica papaya L.)*. Universitas Pembangunan Nasional “Veteran” Jawa Timur.
- Purwanto, & Huda, S. (2022). *Teknologi Industri Elektroplating*. Badan Penerbit Universitas Diponegoro Semarang.
- Rabêlo, F. H. S., & Borgo, L. (2016). Changes Caused by Heavy Metals in Micronutrient Content and Antioxidant System of Forage Grasses Used for Phytoremediation: An Overview. *Ciencia Rural*, 46(8), 1368–1375. <https://doi.org/10.1590/0103-8478cr20151291>
- Razafindrakoto, Z. R., Tombozara, N., Donno, D., Gamba, G., Nalimanana, N. R., Rakotondramanana, D. A., Andrianjara, C., Beccaro, G. L., & Ramanitrahasimbola, D. (2021). Antioxidant, Analgesic, Anti-inflammatory and Antipyretic Properties, and Toxicity Studies of The Aerial Parts of *Imperata cylindrica* (L.) Beauv. *South African Journal of Botany*, 142(11), 222–229. <https://doi.org/10.1016/j.sajb.2021.07.004>
- Ridhowati, S. (2013). *Mengenal Pencemaran Ragam Logam*. Graha Ilmu Yogyakarta.
- Rismawati, D., Thohari, I., & Rochmalia, F. (2020). Efektivitas Tanaman Kayu Apu (*Pistia stratiotes* L.) dalam Menurunkan Kadar BOD5 dan COD Limbah Cair Industri Tahu. *Jurnal Penelitian Kesehatan Suara Forikes*, 11(2), 186–190.
- Riyanto. (2012). *Elektrokimia dan Aplikasinya*. Graha Ilmu Yogyakarta.
- Ruzzi, F., Irawan, A., & Lisha, S. Y. (2023). Uji Efektivitas Tanaman *Salvinia Molesta* dan *Eichhornia Crassipes* dalam Menurunkan Kadar BOD, COD, Dan TSS pada Limbah Cair Tahu. *Cived*, 10(1), 311. <https://doi.org/10.24036/cived.v10i1.122681>
- Shen, X., Dai, M., Yang, J., Sun, L., Tan, X., Peng, C., Ali, I., & Naz, I. (2022). A

- Critical Review on the Phytoremediation of Heavy Metals from Environment: Performance and Challenges. *Chemosphere*, 291(3), 132979. <https://doi.org/10.1016/j.chemosphere.2021.132979>
- Shinta, Y. C., Zaman, B., & Sumiyati, S. (2021). Citric Acid and EDTA as Chelating Agents in Phytoremediation of Heavy Metal in Polluted Soil: A Review. *IOP Conference Series: Earth and Environmental Science*, 896(1), 12023. <https://doi.org/10.1088/1755-1315/896/1/012023>
- Suci, A. (2021). Penentuan Kandungan Logam Berat Cu dan Zn Pada Sampel Air Limbah Kelapa Sawit dengan Metode AAS (Atomic Absorption Spectrophotometry). *Karya Ilmiah*, Fakultas Sains dan Teknologi, Universitas Jambi. <https://repository.unja.ac.id/23982/>
- Supradata, S. (2005). *Pengolahan Limbah Domestik Menggunakan Tanaman Hias Cyperus Alternifolius, L. dalam Sistem Lahan Basah Buatan Aliran Bawah Permukaan (SSF-Wetlands)*. Universitas Diponegoro.
- Tan, H. W., Pang, Y. L., Lim, S., & Chong, W. C. (2023). A State-of-the-art of Phytoremediation Approach for Sustainable Management of Heavy Metals Recovery. *Environmental Technology and Innovation*, 30(5), 103043. <https://doi.org/10.1016/j.eti.2023.103043>
- Tananonchai, A., Sampanpanish, P., Chanpiwat, P., Tancharakorn, S., & Sukkha, U. (2019). Effect of EDTA and NTA on Cadmium Distribution and Translocation in Pennisetum purpureum Schum cv. Mott. *Environmental Science and Pollution Research*, 26(10), 9851–9860. <https://doi.org/10.1007/s11356-018-04103-z>
- Tangahu, B., Titah, H., & Mangkoedihardjo, S. (2018). Teknologi Remediasi Lingkungan. *Mobius Surabaya*, 74–77.
- Tangahu, B. V., Sheikh Abdullah, S. R., Basri, H., Idris, M., Anuar, N., & Mukhlisin, M. (2011). A Review on Heavy Metals (As, Pb, and Hg) Uptake by Plants through Phytoremediation. *International Journal of Chemical Engineering*, 2011(1), 939161. <https://doi.org/10.1155/2011/939161>

- Wiangkham, N., & Prapagdee, B. (2018). Potential of Napier Grass with Cadmium-Resistant Bacterial Inoculation on Cadmium Phytoremediation and its Possibility to Use As Biomass Fuel. *Chemosphere*, 201(6), 511–518. <https://doi.org/10.1016/j.chemosphere.2018.03.039>
- Yadav, M., Singh, G., & Jadeja, R. N. (2021). Phytoremediation for Heavy Metal Removal: Technological Advancements. *Pollutants and Water Management: Resources, Strategies and Scarcity*, 6(5), 128–150. <https://doi.org/10.1002/9781119693635.ch6>
- Yusuf, M. (2014). *Fitoremediasi Tanah Tercemar Logam Berat Pb dan Cd dengan Menggunakan Tanaman Lidah Mertua (Sansevieria trifasciata)*. Universitas Hasanuddin.
- Yuwono, S. S. (2015). Alang-Alang (*Imperata cylindrica*). *Universitas Brawijaya*. <http://darsatop.lecture.ub.ac.id/2015/10/alang-alang-imperata-cylindrica/>
- Zubair, A., Selintung, M., & Samang, L. (2016). Absorption Reduction Capacity with Chromium (Cr) and Cadmium (Cd) Contaminants of Vetiver Phytoremediation Process on Compost Soil. *Journal of Engineering Research and Applications*, 6(1), 53–59.