



Indian Journal of Chemical Technology



<https://niscpr.res.in>



07/11/25
SB

Published by

CSIR-National Institute of Science Communication And
Policy Research

New Delhi, INDIA

Indian Journal of Chemical Technology

www.niscpr.res.in; http:// nopr.niscpr.res.in

VOLUME 32
CODEN: ICHTEU

NUMBER 6

NOVEMBER 2025
ISSN: 0971-457X (Print); 0975-0991 (Online)

CONTENTS

Papers

- Utilizing tea waste for methylene blue removal: Insights from batch and fixed-bed adsorption studies 697
Saurabh Meshram, Nikhil Rahul Dhongde*, Shivani Suryavanshi, Amit Chaudhary & Dhanjit Rajbongshi
- Enhanced photocatalytic and antibacterial performance of ZnO and ZnS synthesized using natural fuel: Influence of green synthesis, particle size, and morphology 710
J. Karthick & V. S. Sreenivasan*
- Design and evaluation of eco-engineered B₄C/Fly ash composites: A green material for gamma and neutron shielding applications 723
Meryem Cansu Şahin* & Kaan Manisa
- Surfactant-assisted synthesis of Cu-Doped Co₃O₄@carbon nano flake nanocomposites for effective photocatalytic breakdown of brilliant green dye under UV irradiation 734
Chandrakala Vinayagasundaram & Arputharaj Samson Nesaraj*
- Utilization of water hyacinth (*Eichhornia crassipes*) for bioethanol production: A comprehensive approach from hydrolysis to purification 749
Piyush Prakash Joshi, Prashant Kumar*, Suyog N. Jain, Yennam Rajesh*, S. N. Derle, Z. K. Deshmukh, Gaurav Daware, Nilesh Eknath Thakare & Prasad Chandrakant Musale
- Refining of used engine oil by solvent extraction and adsorption processes: A circular economy strategy 755
Dawit Tessema Ebissa*, Haileamlak Getachew, Eshetu Getahun* & Zenamarkos Bantie
- Impacts of both the pressure work and activation energy on electro-osmotic flow of Eyring-Powell nanofluid 766
H. A. Sayed*, M. Y. Abouzeid & S. A. Hussein
- Performance evaluation of cost-effective two-chamber microbial fuel cell for simultaneous domestic wastewater treatment and bioenergy generation 778
Murugesan Manik Kampatti Palanisamy*, Padmapriya Veerappan, Priya Dharshini Kothavadi Rajendran & Kalaivani Ramanathan
- Statistical optimization of electrocoagulation for restaurant wastewater treatment using Box–Behnken design 790
S. Niju*, R. Aishwarya, S. Srivatsan, K. Priyadharshini & P. Asaithambi

- Unlocking the potential: Bacterial exopolysaccharide as a smart drug-delivery vehicle for controlled in vitro drug release 800
Sivasankari Marimuthu*, Praveena M, Sakthi Aishvarya C & Saranya S
- Exergy, economic and enviro-economic analysis of single slope finned solar still with nano enhanced PCM 812
T R Sathish Kumar*, A T Navin Prasad & A Vadivel
- Entropy generation in chemically reactive pulsatile flow of Carreau-Yasuda nanofluid with Joule heating and thermal radiation: A Buongiorno model 822
J. Josuv & R. Hemadri Reddy*
- A study on doping of high energy boron powder into liquid fuel JP-10 836
Ashish Kumar Singh, Ashwini Sood & Arun Kumar Gupta*
- Synthesis and applications of MnO₂ -enriched urea nanofertilizer on chili *Capsicum annuum* L. plant 841
B. Ashwini & T. Devasena*
- Simulation-based heat performance evaluation of traditional and divided wall heat integrated distillation column for separation of BTX mixture 853
Rajeev Kumar Dohare*, Nitya Kumar, Abhishek Srivastava, Madhu Agarwal & Kailash Singh

Authors for correspondence are indicated by (*)