

## Contents

### Volume 183

Investment efficiency of floating platforms desalination technology in Egypt D.E. Abozaid, M.O. Abdelaziz, M.E.A. Ali, H.A. Shawky, E. Oterkus (Egypt) .....	1
Supercritical water oxidation of recalcitrant organic pollutants present in retentates from RO desalination of secondary effluents Y. Aviezer, L. Birnhack (Israel), O. Lahav (Israel, China) .....	7
Simulating the behavior of ballasted flocs in circular lamellar settling tank using computational fluid dynamics (CFD) Ki-Yeon Kim, Seongjun Park, Won-Hee Lee, Jong-Oh Kim (Korea) .....	23
Numerical simulation studies of agitating paddle dependence on characteristics of the flow field in the mechanical-continuous-flow-stirred reactor for flocculation Meng Yao, Zhilin Ran, Ting Chen, Qibao Wu, Xiaoqing Dong (China) .....	30
CFD analysis of the demister location impact on the thermal losses and the vapor uniformity within the MED desalination plant A. Abotaleb, A. Mabrouk (Qatar) .....	42
Denitrification performance and microbial community variation during reverse osmosis concentrate treatment by sulfur denitrification process Minji Hong, Yeo-Myeong Yun, Tae-Jin Lee, No-Suk Park, Yongtae Ahn, Sokhee P. Junge, Yuhoon Hwang (Korea) .....	54
Feasibility study and performance assessment of a new tri-generation integrated system for power, cooling, and freshwater production U. Safder (Korea), M.A. Rana (Pakistan), ChangKyoo Yoo (Korea) .....	63
Development of integrated effect plate for performance improvement of multi-effect diffusion solar still Ga-Ram Lee (Korea), T.A. Ajiwiguna (Korea, Indonesia), Byung-Ju Lim, Chang-Dae Park (Korea) .....	73
Vibration signals at the early stage of fouling in reverse osmosis system Minseok Kim, Noori Kim, Jongmin Jeon, Suhan Kim (Korea) .....	81
Evaluating the vulnerability of buildings to urban flooding using the fuzzy inferences method Kiyong Park, Insang Yu (Korea) .....	88
Performance analysis of serially-connected membrane element for pressure-assisted forward osmosis: wastewater reuse and seawater desalination Chulmin Lee, N.T. Tin, R.S. Adha, In S. Kim (Korea) .....	104
Improved pressure drop and silica rejection of polydopamine-coated polypropylene filter media Yesol Kang, Jaewon Jang, In Kyung Park, Byung-Joo Park, In S. Kim (Korea) .....	114
Fabrication of nanocomposite forward osmosis hollow fiber membrane for low reverse salt flux by modification of active layer via co-extrusion with graphene oxide Kyunghoon Jang, Joohwan Lim, Jangho Lee, A.B. Alayande, Bumsuk Jung, In S. Kim (Korea) .....	121
Environmental impact evaluation model of dam breach — considering the uncertainty feature of environment Wei Li, Zong-kun Li (China), Wei Ge (China, The Netherlands), Hexiang Zhang (China) .....	131
Combination of electrolysis and microalgae cultivation to beneficial reuse fertilizer wastewater from poultry manure anaerobic digestion effluent Xinfeng Wang (China), Lu Lin (USA), Li Zhang, R. de Souza, Haifeng Lu, Zhidan Liu, Na Duan (China), Taili Dong (USA), Yuanhui Zhang, Baoming Li (China) .....	139
Selection of appropriate variables in the prediction of the coefficient of performance of absorption heat transformers B. Escobedo-Trujillo, D. Colorado (Mexico) .....	149
Hierarchical intelligence platform designed for wastewater management systems: information technology integration Tim Chen (Vietnam), C.Y.J. Cheng (UK, Australia) .....	167

Fabrication and characterization of moderately hydrophobic membrane with enhanced permeability using a phase-inversion method in membrane distillation Youngkwang Park, Jaehyun Ju, Yunchul Woo, June-Seok Choi, Sangho Lee (Korea) .....	173
A numerical study on effects of operational parameters and membrane characteristics on performance of vacuum membrane distillation (VMD) M. Suleman (Pakistan), M. Asif (Pakistan, China), S.A. Jamal (Pakistan), Pengyu Dong, Xinguo Xi (China) .....	182
Sequencing batch airlift reactor system for simultaneous removal of nitrogen and organic carbon from synthetic tannery wastewater A.G. Melesse (Ethiopia, India), S.V. Srinivasan (India), B.A. Demissie (Ethiopia), S.P. Chacko (India) .....	194
Batch biosorption removal of total organic carbon from laundry aqueous media using raw pine and acid/microwave irradiation treated pine cone powder S.M. Hafyana (Canada), A.F. Elsheikh (Libya), R. Hausler (Canada) .....	205
Chemical modification of the silica gel surface with a carbothioamide Schiff base for removal of Cr (III) ions from wastewater samples A. Cimen, A. Bilgic, I. Yilmaz, A. Cukurovali (Turkey) .....	222
Simultaneous degradation of anodic nitrate and cathodic sulphate in a bioelectrochemical reactor: evaluation of degradation efficiency and characterization of microbial communities Jing Chen, Hao Xu, Na Tong, Shu He, Shaobin Huang, Yongqing Zhang (China) .....	233
Electrocoagulation performance of industrial wastewater with high fluoride concentrations and characteristics of the sludge generated B. Palahouane, A. Keffous, M.W. Naceur, M. Hecini, O. Bouchelaghem, A. Lami, K. Laib, A. Manseri, N. Drouiche (Algeria) .....	240
Bio-reduction potentials of Gentiana kurru Royle for single step bio-genic production of silver nanoparticles M. Mukhtar, F. Khawar, M.I. Din, A. Aihetasham, Z. Hussain, R. Khalid, R. Rehan (Pakistan) .....	248
Efficient feeding strategy to enhance the start-up of anaerobic ammonium oxidation process in an anaerobic up-flow biofilm column reactor M. Ibrahim, N. Yusof, H. Abdullah, M.Z.M. Yusoff, M.A. Hassan (Malaysia) .....	253
Treatment of landfill leachate using modified anaerobic baffled reactor I. Ahmad, S. Chelliapan, N. Othman, N.S. Nasri, S. Krishnan (Malaysia) .....	268
Utilization of BioWinTM simulator in simulating the integrated anaerobic fluidized bed-UASB/aerobic moving bed biofilm system I. Hendy, A.M. Dohdoh, A. Abdo (Egypt) .....	276
Adsorptive removal of nickel by modified natural adsorbents: optimization, characterization and application Qingping Yi, Ruiyi Fan, Huiyu Min, Qinglin Zhang, Zhengrong Luo (China) .....	290
Removal of Cr(VI) from wastewater by simplified electrodeionization Qiannan Jin, Wenwei Yao, Xueming Chen (China) .....	301
Use of grape vine bark as an effective biosorbent for the removal of heavy metals (copper and lead) from aqueous solutions S. Haydar, M.U. Farooq, S. Gull (Pakistan) .....	307
Adsorption study of heavy metal ions from aqueous solution by activated carbon in single and mixed system Chengyu Suo, Kang Du, Rongfang Yuan, Huilun Chen, Fei Wang, Beihai Zhou (China) .....	315
Transformation products and mechanistic pathway of levofloxacin degradation in aqueous solution using advanced oxidation processes in the presence of BiVO <sub>4</sub> and visible light M.A. Meetani, A. Alzamly, N. Al-Dubaili, M.F. Malik, N. Elmerhi, N.I. Albadawi, S. Hisaindee (UAE), R. Selvaraj (Oman), M.A. Rauf (UAE) .....	325
Efficient photo-Fenton degradation of dye and drug molecules over Fe <sub>2</sub> O <sub>3</sub> /C composite with 1,4-benzoquinone as sacrificial agent Jing Zhou (China) .....	335
Numerical simulation of chemical reaction – solute transport coupling model of 2,4-DCP in groundwater Yongxiang Zhang, Xuezhen Huang, Weichun Gao, Youhao Wang, Shan Chang (China) .....	346

Photocatalytic remediation of treated palm oil mill effluent contaminated with phenolic compounds using $TiO_2$ nanomaterial R. Nawaz, Chong Fai Kait, Ho Yee Chia (Malaysia), M.H. Isa (Brunei), Lim Wen Huei (Malaysia) .....	355
Photocatalytic degradation of 2,4,6-trichlorophenol in aqueous solutions using synthesized Fe-doped $TiO_2$ nanoparticles via response surface methodology A. Jahantiq, R. Ghanbari, A.H. Panahi, S.D. Ashrafi, A.D. Khatib, E. Noorabadi, A. Meshkinian, H. Kamani (Iran) .....	366
Carbon nanotubes hybridized graphene oxide composite for efficient capture of cationic dye from aqueous solution E.M. Saad (Egypt), H.M.A. Hassan (Egypt, Saudi Arabia), E.A. El-Sharkawy, M.S. Gaber (Egypt) .....	374
Nano-sized $Ga_{2-x}Cu_xZr_{2-x}W_xO_7$ for Malachite green decolorization under visible light R.A. Nasr, H.A. Abbas (Egypt), A. Khalaf, A. Bozeya (Jordan), T.S. Jamil (Egypt) .....	389
A new approach for preparation of iron oxide-pillared bentonite as adsorbent of dye R. Shayegh, M. Ghorbanpour (Iran) .....	404
Production and characterization of activated carbon from pineapple waste for treatment of kitchen wastewater B.A. Oni, O.G. Abatan, A. Busari, O. Odunlami, C. Nweke (Nigeria) .....	413
Author Index .....	425