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DAFTAR PUSTAKA

Abidin, N., Wahdaniar, Febrianti, N., & Syarifah, S. M. (2023). Pengurai Sampah Plastik Ramah Lingkungan. *Bincang Sains Dan Teknologi*, *2*(02), 63–71. https://doi.org/10.56741/bst.v2i02.339

Abnisa, F., & Daud, W. M. A. W. (2014). A Review on Co-Pyrolisis of Biomass: An Optional Technique to Obtain a High-grade Pyrolisis Oil. *Energy Coversion and Management*, *87*, 71-85. https://doi.org/10.1016/j.enconman.2014.07.007

Achmad, C. R., Faqih, I., & Pratiwi, T. A. A. (2021). Identifikasi Kelimpahan Mikroplastik Air Kawasan Kanal Magetan, Anak Sungai Brantas Kabupaten Sidoarjo. *Environmental Pollution Journal*, *1*(3), 175–183. https://ecotonjournal.id/index.php/epj

Adeleye, A. T., Bahar, M. M., Megharaj, M., & Rahman, M. M. (2023). Recent developments and mechanistic insights on adsorption technology for micro- and nanoplastics removal in aquatic environments. *Journal of Water Process Engineering*, *53*. https://doi.org/10.1016/j.jwpe.2023.103777

Afrianisa, R. D., & Ulyah, T. (2023). Analisis Status Mutu Air Sungai Banjar Desa Banjar Bara Kecamatan Gapura Kabupaten Sumenep menggunakan Metode STORET. *Jurnal Sains Dan Teknologi Lingkungan*, *15*(1), 75–88.

Al-Emran, M., & Nayem, M. J. (2025). Vector effects of microplastics on organic pollutants: sorption-desorption and bioaccumulation kinetics. In *Chemosphere*, *388*. https://doi.org/10.1016/j.chemosphere.2025.144698

Andika, N., & Partarini, N. M. C. (2023). Water Resources Management in Progo River Basin using SWOT Analysis. *Journal of the Civil Engineering Forum*, 315–328. https://doi.org/10.22146/jcef.7652

Andrady, A. L. (2011). Microplastics in the marine environment. In *Marine Pollution Bulletin*, *62*(8), 1596–1605. https://doi.org/10.1016/j.marpolbul.2011.05.030

Ašmonaitė, G., Tivefälth, M., Westberg, E., Magnér, J., Backhaus, T., & Carney Almroth, B. (2020). Microplastics as a Vector for Exposure to Hydrophobic Organic Chemicals in Fish: A Comparison of Two Polymers and Silica Particles Spiked With Three Model Compounds. *Frontiers in Environmental Science*, *8*. https://doi.org/10.3389/fenvs.2020.00087

Association of Plastics Manufacturers. (2017). *Plastics-the Facts 2017 An analysis of European plastics production, demand and waste data*.

Aziz, K. H. H., Mustafa, F. S., & Hama, S. (2025). Pharmaceutical Removal From Aquatic Environments Using Multifunctional Metal-Organic Frameworks (Mofs) Materials For Adsorption And Degradation Processes: A Review. *Coordination Chemistry Reviews*, *542*. https://doi.org/10.1016/j.ccr.2025.216875

Badia, J. D., Gil-Castell, O., & Ribes-Greus, A. (2017). Long-term properties and end-of-life of polymers from renewable resources. *Polymer Degradation and Stability*, *137*, 35–57. https://doi.org/10.1016/j.polymdegradstab.2017.01.002

Badmus, S. O., Amusa, H. K., Oyehan, T. A., & Saleh, T. A. (2021). Environmental risks and toxicity of surfactants: overview of analysis, assessment, and

UNIVERSITAS GADJAH MADA
Kajian Distribusi Kelimpahan dan Karakteristik Warna Mikroplastik Serta Korelasinya Dengan Parameter Kimia dan Status Kualitas Air Berdasarkan Metode STORET di Sungai Progo
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ad.id/

remediation techniques. *Environmental Science and Pollution Research*, *28*, 62085–62104. https://doi.org/10.1007/s11356-021-16483-w/Published

Bher, A., Mayekar, P. C., Auras, R. A., & Schvezov, C. E. (2022). Biodegradation of Biodegradable Polymers in Mesophilic Aerobic Environments. *International Journal of Molecular Sciences*, *23*(20), 1–106. https://doi.org/10.3390/ijms232012165

Bijay-Singh, & Craswell, E. (2021). Fertilizers and nitrate pollution of surface and ground water: an increasingly pervasive global problem. *SN Applied Sciences*, *3*(4). https://doi.org/10.1007/s42452-021-04521-8

Blettler, M. C. M., & Mitchell, C. (2021). Dangerous traps: Macroplastic encounters affecting freshwater and terrestrial wildlife. *Science of the Total Environment*, *798*. https://doi.org/10.1016/j.scitotenv.2021.149317

Briassoulis, D. (2007). Analysis of the mechanical and degradation performances of optimised agricultural biodegradable films. *Polymer Degradation and Stability*, *92*(6), 1115–1132. https://doi.org/10.1016/j.polymdegradstab.2007.01.024

Buwono, N. R., Risjani, Y., & Soegianto, A. (2021). Distribution of microplastic in relation to water quality parameters in the Brantas River, East Java, Indonesia. *Environmental Technology and Innovation*, *24*. https://doi.org/10.1016/j.eti.2021.101915

Chapman, D. V. (2021). *Water quality assessments : a guide to the use of biota, sediments, and water in environmental monitoring*. CRC Press.

Elza, P. (2025). Pengaruh Limbah Domestik Terhadap Pencemaran Air Sungai di Kawasan Padat Penduduk. *Jurnal Riset Kesehatan Lingkungan dan Sanitasi, 1*(1), 30-36.

Fauzi, G., Emma Yuliani, & Jadfan Sidqi Fidari. (2025). Penentuan Status Mutu Air Sungai Panyiburan dengan Metode STORET, Indeks Pencemaran, dan Metode CCME WQI. *Jurnal Teknologi Dan Rekayasa Sumber Daya Air*, *5*(2), 913–923. https://doi.org/10.21776/ub.jtresda.2025.005.02.086

Febriani, I. S., Amin, B., & Fauzi, M. (2020). Distribusi mikroplastik di perairan Pulau Bengkalis Kabupaten Bengkalis Provinsi Riau. *Depik*, *9*(3), 386–392. https://doi.org/10.13170/depik.9.3.17387

Firmansyah, Y. W., Setiani, O., & Darundiati, Y. H. (2021). Kondisi Sungai di Indonesia Ditinjau dari Daya Tampung Beban Pencemaran: Studi Literatur. *Serambi Engineering*, *6*(2), 1879–1890.

Fitriyah, A., Syafrudin, S., & Sudarno, S. (2022). Identifikasi Karakteristik Fisik Mikroplastik di Sungai Kalimas, Surabaya, Jawa Timur. *Jurnal Kesehatan Lingkungan Indonesia*, *21*(3), 350–357. https://doi.org/10.14710/jkli.21.3.350-357

Fu, L., Li, J., Wang, G., Luan, Y., & Dai, W. (2021). Adsorption behavior of organic pollutants on microplastics. In *Ecotoxicology and Environmental Safety*, *217*. https://doi.org/10.1016/j.ecoenv.2021.112207

Gewert, B., Plassmann, M. M., & Macleod, M. (2015). Pathways for degradation of plastic polymers floating in the marine environment. *Environmental Sciences: Processes and Impacts*. 17(9), 1513–1521. https://doi.org/10.1039/c5em00207a

UNIVERSITAS
GADJAH MADA
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Ghayebzadeh, M., Taghipour, H., Aslani, H., Hoseini, G., & Farahani, V. (2023). Abundance and distribution of mesoplastics in the sediment of the southern coast of the Caspian Sea. *Regional Studies in Marine Science*, *57*. https://doi.org/10.1016/j.rsma.2022.102767

Gonzalez-Saldias, F., Sabater, F., & Gomà, J. (2024). Microplastic distribution and their abundance along rivers are determined by land uses and sediment granulometry. *Science of the Total Environment*, *933*. https://doi.org/10.1016/j.scitotenv.2024.173165

Gulo, L. P. I. (2025). Pengaruh Deterjen Terhadap Kualitas Permukaan Air. *PERAUT: Jurnal Perikanan Dan Kelautan*, *2*(1), 120–127.

Hahladakis, J. N., & Iacovidou, E. (2018). Closing the loop on plastic packaging materials: What is quality and how does it affect their circularity? *Science of the Total Environment*, *630*, 1394–1400. https://doi.org/10.1016/j.scitotenv.2018.02.330

Halim, M. H. A., Ismail, H. A. A., Zulkipli, L. Z., Manan, S. A., Ali, M. M., & Jansar, K. M. (2024). Relationship between Microplastics and Water Quality in Sungai Melaka, Melaka, Malaysia. *Sains Malaysiana*, *53*(9), 2071–2083. https://doi.org/10.17576/jsm-2024-5309-05

Haribowo, R., Putra, R. A. W., Shiddik, M. J., Anggani, T. P., Rifdah, R., Wahyuni, S., Yuliani, E., & Fadhilah, A. (2024). Assesment of The Water Quality Pollution Index and Ecological Risk of Microplastic Pollution Along The Tambakoso River in Surabaya, Indonesia. Journal of *Contaminant Hydrology, 267.* https://doi.org/10.1016/j.jconhyd.2024.104457

Hidayati, N. V., Rahma S., Nurhakim, A. N., & Hadiyawati, U. (2022). Komposisi dan Distribusi Makro- dan Meso-Plastik di Sungai Keruh, Bumiayu, Kabupaten Brebes. *Jurnal Perikanan dan Kelautan*, 12(2). http://dx.doi.org/10.33512/jpk.v12i2.16310

Hiwari, H., Purba, N. P., Ihsan, Y. N., Yuliadi, L. P. S., & Mulyani, P. G. (2019). Kondisi sampah mikroplastik di permukaan air laut sekitar Kupang dan Rote, Provinsi Nusa Tenggara Timur. *Prosiding Seminar Nasional Masyarakat Biodiversitas Indonesia*, *5*(2), 165–171. https://doi.org/10.13057/psnmbi/m050204

Hossen, M. A., & Mostafa, M. G. (2025). Emerging pollutants in aquatic environment: a global challenge. *Water Practice and Technology*, *20*(8), 1763–1783. https://doi.org/10.2166/wpt.2025.097

Humaerah, A., & Rasyid, A. E. W. (2024). Korelasi Kualitas Air Terhadap Kelimpahan Mikroplastik Di Perairan Laut Galesong Utara Pada Kondisi Surut. *Cokroaminoto Journal of Chemical Science*, *6*(1), 5–9.

Isiuku, B. O., & Enyoh, C. E. (2020). Pollution and health risks assessment of nitrate and phosphate concentrations in water bodies in South Eastern, Nigeria. *Environmental Advances*, *2*. https://doi.org/10.1016/j.envadv.2020.100018

Jaishankar, M., Tseten, T., Anbalagan, N., Mathew, B. B., & Beeregowda, K. N. (2014). Toxicity, mechanism and health effects of some heavy metals. In *Interdisciplinary Toxicology*, *7*(2), 60–72. https://doi.org/10.2478/intox-2014-0009

Jena, G., Dutta, K., & Daverey, A. (2023). Surfactants in water and wastewater (greywater): Environmental toxicity and treatment options. *Chemosphere*, *341*. https://doi.org/10.1016/j.chemosphere.2023.140082

UNIVERSITAS
GADJAH MADA
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Jiang, T., Chai, G., Guo, Q., Peng, H., Guo, Y., Zhang, X., Lin, Y., Cui, H., Cui, X., & Tong, Y. (2025). Color-categorized microplastics in rivers and lakes: Global distribution, driving mechanisms, and ecological risks unveiled by interpretable machine learning. *Journal of Environmental Chemical Engineering*, *13*(6), 120037. https://doi.org/10.1016/j.jece.2025.120037

Kaing, V., Guo, Z., Sok, T., Kodikara, D., Breider, F., & Yoshimura, C. (2024). Photodegradation of biodegradable plastics in aquatic environments: Current understanding and challenges. In *Science of the Total Environment*, *911*. https://doi.org/10.1016/j.scitotenv.2023.168539

Kapo, F. A., Toruan, L. N. L., & Paulus, C. A. (2020). Jenis Dan Kelimpahan Mikroplastik Pada Kolom Permukaan Air Di Perairan Teluk Kupang. *Jurnal Bahari Papadak*, *1*(1), 10–21.

Karacık, B., Okay, O. S., Henkelmann, B., Pfister, G., & Schramm, K.-W. (2013). Water concentrations of PAH, PCB and OCP by using semipermeable membrane devices and sediments. *Marine Pollution Bulletin*, *70*(1–2), 258–265. https://doi.org/10.1016/j.marpolbul.2013.02.031

Karbalaei, S., Golieskardi, A., Watt, D. U., Boiret, M., Hanachi, P., Walker, T. R., & Karami, A. (2020). Analysis and inorganic composition of microplastics in commercial Malaysian fish meals. *Marine Pollution Bulletin*, *150*. https://doi.org/10.1016/j.marpolbul.2019.110687

Kartikasari, D., Zunisnaini, Z., & Nurdianyoto, I. (2024). Identifikasi Mikroplastik di Sungai Ngrowo, Tulungagung. *Jurnal Ilmiah Biosaintropis (Bioscience-Tropic)*, *9*(2), 75–84. https://doi.org/10.33474/e-jbst.v9i2.556

Kazemi, M., Faisal Kabir, S., & Fini, E. H. (2021). State of the art in recycling waste thermoplastics and thermosets and their applications in construction. In *Resources, Conservation and Recycling*, *174*. https://doi.org/10.1016/j.resconrec.2021.105776

Khan, F. R., Clark, N., & Xu, E. G. (2025). Micro(nano)plastics in The Fish Gastrointestinal Tract: A Mini Review and relevance to One Health Perspective. *Current Opinion in Environmental Science & Health, 46*. 10.1016/j.coesh.2025.100645

Kurniawan, A. (2019). Monitoring Perubahan Pola Alur Sungai Menggunakan Citra Satelit Resolusi Spasial Menengah Berbasis Spectral Classification. *Jurnal Nasional Teknologi Terapan*, *3*(1), 1–12. https://doi.org/10.22146/jntt.56613

Kusniati, B. A. E. P., Fallo, T., Aridito, M. N., Nugroho, A. P., & Setyowati, P. R. (2025). Analisis Konsentrasi dan Karakteristik Mikroplastik di Kawasan Wisata Pantai Congot Desa Jangkaran Kabupaten Kulon Progo. *Jurnal Engine: Energi, Manufaktur, Dan Material*, *9*(1), 131–145. https://doi.org/10.30588/jeemm.v9i1.2171

Kye, H., Kim, J., Ju, S., Lee, J., Lim, C., & Yoon, Y. (2023). Microplastics in water systems: A review of their impacts on the environment and their potential hazards. *Heliyon*, *9*(3), e14359. https://doi.org/10.1016/j.heliyon.2023.e14359

Laycock, B., Nikolić, M., Colwell, J. M., Gauthier, E., Halley, P., Bottle, S., & George, G. (2017). Lifetime prediction of biodegradable polymers. *Progress in Polymer Science*, *71*, 144–189. https://doi.org/10.1016/j.progpolymsci.2017.02.004

UNIVERSITAS
GADJAH MADA
**Kajian Distribusi Kelimpahan dan Karakteristik Warna Mikroplastik Serta Korelasinya Dengan Parameter
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ad.id/

Layn, A. A., Emiyarti, & Ira. (2020). Distribusi Mikroplastik Pada Sedimen Di Perairan Teluk Kendari. *Sapa Laut*, *5*(2), 115–122. http://ojs.uho.ac.id/index.php/jsl

Lechthaler, S., Waldschläger, K., Stauch, G., & Schüttrumpf, H. (2020). The way of macroplastic through the environment. *Environments, 7*(10), 1–30. https://doi.org/10.3390/environments7100073

Lee, J., Hong, S., Song, Y. K., Hong, S. H., Jang, Y. C., Jang, M., Heo, N. W., Han, G. M., Lee, M. J., Kang, D., & Shim, W. J. (2013). Relationships among the abundances of plastic debris in different size classes on beaches in South Korea. *Marine Pollution Bulletin*, *77*(1–2), 349–354. https://doi.org/10.1016/j.marpolbul.2013.08.013

Li, W., Zu, B., Yang, Q., Guo, J., & Li, J. (2023). Sources, distribution, and environmental effects of microplastics: a systematic review. *RSC Advances*, *13*(23), 15566–15574. https://doi.org/10.1039/d3ra02169f

Liu, P., Wu, X., Liu, H., Wang, H., Lu, K., & Gao, S. (2020). Desorption of pharmaceuticals from pristine and aged polystyrene microplastics under simulated gastrointestinal conditions. *Journal of Hazardous Materials*, *392*. https://doi.org/10.1016/j.jhazmat.2020.122346

Lucas, N., Bienaime, C., Belloy, C., Queneudec, M., Silvestre, F., & Nava-Saucedo, J. E. (2008). Polymer biodegradation: Mechanisms and estimation techniques - A review. *Chemosphere*, *73*(4), 429–442. https://doi.org/10.1016/j.chemosphere.2008.06.064

Maganti, S. S., Akkina, R. C. (2023). Investigation of Factors Affecting Metal Ion Desorption from The Surface of Microplastics. *Iranian Journal of Chemistry and Chemical Engineering*, *42*(8), 2418-2426.

Meyer, E. E., Rosenberg, K. J., Israelachvili, J. (2006). Recent Progress in Understanding Hydrophobic Interactions. *Biohysics and Computational Biology*, *103*(43). https://doi.org/10.1073/pnas.0606422103

Mishbach, I., Zainuri, M., Tuhumena, L., Gea, L., Agamawan, L. P. I., & Hamuna, B. (2023). Analisis Nitrat dan Fosfat Terhadap Kesuburan Perairan Muara Sungai Bodri. *Jurnal Ilmu Kelautan Dan Perikanan Papua*, *6*(2), 78–83. http://ejournal.uncen.ac.id/index.php/ACR

Mujiarto, I. (2005). Sifat Dan Karakteristik Material Plastik Dan Bahan Aditif. *Traksi*, *3*(2), 65.

Nabila, N. A., Wulandari, W., & Porusia, M. (2026). Analisis Kelimpahan Mikroplastik pada Air Sungai Bengawan Solo Wilayah Kelurahan Pucangsawit Kota Surakarta, Jawa Tengah. *Malahayati Nursing Journal*, *8*(2), 296–309. https://doi.org/10.33024/mnj.v8i2.24245

Naufal, B. S., & A'yun, D. Q. (2024). Analisis Dampak Pencemaran Tanah Akibat Limbah Deterjen Terhadap Lingkungan Hidup Masyarakat Di Daerah Pedesaan. *Student Research Journal*, *2*(3), 231–235. https://doi.org/10.55606/srjyappi.v2i3.1320

Nugroho, M. O. B., Rizkianto, Y., Yuditama, R. R., Ryan, A., & Maulana, A. (2021). The Sedimentary Process of Sand Deposits in Bogowonto River, Purworejo, Central Java, and Progo River, Kulonprogo, Yogyakarta Using Granulometric Analysis. *EKSPLORIUM*, *42*(2), 91–98. https://doi.org/10.17146/eksplorium.2021.42.2.6436

UNIVERSITAS
GADJAH MADA
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Nuraya, T., Sari, D. W., & Harfinda, E. M. (2022). Analisis Kandungan Nitrat Dan Fosfat Di Perairan Parit Baru, Kubu Raya Kalimantan Barat. *Manfish Journal*, *2*(3), 114–118. http://ejurnal.polnep.ac.id/index.php/manfish

Oh, S., & Stache, E. E. (2024). Recent advances in oxidative degradation of plastics. *Chemical Society Reviews*, *53*(14), 7309–7327. https://doi.org/10.1039/d4cs00407h

Omer, N. H. (2020). Water Quality Parameters. *Water Quality - Science, Assessments and Policy*, 1–18. www.intechopen.com

Parning, Horale, & Tiopan. (2007). *Kimia* (A. Kusmayadi, Ed.; 3rd ed., Vol. 1). Yudhistira.

Pilapitiya, P. G. C. N. T., & Ratnayake, A. S. (2024). The World of Plastic Waste: A Review. *Cleaner Materials, 11*. https://doi.org/10.1016/j.clema.2024.100220

Putra, M. N. A., Zahrani, N. A., Az Zahra, T., Bella, B. C., Hariyadi, A. G., Fadhila, D. S., Al Abiyyu, S. A., Firdausi, R. R. K., Justicio, M. N., Albar, A. K., & Firmansyah, P. (2025). Sampah Plastik Sebagai Ancaman Terhadap Lingkungan. *Aktivisme: Jurnal Ilmu Pendidikan, Politik dan Sosial Indonesia, 2*(1), 154-165. https://doi.org/10.62383/aktivisme.v2i1.725

Pratama, A. A. M. S., Hartini, A. S. A., Susanto, C. A. Z., Wijayanti, D. A., Dewi, R. S., Fitria, S. N., & Anggraeni, V. (2021). Studi Awal Distribusi Mikroplastik di Anak Sungai Brantas. *Environmental Pollution Journal*, *1*(1), 34–40. http://journal.ecoton.or.id/index.php/EPJ

Priatna, A., Purbayanto, A., Simbolon, D., & Hestirianoto, T. (2014). Kemampuan Tangkap Jaring Trawl terhadap Ikan Demersal di Perairan Tarakan dan Sekitarnya. *Jurnal Literatur Perikanan Indonesia, 20*(1), 19-30.

Rafa, N., Ahmed, B., Zohora, F., Bakya, J., Ahmed, S., Ahmed, S. F., Mofijur, M., Chowdhury, A. A., & Almomani, F. (2024). Microplastics as carriers of toxic pollutants: Source, transport, and toxicological effects. *Environmental Pollution*, 343. https://doi.org/10.1016/j.envpol.2023.123190

Rahma, S., Nurhakim, A. N., Hadiyawati, U., & Hidayati, N. V. (2022). Komposisi Dan Distribusi Makro- Dan Meso-Plastik Di Sungai Keruh, Bumiayu, Kabupaten Brebes. *Jurnal Perikanan Dan Kelautan*, *12*(2), 117–131. https://doi.org/10.33512/jpk.v12i2.16310

Romdania, Y., Herison, A., Susilo, G. E., & Novilyansa, E. (2018). Kajian Penggunaan Metode Ip, Storet, Dan CCME WQI Dalam Menentukan Status Kualitas Air. *Jurnal SPATIAL Wahana Komunikasi Dan Informasi Geografi*, *18*(1), 1–13. https://doi.org/10.21009/spatial.181.05

Romdoniah, H. S., Isma, M. R., & Zallesa, S. (2023). Identifiksi dan Disitribusi Mikroplastik pada Sedimen di Kawasan Mangrove Nusawiru Batukaras Pangandaran. *Acta Aquatica: Aquatic Sciences Journal, 12*(2), 119-127. 10.29103/aa.v12i2.8853.

Shafani, R. H., Nuraini, R. A. T., & Endrawati, H. (2022). Identifikasi Dan Kepadatan Mikroplastik Di Sekitar Muara Sungai Banjir Kanal Barat Dan Banjir Kanal Timur, Kota Semarang, Jawa Tengah. *Journal of Marine Research*, *11*(2), 245–254. https://doi.org/10.14710/jmr.v11i2.31885

Sharuddin, S. D. A., Abnisa, F., Daud, W. M. A. W., & Aroua, M. K. (2016). A review on pyrolysis of plastic wastes. In *Energy Conversion and Management*, *115*, 308–326. Elsevier Ltd. https://doi.org/10.1016/j.enconman.2016.02.037

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GADJAH MADA
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Shi, M., Li, R., Xu, A., Su, Y., Hu, T., Mao, Y., Qi, S., & Xing, X. (2022). Huge quantities of microplastics are "hidden" in the sediment of China's largest urban lake—Tangxun Lake. *Environmental Pollution*, *307*. https://doi.org/10.1016/j.envpol.2022.119500

Silva, A. B., Bastos, A. S., Justino, C. I. L., da Costa, J. P., Duarte, A. C., & Rocha-Santos, T. A. P. (2018). Microplastics in the environment: Challenges in analytical chemistry - A review. *Analytica Chimica Acta*, *1017*, 1–19. https://doi.org/10.1016/j.aca.2018.02.043

Singh, B., & Sharma, N. (2008). Mechanistic implications of plastic degradation. *Polymer Degradation and Stabilit, 93*(3), 561–584. https://doi.org/10.1016/j.polymdegradstab.2007.11.008

Sofian, A. (2025). Analisis Dampak Limbah Deterjen Terhadap Pencemaran Lingkungan : Studi Literatur. *Jurnal Exact: Interdisciplinary Studies*, *3*(2), 238–243.

Sugiester S, F., Firmansyah, Y. W., Widiyantoro, W., Fuadi, M. F., Afrina, Y., & Hardiyanto, A. (2021). Dampak Pencemaran Sungai Di Indonesia Terhadap Gangguan Kesehatan : Literature Review. *Jurnal Riset Kesehatan Poltekkes Depkes Bandung*, *13*(1), 120–133. https://doi.org/10.34011/juriskesbdg.v13i1.1829

Sunarti, N. R., Sari, R. P., Walid, A., Tarbiyah, F., Tadris, D., Alam, P., & Bengkulu, I. (2020). Dampak Pencemaran Pantai Tapak Paderi Kota Bengkulu Akibat Sampah Terhadap Kelestarian Laut di Indonesia. *Terapan Informatika Nusantara*, *1*(3).

Sulistyowati, L., Nurhasanah, Riani, E., & Cordova, M. R. (2023). The Occurrence and Abundance of Microplastics in Surface Water of The Midstream and Downstream of The Cisadane River, Indonesia. *Chemosphere*, *291*(3). https://doi.org/10.1016/j.chemosphere.2021.133071

Thakhur, A, Kumar, A., Singh, A. (2024). Adsorptive Removal of Heavy Metals, Dyes, and Pharmaceuticals: Carbon-Based Nanomaterials in Focus. *Carbon*, *217*. 10.1016/j.carbon.2023.118621

Thompson, R. C., Moore, C. J., Saal, F. S. V., & Swan, S. H. (2009). Plastics, the environment and human health: Current consensus and future trends. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *364*(1526), 2153–2166. https://doi.org/10.1098/rstb.2009.0053

Tokiwa, Y., Calabia, B. P., Ugwu, C. U., & Aiba, S. (2009). Biodegradability of plastics. *International Journal of Molecular Science, 10*(9), 3722–3742. https://doi.org/10.3390/ijms10093722

Torres, F. G., Dioses-Salinas, D. C., Pizarro-Ortega, C. I., & De-la-Torre, G. E. (2021). Sorption of chemical contaminants on degradable and non-degradable microplastics: Recent progress and research trends. *Science of the Total Environment*, *757*. https://doi.org/10.1016/j.scitotenv.2020.143875

Tourinho, P. S., Koči, V., Loureiro, S., & van Gestel, C. A. M. (2019). Partitioning of Chemical Contaminants to Microplastics: Sorption Mechanisms, Environmental Distribution and Effects on Toxicity and Bioaccumulation. *Environmental Pollution*, *252*(B), 1246-1256. https://doi.org/10.1016/j.envpol.2019.06.030

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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Turner, A. (2018). Black plastics: Linear and circular economies, hazardous additives and marine pollution. *Environment International*, *117*, 308–318. https://doi.org/10.1016/j.envint.2018.04.036

Utami, I., & Liani, M. (2021). Identifikasi Mikroplastik pada Air Sumur Gali di sekitar TPA Piyungan Yogyakarta. *Jurnal Riset Daerah*, *21*(3), 4003–4014.

Wang, K., Guo, C., Li, J., Wang, K., Liang, S., Wang, W., & Wang, J. (2024). A critical review of the adsorption-desorption characteristics of antibiotics on microplastics and their combined toxic effects. *Environmental Technology and Innovation*, *35*. https://doi.org/10.1016/j.eti.2024.103729

Wang, T., Wang, L., Chen, Q., Kalogerakis, N., Ji, R., & Ma, Y. (2020). Interactions between microplastics and organic pollutants: Effects on toxicity, bioaccumulation, degradation, and transport. *Science of the Total Environment*, *748*. https://doi.org/10.1016/j.scitotenv.2020.142427

Wang, W., & Wang, J. (2018). Investigation of microplastics in aquatic environments: An overview of the methods used, from field sampling to laboratory analysis. *TrAC - Trends in Analytical Chemistry*, *108*, 195–202. https://doi.org/10.1016/j.trac.2018.08.026

Ward, M. H., Jones, R. R., Brender, J. D., de Kok, T. M., Weyer, P. J., Nolan, B. T., Villanueva, C. M., & van Breda, S. G. (2018). Drinking water nitrate and human health: An updated review. *International Journal of Environmental Research and Public Health*, *15*(57) 57, 1–31. https://doi.org/10.3390/ijerph15071557

Widigdo, B., Imran, Z., Taryono, Wulandari, D. Y., & Marliana, A. (2021). Spatial distribution of microplastic in sediment of the Citanduy River, West Java, Indonesia. *IOP Conference Series: Earth and Environmental Science*, *744*(1). https://doi.org/10.1088/1755-1315/744/1/012098

Wulandari, S. Y., Radjasa, O. K., Yulianto, B., & Munandar, B. (2022). Pengaruh Musim dan Pasang Surut Terhadap Konsentrasi Mikroplastik di Perairan Delta Sungai Wulan, Kabupaten Demak. *Buletin Oseanografi Marina*, *11*(2), 215–220. https://doi.org/10.14710/buloma.v11i2.46329

Xia, Y., Niu, S., & Yu, J. (2023). Microplastics as vectors of organic pollutants in aquatic environment: A review on mechanisms, numerical models, and influencing factors. *Science of the Total Environment*, *887*. https://doi.org/10.1016/j.scitotenv.2023.164008

Yatno, T., Wijaya, M., Subiyantoro, S., & Srimuda Pitana, T. (2022). The Plurality of Vesak Celebrations at Borobudur and Sewu Temples. *Proceedings of the First Australian International Conference on Industrial Engineering and Operations Management*, 1641–1648.

Yulistiyanto, B., & Kironoto, B. A. (2008). Kajian Pengembangan Pengelolaan Sumberdaya Air Pada Wilayah Sungai Progo-Opak Serang Dengan Ribasim. *Dinamika TEKNIK SIPIL*, *8*(1), 10–20.

Yusuf, M., Kurzina, I., Voronova, G., Islam, M., Mohammed, S. D., Oladoja, N. A. (2024). Trends in The Energy and Environmental Applications of Metal-Organic Framework-Based Materials. *Energy Advances*, *3*(9), 2079-2135. https://doi.org/10.1039/d4ya00332b

Zamroni, A., Faustino-Eslava, D. V., Andrada II, R. T., Tiburan, C. L., & Ramos, N. T. (2026). Impacts of river morphological changes on farming communities in the Progo River, Indonesia, and their implications for river management

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strategies. *Journal of Environmental Studies and Sciences*. https://doi.org/10.1007/s13412-025-01092-7

Zhang, P., Yang, M., Lan, J., Huang, Y., Zhang, J., Huang, S., Yang, Y., & Ru, J. (2023). Water Quality Degradation Due to Heavy Metal Contamination: Health Impacts and Eco-Friendly Approaches for Heavy Metal Remediation. *Toxics, 11*(10). https://doi.org/10.3390/toxics11100828

Ziani, K., Ioniță-Mîndrican, C. B., Mititelu, M., Neacșu, S. M., Negrei, C., Moroșan, E., Drăgănescu, D., & Preda, O. T. (2023). Microplastics: A Real Global Threat for Environment and Food Safety: A State of the Art Review. *Nutrients, 15*(3). https://doi.org/10.3390/nu15030617

Zhao, W., Jiang, J., Lie, M., Tu, T., Wang, L., & Zhang, S. (2024). Exploring Correlations Between Microplastics, Microorganisms, and Water Quality in an Urban Drinking Water Source. *Ecotoxicology and Environmental Safety, 275*. https://doi.org/10.1016/j.ecoenv.2024.116249