



Contents

Volume 154

Modeling and performance analysis of forward and pressure-retarded osmosis H. Ettouney, K. Al-Hajri (Kuwait)	1
Combined FO and RO system for the recovery of energy from wastewater and the desalination of seawater M. Guizani, M. Saito, R. Ito, N. Funamizu (Japan)	14
Engineering of size-controlled magnetic nanoparticles for use as a draw solution in a forward osmosis process M. Guizani, T. Maeda, R. Ito, N. Funamizu (Japan)	21
Chromium removal by forward osmosis: a flux modeling and experimental validation D. Ben Maouia, A. Boubakri, R. Bouchrit, A. Hafiane (Tunisia), S. Bouguecha (Saudi Arabia)	30
Poly(sodium-4-styrenesulfonate) assisted ultrafiltration for nickel and copper removal from aqueous solutions: optimization several parameters M. Nafti, D.J. Ennigrou, K. Horchani-Naifar, M. Ferid (Tunisia)	39
Critical evaluation of procedures fundamental to reverse osmosis membrane autopsy T.R. da Costa, R.P. Schneider (Brazil)	49
Polyethersulfone nanocomposite membranes with different montmorillonite clays for oil/water separation V.d.N. Medeiros, T.C. de Carvalho, E.M. Araújo, H.L. Lira, A.M.D. Leite, E.A. dos Santos Filho (Brazil)	63
Modeling and experimental study of air gap membrane distillation unit: application for seawater desalination I. El Mokhtar, A. Boubakri (Tunisia), S.A.T. Bouguecha (Saudi Arabia), A. Hafiane (Tunisia)	72
NH ₂ -grafting on micro/nano architecture designed PS/TPU@SiO ₂ electrospun microfiber membrane for adsorption of Cr(VI) Bin Wang, Zhiming Sun, Tong Liu, Qizhi Wang, Congju Li, Xiuyan Li (China)	82
Effect of TiO ₂ nanoparticles on antifouling and separation properties of PVDF/PAN blend membrane A. Anvari (Iran, USA), A.A. Yancheshme, M. Tavakolmoghadam, F. Rekabdar, A. Safekordi (Iran)	92
Thermodynamic analysis of a heat pump assisted active solar still K. Hidouri (Tunisia), M. Mohanraj (India)	101
Grid-based flood insurance rate mapping for detached houses considering flood loss frequency and severity Insang Yu, Huicheul Jung, Lee-hyung Kim, Sangman Jeong (Korea)	111
Laboratory and field application of the synthetic fiber filter for treating turbid stormwater Qingke Yuan, Heidi B Guerra, Youngchul Kim (Korea)	119
Energy assessment and savings for the sewage treatment plant using EUAT and tool-kit in Korea Juwon Jang, Seokhun Park, Jongseok Park, Hoseop Kim, Jaemoon Kim, Hosik Lee (Korea)	132
Performance characteristics of phosphorus removal in sewage treatment using electrocoagulation and fiber filtration process Gahee Kim, Taewoo Kim, Juwon Jang, Jesmin Akter, Hosik Lee (Korea)	141
Regression models (SVR, EMD and FastICA) in forecasting water quality of the Haihe River of China Nan Liang, Zhihong Zou, Yigang Wei (China)	147
Supporting waste management in a Brazilian city using life cycle assessment: a case study of Uberlândia L.M.G. Coelho, L.C. Lange, R. de Souza Henriques (Brazil)	160
Efficient removal of thallium and EDTA from aqueous solution via the Fenton process Ruibing Xu, Minhua Su, Xuexia Huang, Diyun Chen, Jianyou Long, Yonghui Liu, Lingjun Kong, Huosheng Li (China)	166

Efficient adsorption of bisphenol A from aqueous solutions using low-cost activated carbons produced from natural and synthetic carbonaceous materials N. Jaafarzadeh, Z. Baboli, Z. Noorimotlagh (Iran), S. Silva Martínez (Mexico), M. Ahmadi, S. Alavi, S.A. Mirzaee (Iran)	177
Preparation of iron-nitrogen doped titanium dioxide nanoparticles and its application for photocatalytic degradation of phenol under UV and visible light S. Dehestaniathar, P. Abolmohammadi, M. Safay, N. Jonidi, A. Maleki, H. Daraei (Iran)	188
A facile and green method to preparation of mesoporous ZnFe ₂ O ₄ with enhanced adsorption activity M. Rabbani, R. Rahimi, M.R. Ghadi, M. Heidari-Golafzani (Iran)	195
Bioremediation of cardboard recycling industrial wastewater using isolated native fungal strains Z. Hosseini, A. Jafari Nadoushan, M.H. Ehrampoush, M. Ghafourzadeh, S.M. Namayandeh, M.T. Ghaneian (Iran)	201
Synthesis and characterization of strontium aluminate based on utilizing alum sludge R.M. Khattab, F. Abd-EL-Raouf, H.E.H. Sadek, A.A. Gaber (Egypt)	209
Application of used cement blocks for the removal of phosphate from aqueous solution under low-temperature conditions Yueyao Pu, Jianghua Yu, Tao Tao, Lin Zhu (China)	219
Hydraulic conductivity and phosphorus adsorption preference of various waste bricks used as storm-water bio-filter media Hongsheng Zhang, Jianghua Yu, Liang Chen, Tao Tao, Longmian Wang, Xiaojun Zuo (China)	225
Adsorption of fluoride using bimetallic oxide nanoparticles supported on industrial waste prepared by a chemical reduction method A. Blanco-Flores, N.V. Arteaga-Larios, M.C. Ojeda-Escamilla, H.P. Toledo-Jaldin, G. López-Téllez, I. Rodríguez-Torres (Mexico)	235
Methyl tertiary-butyl ether adsorption by bioactivated carbon from aqueous solution: kinetics, isotherm and artificial neural network modeling A. Fatehizadeh, M.R. Zare (Iran), S.W. Van Ginkel (USA), E. Taheri, M.M. Amin, N. Rafiei, M. Mahdavi (Iran)	254
Photocatalytic degradation of aqueous rhodamine B by TiO ₂ /ZnO/rGO nanocomposite: photocatalytic activity and catalytic mechanism Lu Peng, Peng Nian, Jingwei Feng, Xiangxiang Han, Binhua Cui, Songsheng Lu, Jie Zhang, Chenming Li, Aiyong Zhang (China)	268
Reduction of pathogenic microorganisms in an Imhoff tank-constructed wetland system M. Darvishmotevalli, M. Moradnia, A. Asgari, M. Noorisepehr, H. Mohammadi (Iran)	283
Evaluating the removal efficiency of cadmium and mercury from industrial wastewater using microbial desalination cell F. Mirzaenia, A. Jonidi Jafari, M. Malakootian (Iran)	289
Biosorption of lead using <i>Penicillium notatum</i> dead biomass from aqueous solutions A. Khodabakhshi, F. Mohammadi Moghadam, M. Sedehi, R. Abdizadeh, K. Shakeri (Iran)	296
Study on sodium alginate and phosphoric acid modified biomass power plant ash as water treatment biofilm carrier Feipeng Li, Wei Liu, Yubao Jia, Zengsheng Zhang, Hong Tao, Xiaodong Zhang (China)	305
Pt/g-C ₃ N ₄ composites for photocatalytic H ₂ production and •OH formation Kezhen Qi, Shu-yuan Liu, Ruidan Wang, Zhe Chen (China), R. Selvaraj (Oman)	312
Electrochemical treatment and reclamation of water used during the rinsing of silicon wafers B. Palahouane, A. Keffous, M.W. Naceur, M. Hecini, O. Bouchelaghem, A. Lami, N. Drouiche (Algeria)	320
Recovery of cobalt by Aliquat 336 as ionic liquid extractant: a statistical study by Taguchi design N.S. Merad, N.-E. Belkhouche (Algeria), M. Stambouli (France)	328
Photocatalytic degradation of catechol in aqueous solutions: a comparison between UV/Fe ₂ O ₃ and Fe ₂ O ₃ /sunlight processes S. Raeisivand, M. Sadeghi, S. Hemati, A. Fadaei, M. Sedehi, A. Sadeghi, S.M. Hoseini (Iran)	340
Efficiency of the activated carbon and clinoptilolite particles coated with iron oxide magnetic nanoparticles in removal of methylene blue A. Badeenezhad, A. Azhdarpoor (Iran)	347

The use of calcium alginate-activated carbon composite material in fixed-bed columns for methylene blue removal from wastewater A. Boucherdoud, B. Bestani, N. Benderdouche (Algeria), L. Duclaux (France)	356
Application of response surface methodology for optimization of methyl red adsorption by orange peels B. Trifi, M.C. Bouallegue, I. Marzouk Trifi (Tunisia)	369
Adsorption of crystal violet onto epichlorohydrin modified corncob Yinghua Song, Rong Peng, Shengming Chen, Yaqian Xiong (China)	376
Application of <i>Momordica charantia</i> (bitter melon) waste for the removal of malachite green dye from aqueous solution L.B.L. Lim (Brunei Darussalam), N. Priyantha (Sri Lanka), K.J. Mek, N.A.H.M. Zaidi (Brunei Darussalam)	385
Author Index	395