



**Contents**  
**Volume 201**

Forward osmosis by introducing temperature responsive poly(propylene fumarate-co-N-vinyl pyrrolidinone) hydrogel as a new draw solute A. Borsalani, S.M. Tabatabaee Ghomsheh, M. Mirzaei, A. Azimi (Iran) .....	1
Pilot system of microfiltration and reverse osmosis membranes for greywater reuse T.M. de Oliveira, C.T. Benatti, C.R.G. Tavares (Brazil) .....	13
The role of the viscous sublayer in calcium carbonate dissolution C.M. Fellows, A.A. Al-Hamzah (Saudi Arabia, Australia), G.A.H. Al-Dowis (Saudi Arabia), M.G. Evans (Australia), M.M. Rahman (Saudi Arabia) .....	20
Electro-hydraulic proportional control based pressurization and energy recovery integrated system in seawater desalination system Wenlei Li, Jingyi Zhao, Guogang Wang, Qisheng Zhang, Kaixuan Jin, Qian Zhang, Lin Yu, Rui Guo (China) .....	31
The influence of nanosheets' size on pressure assisted self-assembly graphene oxide nanofiltration membrane Yi Wei, Xueli Gao, Xiaojuan Wang, Baohua He, Congjie Gao (China) .....	43
Energy efficiency evaluation of a compact direct contact membrane distillation system using thermoelectric modules Seung-Hyun Kim, Hwan Kyu Lim (Korea) .....	55
Capacitive deionisation technology and its application in circulating cooling sewage treatment: current situation and development trend Shuangchen Ma, Chang Liu, Lan Ma, Chunqin Gong, Dingchang Yang, Baozhong Qu (China) .....	63
Parameter optimization and economic analysis of a single-effect mechanical vapour compression (MVC) distillation system Cong Liu, Mingshu Bi, Guangrui Cui (China) .....	75
CFD for the influence of submergence depth of impellers on the flow field and sludge concentration distributions in an oxidation ditch Wenli Wei, Ch.Wang, J. Wei, Y. Cai, Y. Chang, B. Lv, Y. Hu (China) .....	86
CFD for the optimization of ventilation mode of an aeration tank W. Wei, Ch. Lou, J. Wei, X. Zhao, Y. Chang (China) .....	95
Malathion removal by electrocoagulation process: iron and stainless-steel electrodes, direct and alternating current and determining energy and electrode consumption and kinetic study R. Khaghani, N. Yousefi, A.R. Asgari, R. Kholdi Haghighi, K. Ghadiri, J. Arabloo, A. Fatehizadeh, A. Bagheri, M. Khazaei, S.S. Talebi, F. Khalili, S. Porfadakari (Iran) .....	110
Ceramic membranes originated from cost effective and abundant natural minerals and industrial wastes for broad applications – a review Linquan Sun, Ziyi Wang, Baoyu Gao (China) .....	121
Cost analysis and effects of various coagulants used for sludge treatment at the full-scale wastewater treatment plant Choi Yun Seong, Muhammad Yaqub, Seung Hwan Lee (Korea) .....	139
Sulfate removal from the sea by anion exchange process combined with K <sub>2</sub> SO <sub>4</sub> precipitation E. Korngold (Israel) .....	150
Activated carbon derived from pistachio hull biomass for the effective removal of parabens from aqueous solutions: isotherms, kinetics, and free energy studies H. Rashidi Nodeh, H. Sereshti, S. Ataolahi, A. Toloutehrani, A. Talesh Ramezani (Iran) .....	155
Regression modeling for rapid prediction of wastewater BOD <sub>5</sub> A. Qasaimeh, Z. Al-Ghazawi (Jordan) .....	165
Nanoscale zero-valent iron supported on carbon nanotubes for polychlorinated biphenyls removal Xiuqin Cao, Haoran Wang, Chunmiao Yang, Lin Cheng, Kunming Fu, Fuguo Qiu (China) .....	173

Preparation of modified superhydrophobic sponge and its application in xylene leakage recovery Xi Yan, Yan Xie, Shilin Zhao, Xuejia Sheng, Zhiguo Zhou (China) .....	187
Behavior of anthocyanins in the presence of cassava starch (a biocomposite with antioxidants properties) J.J. García-Sánchez, M. Solache-Ríos, R. Sánchez-Orozco, M.C. Díaz-Nava (Mexico) .....	195
Evaluation of promising coagulant shrimp shell on paint factory effluent: studies on mixing pattern, isotherms, kinetics, and thickener design V. Solaiappan, R. Mukherjee, P. Sengupta, N. Rao (India) .....	204
Removal of cefixime from aqueous solutions by the biosorbent prepared from pine cones: kinetic and isotherm studies D. Naghipour, A. Amouei, K. Taher Ghasemi, K. Taghavi (Iran) .....	219
The 2019 year review on chromium(III) adsorption from aqueous solutions F.J. Alguacil (Spain) .....	228
Evaluation of mass transfer for metal removal via a liquid membrane-based process in a hollow-fiber membrane contactor A.Y. Al Shamsi, M.M. Hossain (UAE) .....	240
Enhanced adsorption of As(V) from aqueous solution by mesoporous goethite: kinetics, isotherms, thermodynamics, and mechanism Yujie Zhao, Min Xiao, Shan Zhao, Hongtao Fan (China) .....	250
Development and characterization of a new adsorbent based on Jerivá coconut ( <i>Syagrus romanzoffiana</i> ) applied for removing toxic metals from water J. Pigatto, D. Brandler, G. Tochetto, D.M. Memlak, G.D.L.P. Vargas, A.A.A. Alves, L.S. Moroni, A.P. Kempka, C. da Luz, A. Dervanoski (Brazil) .....	261
Mesoporous geopolymer for improved adsorption and immobilization of copper ions Zefeng Yu, Weifeng Song, Peifei Ding (China) .....	278
Kinetics and equilibrium studies of copper, zinc, and nickel ions adsorptive removal on to <i>Archontophoenix alexandrae</i> : conditions optimization by RSM R.A. Khera, M. Iqbal, A. Ahmad, S.M. Hassan, A. Nazir, A. Kausar (Pakistan), H.S. Kusuma (Indonesia), J. Niasr, N. Masood, U. Younas, R. Nawaz, M.I. Khan (Pakistan) .....	289
Evaluation of [Zn(bim) <sub>2</sub> (bdc)] <sub>n</sub> -MOF for adsorption of Cs <sup>+</sup> ions from aqueous solution using batch and fixed bed operations A. Nilchi, R. Saberi, K. Sepanloo, O. Mehraban, R. Ahangari (Iran) .....	301
Oxidation of pesticide (Coragen) using triple oxide coated titanium electrodes and nano hydroxyapatite as a sorbent R. Thangamani, K. Velayutham, M.A. Krishnan, A. Dhanasekaran, S. Sivanesan (India) .....	313
Optimization of hydrogen peroxide/NiO nanoparticle photocatalytic process by degrading cephalixin from aqueous solution using Taguchi method: mineralization, mechanism and pathway F. Asadi, G. Asgari, A. Seid-Mohammadi, Z. Torkshavand (Iran) .....	323
Efficiency and mechanism of phenacetin decomposition in Al <sub>2</sub> O <sub>3</sub> supported Ni-Co layered double hydroxides catalytic ozonation Tingting Zhan, Siqi Fan, Pan Xiong, Xinze Bian, Yi Xia, Lin Wang, Wan Zhou, Qizhou Dai, Jianmeng Chen (China) .....	338
Visible light responsive heterostructured $\alpha$ -Bi <sub>2</sub> O <sub>3</sub> /ZnO doped $\beta$ -Bi <sub>2</sub> O <sub>3</sub> photocatalyst for remediation of organic pollutants G. Kaur, S. Sharma, P. Bansal (India) .....	349
Preparation and characterization of hierarchical BiO <sub>0.5</sub> Cl <sub>0.5</sub> with excellent adsorption and photocatalytic abilities for removal of aquatic dyes Yongli Zhang, Jian Zhang, Weihong Tang, Ningruo Wang, Yang Liu, Hongguang Guo (China) .....	356
The production of rice straw-derived biochar and its application for enhanced decolorization of azo dye as the role of redox mediator Cong Ding, Jingjing Yang, Tianyin Huang, Wei Wu, Liming Zhang, Wenjun Xia, Jiabin Chen (China) .....	369
The activation of hematite for the catalytic hydrogen peroxide degradation of Methylene Blue Fangju Huang, Haibo Liu, Hanlin Wang, Fuwei Sun, Tianhu Chen, Dong Chen, Qiaoqin Xie, Yuefei Zhou, Yueling Zhao (China) .....	383
Kinetic and equilibrium studies on the batch removal of methylene blue from aqueous solution by using natural magnetic sand C. Ozer (Turkey) .....	393

Competitive adsorption removal of indigo carmine and Congo red dyes from residual effluents by Zn <sub>2</sub> Al-LDH prepared by co-precipitation A. Bouteiba, N. Benhadria, A. Elaziouti, K. Ezziane, N. Bettahar (Algeria) .....	404
Photocatalytic degradation of Congo Red by using PANI and PANI/ZrO <sub>2</sub> : under UV-A light irradiation and dark environmental S. Zor, B. Budak (Turkey) .....	420
The effect of cathode material, current density and anode-cathode gap on the COD and color removal from leachate by electro-Fenton method K. Atmaca, N. Beyazıt (Turkey) .....	431
Toxicological evaluation of carbamazepine active pharmaceutical ingredient with <i>Lepidium sativum</i> , <i>Daphnia magna</i> and <i>Vibrio fischeri</i> toxicity test methods S. Tongur, S. Yıldız (Turkey) .....	438
Optimum process condition determination for the treatment of Disperse Blue 60 dye by electrocoagulation with Taguchi method F. Ozyonar, H. Muratçobanoğlu, Ö. Gökkuş (Turkey) .....	443
Treatability of textile industry polyester cloth dyeing wastewater by adsorption and photocatalytic method using nTiO <sub>2</sub> N. Pınar Tanatti, Ş. Türkyılmaz, F. Boysan, İ. Ayhan Şengil (Turkey) .....	452
Corrigendum to "Photocatalytic removal of acid orange 7 azo dye by suspended and immobilized zinc oxide" published in vol. 180, March 2020, pp. 405–413 (doi: 10.5004/dwt.2020.25197) P. Nazirian (China, Iran), B. Ayati (Iran), Qian Fang (China), H. Ganjidoust (Iran), Chun-Hai Wei (China) .....	462
Corrigendum to "Surfactant modified kaolinite (MK-BZK) as an adsorbent for the removal of diazinon from aqueous solutions" published in vol. 196, August 2020, pp. 137–145 (doi: 10.5004/dwt.2020.25922) R.D. Tilaki, L.R. Kalakesh, S. Bavandi, I. Babanejad, J. Yazdani Charati (Iran), S. Rodriguez-Couto (Spain) .....	463
Corrigendum to "Optimization of the Acid blue 113 dye degradation in the three-dimensional electro persulfate process (3D/EPS) catalyzed by granular activated carbon (GAC) using the response surface methodology" published in vol. 189, June 2020, pp. 408–427 (doi: 10.5004/dwt.2020.25613) A. Rahmani, A. Seid-Mohammadi, M. Khazaei, S. Maroofi (Iran) .....	464
Corrigendum to "Combined UV catalytic ozonation process on iron loaded peanut shell ash for the removal of methylene blue from aqueous solution" published in vol. 200, October 2020, pp. 231–240 (doi:10.5004/dwt.2020.26135) A. Ikhlāq, F. Javed, A. Niaz, H.M.S. Munir (Pakistan), Fei Qi (China) .....	465
Author Index .....	466