

NEWSLETTER

JULY 2026



Publications:

Gupta, A., Jain, M. K., Pandey, R. P., & Hannah, D. M. (2026). Impact of reservoir storage on propagation from meteorological to hydrological drought. *Journal of Hydrology*, 136061. <https://doi.org/10.1016/j.jhydrol.2026.136061>

Kumar, A., & Jain, M. K. (2026). Reliability of Entropy-Based Telemetry Discharge Estimates in the Himalayan Rivers: A Comparative Study with ADCP and Current Meter. *Hydrological Sciences Journal*, <https://doi.org/10.1080/02626667.2026.2710202>

Sharma, A., Bokkassam, S. D., Deka, B. J., & Bhosale, A. C. (2026). Enhancement in thermal performance of high-temperature electrochemical systems using hybrid nanofluids. *Applied Thermal Engineering*, 132471. <https://doi.org/10.1016/j.applthermaleng.2026.132471>

Swami, B., Mallick, S., Shah, I., & Khandelwal, N. (2026). Formation of Acid-Resistant Envelope on Redox Active Nanoparticles for Simultaneous Extraction of REEs and Uranium from Complex Water Matrices. *Journal of Environmental Chemical Engineering*, 124182. <https://doi.org/10.1016/j.jece.2026.124182>

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Granted Patents:

Title: A silane shield advanced superhydrophobic membrane for desalination.

Name of the inventors: Bhaskar Jyoti Deka, Nagendra Kumar Jilagam, and Gaurav Vaghela

Application No.: 202311067499 (IN), Patent no. 595536, Sl. No. 011232604

Title: A high temperature proton exchange membrane and a process for its fabrication thereof.

Name of the inventors: Bhaskar Jyoti Deka, Amit C. Bhosale, Akshay Sharma

Application number: 202511083842 (IN), Patent no. 595272, Sl. No. 011232485

Title: A hydroxy-modified biomass for rubidium adsorption.

Name of the inventors: Bhaskar Jyoti Deka, Prajwal Mallikarjun Timashetti and Shubham Ketan Sharma.

Application number: 202511033370 (IN), Patent no. 596938, Sl. No. 011233234

Title: A method of synthesizing covalent organic framework-based polymer beads.

Name of the inventors: Ravindra Pandey, Bhaskar Jyoti Deka, Yogesh Kumar, and Shubham Ketan Sharma.

Application number: 202411055456 (IN), Patent no. 597451, Sl. No. 011233462

Title: A process for preparation of sodium periodate (NaIO₄) modifies sugarcane bagasse composite material.

Name of the inventors: Prajwal Mallikarjun Timashetti, Shubham Ketan Sharma, and Bhaskar Jyoti Deka

Application number: 202511027878 (IN), Patent no. 597411, Sl. No. 011233444

Invited Talk:

Prof. Bhaskar Jyoti Deka was invited to deliver his talk on “Innovative membrane surface design for sustainable waste management, water reuse, and pollutant mitigation” during a workshop on Impact of Artificial Intelligence on Circular Economy and Sustainable Waste Management, jointly organized by Indian Institute of Information Technology Vadodara, Gandhinagar, Gujarat, India and Indian Institute of Technology Roorkee, Roorkee, India, from 1st to 3rd July 2026 at IIIT Vadodara, Diu Campus.

