



**Contents**

**Volume 148**

Water desalination by humidification–dehumidification technology with performance evaluation using exergy analysis W. Abdelmoez, E.A. Ashour, N.M. Sayed (Egypt) .....	1
Hydrophobically modified silica blend PVDF nanocomposite membranes for seawater desalination via direct contact membrane distillation R. Kumar, M. Ahmed, G. Bhadrachari, A. Al-Mesri, J.P. Thomas (Kuwait) .....	20
Simulation of heat and mass transport for ethylene glycol solution separation using a vacuum membrane distillation process S. Abdolbaghi, H.R. Mahdavi, T. Mohammadi (Iran) .....	30
A new biomimetic aquaporin thin film composite membrane for forward osmosis: Characterization and performance assessment S. Sahebi (Iran, Vietnam), M. Sheikhi, B. Ramavandi (Iran) .....	42
Hybrid TiO <sub>2</sub> /UV/PVDF ultrafiltration membrane for raw canola oil wastewater treatment S. Martini (Indonesia), Ha Ming Ang (Australia) .....	51
Use of coagulation-ultrafiltration membrane continuous system for treatment of wastewater containing silica nanoparticles A.H. Konsowa, M.G. Eloffy, W.A. Ibrahim, Y.A. El-Taweel, O.E. Abdelwahab (Egypt) .....	60
Comparison of coagulation, adsorption, ultrafiltration, and hybrid process efficiencies on the kaolin–humic water treatment A.Q. Low, M.N. Abu Seman, A. Ali (Malaysia) .....	70
Bacterial filtration efficiencies and the bacterial communities' proportions differences between sand size and depths in biosand filters Ji Hun Park, Seul Jin, Young Rok Kim, Hyungki Do, Cher-Won Hwang (Korea) .....	81
Optimization of thermo-alkaline pretreatment on municipal sludge and enhanced subsequent anaerobic digestion Qinghua Deng, Yuzhao Huang, Ping Xian, Tao Li, Shun He, Qin Liu (China) .....	88
A pilot-scale study on the partial nitrification-anammox process for treatment of anaerobic sludge digester effluent İ. Çelen-Erdem, E. Sağır-Kurt (Turkey) .....	95
Organic pollutants removal from olive mill wastewater by coagulation and electrocoagulation: application of Box-Behnken design (BBD) A. El Shahawy, S. Hassan, E.E. Ebrahiem, I. El Kersh (Egypt) .....	102
Assessment of water quality changes during climate change using the GIS software in a plain in the southwest of Tehran province, Iran L. Karami, M. Alimohammadi, H. Soleimani, M. Askari (Iran) .....	119
Oxidative degradation of furfural using synthesized copper activated persulfate in aqueous solution, intermediates identification and artificial neural network modeling S. Jorfi, Y.T. Birgani, A.R. Rahmani, F. Zamani, M. Ahmadi, H. Almasi (Iran) .....	128
Analysis of lithium separation by modified zeolite using fuzzy logic: equilibrium, kinetics and thermodynamic M. Farhadi, A. Rashidi, M.H. Mallah (Iran) .....	141
Application of heterogeneous iron loaded zeolite A catalyst in photo-Fenton process for the removal of safranin in wastewater A. Ikhtlaq, F. Javed, H.M.S. Munir, S. Hussain (Pakistan), K.S. Joya (Pakistan, Denmark), A.M. Zafar (Pakistan) .....	152
Metronidazole in aqueous solution removal by activated carbon fiber adsorption of systems: adsorption kinetics, adsorption isotherms and thermodynamics Yu Gao, Yuzhi Liu, Danwa Zou, Heda Guan, Donglei Zou (China) .....	162

Investigation the efficiency of Mch/Fe-Zr nano-composite for adsorption of humic acid M. Khodadadi, F. Akbari, N. Nasseh (Iran) .....	170
Effect of nitrogen functionalization on the adsorption performance of commercial charcoal activated with phosphoric acid G.M. Mohamed, W.E. Rashwan, N.A. Fathy, S.A.S. Ahmed (Egypt) .....	178
Facile fabrication of three-dimensional and recyclable graphene oxide-melamine composites with high removal efficiency Xiao-Ru Zhao, Xia Xu, Xin-Yu Jiang, Jie Teng, Jin-Gang Yu (China) .....	188
Adsorption of phenanthrene on the magnetized biochar organic coated by amphoteric modifier Haixia He, Wenbin Li, Hongyan Deng, Le Kang, Run Qiu, Xuelian Li, Wei Liu, Zhaofu Meng (China) .....	195
Supramolecular solvent microextraction of phenylurea herbicides from environmental samples S. Amir, J. Shah, M.R. Jan (Pakistan) .....	202
Bioaccumulation of essential and toxic metals in four different species of bottom fish in the Marmara Sea, Tekirdag, Turkey: risk assessment to human health A.H. Dökmeci, T. Sabudak, V. Dalmış (Turkey) .....	213
A novel biosorbent <i>B. spectabilis</i> stalks leaves for removal of Cd(II) and Cu(II) from wastewater H. Nazir, M. Salman, M. Athar, U. Farooq, M. Akram, N. Saleem (Pakistan) .....	222
Biosorption of lead from aqueous solutions by algae biomass: optimization and modeling S.A. Mousavi, A. Almasi, F. Navazeshkh, F. Falahi (Iran) .....	229
Analysis of the behavior of almond shells biomass in the biosorption of lead (II) and nickel (II) cations in aqueous solution S. Ayed, A. Ghorbel (Tunisia), A. Comite (Italy), T. Boubaker (Tunisia) .....	238
Cr(VI) reduction and adsorption by amino-functionalized magnetic loofah fiber composites Cheng Liang, Chen Liu, Chunjie Yan, Sen Zhou (China) .....	248
Removal of Cu and Cr ions from aqueous solutions by a chitosan based flocculant Yongjun Sun, Aowen Chen, Wenquan Sun (China), K.J. Shah (Taiwan), Huaili Zheng, Chengyu Zhu (China) .....	259
Removal of Cr(VI) from aqueous media on calcined (Mg-Zn)/(Al-Fe)-(CO <sub>3</sub> )/Cl layered double hydroxides M.A.H. Hafez, I.M.M. Kenawy, Z.M.E. Abd Elbary, R.R. Elmorsi, K.S. Abou-El-Sherbini (Egypt) .....	270
Preparation of C/CoFe <sub>2</sub> O <sub>4</sub> nanocomposites based on membrane dispersion-hydrothermal carbonization and their application for dyeing removal Min Lu, Qian Wu, Xiao-Hui Guan, Qi-Yuan Zheng, Guang-Sheng Wang (China) .....	285
Highly selective removal of organic dyes from aqueous solutions with recyclable Fe <sub>3</sub> O <sub>4</sub> @PDA-Ag magnetic microspheres Rong Luo, Fei Yan, Zheng Zhu, Yu Zhao, Qing-dan Luo, Yu-hua Fan, Xia Zhang, Cai-feng Bi (China) .....	296
Comparison of zero valent iron and zinc oxide green nanoparticles loaded on activated carbon for efficient removal of Methylene blue M.R. Miri, R. Khosravi, A.A. Taghizadeh, M. Fazlzadehdavil, Z. Samadi, H. Eslami, A. Gholami, E. Ghahramani (Iran) .....	312
Modelling by the experimental design for color removal (absorbance at 254 nm) from tannery wastewater G. Bouazza, M. Assou, S. Souabi, E.H. Chatri (Morocco) .....	324
Photocatalytic degradation of monocrotophos using TiO <sub>2</sub> photocatalyst: identification of intermediates by chromatographic techniques and reaction pathway P. Kaur, P. Bansal, D. Sud (India) .....	329
Solar light assisted degradation of oxytetracycline from water using Bi <sub>2</sub> O <sub>3</sub> /Fe <sub>3</sub> O <sub>4</sub> supported graphitic carbon nitride photocatalyst P. Raizada, A. Sudhaik, V.P. Singh (India), V.K. Gupta (Saudi Arabia), A. Hosseini-Bandegharaei (Iran), R. Kumar, P. Singh (India) .....	338
Isolation and characterization of phenol degrading organism, optimization using Doehlert design R. Sandhyarani, S. Mishra (India) .....	351
Application of CoFe <sub>2</sub> O <sub>4</sub> @CuS magnetic nanocomposite as a novel adsorbent for removal of Penicillin G from aqueous solutions: Isotherm, kinetic and thermodynamic study M. Kamranifar, A. Allahresani, A. Naghizadeh (Iran) .....	363

Synthesis and adsorption studies of alumina-silicate hybrid for remediation of mercury and lead F. Tariq, U. Rafique (Pakistan) .....	374
Author Index .....	380
Corrigendum to "Study of the removal efficiency of arsenic from aqueous solutions using Melia azedarach sawdust modified with FeO: isotherm and kinetic studies" published in vol. 137 (2019) pp. 292-299 (doi:10.5004/dwt.2019.23217) M. Davoudi, H. Alidadi, A. Ramezani, F. Jamali-Behnam, Z. Bonyadi (Iran) .....	381
Corrigendum to "Optimization model for location and operation schedule of chlorine booster stations in water distribution networks" published in vol. 140 (2019) pp. 91-102 (doi: 10.5004/dwt.2019.23373 ) Jeewon Seo, Kibum Kim, Jinseok Hyung, Taehyeon Kim, Jayong Koo (Korea) .....	382
Corrigendum to "'Mineral extraction from seawater reverse osmosis brine of Gulf seawater" published in vol. 144 (2019) pp. 45–56 (doi:10.5004/dwt.2019.23679) M. Ahmad, B. Garudachari, Y. Al-Wazzan, R. Kumar, J.P. Thomas (Kuwait).....	383