

Lista cuprinzând tematica și bibliografia

Tematica

- Tehnologia stațiilor de epurare a apelor uzate și îndepărtarea poluanților specifici
- Materiale pentru
- Programare în MATLAB pentru modelare matematică

Bibliografia

1. Pirvu, F., Covaliu-Mierlă, C. I., Paun, I., Paraschiv, G., & Iancu, V. (2022). Treatment of wastewater containing nonsteroidal anti-inflammatory drugs using activated carbon material. *Materials*, 15(2), 559. <https://doi.org/10.3390/ma15020559>
2. Al-Jemeli, M., Mahmoud, M. A., Majdi, H. S., Abid, M. F., Abdullah, H. M., & AbdulRazak, A. A. (2021). Degradation of anti-inflammatory drugs in synthetic wastewater by solar photocatalysis. *Catalysts*, 11(11), 1330. <https://doi.org/10.3390/catal11111330>
3. Gabelica, I., Radovanović-Perić, F., Matijašić, G., Tolić Čop, K., Ćurković, L., & Mutavdžić Pavlović, D. (2025). Synergistic removal of diclofenac via adsorption and photocatalysis using a molecularly imprinted core-shell photocatalyst. *Materials*, 18(10), 2300. <https://doi.org/10.3390/ma18102300>
4. Paparo, R., Di Serio, M., Roviello, G., Ferone, C., Trifuoggi, M., Russo, V., & Tarallo, O. (2024). Geopolymer-based materials for the removal of ibuprofen: A preliminary study. *Molecules*, 29(10), 2210. <https://doi.org/10.3390/molecules29102210>
5. Skwierawska, A. M., Nowacka, D., Nowicka, P., Rosa, S., & Kozłowska-Tylingo, K. (2021). Structural adaptive, self-separating material for removing ibuprofen from waters and sewage. *Materials*, 14(24), 7697. <https://doi.org/10.3390/ma14247697>
6. Tchobanoglous, G., Burton, F. L., & Stensel, H. D. (2003). *Wastewater engineering: Treatment and reuse* (4th ed.). McGraw-Hill. <https://www.wiley.com/en-us/Wastewater+Quality+Monitoring+and+Treatment-p-9780471499299>
7. Satyam, S., & Patra, S. (2024). Innovations and challenges in adsorption-based wastewater remediation: A comprehensive review. *Heliyon*, 10(9), e29573. <https://doi.org/10.1016/j.heliyon.2024.e29573>
8. Younas, F., Mustafa, A., Farooqi, Z. U. R., Wang, X., Younas, S., Mohy-Ud-Din, W., Hameed, M. A., Abrar, M. M., Maitlo, A. A., Noreen, S., & Hussain, M. M. (2021). Current and emerging adsorbent technologies for wastewater treatment: Trends, limitations, and environmental implications. *Water*, 13(2), 215.

<https://doi.org/10.3390/w13020215>

9. Akhtar, M. S., Ali, S., & Zaman, W. (2024). Innovative adsorbents for pollutant removal: Exploring the latest research and applications. *Molecules*, 29(18), 4317. <https://doi.org/10.3390/molecules29184317>
10. Rezania, S., Darajeh, N., Rupani, P. F., Mojiri, A., Kamyab, H., & Taghavijeloudar, M. (2024). Recent advances in the adsorption of different pollutants from wastewater using carbon-based and metal-oxide nanoparticles. *Applied Sciences*, 14(24), 11492. <https://doi.org/10.3390/app142411492>
11. Hussein, E. B., Rasheed, F. A., Mohammed, A. S., & Kayani, K. F. (2025). Emerging nanotechnology approaches for sustainable water treatment and heavy metals removal: A comprehensive review. *RSC Advances*, 15(48), 41061–41107. <https://doi.org/10.1039/D5RA06914A>
12. Zango, Z. U., Jumbri, K., Sambudi, N. S., Ramli, A., Abu Bakar, N. H. H., Saad, B., Rozaini, M. N. H., Isiyaka, H. A., Jagaba, A. H., Aldaghri, O., & Sulieman, A. (2020). A critical review on metal-organic frameworks and their composites as advanced materials for adsorption and photocatalytic degradation of emerging organic pollutants from wastewater. *Polymers*, 12(11), 2648. <https://doi.org/10.3390/polym12112648>
13. Russo, V., Hmoudah, M., Broccoli, F., Iesce, M. R., Jung, O.-S., & Di Serio, M. (2020). Applications of metal organic frameworks in wastewater treatment: A review on adsorption and photodegradation. *Frontiers in Chemical Engineering*, 2, 581487. <https://doi.org/10.3389/fceng.2020.581487>
14. Mannaf, M. M., Rahman, M. M., Sabuj, S. T., Talukder, N., & Lee, E. S. (2025). Current progress in advanced functional membranes for water-pollutant removal: A critical review. *Membranes*, 15(10), 300. <https://doi.org/10.3390/membranes15100300>
15. Abdelhamid, H. N. (2024). Nanocellulose-based materials for water pollutant removal: A review. *International Journal of Molecular Sciences*, 25(15), 8529. <https://doi.org/10.3390/ijms25158529>
16. Al-Gethami, W., Qamar, M. A., Shariq, M., Alaghaz, A.-N. M. A., Farhan, A., Areshi, A. A., & Alnasir, M. H. (2024). Emerging environmentally friendly bio-based nanocomposites for the efficient removal of dyes and micropollutants from wastewater by adsorption: A comprehensive review. *RSC Advances*, 14(4), 2804–2834. <https://doi.org/10.1039/D3RA06501D>
17. Suresh, R., Rajendran, S., Chen, W.-H., Soto-Moscoso, M., Sundaram, T., Abdul Jalil, A., & Sekar, S. K. R. (2024). A review on algae-mediated adsorption and

catalytic processes for organic water pollution remediation. *Frontiers in Materials*, 11, 1432704. <https://doi.org/10.3389/fmats.2024.1432704>

18. Wang, Y., Chen, L., Zhu, Y., Fang, W., Tan, Y., He, Z., & Liao, H. (2024). Research status, trends, and mechanisms of biochar adsorption for wastewater treatment: A scientometric review. *Environmental Sciences Europe*, 36, 25. <https://doi.org/10.1186/s12302-024-00859-z>
19. Alsawy, T., Rashad, E., El-Qelish, M., & Mohammed, R. H. (2022). A comprehensive review on the chemical regeneration of biochar adsorbent for sustainable wastewater treatment. *npj Clean Water*, 5, 29. <https://doi.org/10.1038/s41545-022-00172-3>
20. Swamy, K. R., Shyamala, G., Gurugubelli, T. R., Ravindran, G., & Bathula, B. (2026). Recent advancements of wastewater treatment by photocatalysis: A comprehensive review. *iScience*, 29(6), 116088. <https://doi.org/10.1016/j.isci.2026.116088>
21. Sayam, S., Islam, T., Tusti, T. H., & Ghosh, J. (2026). Microplastic removal from wastewater through biopolymer and nanocellulose-based green technologies. *RSC Sustainability*, 4(1), 79–117. <https://doi.org/10.1039/D5SU00634A>