



December Newsletter



PUBLICATIONS:

- Ranjan, S., Yadav*, B. K., & Joshi, H. (2024) "In-situ Treatment of As Contaminated Groundwater by Extraction-well Integrated Permeable Reactive Barriers" ASEC Journal of Environmental Engineering (Accepted)
- Choudhary, N. Khandelwal, Z. A. Ganie, G. K. Darbha "Influence of magnetite and its weathering originated maghemite and hematite minerals on sedimentation and transport of nanoplastics in the aqueous and subsurface environments." Sci Total Environ, 169132 (2023). <https://doi.org/10.1016/j.scitotenv.2023.169132>
- Vaghela, G., Pushkar, A., An, A. K., Deka, B. J.* (2024). Reinforced PS-PVDF-WO₃ superhydrophobic antiwetting membrane for membrane distillation, Desalination, 574, 117235 (Accepted, Q1, Impact factor: 9.9).
- Wong, P. W., Deka, B. J., An, A. K. * et al. (2024) Evaluating and Predicting Surfactant-Induced Hydrophilization of Pore Channels in Membrane Distillation, Journal of Membrane Science, 691, 122242 <https://doi.org/10.1016/j.memsci.2023.122242> (Q1, Impact factor: 9.5).
- Farid, M.U., Sharma, Samriddhi, Deka, B. J., An, A. K. * et al. (2024) Technological Advancements in Water Heating Approaches for Membrane Distillation Desalination Process: From Bulk to Localized Heating, Desalination, 574, 117235 (Q1, Impact factor: 9.9).
- Kulkarni, S., & Agarwal, A. (2023). Quantifying the association between Arctic Sea ice extent and Indian precipitation. International Journal of Climatology, 1–15. <https://doi.org/10.1002/joc.8337>.

CONFERENCE :

- Dutta, N and Dey, P. Removal of Fluoride Using Activated Alumina: Optimization and Modeling, International Conference on Environmental Sustainability and Climate Change, National Institute of Technology Meghalaya, December 2023.
- Ajay Gupta, Manoj Kumar Jain, Rajendra Prasad Pandey, Vivek Gupta, and Aniruddha Saha. Ajay Gupta presented a paper titled, "Assessment of Global Precipitation Datasets against Station Data in Capturing Meteorological Drought over India", during a poster session on 15 December 2023 at the AGU Fall Meeting 2023, which took place on 11-15 December 2023 at the Moscone Center in San Francisco, CA, USA.
- Aniruddha Saha, Manoj Kumar Jain, Subhankar Das, and Ajay Gupta. Ajay Gupta presented a paper titled, "Attribution analysis of various meteorological variables to the trend of reference evapotranspiration in India from 1990-2020", during a poster session on 13 December 2023 at the AGU Fall Meeting 2023, which took place on 11-15 December 2023 at the Moscone Center in San Francisco, CA, USA.

AWARDS/RECOGNITION :

- Brijesh K Yadav and Prabhat Dwivedi* received the Best Paper Award for their work on 'HYDROGEOCHEMICAL ASSESSMENT OF INTERACTING SURFACE-GROUND WATER RESOURCES OF KALI RIVER BASIN' at the Hydro-2023 International Conference held from December 21-23, 2023, at NIT Warangal.
- Ashish Mishra received Science and Engineering Research Board (SERB) International Travel Support to attend the AGU Fall Meeting 2023 in San Francisco, USA.
- Mani Kanta Malla was awarded the Best Paper (First Position) on the Theme "Hydroclimatic Extremes and its impacts " in the 28th Conference on Hydraulics, Water Resources, River and Coastal Engineering (HYDRO-2023) organized by the Department of Civil Engineering, National Institute of Technology Warangal, under the aegis of The Indian Society of Hydraulics (ISH), Pune, during December 21-23, 2023.



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INVITED TALKS :

- Brijesh Kumar Yadav delivered an Expert talk on “Applied Numerical Modeling for Fate and Transport of Contaminant in (Sub)-Surface Soil-water Systems” during the Atal FDP on “Assurance modelling for water quality and quantity” by Civil Engg. Department Government Engineering College, Bharuch (Gujarat) on December 11, 2023.
- Brijesh Kumar Yadav delivered a Keynote talk on “Enhancing freshwater availability in saline regions through managed aquifer recharge” during the 5th Indian National Groundwater Conference (INGWC-2023), conducted by the Department of Civil Engg, IIT Hyderabad, Dec 5-6, 2023.
- Ankit Agarwal and Prof. Ashutosh Sharma organized and presented “23 Unsolved Problems in Hydrology: Advances from India” at the 41st AHI Annual Convention and National Seminar organized by the Federation of Indian Geosciences Associations & Association of Hydrologists of India on 2nd December 2023 in Coimbatore.
- Brijesh Kumar Yadav chaired a Technical session, “Groundwater Modelling and Management”, during the 5th Indian National Groundwater Conference (INGWC-2023), conducted by the Department of Civil Engg, IIT Hyderabad, Dec 5-6, 2023.
- Bhaskar Jyoti Deka delivered a keynote lecture on "An environmentally benign method of removing dissolved organic materials from water combined with cutting-edge in-situ monitoring " during the 3rd International Conference on Water Technologies 2023 (ICWT 2023), AUA Academic Conference on Water Technologies during 04-07 December 2023 at IIT Bombay, Mumbai, India.

PROJECT:

- An international collaborative project titled "Designing nanoscale water-warriors for continuous water purification" has been funded under the "Imperial-India Connect Fund" scheme. [PI- Prof. Nitin Khandelwal, IIT Roorkee; Prof. Mary Ryan, Imperial College London and Co-PI- Prof. Xie Fang, Imperial College London]

PATENT GRANTED:

- A superhydrophobic polystyrene/PVDF membrane coated with WO₃ nanocomposite for membrane distillation application. Name of the inventor: Bhaskar Jyoti Deka, Gaurav Vaghela, Akshit Pushkar and Himanshu Joshi, Application number: 202211008575 (IN), Patent no. 477779.



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EVENTS/RECOGNITIONS:

- Brijesh Kumar Yadav and Mr. Sourabh Sharma (JLA) represented the Institute in Football and Cricket, respectively, in the 28th Inter IIT staff sports meet conducted at IIT Gandhinagar Gujarat from December 24-29, 2023.
- Prof. Kristen Cook Ird, ISTerre, Université Grenoble Alpes, France visited the Department. She delivered an Expert Talk, "Fluvial Disasters in The Himalayas – New Insights and Potential for Early Warning", on December 04, 2023.

