

Contents
Volume 70

Water–energy nexus and the Arab Gulf countries case M.A. Darwish (Qatar)	1
Physical characteristics of bubbles in dissolved air flotation processes in seawater reverse osmosis desalination plants Tschungil Kim, T. Temesgen, Hyunju Park, Mooyoung Han (Korea)	19
Development and analysis of membranes for osmotic processes J.C. da Silva, C.P. Borges (Brazil)	24
Estimation of maximum water recovery in RO desalination for different feedwater inorganic compositions A. Ruiz-García, J. Feo-García (Spain)	34
Studies on performances of membrane, draw solute and modeling of forward osmosis process in desalination — a review S. Subramani, R.C. Panda, B. Panda (India)	46
Thin-film composite membranes with nanocomposite substrate modified with graphene oxide/TiO ₂ for forward osmosis process Fang Li, Feng Zhao, Manhong Huang, Chunyan Ma, Bo Yang, Qing Tian (China)	64
Using ammonia as an additive to fabricate a high performance PVDF hollow membrane for distillation Qi Zhang, Yaofang Fan, Hua Wang, Xuan Liu, Shuo Chen, Xie Quan (China)	79
Quantification of nonpoint source pollutants discharged from the combined sewer system in the Nakdong River Basin, Korea, using SWMM Hyun-Suk Shin, Jong-Kyung Jang, Young-Su Jang, Mi-Eun Kim (Korea)	86
Water quality appraisal of Keti Bandar and Shah Bandar creeks of Indus delta, Sindh, Pakistan A. Alamgir, M.A. Khan, S.S. Shaukat, T.M.A. Khan, S. Zubair (Pakistan)	95
Characterization of raw water resources in northern and central Taiwan F.C. Lo, K.L. Lin, T.Y. Pai, S.L. Lo, H.Y. Chiu, T.C. Chang, S.W. Lo, M.H. Liu, C.A. Chang, S.C. Wang, C.F. Chiang, K.P. Chao, W.Y. Lo, Y.L. Chu, H.M. Lo (Taiwan)	106
The combination of the modified DRASTIC and GOD methods for assessing the vulnerability to pollution of the Middle Cheliff aquifer, Algeria S. Nadjai, A.N. Nadir, K. Slimane, L. Belkacem (Algeria), L. Benaabidate (Morocco)	117
Wastewater treatment from shale gas operation by Fenton process: a statistical optimization H. Sari Erkan, N. Bakaraki Turan, G.O. Engin (Turkey)	125
The adsorption–desorption mechanisms on the powdered activated carbon (PAC) of an anionic textile dye (RB3GL) A. Gürses, D. Yalvaç, K. Güneş, E. Şahin, M. Açıkyıldız (Turkey)	134
The optimization of the electroflotation process using DSA [®] electrodes for treating the simulated effluent of produced water from oil production T.C.M. Nonato, A.A. de Almeida Alves, W.F. Broock, R.L. Dalsasso, M.L. Sens (Brazil)	139
Enhanced degradation efficiency of grass pulp mill excess sludge by inoculate rumen microorganisms Na Li, Jian Zhang, Hai-qiang Shi, Mei-hong Niu, Qing-wei Ping (China)	145
Effects of mixed liquor ozonation in an activated sludge system for sewage treatment S. Pesante, G. Morales, C. Baeza, G. Gómez, G. Vidal (Chile)	150
Thermal Na ⁺ conditioning of natural clinoptilolite for softening removal of aqueous Ca ²⁺ from simulated cooling-water environment S. Zhang, D. Wang, J.F. Zheng, Y.C. Chen, L.P. Sun (China)	157
Removal of Ni(II) and Co(II) ions from acidic solutions by Lewatit TP-260 resin A. Cerpa, F.J. Alguacil, I. Lado, A. López, F.A. López (Spain)	169

Synthesis and use of nanomagnetic MnO ₂ adsorbent for removing Pb(II) and Cd(II) ions from acid aqueous solutions C. Basualto, P. González, A. Briso, K. Barrera, V. Ide, M. Araya, G. Montes-Atenas, F. Valenzuela (Chile)	175
Enhanced trapping of Ni(II) ions by diatomite-supported nanoscale zerovalent iron from aqueous solution Guodong Sheng, Xiangxian Ma, Wensheng Linghu, Zhongshan Chen, Jun Hu (China), A. Alsaedi, W. Shammakh, S. Monaquel (Saudi Arabia), Jiang Sheng (China)	183
Selective transport of Cu(II), Co(II), Cd(II) and Ni(II) ions through polymer inclusion membranes (PIMs) based on some amide derivatives of 4-amino-1,5-dimethyl-2-phenylpyrazolidin-3-one A.F. Shaaban, M.M. Azab, A.A. Mahmoud, A.A. Khalil, A.M. Metwally (Egypt)	190
Fly ash-based geopolymer as a potential adsorbent for Cr(VI) removal Jingping Qiu, Yingliang Zhao, Jun Xing, Xiaogang Sun (China)	201
Optimization of Cd(II) removal from aqueous solution with modified corn straw biochar using Plackett-Burman design and response surface methodology Xiao Deng, Hang Zhou, Xiao-Ning Qu, Jian Long, Pei-Qin Peng, Hong-Bo Hou, Ke-Lin Li, Ping Zhang, Bo-Han Liao (China)	210
Efficient removal of Co(II) metal ion from aqueous solution using cost effective oxidized activated carbon: kinetic and isotherm studies E.-R. Kenawy (Egypt), A.A. Ghfar (Egypt, Saudi Arabia), M. Naushad, Z.A. AlOthman, M.A. Habila (Saudi Arabia), A.B. Albadarin (Ireland)	220
Response of duckweed to lead exposure: phytomining, bioindicators and bioremediation A.K. Hegazy, M.H. Emam (Egypt), L. Lovett-Doust (Canada), E. Azab (Egypt, Saudi Arabia), A.A. El-Khatib (Egypt)	227
Optimisation of the removal of arsenate from water using nanochitosan A. Sreeram, P. Hadi, Chi-Wai Hui (Hong Cong, China), T. Al Ansari, G. McKay (Qatar)	235
Removal of toxic metal ions and their kinetic studies from aqueous solution using zeolite as an adsorbent R. Kumar, S.K. Jain (India)	244
Application of molybdenum disulfide nanosheets for adsorption of tetracycline in water samples M.J. Aghagoli, F. Shemirani (Iran)	250
Procedure optimization for removal of 2,4-dichlorophenoxyacetic acid from water by surfactant-modified magnetic nanoparticles S.M. Pourmortazavi, M. Taghdiri, R. Ahmadi, M.M. Zahedi (Iran)	261
Factors affecting activated carbon's bromate removal ability from concentrated, organic load rich cooling water, in the presence of residual bromine F.A. Megalopoulos, M.T. Ochsenskuehn-Petropoulou (Greece)	269
Nitrogen removal and microbial community structure in membrane bioreactors with addition of alkali-rice straw Yu-Li Yang, Xiao-Li Yang, Jia-Jun Wu, Jiang Qi (China), Shuai Luo (USA)	275
An analysis of boron removal from water using modified zero-valent iron nanoparticles H. Khorsandi, A. Azarnioush, A.-A. Aghapour, S. Nemat, S. Karimzadeh, H.-R. Khalkhali (Iran)	284
Efficiency of ultrasonic process in the regeneration of graphene nanoparticles saturated with humic acid A. Naghizadeh, F. Momeni, E. Derakhshani (Iran)	290
Adsorption of the herbicide 2,4-dichlorophenoxyacetic acid by Fe-crosslinked chitosan complex in batch mode Tong Zhou, Liyan Fang, Xuwei Wang, Minyuan Han, Shusheng Zhang, Runping Han (China)	294
Removal of ammonium salt from aqueous solution of glycolic acid with macroporous resin Junwei Zhang, Chengxu Zhu, Haijian Sun, Qijun Peng (China)	302
Photocatalytic degradation of 2,4-dichlorophenol using natural iron oxide and carboxylic acids under UV and sunlight irradiation: intermediates and degradation pathways W. Remache, S. Belaidi, L. Mammeri, H. Mechakra, T. Sehili, K. Djebbar (Algeria)	311
Monitoring the ethylfluralin biodegradation with certain bacteriophage mixed culture G.Ö. Ergüven (Turkey)	322
An analysis of the sensitivity of fixed bed adsorption for diazinon removal: experimental and modeling studies H. Esfandian, B. Khoshandam, M. Parvini, A. Samadi-Maybodi (Iran)	330

Oxidative degradation of the antineoplastic drugs 5-fluorouracil and cytarabine in aqueous solution by potassium permanganate Pingping Cheng, Fangyuan Sun, Wei Wang, Jingwei Feng, Zhen-Hu Hu, Shoujun Yuan, Qiquan Wang (China)	339
Bi-amino surface functionalized nanoparticles: synthesis and binary system dye removal from wastewater containing anionic dyes N.M. Mahmoodi, M. Ghezelbash, C. Ghotbei, M. Kazemeini (Iran)	347
Investigation of equilibrium, kinetics and thermodynamics of extracted chitin from shrimp shell in reactive blue 29 (RB-29) removal from aqueous solutions A. Naghizadeh, M. Ghafouri, A. Jafari (Iran)	355
Brilliant Blue FCF degradation by persulfate/zero valent iron: the effects of influencing parameters and anions M. Yousefi, F. Ghanbari, M.A. Zazouli, S. Madihi-Bidgoli (Iran)	364
Adsorption of C.I. Reactive Red 2 by ZnAl-layered double hydroxides: kinetics, equilibrium, and thermodynamics Jui-Chan Huang, Chao-Yin Kuo, Chung-Hsin Wu, Yong-Huei Lin (Taiwan)	372
Batch adsorptive removal of metanil yellow from simulated dye wastewater using nitric acid modified- H_3PO_4 -activated carbon (NAMP AAC) from Gmelina arborea bark: equilibrium and isotherm studies B.O. Isiuku, D.C. Anyanwu, C.N. Nwosu, S.C. Iroamaka (Nigeria)	380
A study of applying green glucose-reduced graphene oxide in advanced treatment of different dyes Ruibin Wang, Rendang Yang, Youmao Zhang (China)	387
Author Index	394