



**Contents**

**Volume 109**

Availability and reliability analysis of integrated reverse osmosis - forward osmosis desalination network U. Safder, P. Ifaei, KiJeon Nam, J. Rashidi, ChangKyoo Yoo (Korea) .....	1
New concept to characterize seawater quality for RO plant design and operation K. Shin, S. Ihm (Korea), R.B. Mansour, A.A. Aithan, A.M. Mahmoud (Saudi Arabia), Jangyong You, Hwanchul Cho, Hyunsung Choi (Korea), A.M. Farooque, A.S. Al-Amoudi (Saudi Arabia) .....	8
Draw channel contraction of an 8040 spiral-wound forward osmosis membrane element in pressure-assisted forward osmosis (PAFO) M.A. Hidayat, Seungho Kook, In S. Kim (Korea) .....	17
Performance comparison between TFC-ES membranes and aquaporin membranes for dairy wastewater reclamation Hongwei Song, Jinrong Liu, Dou Wu (China) .....	28
Pretreatment in membrane processes for ultra-pure demineralized water production from secondary effluent Jinghao Wang, Xiaolan Zhou, Yuancai Chen, Yongyou Hu (China) .....	36
Synthesis of AgCl/PES hybrid membranes and their application in removing iodide ion Fengqin Yu, Haizeng Wang (China) .....	45
Urban debris flow vulnerability map: an application to the metropolitan cities in Korea Yoonkyung Park, Sangdan Kim, Jingul Joo, Hayong Kim, Sangman Jeong, Hyun-Ki Kim (Korea) .....	53
Filter media washing prior to installation in stormwater treatment facilities H.B. Guerra, Qingke Yuan, Youngchul Kim (Korea) .....	64
Numerical modeling of an inner preheating transpiring-wall reactor for supercritical water oxidation Fengming Zhang, Chuangjian Su, Chunyuan Ma (China) .....	72
Application of artificial neural network and random forest methods for modeling simultaneous adsorption of safranin-O and methyl violet dyes onto modified pine cone powder M. Ashrafi, G. Bagherian, M. Arab Chamjangali, N. Goudarzi (Iran) .....	90
Biodrying of storage sludge and analysis of the stability and agricultural properties of biodried products Tiantian Liu, Chongwei Cui, Junguo He, Jian Tang (China) .....	104
Application of surfactant-modified zeolite-activated carbons as adsorbents to a semi-batch operation Z. Ioannou, C. Karasavvidis, A. Molla, A. Dimirkou (Greece) .....	112
Softening of wastewater from wet flue gas desulfurization process based on internal airlift loop reactor (IALR) Xiangxin Nie, Zongming Zheng, Qiang Lu, Changqing Dong, Wu Qin, Tipeng Wang (China) .....	125
Comparison of classical Fenton and Fenton-like using $\mu$ -ZVI processes for the degradation of cresol in the wastewater M. Hajian, S.A. Mirbagheri, A.H. Javid (Iran) .....	132
Removal of lindane as a health-toxic pesticide in drinking water by slow sand filtration K. Moradnejadi, A. Torabian, H. Nourmoradi, S.A. Mirbagheri (Iran) .....	139
Magnetic FeO <sub>x</sub> -NdFeB@AC catalyst application in degradation of coking wastewater by activated persulfate process Chunwei Yang, Baixiang Ren, Dong Wang (China) .....	145
Treatment of landfill leachate by hybrid coagulation and adsorption on modified waste activated sludge D. Balarak, E. Bazrafshan, H. Moein, S. Nakhaei, R. Badali, H. Kamani, A.H. Mahvi, N. Poormollae (Iran) .....	152
Photoelectrocatalytic degradation of organic pollutants in wastewater using titania nanopore arrays: a proof-of-concept study Yunlin Li, Chaosheng Zhu, Jing Jiang, Lili Li, Yifei Guo (China), Jianli Hu (USA) .....	162
Peach resin coated silica particles for Imidacloprid removal as a greener approach to water remediation M. Arslan, S. Manzoor, T.M. Ansari, A. Yar, S. Naz (Pakistan), A. Bin Yousaf (Qatar), G. Yasmin (Pakistan) .....	169

Polymeric composite materials based on silicate. II. Sorption and distribution studies of some hazardous metals on irradiated doped polyacrylamide acrylic acid M.M. Abou-Mesalam, M.R. Abass, M.A. Abdel-Wahab, E.S. Zakaria, A.M. Hassan (Egypt) .....	176
Coagulation efficiency comparison of natural and its blended coagulant with alum in water treatment A. Iqbal, N. Zahra (Pakistan) .....	188
Illumina sequencing reveals bacterial community shift and its role in a full-scale A <sup>2</sup> O sewage treatment process at low temperatures Xiao-Hu Kang, Xiu-Kun Wu, Hui Wang, Xiao-Ying Zeng, Yan Leng, Shi-Weng Li (China) .....	193
“WETWALL” — an innovative design concept for the treatment of wastewater at an urban scale J.A. Castellar Da Cunha (Spain), C.A. Arias, P. Carvalho (Denmark), M. Rysulova (Slovakia), J.M. Canals, G. Perez, M. Bosch Gonzalez, J.F. Morató (Spain) .....	205
Characterization of hydrogen peroxide (H <sub>2</sub> O <sub>2</sub> ) modified hydrochars from walnut shell for enhanced adsorption performance of methylene blue from aqueous solution Yang Huang, Yan Huang, Weiqing Wang, Kui Zheng (China) .....	221
Applicability of dragon fruit ( <i>Hylocereus polyrhizus</i> ) peels as low-cost biosorbent for adsorption of methylene blue from aqueous solution: kinetics, equilibrium and thermodynamics studies A.H. Jawad, A. Murtadha Kadhum, Y.S. Ngoh (Malaysia) .....	231
Efficient removal of malachite green dye from aqueous solution using functionalized GO/Fe <sub>3</sub> O <sub>4</sub> nanocomposite: kinetic, equilibrium and thermodynamic studies Sheng Feng, Shuguang Liu, Zhihui Zhang, Shanshan Feng, Bin Yuan, Ping Cheng, Runbai Wang (China) .....	241
Optimization and evaluation of the indigo blue vat dye removal process on rice husk through statistical design F. Amaringo, A. Hormaza (Colombia) .....	253
Kinetic, isothermal, and thermodynamic models to evaluate Acid Blue 161 dye removal using industrial chitosan powder G. Dilarri, R.N. Montagnoli, E.D. Bidoia, C.R. Mendes, C.R. Corso (Brazil) .....	261
Removal of Cr(III) and Cu(II) from aqueous solution by fulvic acid functionalized magnetite nanoparticles Chengwei Zhao (China), Hongguang Guo (China, USA), Yongli Zhang, Weihong Tang, Yang Liu, Xin Cheng, Wei Li (China) .....	271
Regulation of interfacial properties of polybenzoxazine for effective removal of Cr(VI) from aqueous solution Mingpeng Wu, Li Zhang, Caoyu Wang, Cong Ding, Xinsheng Zheng (China) .....	279
Biosorption of Mg(II) from water by <i>Rhizopus arrhizus</i> N. Feroze, M. Kazmi, H. Saleemi, A. Latif, A. Waheed, M. Faheem (Pakistan) .....	291
Continuous flow column adsorption of mordenite zeolite–polymer composite fibers for lead removal K. Nakamoto, M. Ohshiro, T. Kobayashi (Japan) .....	297
Optimization of low-concentration phosphorus removal from raw lake water Jin Sun Kim, Han Jo You, Bae Kyung Park, Ihn Sup Han (Korea) .....	307
Synthesis and characterization of a nanoadsorbent for removal of bisphenol A by hydrous magnesium oxide: kinetic and isotherm studies P. Bahrami, I. Kazeminezhad, Z. Noorimotlagh, S.S. Martinez, M. Ahmadi, M. Saraji, M. Ravanbakhsh, N. Jaafarzadeh (Iran) .....	318
Adsorption of Eosin Y using an environmentally friendly adsorbent prepared by microwave heating Jianhua Shu, Hongying Xia, Libo Zhang, Jinhui Peng, Song Cheng, Chunyang Li (China) .....	326
Degradation of acetaminophen in water by using dielectric barrier discharge A.J. Al-Rajab, Z.-ul-I. Mujahid, O. Hakami, M. Albratty, H.A. Alhazmi, A.M. Hala (Saudi Arabia) .....	337
Parametric evaluation of the Euler-Lagrangian approach for tracer studies I.T. Tenebe, A.S. Ogbiye, D.O. Omole, P.C. Emenike (Nigeria) .....	344
Author Index .....	350