

**3rd International Conference on Advances in Water treatment and Management
(ICAWTM-24)**

**Pandit Deendayal Energy University
Gandhinagar, Gujarat, INDIA
1-2nd March, 2024**

Day - 1 (1/03/2024)

Session Time: 15:30 to 17:30

Venue - E-101

Track - 1 Advanced Technologies for Sustainable Wastewater Treatment

| Track ID | Author Name | Paper Title | Organization/ Institution |
|-----------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Water-001 | Dr. Ravi Tejasvi | Photoelectrochemical Water Splitting and Photocatalytic Oxidation Reaction Rate Tuning through Photocatalyst Particle Size Optimization | Pandit Deendayal Energy University |
| Water-002 | Dr Abhipsa R Makwana and Maaz Alam | Mixed-Metal-Oxide Based Electrooxidation of RR120 Azo Dye | Faculty of Tech and Engg. The Maharaja Sayajirao University of Baroda |
| Water-003 | Dr. Abhipsa R Makwana and Dhanvi Mengar | Effect of current Density and pH on mixed-metal-oxide based electrooxidation of leachate | Faculty of Tech and Engg, The Maharaja Sayajirao University of Baroda |
| Water-004 | Dr. Sujoy Kumar Samanta | Ciprofloxacin Removal from Aqueous Solution Using Graphene Oxide and Reduced Graphene Oxide | Indian Institute of Technology Patna |
| Water-006 | Dr. S.V. Ambekar | EFFECT OF VARIOUS PARAMETERS ON OPTIMUM COAGULANT DOSE- A CASE STUDY | Yeshawantrao Chavan College of Engineering |
| Water-061 | Dr. Arijit Ganguli | Hydrodynamics of microbubbles in a rectangular bubble column for treatment of wastewater: A CFD study | Ahmedabad University |

Track – 2 Water Management**Day - 1 (1/03/2024)****Session Time: 15:30 to 17:30****Venue - E-102**

| Track ID | Author Name | Paper Title | Organization/ Institution |
|-----------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Water-008 | Hardik Giri Gosai | An assessment of different tides and anthropogenic influence on coastal surface water at Bhavnagar coast, Gulf of Khambhat, India | The Maharaja Sayajirao University, Baroda, Vadodara |
| Water-009 | Abhishek Kumar | Assessing the Potential of Economic Valuation for Water in India: A Pathway to Sustainable Viability amidst Potable Water Scarcity – Insights from a Primary Survey in Kanpur City | Indian Institute of Technology Kanpur |
| Water-010 | PATEL DISHA NARESHBHAJ | INTEGRATED FLOOD MODELLING OF AMBIKA RIVER BASIN USING HEC-RAS: A COMPREHENSIVE ANALYSIS FOR DISASTER RESILIENCE | THE MAHARAJA SAYAJIRAO UNIVERSITY BARODA |
| Water-011 | Rahul Das | Assessment and Mapping of Heavy Metal Contamination in Groundwater using GIS and Heavy Metal Indices | National Institute of Technology Agartala |
| Water-012 | GAURAV KUMAR | Spectral and Temporal response from the water of Kiul River within Lakhisarai district, Bihar in the aspect of Turbidity by the Remote Sensing & GIS | B.I.T. MESRA |
| Water-013 | Dr. Debasis Sarkar | Smart Water, Real Solutions: A Review of Intelligent Technologies for Efficient and Sustainable Water Management | Pandit Deendayal Energy University |
| Water-040 | Akash Bhandari, Dr. Samir Patel | An Explainable-AI Enabled Groundwater Classification System for Irrigation Using Machine Learning | Pandit Deendayal Energy University |

Track – 3 From Waste to Water: Solutions for Wastewater Treatment and Resource Recovery

Day - 1 (1/03/2024)

Session Time: 15:30 to 17:30

Venue - E-103

| Track ID | Author Name | Paper Title | Organization/ Institution |
|-----------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Water-014 | Harsh Pandya, Khushi Jaiswal | Remediation of Sewage Treatment Plant (STP) Waste Water Using Metal Loaded Biochar – A Sustainable Approach for Getting Fertilizer Alike Material | Pandit Deendayal Energy University |
| Water-016 | Setu Visavadia, Dr. Ravi Tejasvi | Optimizing Reaction Kinetics in Wastewater Treatment: Particle Size Manipulation and Rate Tuning via COMSOL Simulation | Pandit Deendayal Energy University |
| Water-017 | Subhankar Roy | A Numerical Investigation of Multi-bubble Dynamics in Hydrodynamic Cavitation | Pandit Deendayal Energy University |
| Water-018 | Saumya Mankad | Iron Oxide and Iron Oxide-Based Nanomaterials for Water Remediation | School of Health Sciences and Technology, Dr. Vishwanath Karad MIT World Peace University, MIT Campus, Paud Road, Kothrud, Pune 411038, Maharashtra (India). |
| Water-019 | Swachchhatoya Ghosh | Strategies for managing wastewater generated during valorisation of lignocellulosic biomass: A comprehensive review | CSIR-Indian Institute of Chemical Technology |
| Water-020 | Deepa D | BIOREMEDIATION FOR SUSTAINABLE DYE WASTEWATER TREATMENT | SASTRA Deemed to be university, Thanjavur. |
| Water-021 | Mr. Dabeer Hussain Mir | Microbial Bioremediation of Nutrient Pollutants(Ammonical Nitrogen) in Synthetic Wastewater | NIT Srinagar |

Track – 4 Advanced Desalination and Water Treatment

Day - 1 (1/03/2024)

Session Time: 15:30 to 17:30

Venue - E-104

| Track ID | Author Name | Paper Title | Organization/ Institution |
|-----------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Water-022 | SIDDHARTHA MOULIK, SUBHANKAR ROY | Environmentally Sustainable Desalination through Rapid Screening and Design of High Performance Thin Film Nanocomposite Membranes and Process Optimization Using Artificial Intelligence (AI) – Machine Learning (ML) Framework | BITS PILANI GOA CAMPUS |
| Water-023 | Dr. Harshada Jadhav | Infrared active narrow bandgap Ni doped LaFeO ₃ nanoparticles for desalination and decontamination of water leveraging interfacial solar steam generation | IIT Indore |
| Water-024 | Dr. Vinayak S. Wadgaonkar | Review of Ultrasonic Water Treatment for Organic Pollutants | Dr. Vishwanath Karad MIT World Peace University Pune |
| Water-025 | Mr. Vidhan Thakore | Water Desalination and H ₂ Production | PDEU |
| Water-026 | Sapna Gawali | Optimisation of PSF/ZIF-7 mixed matrix membrane for effective removal of organic contaminants from wastewater using Box-Behnken Design | PDEU, gandhinagar |
| Water-027 | Siddesh Mandhare, Aniket Wakle | Artificial intelligence in water treatment for process water optimization and automation in the oil and gas industry: Recent advances and prospects | MIT-WPU |
| Water-028 | Pravesh Chandra | Performance Modelling and Exergy-Economic Analysis of Thermal Driven Multiple Effect Distillation System for Brackish Water Treatment | MIT Moradabad |
| Water-029 | Dr Hitesh Panchal | Investigation on Triple basin solar desalination system with evacuated tubes | Government engineering college patan |

Day - 2 (2/03/2024)

Session Time: 11:15 to 13:15

Venue - E-101

Track - 5 Textile Wastewater Treatment: Cutting-Edge Adsorbents and Bio-Sorption Technologies

| Track ID | Author Name | Paper Title | Organization/ Institution |
|-----------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Water-030 | Dr. Ganesh B Dabhade; Prof. Ankita A. Malpure | An Efficient Removal of Indigo Carmine Dye (IC) From Aqueous Medium Using Environmental Friendly Synthesized NiFe ₂ O ₄ | K.K.Wagh Institute of Engineering Education and Research Nasik |
| Water-031 | NISHTHA S VALODRA , DR. KOSHA SHAH | Application of waste peanut shells to form activated carbon and its utilization for the removal of ACID YELLOW 36 | CIVIL DEPARTMENT , FACULTY OF TECHNOLOGY AND ENGINEERING M.S UNIVERSITY BARODA |
| Water-032 | Om Rajendra Kudal, Yash Nitin Valwe, Gauri Vinayak Shinde, Sushant Omprakash Korde, Bhushan Gajanan Chaudhari | Adsorption of commercial dyes using synthetic adsorbent for textile industry waste water treatment | Vishwakarma Institute Of Technology, Pune |
| Water-033 | Dr. Vinayak S. Wadgaonkar | Investigation on Elimination of Cr (VI) From Waste Water By Powdered Shell of Lima Bean As Adsorbent | Dr. Vishwanath Karad MIT World Peace University Pune |
| Water-034 | Miss Charuta Waghmare | Methylene Blue Dye Removal From An Aqueous Solution By Charcoal Derived From Acid Treated Marigold Flower | Yeshwantrao Chavan College of Engineering, Nagpur, Maharashtra |
| Water-035 | Arth Padaria | Treatment of textile effluent by bio-sorption: kinetics and thermodynamic study | Pandit Deendayal Energy University |
| Water-036 | Dr. Vinayak S. Wadgaonkar | Comparative Study of Fixed-Bed Column Studies on Cr (VI) Removal From Wastewater By Peas Husk and Lima Bean | Dr. Vishwanath Karad MIT World Peace University Pune |
| Water-037 | Kurella Swamy | Removal of Methyl Orange dye by using Rice Husk & TEA Waste | National Institute of Technology Srinagar, Jammu and Kashmir |

Track – 6 Smart Water: Technologies for Sustainable Management

Day - 2 (2/03/2024)

Session Time: 11:15 to 13:15

Venue - E-102

| Track ID | Author Name | Paper Title | Organization/ Institution |
|-----------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Water-038 | Jaimin Patel , Vanshita Parekh | Smart Water Management: The Role of Phyto-Coagulants in Revolutionising Chemical Industry Wastewater Treatment | Dharmsinh Desai University |
| Water-039 | Tejaswini | Management of Geothermal Water in Abandoned Oil and Gas fields | PDEU |
| Water-041 | YOGITA PRALHAD SHEWALE, Dr. GANESH B. DABHADE, HARSHALKUMAR R. KHAIRNAR | Cyber Security Attack detection and Municipal Waste Management for Smart City based on IoT | K. K. WAGH INSTITUTE OF ENGINEERING AND RESEARCH, NASHIK |
| Water-042 | Balraj Gourish Tavanandi | Improving the quality of process water for ASP flooding applications | MIT WORLD PEACE UNIVERSITY |
| Water-043 | Bodhipriya saha | River health monitoring through microbial pollution:A case study of Haora river of | NIT AGARTALA |
| Water-083 | Nikita P. Chokshi | Synthesis, Characterization and Application of Ag-La-Ce composite metal oxide in catalytic ozonation | Nirma Univeristy |
| Water-015 | Md Aurangzeb | Application of Heat-Intensified Extractive Double-Partitioned Divided-Wall Column for Purification of Water from Petrochemical | Pandit Deendayal Energy University |

Track – 7 Industrial Effluent Treatment**Day - 2 (2/03/2024)****Session Time: 11:15 to 13:15****Venue - E-103**

| Track ID | Author Name | Paper Title | Organization/ Institution |
|-----------|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Water-044 | Pratiksinh Dilipsinh Chavda | Reduction of Chemical Oxygen Demand of Effluent generated from production of pigment Suthol Red | College of Renewable Energy and Environmental Engineering, SDAU, S.K. Nagar |
| Water-045 | Shubham Kumar Mishra | Treatment of Domestic and Industrial Wastewater with Flow Electrode Capacitive Deionization - A Review | Indian Institute of Technology Madras |
| Water-046 | Preethi B S | Advances in industrial waste water Treatment: Addressing the challenge and improving efficiency | Jss AHER mysuru |
| Water-047 | Dr. Megha D Bhatt | Green Initiative: Use of Cow-dung Slurry for treatment of Industrial Effluent | Gujarat State Fertilizers & Chemicals Ltd |
| Water-048 | Akashkumar Mahedrabhai Patel | Extraction of Organics and Ammonium Sulphate from Caprolactam Plant Waste Water | Gujarat State Fertilizers and Chemical limited |
| Water-049 | Tej Patel | Efficacy Assessment of Biochar for the Removal of Emerging Contaminants from Industrial Wastewater | Pandit Deendayal Energy University |
| Water-050 | Modi Dhruv Bijalbhai | A Review of Advanced Oxidation Procedures (AOPs) for Industrial Waste Water Treatment | Pandit Deendayal Energy University |
| Water-005 | Malika Shrivastava, Kosha A. Shah | Decolorization of Reactive black 5 dye with Electrocoagulation using Flyash as an adsorbent | The Maharaja Sayajirao University of Baroda |

Track – 8 Water Resources and Management**Day - 2 (2/03/2024)****Session Time: 11:15 to 13:15****Venue - E-104**

| Track ID | Author Name | Paper Title | Organization/ Institution |
|-----------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Water-051 | Sohail Ayub | Rural Water Quality Assessment in Close Vicinity of Slaughterhouses at Mathura bypass Road Aligarh U.P. | Aligarh Muslim University, Aligarh |
| Water-052 | Jagriti Patel | Surface Water Quality Assessment near Municipal Solid Waste Landfill | The Maharaja Sayajirao University of Baroda |
| Water-053 | Satvi H Makati, Himanshu K Gajera | Enhancing Water Quality Assessment through Machine Learning Techniques | Pandit Deendayal Energy University |
| Water-054 | Dr. Ripal Gupta | ANALYZING WATER WASTAGE IN REVERSE OSMOSIS (RO) SYSTEMS: UNRAVELING CAUSES AND PROPOSING SOLUTIONS | National Forensic Sciences University |
| Water-055 | Balraj Tavanandi | Quality assessment of proposed process water for sustainable development | MIT-WPU |
| Water-056 | Mr. Darshitsinh Ritendrasinh Parmar | Determination of Trace Metal Pollutants in Wastewater from Industrial Zones of Ahmedabad using Laser Induced Breakdown Spectroscopy | Pandit Deendayal Energy University |
| Water-057 | Sugayaalini Ramsbramanian | State-of-the-art Water Quality Studies Focused on Gujarat, India: A Review | Pandit Deendayal Energy University |
| Water-089 | Sachin Prajapati | Economic and Strategic Implications of Heavy Water Production and Utilization: A Comprehensive Review | Pandit Deendayal Energy University |

Track – 9 Green Pathways in Wastewater Treatment

Day - 2 (2/03/2024)

Session Time: 15:45 to 17:30

Venue - E-101

| Track ID | Author Name | Paper Title | Organization/ Institution |
|-----------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Water-058 | Gautamsinh Gohil, Devam Bhadaniya, Vanshika Jain, Arjun Bansal, Dr Manishkumar Sinha | Application of Membrane Bioreactors for Wastewater Treatment | Pandit Deendayal Energy University |
| Water-059 | Dr. Vinayak S. Wadgaonkar | Review of Membrane Fouling in the MBR System: Mechanism, Effects, and Control Measures | Dr. Vishwanath Karad MIT World peace University Pune |
| Water-060 | Dr. K SOUNDARANAYAKI | Integrated Constructed Wetland and Microbial Fuel Cell for the Treatment of Stabilized landfill Leachate | ANNA UNIVERSITY CHENNAI |
| Water-062 | Jesic Patadiya | Efficacy Assessment of Sewage Treatment through Innovative Filtration Techniques | Pandit Deendayal Energy University |
| Water-063 | Chandrashekhar Parab | Comparative Analysis of Lab-Scale Constructed Wetlands with and without Media Using Water Hyacinth for Greywater Treatment | Sardar Vallabhbai National Institute of Technology |
| Water-064 | Ankita A. Malpure, Ganesh B. Dabhade, P. P. Wani | NiFe ₂ O ₄ Nanocomposite Exhibited as an Excellent Gas Sensor and Photocatalyst for Waste Water treatment | S. S. Dhamankar college of Commerce, Arts and Science, Nashik |
| Water-065 | Dr. Bharti Saini | Removal of Humic Acid from wastewater using ultrafiltration membrane modified with PANI-SiO ₂ nanoparticles | bharti.saini@sot.pdpu.ac.in |
| Water-090 | Dipak Ankoliya | Techno-economic analysis of hybrid forward osmosis-reverse osmosis process for water recovery from dairy effluent | Pandit Deendayal Energy University |

Track – 10 Adsorption Odyssey: Advanced and Innovative Materials for Water Treatment

Day - 2 (2/03/2024)

Session Time: 15:45 to 17:30

Venue - E-102

| Track ID | Author Name | Paper Title | Organization/ Institution |
|-----------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Water-066 | Dr. Indrajeet Kumar | Evaluation of coexisting ions on arsenic adsorption using CuO nanoparticles in aqueous solution | Institute of Technology, Nirma University Ahmedabad |
| Water-067 | FIRDOUS AHMAD DAR | Utilization of Organic Waste for the Production of a Sustainable Adsorbent for Defluoridation: Effectiveness and Mechanism of Fluoride Elimination by Adsorption using Chinar Leaves | National Institute of Technology, Srinagar J&K |
| Water-068 | Ved Tripathi | Density functional theory based molecular dynamics study of pharmaceutical pollutants' adsorption mechanism on iron oxide nanoparticles | Dharmsinh Desai University |
| Water-069 | Dr. Vinayak S. Wadgaonkar | Produced Water Treatment Using Adsorption Process: A Review | Dr. Vishwanath Karad MIT World Peace University Pune |
| Water-070 | Gangaraju Vagdeep Varma | Catalytic wet peroxidation of clindamycin using Biochar as catalyst | Shiv nadar university |
| Water-071 | Jani Parth ShaileshKumar | A Review of Adsorption for Wastewater Treatment | Pandit Deendayal energy University |
| Water-072 | mohammad iqbal lone | Aniline Adsorption Behavior on Polystyrene Microplastics as a Potential Wastewater Treatment Strategy | National institute of technology srinagar |
| Water-007 | Stuti Thakur | Recent Advancement of Coagulation-Flocculation Process to Treat Wastewater | pandit deendayal energy institute |

Track – 11 Technologies and Innovations for the Application in Water**Day - 2 (2/03/2024)****Session Time: 15:45 to 17:30****Venue - E-103**

| Track ID | Author Name | Paper Title | Organization/ Institution |
|-----------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| Water-073 | Jitendra Singh | Study on Evaporation Characteristics of Water in Cylindrical Liquid Pool at Low Pressures | IIT Jodhpur |
| Water-074 | Patel Jaydeep Dineshkumar, Vivek Patel | Exergy analysis of plate heat exchanger with varying geometry | Pandit Deendayal Energy University |
| Water-075 | Dr. Bansi D. Raja | Exergy analysis of multi-stage vapour compression refrigeration system with different refrigerants | Pandit Deendayal Energy University |
| Water-076 | Arham Mohsin Kaskar | Enhancing crude oil recovery by modifying physicochemical parameters of process water utilization | MITWPU |
| Water-077 | Dr Ratnadip R Joshi, Shri. Aniket Patrikar, Shri. Rugved Miteleu | Effectiveness of mixed agro waste fertilizer from bio-digester | Dr Vishwanath Karad MIT World Peace University Pune |
| Water-078 | Srivathsan Velamur | Analyzing the Abrasive Waterjet Technique for Maximum MRR, and Minimum Kerf Angle for Pure Titanium | Pandit Deendayal Energy University, Gandhinagar |
| Water-079 | Piyush Dixit | Investigating the Effect of Nano-particle mixed Dielectric fluid on Tool Wear Rate of Inconel-718 | Pandit deendayal energy university |

Day - 2 (2/03/2024)

Session Time: 15:45 to 17:30

Venue - E-104

Track – 12 Challenges and Opportunities: Wastewater Treatment

| Track ID | Author Name | Paper Title | Organization/ Institution |
|-----------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Water-080 | URVEE SANGANI | Effectiveness of various Biosorbent for Industrial Effluent Treatment - A review | Pandit Deendayal Energy University |
| Water-081 | Dr. Lakshmana Rao Jeeru | Synthesis and characterization of zeolite from fly ash for removal of water hardness | Pandit Deendayal Energy University, Raisan, Gandhinagar, Gujarat |
| Water-082 | Dr. Lakshmana Rao Jeeru | RSM-Guided Optimization of Pectin-TiO ₂ Nanohydrogel for Enhanced Dye Degradation | Pandit Deendayal Energy University, Raisan, Gandhinagar, Gujarat |
| Water-084 | Dr. Rina Kumari | Fabrication of Nano-adsorbent and its application in Fluoride removal | Central University of Gujarat, Gandhinagar-382030 |
| Water-085 | Nidhi Mehta, Sandip Sharma | Application of Mixed Metal Oxide Electrodes in Wastewater Treatment using Electrochemical Method | L. J. University |
| Water-086 | Sandip Sharma, Nidhi Mehta | Microwave-assisted advanced oxidation process for dye wastewater treatment | Nirma University |
| Water-087 | Dr. Manish Kumar | Cost-Effective Wastewater Treatment Strategies by Predictive Energy Management with Machine Learning Techniques | Pandit Deendayal Energy University |
| Water-088 | Dr. Bhasuru Abhinaya Srinivas, Trupti Panchal, | AI-based Predictive Image Classification Model for Detection of Soluble Salt Concentration in Water | PDEU |