



**Contents**  
**Volume 258**

Numerical investigation of heat and mass transfer characteristics within narrow channel in a packing humidifier  
Zhiyang Hu, Xikun Wang, Xiaolong Xing, Weiliang Huang, Zhongyang Gao (China) ..... 1

Simulation and optimization of pilot reverse osmosis desalination plant powered by photovoltaic solar energy  
A. Lilane, D. Saifaoui, Y. Aroussy, M. Chouiekh (Morocco), M.A. Sharaf Eldean (Egypt), A. Mabrouk (Qatar) ..... 16

Application of heat-mass transfer analogy for understanding the mechanism of fouling control in a submerged flat sheet microfiltration membrane  
T.M. Qaisrani, A. Fatima (Pakistan), W.M. Samhaber (Austria) ..... 43

LCST-type thermo-responsive ionic liquid used as a recyclable and reusable cleaning agent for fouled membrane  
Hao-Xiang Xu, David C. Wang, Chia-Hua Ho, Min-Chao Chang, Ren-Yang Horng, Teh-Ming Liang, Po-I Liu (Taiwan) ..... 55

Theoretical tool for evaluating induction periods of calcium sulfate scaling on reverse osmosis membranes  
A. Sagiv (Israel), Xianhui Li (China), R. Semiat, H. Shemer (Israel) ..... 64

Decolorization efficiency of methyl orange simulative wastewater by a reverse electrodialysis reactor: experiments and kinetics models  
Qiang Leng, Shiming Xu, Xi Wu, Sixue Wang, Debing Wu, Fujiang Dong, Dongxu Jin, Ping Wang (China) ..... 72

Efficient adsorptive removal of industrial dye from aqueous solution by synthesized zeolitic imidazolate framework-8 loaded date seed activated carbon and statistical physics modeling  
G.A.A. Al-Hazmi (Saudi Arabia, Yemen), M.A. El-Bindary, M.G. El-Desouky, A.A. El-Bindary (Egypt) ..... 85

Domestic wastewater treatment using a combination of peat and coconut shells  
T. Anwar, S. Slamet, S. Wardoyo (Indonesia) ..... 104

Degradation of a basic textile dye by inactivated calcium peroxide  
B. Balci, F. Elcin Erkurt, F. Budak, Z. Zaimoglu, M. Basibuyuk, H. Kivanc Yesiltas (Turkey) ..... 111

Competitive adsorption of Zn in wastewater effluents by NaOH-activated raw coffee grounds derivative and coffee grounds  
N. Qisse, G. Fattah, M. Elouardi, J. Mabrouki, L. El Azzouzi, A. Ennouari, M.A. El Belghiti, M. El Azzouzi (Morocco) ..... 123

Adsorption performance of rice husk towards copper ions from wastewater  
S. Zafar (Pakistan), M.I. Khan (UAE), N. Elboughdiri (Saudi Arabia, Tunisia), M.H. Lashari (Pakistan), A. Shanableh (UAE), S. Shahida, S. Manzoor (Pakistan) ..... 133

Experimental study on the treatment of polyacrylamide wastewater by non-equilibrium plasma  
Xiaobing Wang, Chenyang Zhu, Sen Li, Jinqiu Liu, An Jin, Chen Feng, Yanshe Hu (China) ..... 143

Textile effluent treatment under artificial and natural irradiation using coupled ZnO-iron ores nanocomposite as photocatalyst  
S. Khelifi, R. Alsharary (Tunisia), A. Berez (France), L. Mansour (Saudi Arabia), A. Choukchou-Braham (Algeria), F. Ayari (Tunisia) ..... 153

Photocatalytic degradation of Acridine Orange dye and real textile wastewater via ZnO nanoparticle supported natural Tunisian clay  
M. Ibn Mahrsi, S. Khelifi (Tunisia), R. Alcharari, A. Berez (France), L. Mansour (Saudi Arabia), F. Ayari (Tunisia) ..... 166

Structure and photocatalytic activity of porous g-C<sub>3</sub>N<sub>4</sub> and Cu<sub>2</sub>O@ g-C<sub>3</sub>N<sub>4</sub> system toward rhodamine B degradation under solar light irradiation  
R.M. Basal, H.A. Kiwaan, M.R. Mostafa (Egypt) ..... 179

Estimation of efficiency of water disinfection and preservation with low-pressure CO <sub>2</sub> using <i>Escherichia coli</i> V.V. Goncharuk, M.N. Saprykina, E.S. Bolgova, L.O. Melnyk, S.V. Remez (Ukraine) .....	190
Comparison of natural extract as a clean coagulant with alum and natural extract-alum hybrid coagulant for removal of water turbidity S.M. Mousavi, H. Akbari, S.D. Ashrafi, H. Kamani (Iran) .....	197
Plastics-derived and heavy metals contaminants in the granulometric fractions of bottom sediments of anthropogenic water reservoir – comprehensive analysis A. Pohl, M. Tytła, J. Kernert, M. Bodzek (Poland) .....	207
Characteristics of a solid carbonaceous product of microwave pyrolysis/torrefaction of sewage sludge for the use in agriculture and blue-green infrastructure J. Raček, T. Chorazy, R. Komendová, J. Kučerík, P. Hlavínek (Czech Republic) .....	223
Efficient elimination of Pb(II) ions from aqueous solutions using magnetic Fe <sub>3</sub> O <sub>4</sub> -nanoparticles/activated carbon derived from agricultural waste M.A. El-Sheeta, M.E. Goher, M.G. Abd El-Moghny, M.S. El-Deab (Egypt) .....	241
Forms of phosphorus bound to reactive material – results from a flow-through experiment with the focus on P reuse A. Karczmarczyk, A. Bus, A. Baryła (Poland) .....	261
Feasibility of vanadium (IV) adsorption using natural bentonite: optimization, equilibrium and kinetics A. Etaati, M. Soleimani (Iran) .....	266
Modification of hydrous ferric oxide by chitosan to enhance its adsorption performance toward perfluorooctane sulfonate Ji Zang, Yuting He, Zhengjie Chen, Zhengxin Xie, Shisuo Fan, Jun Tang (China) .....	278
Multiple factors increase the degradation rate of tetracycline in anaerobic digestion Shuzhen Zou, Xiaoyu Luo, Yun Tang, Hairong Tu, Kunyue Zhang, Dongxue Yin, Di Kang (China) .....	290
Corrigendum to "Investigate the simultaneous effect of pH, temperature, and hydraulic retention time in moving bed biofilm reactor: optimization and modeling using response surface methodology" published in Vol. 235, September 2021, pp. 80–91 [doi: 10.5004/dwt.2021.27617] N. Davari, H.A. Golestani, H. Ahmari, S. Mohseni (Iran) .....	303
Author Index .....	304