

SUSTAINABLE DEVELOPMENT GOALS

6. CLEAN WATER AND SANITATION



Other details

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Other details

1. Research works contributing to SDG6

1. Water quality analysis in peri-urban areas of Chennai city using aqua chem software
2. Detection, prevention and removal of contaminants in hydraulic working fluid
3. Water verge – to forecast water consumption

2. Publications contributing to SDG6

1. Wang, Y., Danook, S. H., AL-bonsrulah, H. A., Veeman, D., & Wang, F. (2022). A recent and systematic review on water extraction from the atmosphere for arid zones. *Energies*, 15(2), 421.
2. Jayaraman, P., Nagarajan, K. K., & Partheeban, P. (2022). A Review on Artificial intelligence Algorithms and Machine Learning to Predict the Quality of Groundwater for Irrigation Purposes. In 2022 International Conference on Data Science, Agents & Artificial Intelligence (ICDSAAI) (Vol. 1, pp. 1-8). IEEE.
3. Anuradha, B., Packialakshmi, S., Sanjay, N., & Vivekananthan, V. (2022). An Analytical Study for Assessing Water Productivity in Pre-and Post-Rehabilitation Period of Rural Tank System. *Advances in Civil Engineering*, 2022(1), 1119931.
4. Vishnupriyan, J., Partheeban, P., Dhanasekaran, A., & Shiva, M. (2022). Analysis of tilt angle variation in solar photovoltaic water pumping system. *Materials Today: Proceedings*, 58, 416-421.
5. Jayaraman, P., Nagarajan, K. K., & Partheeban, P. (2023). Analyzing the Interplay of Rainfall, Humidity, and Groundwater in Chennai and Kanchipuram through ARIMA Modeling. In 2023 International Conference on Data Science, Agents & Artificial Intelligence (ICDSAAI) (pp. 1-8). IEEE.
6. Sindhu, R., Eswaramoorthi, S., Loganathan, K., & Jain, R. (2024). Comparative approach of Darcy–Forchheimer flow on water based hybrid nanofluid (Cu-Al₂O₃) and mono nanofluid (Cu) over a stretched surface with injection/suction. *Partial Differential Equations in Applied Mathematics*, 11, 100786.

7. Pachaivannan, P., Manimuthu, S., & Jegadeesan, V. (2024). Comparative energy performance analysis of solar water pumping systems across diverse climate zones. *Journal of Engineering Research*.
8. Prabhu, B., Vengadesan, E., Senthil, S., & Arunkumar, T. (2024). Comprehensive energy and enviro-economic performance analysis of a flat plate solar water heater with a modified absorber. *Thermal Science and Engineering Progress*, 54, 102848.
9. Prabhu, B., Vengadesan, E., Senthil, S., & Arunkumar, T. (2024). Comprehensive energy and enviro-economic performance analysis of a flat plate solar water heater with a modified absorber. *Thermal Science and Engineering Progress*, 54, 102848.
10. Jayaraman, P., Nagarajan, K. K., Partheeban, P., & Krishnamurthy, V. (2024). Critical review on water quality analysis using IoT and machine learning models. *International journal of information management data insights*, 4(1), 100210.
11. Shanmugam, S., Ali, M. S., Narayanan, G., & Rhaima, M. (2023). Finite-Time Boundedness of Switched Time-Varying Delay Systems With Actuator Saturation: Applications in Water Pollution Control. *IEEE Access*.
12. Sambhavi, A. A., Nagamani, K., Gowtham, B., Packialakshmi, S., & Anuradha, B. (2023). Fluoride Contamination of Groundwater in a Coastal Region-A Growing Environmental Pollution Threat. *GLOBAL NEST JOURNAL*, 25(9), 41-52.
13. Nagamani, K., Batvari, P. D., Packialakshmi, S., Reddy, C. S. K., & Anuradha, B. (2021). Groundwater Recharge Planning Using Field Survey for Talupula Mandal in Anantapur District, Andhra Pradesh, India. *Nature Environment and Pollution Technology* this link is disabled, 20(5), 1981-1987.
14. Ayyadurai, M., Raj, P. V., Vijayaraj, A., Dhanagopal, R., & Kumar, R. S. (2022, April). Hybrid atom search-heap energy optimization algorithm for dynamic topology in underwater acoustic sensor network. In *2022 6th International Conference on Devices, Circuits and Systems (ICDCS)* (pp. 472-476). IEEE.
15. Packialakshmi, S., Nagamani, K., & Anuradha, B. (2023). Hydrochemical Investigation and Water Quality Mapping in and Around Pallikaranai Marshland Area in Chennai, India. In *Impacts of Urbanization on Hydrological Systems in India* (pp. 25-42). Cham: Springer International Publishing.
16. Nagamani, K., Meer, M. S., Anuradhha, B., Bhuvanewari, C., & Packialakshmi, S. (2023, December). Identification of Groundwater Potential Zones Using Machine

- Learning Algorithms and Geospatial Techniques. In 2023 International Conference on Data Science, Agents & Artificial Intelligence (ICDSAAD) (pp. 1-8). IEEE.
17. Munavalli, G. R., & Saler, P. (2009). Treatment of dairy wastewater by water hyacinth. *Water Science and Technology*, 59(4), 713-722.
 18. Chukka, N. D. K. R., Gomathi Nagajothi, P., Natrayan, L., Reddy, Y. B. S., Veeman, D., Patil, P. P., & Thanappan, S. (2022). Investigation on efficient removal of fluoride from ground water using activated carbon adsorbents. *Adsorption Science & Technology*, 2022, 7948069.
 19. Narayanan, L. K., Sankaranarayanan, S., Rodrigues, J. J., & Lorenz, P. (2020). Multi-agent-based modeling for underground pipe health and water quality monitoring for supplying quality water. *International Journal of Intelligent Information Technologies (IJIIT)*, 16(3), 52-79.
 20. Baanu, B. B., Babu, K. J., & Baskaran, A. (2022). Need to educate farmers about the benefits of using treated wastewater for agriculture. *Water Policy*, 24(8), 1269-1286.
 21. Somasundaram, S., Jayabalakrishnan, D., Balajikrishnabharathi, A., & Bhaskar, K. (2024). Performance evaluation of silane-treated *Cissus quadrangularis* fiber and waste *Limonia acidissima* hull powder on mechanical, fatigue, and water absorption properties of epoxy resin composite. *Biomass Conversion and Biorefinery*, 14(5), 6205-6213.
 22. Govindhan, P. (2024). Phytochemical analysis of the methanolic extract from the mangrove species *Avicennia marina* plant species inhabited in coastal water. *Natural Product Research*, 1-11.
 23. Ganesh, V., Pandikumar, A., Alizadeh, M., Kalidoss, R., & Baskar, K. (2020). Rational design and fabrication of surface tailored low dimensional Indium Gallium Nitride for photoelectrochemical water cleavage. *International Journal of Hydrogen Energy*, 45(15), 8198-8222.
 24. Ganesh, V., Pandikumar, A., Alizadeh, M., Kalidoss, R., & Baskar, K. (2020). Rational design and fabrication of surface tailored low dimensional Indium Gallium Nitride for photoelectrochemical water cleavage. *International Journal of Hydrogen Energy*, 45(15), 8198-8222.
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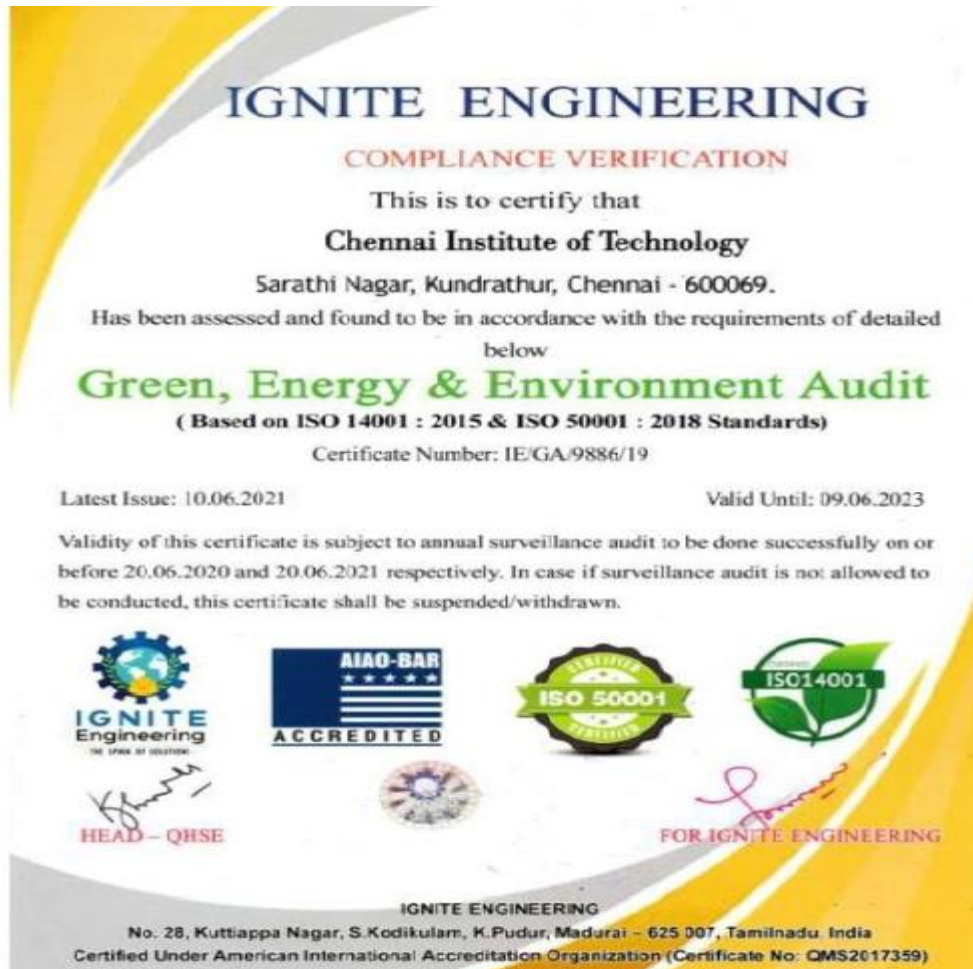
- chromium ions from wastewater by uninterrupted mode of adsorption. In IOP Conference Series: Materials Science and Engineering (Vol. 955, No. 1, p. 012087). IOP Publishing.
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27. Vinayagamorthy, M., Yuwaraj, K. R., Jayabalakrishnan, D., Harish, C., & Mugelan, A. (2024, August). Solar water heater system using computational fluid dynamics-simulation study. In *AIP Conference Proceedings* (Vol. 2937, No. 1). AIP Publishing.
28. Packialakshmi, S., Anuradha, B., Nagamani, K., Devi, J. S., & Sujatha, S. (2023). Treatment of industrial wastewater using coconut shell based activated carbon. *Materials Today: Proceedings*, 81, 1167-1171.
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31. Venkatesh, J., Partheeban, P., Baskaran, A., Krishnan, D., & Sridhar, M. (2024). Wireless sensor network technology and geospatial technology for groundwater quality monitoring. *Journal of Industrial Information Integration*, 38, 100569.

3. Patents contributing to SDG6

1. IoT based NFT hydroponics system. Application No: 202341077562 A
2. Device for electricity generation from waste water treatment. Design No: 394720-001
3. System for water level detection and control based on internet of things. Application No: 202341006631 A

2. Green, energy and environment audit certification

Chennai Institute of technology has been assessed and found to be in accordance with the requirements of green, energy and environment audit.



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