DAFTAR PUSTAKA

Ahsan, M., Ashraf, H., Iahtisham-Ul-Haq, Liaquat, A., Nayik, G. A., Ramniwas, S., Alfarraj, S., Ansari, M. J., & Gere, A. (2024). Exploring pectin from ripe and unripe Banana Peel: A novel functional fat replacers in muffins. *Food Chemistry: X*, *23*. https://doi.org/10.1016/j.fochx.2024.101539

Albatrni, H., Abou Elezz, A., Elkhatat, A., Qiblawey, H., & Almomani, F. (2024). A green route to the synthesis of highly porous activated carbon from walnut shells for mercury removal. *Journal of Water Process Engineering*, *58*. https://doi.org/10.1016/j.jwpe.2024.104802

Altus, K. M., & Love, J. A. (2021). The continuum of carbon–hydrogen (C–H) activation mechanisms and terminology. In *Communications Chemistry* (Vol. 4, Issue 1). Nature Research. https://doi.org/10.1038/s42004-021-00611-1

Andrew, J. J., & Dhakal, H. N. (2022). Sustainable biobased composites for advanced applications: recent trends and future opportunities – A critical review. In *Composites Part C: Open Access* (Vol. 7). Elsevier B.V. https://doi.org/10.1016/j.jcomc.2021.100220

Ayalew, A. A. (2023). Comparative adsorptive performance of adsorbents developed from kaolin clay and limestone for de-fluoridation of groundwater. *South African Journal of Chemical Engineering*, *44*, 1–13. https://doi.org/10.1016/j.sajce.2022.11.002

Bassareh, H., Karamzadeh, M., & Movahedirad, S. (2023). Synthesis and characterization of cost-effective and high-efficiency biochar for the adsorption of Pb2+ from wastewater. *Scientific Reports*, *13*(1). https://doi.org/10.1038/s41598-023-42918-0

Bernardi, M., Hantson, A. L., Caulier, G., Eyley, S., Thielemans, W., De Weireld, G., & Gossuin, Y. (2024). Ni2+ removal by ion exchange resins and activated carbon: a benchtop NMR study. *International Journal of Environmental Science and Technology*, *21*(13), 8337–8360. https://doi.org/10.1007/s13762-024-05547-2

Castillo, M., de Guzman, M. J. K., & Aberilla, J. M. (2023). Environmental sustainability assessment of banana waste utilization into food packaging and

liquid fertilizer. *Sustainable Production and Consumption*, *37*, 356–368. https://doi.org/10.1016/j.spc.2023.03.012

Chen, L., Kenjayeva, U., Mu, G., Iqbal, N., & Chin, F. (2024). Evaluating the influence of environmental regulations on green economic growth in China: A focus on renewable energy and energy efficiency guidelines. *Energy Strategy Reviews*, *56*. https://doi.org/10.1016/j.esr.2024.101544

Chepkasov, I. V., Ghorbani-Asl, M., Popov, Z. I., Smet, J. H., & Krasheninnikov, A. V. (2020). Alkali metals inside bi-layer graphene and MoS2: Insights from first-principles calculations. *Nano Energy*, *75*. https://doi.org/10.1016/j.nanoen.2020.104927

Choi, S., Jeon, S., Park, I., Tabelin, C. B., Ito, M., & Hiroyoshi, N. (2021). Enhanced cementation of Cd2+, Co2+, Ni2+, and Zn2+ on Al from sulfate solutions by activated carbon addition. *Hydrometallurgy*, *201*. https://doi.org/10.1016/j.hydromet.2021.105580

Costa, J. G. dos R. da, Costa, J. M., & Almeida Neto, A. F. de. (2021). Recent advances and future applications in electro-adsorption technology: An updated review. In *Journal of Environmental Chemical Engineering* (Vol. 9, Issue 6). Elsevier Ltd. https://doi.org/10.1016/j.jece.2021.106355

Cui, T., Su, Y., Fu, X., Zhu, Y., & Zhang, Y. (2022). The key role of surface hydroxyls on the activity and selectivity in photocatalytic degradation of organic pollutants and NO removal. *Journal of Alloys and Compounds*, *921*. https://doi.org/10.1016/j.jallcom.2022.165931

de Castro-Alves, L., Yáñez-Vilar, S., González-Goméz, M. A., Garcia-Acevedo, P., Arnosa-Prieto, Á., Piñeiro-Redondo, Y., & Rivas, J. (2024). Understanding adsorption mechanisms and metal ion selectivity of superparamagnetic beads with mesoporous CMK-3 carbon and commercial activated carbon. *Microporous and Mesoporous Materials*, *374*. https://doi.org/10.1016/j.micromeso.2024.113159

Dehghani, M. H., Afsari Sardari, S., Afsharnia, M., Qasemi, M., & Shams, M. (2023). Removal of toxic lead from aqueous solution using a low-cost adsorbent. *Scientific Reports*, *13*(1). https://doi.org/10.1038/s41598-023-29674-x

Devi, M., & Rawat, S. (2021). A comprehensive review of the pyrolysis process: From carbon nanomaterial synthesis to waste treatment. In *Oxford Open Materials Science* (Vol. 1, Issue 1). Oxford University Press. https://doi.org/10.1093/oxfmat/itab014

Dilshara, P., Abeysinghe, B., Premasiri, R., Dushyantha, N., Ratnayake, N., Senarath, S., Sandaruwan Ratnayake, A., & Batapola, N. (2024). The role of nickel (Ni) as a critical metal in clean energy transition: applications, global distribution and occurrences, production-demand and phytomining. In *Journal of Asian Earth Sciences* (Vol. 259). Elsevier Ltd. https://doi.org/10.1016/j.jseaes.2023.105912

Du, B., Li, H., Lin, Z., Wang, C., Zhang, X., Ji, Q., Chen, Q., & Zhang, C. (2022). Synthesis of carbon nanoblocks and carbon nanorods by Tween-80@NaCl. *Carbon Trends*, *9*. https://doi.org/10.1016/j.cartre.2022.100199

du Plessis, A. (2022). Persistent degradation: Global water quality challenges and required actions. *One Earth*, *5*(2), 129–131. https://doi.org/10.1016/j.oneear.2022.01.005

Fiallos-Cárdenas, M., Pérez-Martínez, S., & Ramirez, A. D. (2022). Prospectives for the development of a circular bioeconomy around the banana value chain. In *Sustainable Production and Consumption* (Vol. 30, pp. 541–555). Elsevier B.V. https://doi.org/10.1016/j.spc.2021.12.014

French, A. D., & Santiago Cintrón, M. (2013). Cellulose polymorphy, crystallite size, and the Segal Crystallinity Index. *Cellulose*, *20*(1), 583–588. https://doi.org/10.1007/s10570-012-9833-y

Gao, X., Guo, C., Hao, J., Zhao, Z., Long, H., & Li, M. (2020). Adsorption of heavy metal ions by sodium alginate based adsorbent-a review and new perspectives. In *International Journal of Biological Macromolecules* (Vol. 164, pp. 4423–4434). Elsevier B.V. https://doi.org/10.1016/j.ijbiomac.2020.09.046

Gong, Z. X., Steven, M., Chen, Y. T., Huo, L. Z., Xu, H., Guo, C. F., Yang, X. J., Wang, Y. X., & Luo, X. P. (2024). High adsorption to methylene blue based on Fe3O4-N-banana-peel biomass charcoal. *RSC Advances*, *14*(35), 25619–25628. https://doi.org/10.1039/d4ra04973j

Gu, Y., Zheng, S., Huang, C., Cao, X., Liu, P., Zhuang, Y., Li, G., Hu, G., Gao, X., & Guo, X. (2024). Microbial colony sequencing combined with metabolomics revealed the effects of chronic hexavalent chromium and nickel combined exposure on intestinal inflammation in mice. *Science of the Total Environment*, *915*. https://doi.org/10.1016/j.scitotenv.2023.169853

Han, G., Liu, F., Zhang, T., Xu, W., Zhang, Y., Wu, N., & Ouyang, S. (2023). Study of microwave non-thermal effects on hydrogen bonding in water by Raman spectroscopy. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, *285*. https://doi.org/10.1016/j.saa.2022.121877

Hashim, Z. H., Kuwahara, Y., Mohamed, A. R., & Yamashita, H. (2023). CO2 Adsorption on a CaO–Ca12Al14O33 Composite Synthesized from a Blast Furnace Slag and its Regenerative Ability. *ISIJ International*, *63*(1), 190–196. https://doi.org/10.2355/isijinternational.ISIJINT-2022-310

Heryanto, H. (2025). Rice husk-derived biosilica/clay hybrids for photocatalytic dye degradation. *Materials Chemistry and Physics*, *332*. https://doi.org/10.1016/j.matchemphys.2024.130245

Heryanto, H., Tahir, D., Akmal, A., Akouibaa, A., & Rahmat, R. (2024). Photocatalysis and microwave absorption performance of cobalt particles dispersed on activated carbon surface under the role of surface, optical, and magnetic properties. *Materials Chemistry and Physics*, *327*. https://doi.org/10.1016/j.matchemphys.2024.129902

Huang, C., Liao, H., Ma, X., Xiao, M., Liu, X., Gong, S., Shu, X., & Zhou, X. (2021). Adsorption performance of chitosan Schiff base towards anionic dyes: Electrostatic interaction effects. *Chemical Physics Letters*, *780*. https://doi.org/10.1016/j.cplett.2021.138958

Jäger, S., Khatri, J., Meyer, P., Henkel, S., Schwaab, G., Nandi, A., Pandey, P., Barlow, K. R., Perkins, M. A., Tschumper, G. S., Bowman, J. M., van der Avoird, A., & Havenith, M. (2024). On the nature of hydrogen bonding in the H2S dimer. *Nature Communications*, *15*(1), 9540. https://doi.org/10.1038/s41467-024-53444-6

Jasim, A. Q., & Ajjam, S. K. (2024). Removal of heavy metal ions from wastewater using ion exchange resin in a batch process with kinetic isotherm. *South*

African Journal of Chemical Engineering, *49*, 43–54. https://doi.org/10.1016/j.sajce.2024.04.002

Jeong, D., Park, H., Jang, B. K., Ju, Y. Bin, Shin, M. H., Oh, E. J., Lee, E. J., & Kim, S. R. (2021). Recent advances in the biological valorization of citrus peel waste into fuels and chemicals. In *Bioresource Technology* (Vol. 323). Elsevier Ltd. https://doi.org/10.1016/j.biortech.2020.124603

Jiang, W., Peng, D., Cui, W. R., Liang, R. P., & Qiu, J. D. (2020). Charge-Enhanced Separation of Organic Pollutants in Water by Anionic Covalent Organic Frameworks. *ACS Omega*, *5*(49), 32002–32010. https://doi.org/10.1021/acsomega.0c04904

Kaboré, A., Simo Tala, J. V., Younsi, Z., & Bougeard, D. (2024). Natural convection and field synergy principle analysis of the influence of fins redistribution on the performance of a latent heat storage unit in a successive charge and discharge. *Journal of Energy Storage*, *89*. https://doi.org/10.1016/j.est.2024.111855

Khan, I., Hou, F., & Le, H. P. (2021). The impact of natural resources, energy consumption, and population growth on environmental quality: Fresh evidence from the United States of America. *Science of the Total Environment*, *754*. https://doi.org/10.1016/j.scitotenv.2020.142222

Kumar, A., Jigyasu, D. K., Kumar, A., Subrahmanyam, G., Mondal, R., Shabnam, A. A., Cabral-Pinto, M. M. S., Malyan, S. K., Chaturvedi, A. K., Gupta, D. K., Fagodiya, R. K., Khan, S. A., & Bhatia, A. (2021). Nickel in terrestrial biota: Comprehensive review on contamination, toxicity, tolerance and its remediation approaches. In *Chemosphere* (Vol. 275). Elsevier Ltd. https://doi.org/10.1016/j.chemosphere.2021.129996

Kumar, K., Kumar, R., Kaushal, S., Thakur, N., Umar, A., Akbar, S., Ibrahim, A. A., & Baskoutas, S. (2023). Biomass waste-derived carbon materials for sustainable remediation of polluted environment: A comprehensive review. *Chemosphere*, *345*. https://doi.org/10.1016/j.chemosphere.2023.140419

Laipan, M., Xiang, L., Yu, J., Martin, B. R., Zhu, R., Zhu, J., He, H., Clearfield, A., & Sun, L. (2020). Layered intercalation compounds: Mechanisms, new methodologies, and advanced applications. In *Progress in Materials Science* (Vol. 109). Elsevier Ltd. https://doi.org/10.1016/j.pmatsci.2019.100631

Lawtae, P., Nagaishi, S., Tangsathitkulchai, C., Iwamura, S., & Mukai, S. R. (2023). Improving porous properties of activated carbon from carbon gel by the OTA method. *RSC Advances*, *13*(21), 14065–14077. https://doi.org/10.1039/d3ra01647a

Li, C., Liu, B., Li, Y., Zheng, Q., Fang, Y., Zhao, Q., Jiang, Z., & Li, J. (2024). Reaction mechanism of Ca(OH)2-based carbon storage suitable for the production of building materials. *Cement and Concrete Composites*, *153*. https://doi.org/10.1016/j.cemconcomp.2024.105737

Li, Y., Chen, Y., Xu, J., & Liu, J. (2024). Removal mechanism of phosphorus in water by calcium hydroxide modified copper tailings. *Scientific Reports*, *14*(1). https://doi.org/10.1038/s41598-024-71347-w

Liu, D., Chen, H., & Su, R. K. L. (2024). Effects of heat-treatment on physical and mechanical properties of limestone. *Construction and Building Materials*, *411*. https://doi.org/10.1016/j.conbuildmat.2023.134183

Liu, Y., Ali, A., Su, J. F., Li, K., Hu, R. Z., & Wang, Z. (2023). Microbial-induced calcium carbonate precipitation: Influencing factors, nucleation pathways, and application in waste water remediation. In *Science of the Total Environment* (Vol. 860). Elsevier B.V. https://doi.org/10.1016/j.scitotenv.2022.160439

Lobato-Peralta, D. R., Arreola-Ramos, C. E., Ayala-Cortés, A., Pacheco-Catalán, D. E., Robles, M., Guillén-López, A., Muñiz, J., Okoye, P. U., Villafán-Vidales, H. I., Arancibia-Bulnes, C. A., & Cuentas-Gallegos, A. K. (2024). Optimizing capacitance performance: Solar pyrolysis of lignocellulosic biomass for homogeneous porosity in carbon production. *Journal of Cleaner Production*, *448*. https://doi.org/10.1016/j.jclepro.2024.141622

Lu, C., & Wang, K. (2023). Natural resource conservation outpaces and climate change: Roles of reforestation, mineral extraction, and natural resources depletion. *Resources Policy*, *86*. https://doi.org/10.1016/j.resourpol.2023.104159

Maddodi, S. A., Alalwan, H. A., Alminshid, A. H., & Abbas, M. N. (2020). Isotherm and computational fluid dynamics analysis of nickel ion adsorption from aqueous solution using activated carbon. *South African Journal of Chemical Engineering*, *32*, 5–12. https://doi.org/10.1016/j.sajce.2020.01.002

Mason, A., & Lee, R. (2022). Six Ways Population Change Will Affect the Global Economy. *Population and Development Review*, *48*(1), 51–73. https://doi.org/10.1111/padr.12469

Mcyotto, F., Wei, Q., Macharia, D. K., Huang, M., Shen, C., & Chow, C. W. K. (2021). Effect of dye structure on color removal efficiency by coagulation. *Chemical Engineering Journal*, *405*. https://doi.org/10.1016/j.cej.2020.126674

Mirghiasi, Z., Bakhtiari, F., Darezereshki, E., & Esmaeilzadeh, E. (2014). Preparation and characterization of CaO nanoparticles from Ca(OH)2 by direct thermal decomposition method. *Journal of Industrial and Engineering Chemistry*, *20*(1), 113–117. https://doi.org/10.1016/j.jiec.2013.04.018

Mitrogiannis, D., Psychoyou, M., Baziotis, I., Mavrogonatos, C., Koukouzas, N., Anastopoulos, I., Fyrillas, M., & Inglezakis, V. J. (2023). Phosphate removal by Ca(OH)2-treated natural minerals: Experimental and modeling studies. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, *660*. https://doi.org/10.1016/j.colsurfa.2022.130805

Nasiri, S., Rabiei, M., Palevicius, A., Janusas, G., Vilkauskas, A., Nutalapati, V., & Monshi, A. (2023). Modified Scherrer equation to calculate crystal size by XRD with high accuracy, examples Fe2O3, TiO2 and V2O5. *Nano Trends*, *3*, 100015. https://doi.org/10.1016/j.nwnano.2023.100015

Neolaka, Y. A. B., Baunsele, S. D., Nitbani, F. O., de Rozari, P., Widyaningrum, B. A., Lawa, Y., Amenaghawon, A. N., Darmokoesoemo, H., & Kusuma, H. S. (2024). Preparation of cellulose adsorbent based on banana peel waste (Musa paradisiaca): Green activation and adsorption of Rhodamine B from the aquatic environment. *Nano-Structures and Nano-Objects*, *38*. https://doi.org/10.1016/j.nanoso.2024.101146

Nishat, A., Yusuf, M., Qadir, A., Ezaier, Y., Vambol, V., Ijaz Khan, M., Ben Moussa, S., Kamyab, H., Sehgal, S. S., Prakash, C., Yang, H. H., Ibrahim, H., & Eldin, S. M. (2023). Wastewater treatment: A short assessment on available techniques. In *Alexandria Engineering Journal* (Vol. 76, pp. 505–516). Elsevier B.V. https://doi.org/10.1016/j.aej.2023.06.054

Noor, A. E., Fatima, R., Aslam, S., Hussain, A., Nisa, Z. un, Khan, M., Mohammed, A. A. A., & Sillanpaa, M. (2024). Health risks assessment and source admeasurement of potentially dangerous heavy metals (Cu, Fe, and Ni) in

rapidly growing urban settlement. *Environmental Research*, *242*. https://doi.org/10.1016/j.envres.2023.117736

Ospina-Montoya, V., Pérez, S., Muñoz-Saldaña, J., Forgionny, A., Flórez, E., & Acelas, N. (2024). Performance of novel Ca-biocomposites produced from banana peel and eggshell for highly efficient removal and recovery of phosphate from domestic wastewater. *Journal of Environmental Management*, *352*. https://doi.org/10.1016/j.jenvman.2024.120029

Patel, H. (2020). Batch and continuous fixed bed adsorption of heavy metals removal using activated charcoal from neem (Azadirachta indica) leaf powder. *Scientific Reports*, *10*(1). https://doi.org/10.1038/s41598-020-72583-6

Peng, D., & Kong, Q. (2024). Corporate green innovation under environmental regulation: The role of ESG ratings and greenwashing. *Energy Economics*, *140*. https://doi.org/10.1016/j.eneco.2024.107971

Piwowarska, D., Kiedrzyńska, E., & Jaszczyszyn, K. (2024). A global perspective on the nature and fate of heavy metals polluting water ecosystems, and their impact and remediation. In *Critical Reviews in Environmental Science and Technology* (Vol. 54, Issue 19, pp. 1436–1458). Taylor and Francis Ltd. https://doi.org/10.1080/10643389.2024.2317112

Rai, P. K. (2022). Novel adsorbents in remediation of hazardous environmental pollutants: Progress, selectivity, and sustainability prospects. In *Cleaner Materials* (Vol. 3). Elsevier Ltd. https://doi.org/10.1016/j.clema.2022.100054

Rashid, R., Shafiq, I., Akhter, P., Iqbal, M. J., & Hussain, M. (2021). A state-of-the-art review on wastewater treatment techniques: the effectiveness of adsorption method. In *Environmental Science and Pollution Research* (Vol. 28, Issue 8, pp. 9050–9066). Springer Science and Business Media Deutschland GmbH. https://doi.org/10.1007/s11356-021-12395-x

Rathi, B. S., & Kumar, P. S. (2021). Application of adsorption process for effective removal of emerging contaminants from water and wastewater. *Environmental Pollution*, *280*. https://doi.org/10.1016/j.envpol.2021.116995

Rizwan, M., Usman, K., & Alsafran, M. (2024). Ecological impacts and potential hazards of nickel on soil microbes, plants, and human health. In *Chemosphere* (Vol. 357). Elsevier Ltd. https://doi.org/10.1016/j.chemosphere.2024.142028

Sabzehmeidani, M. M., Mahnaee, S., Ghaedi, M., Heidari, H., & Roy, V. A. L. (2021). Carbon based materials: A review of adsorbents for inorganic and organic compounds. In *Materials Advances* (Vol. 2, Issue 2, pp. 598–627). Royal Society of Chemistry. https://doi.org/10.1039/d0ma00087f

Sani, M. N. H., Amin, M., Siddique, A. B., Nasif, S. O., Ghaley, B. B., Ge, L., Wang, F., & Yong, J. W. H. (2023). Waste-derived nanobiochar: A new avenue towards sustainable agriculture, environment, and circular bioeconomy. In *Science of the Total Environment* (Vol. 905). Elsevier B.V. https://doi.org/10.1016/j.scitotenv.2023.166881

Setianto, S., Panatarani, C., Singh, D., & Joni, I. M. (2023). Semi-empirical infrared spectra simulation of pyrene-like molecules insight for simple analysis of functionalization graphene quantum dots. *Scientific Reports*, *13*(1). https://doi.org/10.1038/s41598-023-29486-z

Sheng, X., Chen, S., Zhao, Z., Li, L., Zou, Y., Shi, H., Shao, P., Yang, L., Wu, J., Tan, Y., Lai, X., Luo, X., & Cui, F. (2023). Rationally designed calcium carbonate multifunctional trap for contaminants adsorption. In *Science of the Total Environment* (Vol. 903). Elsevier B.V. https://doi.org/10.1016/j.scitotenv.2023.166142

Sibiryakov, B., Leite, L. W. B., & Sibiriakov, E. (2021). Porosity, specific surface area and permeability in porous media. *Journal of Applied Geophysics*, *186*. https://doi.org/10.1016/j.jappgeo.2021.104261

Silakhori, M., Jafarian, M., Chinnici, A., Saw, W., Venkataraman, M., Lipiński, W., & Nathan, G. J. (2021). Effects of steam on the kinetics of calcium carbonate calcination. *Chemical Engineering Science*, *246*. https://doi.org/10.1016/j.ces.2021.116987

Soo, X. Y. D., Lee, J. J. C., Wu, W. Y., Tao, L., Wang, C., Zhu, Q., & Bu, J. (2024). Advancements in CO2 capture by absorption and adsorption: A comprehensive review. In *Journal of CO2 Utilization* (Vol. 81). Elsevier Ltd. https://doi.org/10.1016/j.jcou.2024.102727

Surgutskaia, N. S., Martino, A. Di, Zednik, J., Ozaltin, K., Lovecká, L., Bergerová, E. D., Kimmer, D., Svoboda, J., & Sedlarik, V. (2020). Efficient Cu2+, Pb2+ and Ni2+ ion removal from wastewater using electrospun DTPA-modified chitosan/polyethylene oxide nanofibers. *Separation and Purification Technology*, *247*. https://doi.org/10.1016/j.seppur.2020.116914

Syarifuddin, S., Heryanto, H., Suryani, S., & Tahir, D. (2024). Biochar from diverse wastes: A comprehensive bibliometric analysis of heavymetal adsorption in wastewater. *Desalination and Water Treatment*, *317*. https://doi.org/10.1016/j.dwt.2024.100089

Tanpure, S., Ghanwat, V., Shinde, B., Tanpure, K., & Lawande, S. (2022). The Eggshell Waste Transformed Green and Efficient Synthesis of K-Ca(OH)2 Catalyst for Room Temperature Synthesis of Chalcones. *Polycyclic Aromatic Compounds*, *42*(4), 1322–1340. https://doi.org/10.1080/10406638.2020.1776740

Tolkou, A. K., Tsoutsa, E. K., Kyzas, G. Z., & Katsoyiannis, I. A. (2024). Sustainable use of low-cost adsorbents prepared from waste fruit peels for the removal of selected reactive and basic dyes found in wastewaters. *Environmental Science and Pollution Research*, *31*(10), 14662–14689. https://doi.org/10.1007/s11356-024-31868-3

Várdai, R., Schäffer, Ferdinánd, M., Lummerstorfer, T., Jerabek, M., Gahleitner, M., Faludi, G., Móczó, J., & Pukánszky, B. (2022). Crystalline structure and reinforcement in hybrid PP composites. *Journal of Thermal Analysis and Calorimetry*, *147*(1), 145–154. https://doi.org/10.1007/s10973-021-11053-1

Wang, K., Peng, N., Zhang, D., Zhou, H., Gu, J., Huang, J., Liu, C., Chen, Y., Liu, Y., & Sun, J. (2023). Efficient removal of methylene blue using Ca(OH)2 modified biochar derived from rice straw. *Environmental Technology and Innovation*, *31*. https://doi.org/10.1016/j.eti.2023.103145

Wang, W., & Wang, A. (2022). Perspectives on green fabrication and sustainable utilization of adsorption materials for wastewater treatment. *Chemical Engineering Research and Design*, *187*, 541–548. https://doi.org/10.1016/j.cherd.2022.09.006

Wang, Z., Dan, G., Zhang, R., Ma, L., & Lin, K. (2023). Coupling and decoupling CH stretching vibration of methylene and methine in serine conformers.

Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, *285*. https://doi.org/10.1016/j.saa.2022.121829

World Population Prospects 2024. (n.d.). www.unpopulation.org.

Wu, Y., Tong, K., Zhao, Z., & Tian, Y. (2023). Strengthening and toughening by constructing crystalline-amorphous nanoarchitecture. In *Matter* (Vol. 6, Issue 1, pp. 7–10). Cell Press. https://doi.org/10.1016/j.matt.2022.11.028

Xing, S., Li, C., Wang, J., Sun, M., Zhao, Y., Gou, Y., Zhang, P., & Bi, J. (2024). A colorimetric sensing method for direct determination of the adsorption capacity of colored cations in adsorbents. *Npj Clean Water*, *7*(1). https://doi.org/10.1038/s41545-024-00412-8

Yang, J., Tang, X., Liu, J., Wang, J., Shang, H., Wu, L., Li, J., & Deng, S. (2021). Down-sizing the crystal size of ZK-5 zeolite for its enhanced CH4 adsorption and CH4/N2 separation performances. *Chemical Engineering Journal*, *406*. https://doi.org/10.1016/j.cej.2020.126599

Yanti, I., Sationo, P. P., Winata, W. F., Anugrahwati, M., Anas, A. K., & Swasono, Y. A. (2023). Effectiveness of activated carbon magnetic composite from banana peel (Musa acuminata) for recovering iron metal ions. *Case Studies in Chemical and Environmental Engineering*, *8*. https://doi.org/10.1016/j.cscee.2023.100378

Zhai, Q., & Kurumisawa, K. (2021). Effect of accelerators on Ca(OH)2 activated ground granulated blast-furnace slag at low curing temperature. *Cement and Concrete Composites*, *124*. https://doi.org/10.1016/j.cemconcomp.2021.104272

Zhang, C., Guan, X., Zhu, J., Liu, S., & Zhao, R. (2024). Investigation of curing behavior of γ-C2S and MgO under varying CO2 concentrations. *Construction and Building Materials*, *455*, 139176. https://doi.org/10.1016/j.conbuildmat.2024.139176

Zhang, W., & Lv, C. (2020). Effects of mineral content on limestone properties with exposure to different temperatures. *Journal of Petroleum Science and Engineering*, *188*. https://doi.org/10.1016/j.petrol.2020.106941

Zhao, D., Li, Z., Liu, W., Li, T., Yue, G., & Pan, L. (2023). Crystallization mechanism and mechanical properties of CF/PPS thermoplastic composites manufactured by laser-assisted automated fiber placement. *Journal of Composite Materials*, *57*(1), 49–61. https://doi.org/10.1177/00219983221137676

Zhu, H., Chen, S., & Luo, Y. (2023). Adsorption mechanisms of hydrogels for heavy metal and organic dyes removal: A short review. *Journal of Agriculture and Food Research*, *12*. https://doi.org/10.1016/j.jafr.2023.100552

Zhu, T., Huang, F., Li, S., & Zhou, Y. (2024). Microscopic characteristics and thermodynamic property changes in limestone under high-temperature treatment. *Materials Letters*, *356*. https://doi.org/10.1016/j.matlet.2023.135558