DAFTAR PUSTAKA

Abdulsalam, K. A., Olagoke, H., Oladosu, I. A., Olawoye, B. M., Amodu, B. H., Fakorede, O. K., Tiamiyu, A., & Owolabi, S. O., 2022, Methyl Orange, An Organic Dye: Its Health Impact And Sorptive Removal From Waste Water, *International Journal of Progressive Sciences and Technologies (IJPSAT*, *33*(1), 150–160.

Abedini, A., Ebrahimi Valmoozi, A. A., & Seyyed Afghahi, S. S., 2022, Anodized Graphite as An Advanced Substrate for Electrodeposition of PbO2, *Materials Today Communications*, *31*, 103464, https://doi.org/10.1016/j.mtcomm.2022.103464

Ahriani, A., Zelviani, S., Hernawati, H., & Fitriyanti, F., 2021, Analisis Nilai Absorbansi Untuk Menentukan Kadar Flavonoid Daun Jarak Merah (Jatropha gossypofolia L.) Menggunakan Spektrofotometer UV-VIS, *JFT: Jurnal Fisika dan Terapannya*, *8*(2), 147–155, https://doi.org/10.24252/JFT.V8I2.23379

Ali, A., Chiang, Y. W., & Santos, R. M., 2022, X-Ray Diffraction Techniques for Mineral Characterization: A Review for Engineers of the Fundamentals, Applications, and Research Directions, *Minerals*, *12*(2), https://doi.org/10.3390/min12020205

Asiah, N., Sylvia, N., & Bahri, S., 2022, Adsorpsi Zat Warna Methylene Blue Menggunakan Adsorben Dari Ampas Teh Pada Kolom, *Chemical Engineering Journal Storage*, *2*(2), 75–86

Barrera-Díaz, C., Cañizares, P., Fernández, F. J., Natividad, R., Rodrigo, M. A., Rosedal, E., 50200, C. P., Toluca, E., & De México, M., 2014, Electrochemical Advanced Oxidation Processes: An Overview of the Current Applications to Actual Industrial Effluents, *Journal of the Mexican Chemical Society*, *58*(3), 256–275,

Baunsele, A. B., & Missa, H., 2020, Kajian Kinetika Adsorpsi Metilen Biru Menggunakan Adsorben Sabut Kelapa, *Akta Kimia Indonesia*, *5*(2), 76–85

Chaplin, B. P., 2014, Critical review of electrochemical advanced oxidation processes for water treatment applications, *Environmental Science: Processes & Impacts*, *16*(6), 1182–1203, https://doi.org/10.1039/C3EM00679D

Chen, B. ming, Guo, Z. cheng, Yang, X. wan, & Cao, Y. dong., 2010, Morphology of alpha-lead dioxide electrodeposited on aluminum substrate electrode, *Transactions of Nonferrous Metals Society of China (English Edition)*, *20*(1), 97–103. https://doi.org/10.1016/S1003-6326(09)60103-5

Chen, Y., Li, H., Liu, W., Tu, Y., Zhang, Y., Han, W., & Wang, L., 2014, Electrochemical Degradation of Nitrobenzene by Anodic Oxidation on the Constructed TiO2-NTs/SnO2-Sb/PbO2 Electrode, *Chemosphere*, *113*, 48–55, https://doi.org/10.1016/j.chemosphere.2014.03.122

Christian, G. D., Dasgupta, P. K., & Schug, K. A., 2014, *Analytical Chemistry*, John Wiley & Sons, Hoboken

Falcao, E. H., & Wudi, F., 2007, Review Carbon Allotropes: Beyond Graphite and Diamond, *Journal of Chemical Technology & Biotechnology*, *82*(6), 524–531

Faraji, M., Yamini, Y., & Salehi, N., 2021, Characterization of Magnetic Nanomaterials, *Magnetic Nanomaterials in Analytical Chemistry*, 39–60, https://doi.org/10.1016/B978-0-12-822131-0.00014-5

Fu, X., Han, Y., Xu, H., Su, Z., & Liu, L., 2022, Electrochemical Study of a Novel High-Efficiency PbO2 Anode Based on a Cerium-Graphene Oxide Co-Doping Strategy: Electrodeposition Mechanism, Parameter Optimization, and Degradation Pathways, *Journal of Hazardous Materials*, *422*, 126890. https://doi.org/10.1016/j.jhazmat.2021.126890

Görmez, Ö., Akay, S., Gözmen, B., Kayan, B., & Kalderis, D., 2022, Degradation of Emerging Contaminant Coumarin Based on Anodic Oxidation, Electro-Fenton and Subcritical Water Oxidation Processes, *Environmental Research*, *208*, https://doi.org/10.1016/j.envres.2022.112736

Hakim, L., Dirgantara, M., & Nawir, M., 2019, Karakterisasi Struktur Material Pasir Bongkahan Galian Golongan C Dengan Menggunakan X-Ray Difraction (X-RD) Di Kota Palangkaraya, *Jurnal Jejaring Matematika dan Sains*, *1*(1), 44–51, https://doi.org/10.36873/jjms.v1i1.136

Handaja, S., & Susanto, H., 2021, Electrical Conductivity of Carbon Electrodes by Mixing Carbon Rod and Electrolyte Paste of Spent Battery, *Int. Journal of Renewable Energy Delevelopment* (*IJRED*), *10*(2), 221–227, https://doi.org/10.14710/ijred.2021.31637

Hossain, M. D., Mustafa, C. M., & Islam, M. M., 2017, Effect of Deposition Parameters on The Morphology and Electrochemical Behavior of Lead Dioxide, *Journal of Electrochemical Science and Technology*, *8*(3), 197–205, https://doi.org/10.5229/JECST.2017.8.3.197

Ilginis, A., Žmuidzinavičienė, N., & Griškonis, E., 2021, Electrodeposition of Pb And PbO2 on Graphite Felt in Membraneless Flow-Through Reactor: A Method to Prepare Lightweight Electrode Grids for Lead-Acid Batteries, *Materials*, *14*(20), https://doi.org/10.3390/ma14206122

Kharisov, B. I., & Kharissova, O. V., 2019, *Carbon Allotropes: Metal-Complex Chemistry, Properties and Applications*, Springer International Publishing, Cham

Kuang, C., Xu, Y., Lai, W., Xie, G., Pan, Z., Zheng, L., Talawar, M. P., Ling, J., Ye, S., & Zhou, X., 2019, Novel Electrodes for Cathode Electro-Fenton Oxidation Coupled with Anodic Oxidation System for Advanced Treatment of Livestock Wastewater, *Electrochimica Acta*, *321*, 134605, https://doi.org/10.1016/j.electacta.2019.134605

Kusuma, A. R., & Widodo, D. S., 2015, Elektrodekolorisasi Limbah Cair Batik di Pekalongan dengan Elektroda PbO2/Cu, *Jurnal Kimia Sains dan Aplikasi*, *18*(2), 57–61, https://doi.org/10.14710/jksa.18.2.57-61

Langenhorst, F., & Campione, M., 2019, Ideal and Real Structures of Different Forms of Carbon, With Some Remarks on Their Geological Significance, *Journal of the Geological Society*, *176*(2), 337–347, https://doi.org/10.1144/jgs2018-056

Li, H., Kuang, X., Shen, X., & Zhu, J., 2020, Comparative Electrochemical Oxidation of the Secondary Effluent of Petrochemical Wastewater with Electro-Fenton and Anodic Oxidation with Supporting Electrolytes, *Environmental Technology (United Kingdom)*, *0*(0), 1–24, https://doi.org/10.1080/09593330.2020.1791971

Li, X., Pletcher, D., & Walsh, F. C., 2011, Electrodeposited Lead Dioxide Coatings, *Chemical Society Reviews*, *40*(7), 3879–3894, https://doi.org/10.1039/c0cs00213e

Liu, Z., Luo, X., & Ji, D., 2021, Effect of Phase Composition of PbO2 on Cycle Stability of Soluble Lead Flow Batteries, *Journal of Energy Storage*, *38*(February), 102524, https://doi.org/10.1016/j.est.2021.102524

Lopez-Rubio, A., Flanagan, B. M., Gilbert, E. P., & Gidley, M. J., 2008, A Novel Approach for Calculating Starch Crystallinity and Its Correlation With Double Helix Content: A Combined XRD and NMR study, *Biopolymers*, *89*(9), 761–768, https://doi.org/10.1002/bip.21005

Moreira, F. C., Boaventura, R. A. R., Brillas, E., & Vilar, V. J. P., 2017, Electrochemical Advanced Oxidation Processes: A Review on Their Application to Synthetic and Real Wastewaters, *Applied Catalysis B: Environmental*, *202*, 217–261

Mukimin, A., 2013,*Sintesis, Karakterisasi, dan Aplikasi Elektroda Ti/PbO2 Pada Elektrodegradasi Zat Warna Biru Reaktif*, Universitas Gadjah Mada.

Mukimin, A., Vistanty, H., & Zen, N., 2015, Oxidation of Textile Wastewater Using Cylinder Ti/β-PbO2 Electrode in Electrocatalytic Tube Reactor, *Chemical Engineering Journal*, *259*, 430–437, https://doi.org/10.1016/j.cej.2014.08.020

Mukimin, A., Wijaya, K., & Kuncaka, A., 2013, Electrodeposition of PbO2 on Ti Substrate in Alkaline Solution: Influence of Fluoride Ions Addition, *Asian Journal of Chemistry*, *25*(7), 3961–3965, https://doi.org/10.14233/ajchem.2013.13858

Mursal, I. L. P., 2018, Karakterisasi XRD dan SEM Pada Material Nanopartikel Serta Peran Material Nanopartikel Dalam Drug Delivery System, *Pharma Xplore : Jurnal Ilmiah Farmasi*, *3*(2), 214–221, https://doi.org/10.36805/farmasi.v3i2.491

Ngatijo, Gusmaini, N., Bemis, R., & Basuki, R., 2021, Adsorpsi Methylene Blue pada Nanopartikel Magnetit tersalut Asam Humat: Kajian Isoterm dan Kinetika, *CHEESA: Chemical Engineering Research Articles*, *4*(1), 51–64

Nie, C., Dong, J., Sun, P., Yan, C., Wu, H., & Wang, B., 2017, An Efficient Strategy for Full Mineralization of An Azo Dye in Wastewater: A Synergistic Combination of Solar Thermo- and Electrochemistry Plus Photocatalysis, *RSC Advances*, *7*(58), 36246–36255, https://doi.org/10.1039/c7ra05797k

Okoye, P. C., Azi, S. O., Qahtan, T. F., Owolabi, T. O., & Saleh, T. A., 2023, Synthesis, Properties, and Applications of Doped and Undoped CuO and Cu2O Nanomaterials, *Materials Today Chemistry*, *30*, 101513, https://doi.org/10.1016/j.mtchem.2023.101513

Olvera-Vargas, H., Rouch, J. C., Coetsier, C., Cretin, M., & Causserand, C., 2018, Dynamic Cross-Flow Electro-Fenton Process Coupled to Anodic Oxidation for Wastewater Treatment: Application to The Degradation of Acetaminophen, *Separation and Purification Technology*, *203*, 143–151, https://doi.org/10.1016/j.seppur.2018.03.063

Osya, Y. B., Sanjaya, H., & Yohandri, Y., 2023, Degradasi Zat Warna Methyl Orange dengan Katalis TiO2 Menggunakan Metode Fotosonolisis, *Periodic*, *12*(1), 17–21, https://doi.org/10.24036/p.v12i1.116883

Pratiwi, S. W., Sari, S. N., Nurmalasari, R., & Indriani, M., 2020, Utilization of Nata De Coco as Adsorben in Methyl Orange Adsorption, *EduChemia (Jurnal Kimia dan Pendidikan)*, *5*(2), 187, https://doi.org/10.30870/educhemia.v5i2.7977

Rani, S. R. A., 2022, Studi Analisis Data Difraksi Sinar-X Pada Material Zircon Pasir Alam Melalui Metode Rietveld, *JFT: Jurnal Fisika dan Terapannya*, *9*(1), 16–22, https://doi.org/10.24252/jft.v9i1.25470

Rasyid, R. A. Al, Wardhani, S., & Mutrofin, S., 2021, Fotodegradasi Metil Jingga dengan TiO2/CuO-Zeolit-Alginat Pada Sinar UV, *The Indonesian Green Technology Journal*, *10*(2), 79–87, https://doi.org/10.21776/ub.igtj.2021.009.01.07

Riwayati, I., Fikriyyah, N., & Suwardiyono, 2019, Adsorpsi Zat Warna Methylene Blue Menggunakan Abu Alang-Alang (Imperata cylindrica) Teraktivasi Asam Sulfat, *Inovasi Teknik Kimia*, *4*(2), 6–11

Saji, V. S., 2018, Electrodeposition in Bulk Metallic Glasses, *Materialia*, *3*, 1–11, https://doi.org/10.1016/j.mtla.2018.09.021

Samarghandi, M. R., Ansari, A., Dargahi, A., Shabanloo, A., Nematollahi, D., Khazaei, M., Nasab, H. Z., & Vaziri, Y., 2021, Enhanced Electrocatalytic Degradation of Bisphenol A by Graphite/β-PbO2 Anode in a Three-Dimensional Electrochemical Reactor, *Journal of Environmental Chemical Engineering*, *9*(1), 1–16,

Samarghandi, M. R., Dargahi, A., Shabanloo, A., Nasab, H. Z., Vaziri, Y., & Ansari, A., 2020, Electrochemical Degradation of Methylene Blue Dye Using a Graphite Doped PbO2 Anode: Optimization of Operational Parameters , Degradation Pathway and Improving the Biodegradability of Textile Wastewater, *Arabian Journal of Chemistry*, *13*(8), 6847–6864, https://doi.org/10.1016/j.arabjc.2020.06.038

Scanlon, D. O., Kehoe, A. B., Watson, G. W., Jones, M. O., David, W. I. F., Payne, D. J., Egdell, R. G., Edwards, P. P., & Walsh, A., 2011, Nature of the Band Gap and Origin of The Conductivity of PbO 2 Revealed by Theory and Experiment, *Physical Review Letters*, *107*(24), 1–5, https://doi.org/10.1103/PhysRevLett.107.246402

Shamsi, F., & Rezaei, M., 2023, Anodic Electrodeposition of PbO2 on ATO/Ti with Simultaneous Doping of F, Co, and Fe as Super-Hydrophilic, Highly Active, and Durable Electrocatalyst for Oxygen Evolution Reaction in Acidic Solution, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, *670*, 131608, https://doi.org/10.1016/j.colsurfa.2023.131608

Sun, X., Xu, D., Dai, P., Liu, X., Tan, F., & Guo, Q., 2020, Efficient Degradation of Methyl Orange in Water via Both Radical and Non-Radical Pathways using Fe-Co Bimetal-doped MCM-41 as Peroxymonosulfate Activator, *Chemical Engineering Journal*, *402*, 125881, https://doi.org/10.1016/j.cej.2020.125881

Swantomo, D., Annisa, & Hasnowo, L. A., 2018, Pengaruh Binder PVDF dan Ketebalan Elektroda Komposit Polianilin Graphene Selulosa Terhadap Konduktivitas Sel Superkapasitor, *Seminar Nasional SDM Teknologi Nuklir*, 341–347.

Thi Tot, P., Thuy, M. T. T., & Binh, P. T., 2024, Electrochemical Degradation of Methyl Orange from Wastewater by SS/PbO2-TiO2-SnO2 Composite Electrode With and Without UV, *Vietnam Journal of Chemistry*, *62*, 101–109, https://doi.org/10.1002/vjch.202300287

Tomovska, R., Agirre, A., Veloso, A., & Leiza, J. R., 2014, Characterization Techniques for Polymeric Materials, *Reference Module in Chemistry, Molecular Sciences and Chemical Engineering*, 1–25, Elsevier Inc.

Wang, K., Qin, X., Cao, P., Chen, S., Yu, H., & Quan, X., 2023, High-Efficiency Refractory Organic Pollutants Removal Boosted by Combining Heterogeneous Electro-Fenton with Electrochemical Anodic Oxidation Over a Broad pH Range, *Process Safety and Environmental Protection*, *177*, 635–642, https://doi.org/10.1016/j.psep.2023.07.042

Wang, X., Wang, L., Wu, D., Yuan, D., Ge, H., & Wu, X., 2023, PbO2 Materials for Electrochemical Environmental Engineering: A Review on Synthesis and Applications, *Science of the Total Environment*, *855*, https://doi.org/10.1016/j.scitotenv.2022.158880

Wati, A. M., Mahatmanti, F. W., Jumaeri, J., & Prasetya, A. T., 2022, Adsorpsi

Metilen Biru oleh Abu Layang Batu Bara yang Teraktivasi Menggunakan Proses Hidrotermal dengan Bantuan Gelombang Mikro, *ALCHEMY Jurnal Penelitian Kimia*, *18*(1), 58–69

Yani, S. R., Djamas, D., & Ramli, 2019, Analisis Sifat Listrik Nanokomposit NiFe2O4/PANi yang Disintesis dengan Metode Sol Gel, *Pillar of Physics*, *12*(1), 8–15

Yu, B., Xu, R., He, S., Qin, Z., & Wang, W., 2019, Preparations and Performances Testing of α/β-PbO2 Phase Compositions Prepared in Methanesulfonic Acid in Order to Provide More Appropriate Environmentally Sustainable Electrodes, *Electrochemistry*, *87*(4), 197–203

Yu, B., Xu, R., Wang, X., Wang, W., & Feng, S.,2020, Study of Simultaneously Electrodepositing α/β-PbO2 Coating Materials in Methanesulfonic Acid and Its Application in Novel Flow Battery, *Renewable Energy*, *159*, 885–892, https://doi.org/10.1016/j.renene.2020.03.159

Yun-Hai, W., Qing-Yun, C., Guo, L., & Xiang-Li, L., 2012, Anodic Materials with High Energy Efficiency for Electrochemical Oxidation of Toxic Organics in Waste Water, *Industrial Waste*, *March 2012*, 32–52, https://doi.org/10.5772/38556

Yuzhu, S., Zhen, C., Lai, G., Qiang, Y., Wei, Z., Dan, W., & Tao, Z., 2019, Fabrication and Electrocatalytic Performance of a Two Dimensional ß-PbO2 Macroporous Array for Methyl Orange Degradation, *International Journal of Electrochemical Science*, Vol. 14(8), 7790–7810, https://doi.org/10.20964/2019.08.45

Zainul, R., 2024, *Elektrokimia dalam Pemurnian Logam dan Pemulihan Sumber Daya*, PT Rajagrafindo Persada, Depok

Zhang, H., Yang, Y., Ren, D., Wang, L., & He, X., 2021, Graphite as Anode Materials: Fundamental Mechanism, Recent Progress and Advances, *Energy Storage Materials*, *36*, 147–170, https://doi.org/10.1016/j.ensm.2020.12.027

Zhang, Q., Guo, X., Cao, X., Wang, D., & Wei, J., 2015, Facile Preparation of a Ti/α-PbO2/β-PbO2 Electrode for The Electrochemical Degradation of 2-Chlorophenol, *Chinese Journal of Catalysis*, *36*(7), 975–981, https://doi.org/https://doi.org/10.1016/S1872-2067(15)60851-8

Zhao, W., Zhao, C., Wu, H., Li, L., & Zhang, C., 2024, Progress, Challenge and Perspective of Graphite-Based Anode Materials for Lithium Batteries: A Review, *Journal of Energy Storage*, *81*, 110409, https://doi.org/10.1016/j.est.2023.110409

Zheng, Y., Su, W., Chen, S., Wu, X., & Chen, X., 2011, Ti/SnO2-Sb2O5-RuO2/α-P bO2/β-PbO2 Electrodes for Pollutants Degradation, *Chemical Engineering Journal*, *174*(1), 304–309, https://doi.org/10.1016/j.cej.2011.09.035

Zhou, S. G., Tian, M. L., Xu, Y., Zhang, C., & Cao, Y., 2022, First-Principles Study

of The Elastic, Thermal and Optical Properties of α-PbO2 and β-PbO2. *Indian Journal of Physics*, *96*, 3449–3460, https://doi.org/10.1007/s12648-022-02305-3

Zwane, B. N., Orimolade, B. O., Koiki, B. A., Mabuba, N., Gomri, C., Petit, E., Bonniol, V., Lesage, G., Rivallin, M., Cretin, M., & Arotiba, O. A., 2021, Combined Electro-Fenton and Anodic Oxidation Processes at a Sub-Stoichiometric Titanium Oxide (Ti4O7) Ceramic Electrode for the Degradation of Tetracycline in Water, *Water (Switzerland)*, *13*(19), https://doi.org/10.3390/w13192772