



Contents
Volume 142

Numerical simulation and experimental validation of a compact distillation module used in solar desalination unit K. Zhani (Tunisia)	1
Theoretical investigation of a direct contact humidification-dehumidification desalination system A. Alvarez, F. Carranza, I. Zavala, D. Saucedo (Mexico)	11
Comparison of energy-efficient configurations of direct contact membrane distillation for brackish water desalination E. Ali, J. Orfi, A. Najib, J. Saleh (Saudi Arabia)	24
Embedded high-hydrophobic CNMs prepared by CVD technique with PVDF-co-HFP membrane for application in water desalination by DCMD M.M. Aljumaily (Malaysia), M.A. Alsaadi (Malaysia, Oman), N.A. Hashim (Malaysia), Q.F. Alsalhy (Iraq), R. Das (Malaysia), F.S. Mjalli (Oman)	37
Pre-treatment of olive mill wastewater (OMW) by ultrafiltration process using chitosan E.O. Akdemir, E. Aygan (Turkey)	49
Predicting greywater reuse for potable and non-potable purposes in a developing country – a theory of planned behaviour approach M. Oteng-Peprah (The Netherlands, Ghana), M.A. Acheampong (Ghana), N.K. DeVries (The Netherlands)	56
Improvement of performance and antifouling properties of reverse osmosis membranes using green additive D.E. Abd-El-Khalek, B.A. Abd-El-Nabey, A. Morsy, Sh. Ebrahim, S.R. Ramadan (Egypt)	65
Zwitterionic multisilicon copolymer used for preparing PVA based hybrid membranes for alkali recovery Chunhua Dai, Chuanyu Deng, Lei Zhang, Liang Wu, Tongwen Xu, Yonghui Wu (China)	72
Spatial and temporal variation of physicochemical and microbial quality of drinking water for the distribution network in Maku, Iran F. Baghal Asghari, M. Pakdel, A.A. Mohammadi, M. Yousefi (Iran)	82
Anion exchange membranes and binders based on polystyrene-block-poly(ethylene-ran-butylene)-block-polystyrene copolymer for alkaline water electrolysis J. Žitka, J. Peter, B. Galajdová, L. Pavlovec, Z. Pientka, M. Paidar, J. Hnát, K. Bouzek (Czech Republic)	90
Activated sludge culture domestication at high altitudes in Tibet of China Jin Xu, Peifang Wang, Yi Li, Lihua Niu (China)	98
Investigation into the temperature effect on NOM fouling and cleaning in submerged polymeric membrane systems M.T. Alresheedi, O.D. Basu (Canada)	104
Effects of inorganic nanoparticle/PEG600 composite additives on properties of chlorinated polyvinyl chloride ultrafiltration membranes Wei Zhang, Honghai Yang, Jun Wang (China)	114
Research on a coupling model for groundwater depth forecasting Chao Song, Xianqi Zhang, Dengkui Hu, Wei Tuo (China)	125
Multiscale computational modeling of organic compounds separation using microporous membranes M. Rezakazemi (Iran), S. Shirazian (Vietnam)	136
Treatment of real petroleum refinery wastewater with alternative ferrous-assisted UV/persulfate homogeneous processes O. Pourehie, J. Saien (Iran)	140
Simultaneous organic carbon and nitrogen removal by heterotrophic nitrifiers under oxygen-limited condition in an internal-loop fluidized membrane bioreactor Li Yang, Qin Cai, Ping Yang, Wei Liao, Xiao Tan (China)	148

Nitrogen removal of the simultaneous anammox and denitrification process for treating phenol-containing sewage in a hybrid UASB reactor Zhaozhao Wang, Ying Ji, Lina Yan, Dan Zhao, Simin Li (China)	158
Optimization of Fe ²⁺ catalyzed hydrogen peroxide/persulfate and its application in activated carbon regeneration Shengpin Li, Wenpeng Li, Boyang Liu, Fei Liu, Honghan Chen, Xiulan Yin (China), Song Jin, Yi Li, Zaixing Huang, M.A. Urynowicz (USA)	167
Photocatalysis study of TiO ₂ composite film containing nanocrystals and conductive layer Zhenquan Li, Xuewen Yi (China)	179
Emulsifying and demulsifying chemistry for enhancing the ClO ₂ -oxidative separation pilot of ultrastable oil-water emulsions Dandan Yuan, Shihao Liu, Yuli Zhang, Xin Sui, Chunhong Nie, Hong Jiang, Baohui Wang (China)	185
Fe ₃ O ₄ -TiO ₂ /chitosan nanobiocomposite as a novel cadmium adsorbent: fabrication, characterization, equilibrium isotherms, adsorption kinetics and thermodynamics study A. Sadeghi, H. Tashakkorian, A.R. Abri, M. Tajbakhsh (Iran)	193
Adsorption kinetics and isotherms of Ni (II) and Zn (II) heavy metals onto a natural adsorbent: expanded perlite S.M. Turp (Turkey)	205
Synthesis and characterization of immobilized 1-(1,3-diphenyl-5-hydroxy-1H-pyrazol-4-yl)ethanone on silica gel and its use for aqueous heavy metal removal F. Suhail, M. Batool, M.I. Din, M.A. Khan, K. Ayub, S. Tabassum, A.T. Shah (Pakistan)	213
Response surface methodological approach for optimizing heavy metal biosorption by the blue-green alga <i>Chroococcus disperses</i> J. Jaafari, K. Yaghmaei (Iran)	225
Characteristics and mechanisms of molybdenum(VI) adsorption by drinking water treatment residue Jian-jun Lian, Mei Yang, Bo Chen, Shi-sheng Wang, Tian-ran Ye, Dong-dong Zheng, Chuan-rui Jiang (China)	235
Removal of iron (II) from wastewater in oil field using 3-(p-methyl) phenyl-5-thionyl-1,2,4-triazoline assembled on silver nanoparticles E.M.S. Azzam, S.A. Ahmed, H.H. Mohamed, M.A. Adly, E.A.M. Gad (Egypt)	244
Selective adsorption of heavy metals (Co ²⁺ , Ni ²⁺ and Cr ³⁺) from aqueous solutions onto natural marne clay K. Tizaoui, B. Benguella, B. Makhoukhi (Algeria)	252
Synthesis of polyacrylonitrile/graphene oxide nanocomposite for removal of Cd(II) and Pb(II) from aqueous solutions A.A. El-Zahhar (Saudi Arabia, Egypt), K.S. Al-Namshah, N.S. Awwad (Saudi Arabia)	260
Macrophytes as potential indicator of heavy metals in river water A. Yasar, T. Farooq, A.B. Tabinda (Pakistan), M.T. Sohail (China, Pakistan), Y. Mahfooz, A. Malik (Pakistan)	272
Biosorption of Cu(II) from aqueous solutions by the residues of cider vinegar as new biosorbents: comparative study with modified citrange peels M. Turkman, N. Moulai-Mostefa, Y. Zouambia (Algeria)	279
Performance evaluation of agro-based adsorbents for the removal of cadmium from wastewater S. Ayub (India), A.A. Mohammadi, M. Yousefi, F. Changani (Iran)	293
Adsorption properties of iron-loaded composite resin for chromium (VI) Xu Zhang, Wenhong Li, Dong Li, Yong Gang (China)	300
Efficient removal of azo dyes from water with chitosan/carbon nanoflower as a novel nanocomposite synthesized by pyrolysis technique M. Kafil (Finland, Iran), S.B. Nasab, H. Moazed (Iran), J. Jokiniemi, A. Lähde, A. Bhatnagar (Finland)	308
Polyaniline-TiO ₂ /graphene nanocomposite: an efficient catalyst for the removal of anionic dyes R. Mohammadi, B. Massoumi, F. Galandar (Iran)	321
Magnetized algae-silica hybrid from <i>Porphyridium</i> sp. biomass with Fe ₃ O ₄ particle and its application as adsorbent for the removal of methylene blue from aqueous solution Buhani, F. Hariyanti, Suharso, Rinawati, Sumadi (Indonesia)	331
Degradation of ibuprofen in the photocatalytic process with doped-TiO ₂ as catalyst and UVA-LED as existing source N. Shafeei, G. Asadollahfardi, G. Moussavi, M. Mashhadi Akbar Boobar (Iran)	341

Preparation of Fe(III)-Salen-grafted Fe ₃ O ₄ magnetic composites and their degradation of 2,4,6-trichlorophenol via Fenton-like reaction under visible light Le-Yi Weng, Yu-Fei Wang, Hao-Yu Shen, Mei-Qin Hu (China)	353
Biostimulation and bioaugmentation for the enhanced atrazine degradation in semi-saline medium M. Dehghani, M. Nozari, M.R. Samaei, M. Ansari Shiri (Iran)	364
Magnetic Fe-doping g-C ₃ N ₄ /graphite: the effect of supporters and the performance in Fenton-like reactions Jianqing Ma, Ziheng Huang, Hao Xi, Yuezhong Wen (China)	371
Author Index	381