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## **6 CLEAN WATER AND SANITATION**



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MIL-53(Fe)-derived  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> coupled with CuO hybrid nanoarchitecture: A dual-functional photocatalyst for ibuprofen removal and hydrogen production

Sahoo, U., Mallick, S., Aparajita, P., ...Altarawneh, M.K., Bariki, R.

***Separation and Purification Technology*, 2026**

Article

A hydrothermally engineered MoS<sub>2</sub>-ZnS-MWCNT nanocomposite for superior oxygen evolution and visible light photocatalytic dye degradation

Mandom, R., Boppudi, H.B., Kuchi, C., ...Reddy, N.P., Reddy, P.S.

***Journal of Materials Science*, 2026**

Review • *Open access*

Two-Dimensional Carbon-Based Electrochemical Sensors for Pesticide Detection: Recent Advances and Environmental Monitoring Applications

Imran, K., Amin, A., Venkata Prasad, G., ...Wilson, J., Kim, T.

***Biosensors*, 2026**

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A Hybrid Machine Learning Framework for Water Quality Index Prediction Using Feature-Based Neural Network Initialization

Al Bataineh, A.S., Vamsi, B., Smith, S.A.

***IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 2026**

Article

Facile single-step electrodeposition of flower-shaped Cu doped ZnO nanostructures for optical, photoluminescence and photocatalytic assessment

Manno, A.K., Sarangi, S.N., Singh, J.P., ...Varma, S., Yuvaraj, C.S.

***Optical Materials*, 2026**

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Enhanced water quality index prediction using a dual-key convolutional transformer autoencoder network integrating with poplar optimization

Maruthamuthu, R., Balamurugan, S., Naveen Kumar, N., Devi, P.P., Dinesh Kumar, K.K.

***Franklin Open*, 2025**

Conference Paper

Enhanced removal of manganese ions from wastewater media by oxidized MNT-based filters: EDS and raman investigations

Esehly, E.M., Deepanraj, B., Shaik, F., Raman, L.A.

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Facile Green Synthesis of Gold Nanoparticles Using Catunaregam Spinosa Extract for Environmental Remediation and Antimicrobial Activity

Siddiq, S.M., Basri, T.S.J., Yuvaraj, C.S., Kuchi, C.

***Chemistryselect*, 2025**

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A Scalable Machine Learning Framework for Hydrological Water Quality Monitoring Using Physicochemical and Microbial Parameters

Bhowmik, P.N., Saini, K., Nunna, T.S.P., Anand, P., Ateş, B.

***Water Switzerland*, 2025**

Article

A study on de-contamination of dairy wastewater using natural coagulants

Mishra, L., Bhowmik, P.N., Anand, P., Sudheer Kumar, Y.

***Environmental Monitoring and Assessment*, 2025**

Article

Oleic acid-ligated Co<sub>0.7</sub> doped Ca<sub>0.3</sub>Fe<sub>2</sub>O<sub>4</sub> nanoparticles: A synergistic approach for enhanced wastewater purification and magnetic hyperthermia applications

Rosaiah, P., Kuchi, C., Dhanalakshmi, R., ...Guru-Prakash, N.G., Ko, T.J.

***Physica B Condensed Matter*, 2025**

Article

B, S co-doped g-C<sub>3</sub>N<sub>4</sub> hollow nanotubes/MIL-53 heterostructure: A MOF derived high performance Z scheme photocatalyst for bisphenol A degradation and H<sub>2</sub> evolution

Sahoo, U., Pattanayak, S., Choudhury, S., ...Das, S., Hota, G.

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HydroDepth: An Integrated Approach for Accurate Depth and Radius Estimation of Circular Water Bodies and Borewells

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AUTOMATIC MONITORING OF TREATED WATER RELEASED FROM WASTEWATER TREATMENT PLANTS USING MODEL-BASED CLUSTERING WITH DENSITY ESTIMATION

Begum, S.F., Lokeshwaran, K.

***Journal of Environmental Engineering and Landscape Management*, 2025**

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Sewage Water Monitoring Using Raspberry Pi

Sai Anusha, V., Pavan Kumar, M.V., Pavan Kalyan, K., ...Basha, S.T., Siva Dinesh, S.

***2025 International Conference on Sensors and Related Networks Sennet 2025 Special Focus on Digital Healthcare 64220*, 2025**

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Effective Water Quality Prediction Using Random Forest Algorithm

Sayeed, S., Selvaraj, P., Sneha, T.N., ...Prudhvi Raj, Y., Ujeeb Naik, M.

***Springer Proceedings in Mathematics and Statistics*, 2025**

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Nafion II2 Based Proton Exchange Membrane Fuel Cells and Its Visualization Using Machine Learning

Khan, S., Sethuraman, K., Prasanth, V.S., Parveen Akhther, A.

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Pitta, S., Amirthayogam, G., Rebecca, A.S., ...Sundar, R.S.S., ArunKumar, G.

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Conference Paper

IoT-Driven Dynamic Behavior Intervention Model for Sustainable Hygiene Practices: Insights from Household Water Consumption

Srinivasan, R., Devi, V.K., David Winster Praveenraj, D., ...Prasanth, V.S., Baburao, G.

***Communications in Computer and Information Science*, 2025**

Article

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Sailaja, M., Medapati, P.K., Jyothi, B.S., ...Manjula, S., Divya Priya, D.D.

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***Natural Hazards*, 2024**

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Technological Innovations in IoT-Based Smart Agriculture Systems for Sustainable Crop Management

Padmapriya, S., Todmal, A., Veeraiah, V., ...Muthugurunathan, G., Rakshitha,

***Proceedings 4th International Conference on Technological Advancements in Computational Sciences Ictacs 2024*, 2024**

Article

ADVANCED WASTEWATER TREATMENT USING ENERGY – EFFICIENT FENTON PROCESS OPTIMISED WITH DEEP LEARNING

Karpagavalli, C., Sri Harsha, A., Mahadevan, N.Y., ...Philip, J.M., Rajaram, A.

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