

## Contents

### Volume 97

Influence of operation conditions on the performance of pilot-scale vacuum membrane distillation (VMD)	
Yonghyun Shin, Jihyuk Choi, Youngkyu Park, Yongjun Choi, Sangho Lee (Korea) .....	1
Improvement of membrane distillation performance through enhancement of the heat retaining capacity	
of the heat storage tank using phase change material	
Seung-Hyun Kim, Hwan Kyu Lim (Korea) .....	8
Analysis of silica fouling in membrane distillation using response surface methodology	
Yongsun Jang, Hyeongrak Cho, Yonghyun Shin, Jihyeok Choi, Younghoon Ko,	
Yongjun Choi, Sangho Lee (Korea) .....	14
Modeling and application of direct contact membrane distillation for fluoride removal	
from aqueous solutions	
M.M. Damtie, June-Seok Choi (Korea) .....	23
Bacterial cell numbers and community structures of seawater biofilms depend on the attachment substratum	
S.A. Yap, G. Scarascia, Pei-Ying Hong (Saudi Arabia) .....	41
Applicability of short-term accelerated biofouling studies to predict long-term biofouling accumulation	
in reverse osmosis membrane systems	
H. Sanawar, A. Siddiqui, Sz.S. Bucs, N.M. Farhat (Saudi Arabia), M.C.M. van Loosdrecht,	
J.C. Kruithof (The Netherlands), J.S. Vrouwenvelder (Saudi Arabia, The Netherlands) .....	72
Effects of membrane and operational features on biofouling in a pressure retarded osmosis process	
Taek-Seung Kim, Pengfei Sun, Yong-Gyun Park, Hee-Deung Park (Korea) .....	79
Evaluation of critical flux and cleaning efficiency for electrospun nanofiber microfiltration membrane	
Younghoon Ko, Yongjun Choi, Youngsun Jang, Jihyeok Choi, Sangho Lee (Korea) .....	87
Opportunities of improvement of the MED seawater desalination process by pretreatments	
allowing high-temperature operation	
B. Ortega-Delgado (Spain, Italy), L. García-Rodríguez, D.-C. Alarcón-Padilla (Spain) .....	94
Modelling and experimental design of a stagnant film crystalliser for freezing desalination treatment	
of seawater using sweating steps and non-direct freezing	
R.N. Mohammed, S. Abu-Alhail, A.N.A. Hamdan (Iraq) .....	109
Evaluation of chemical washing for granular activated carbon during drinking water treatment	
Hyounghmin Woo (USA), Hyun-Chul Kim, Sangje Lee, Sung Kyu Maeng (Korea) .....	117
Evaluation of a natural coagulant in the polishing treatment of swine slaughterhouse wastewater	
R. Bortolatto, D.C. Lenhard, A.K. Genena (Brazil) .....	126
The existence and role of ammonia-oxidizing archaea in full-scale wastewater treatment plants	
H. Kurt (Turkey), M.Ö. Çelik (Germany), M. Kumru, A.T. Akarsubaşı (Turkey) .....	133
Effects of pH and salinity on the separation of magnesium and lithium from brine by nanofiltration	
Yan Li, Youjing Zhao, Min Wang (China) .....	141
Reduction of oil, COD and turbidity of Kermanshah oil refinery effluent	
using modified nano-zeolite by bismuth and iron	
M. Mohamadi, F. Salimi, S. Sadeghi (Iran) .....	151
Defluoridation using hybrid clay – influence of process conditions and modeling	
R. Natarajan (Oman), R. Manivasagan (India), F. Al Qasmi (Oman) .....	158
Contribution of hydrological modeling to the water resources assessment	
using soil-moisture accounting model: the case of the Wadi Taria (Macta basin, NW Algeria)	
Y. Anouar, D. Yebdri, M. Errih (Algeria) .....	164
Mefenamic acid stability and removal from wastewater	
using bentonite-supported nanoscale zero-valent iron and activated charcoal	
S. Sulaiman, T. Shahwan (Palestinian Authority) .....	175
Experimental study on removal of mercury in gas field water	
Hong Jiang, HongYu Pu (China) .....	184

Fabrication and characterization of pyrophyllite-based ceramic membranes: filtration experiments with pure water, bovine serum albumin solution, and oil-in-water emulsion Eun-Hye Sim, Jin-Kyu Kang, Seung-Chan Lee, Nag-Choul Choi, Song-Bae Kim, Cheon-Young Park (Korea) .....	191
Fabrication of a nanofiber membrane functionalized with molecularly imprinted polymers for humic acid removal from peat water M.A. Zulfikar, I. Afrianingsih, M. Nasir, N. Handayani (Indonesia) .....	203
Synthesis of chitosan-SnO <sub>2</sub> nanoparticles biocomposite for dispersive micro-solid phase extraction of iron in environmental and wastewater samples and its determination by microvolume spectrophotometric detection R. Mirzajani, N. Pourreza, J. Burromandpiroze (Iran) .....	213
Comparative study on the electrocatalytic performance of different catalysts supported on activated carbon particle electrodes in a three-dimensional electrode cell Gui-Ping Cao, Ya-Feng Zhuang, Li Wang (China) .....	225
Changes of PAHs and C humic fractions in composts with sewage sludge and biochar amendment M. Kopeć, B. Smreczak, A. Ukalska-Jaruga, M. Mierzwa-Hersztek, K. Gondek (Poland) .....	234
Electrochemical denitrification using carbon cloth as an efficient anode E. Hoseinzadeh, A. Rezaee, S. Fazeli (Iran) .....	244
Graft copolymerization of methyl acrylate onto date palm fiber and its application in the removal of chromium(III) from water A.M. Abulkibash, N.M. Osman, F.A. Abuilaiwi (Saudi Arabia) .....	251
Fe <sub>3</sub> O <sub>4</sub> magnetic nanoparticles as a catalyst of oxone for the removal of a typical amino acid Cheng Liu, Meiqi Zhao, Siyuan He, Zhen Cao, Wei Chen (China) .....	262
Preparation of NH <sub>2</sub> -SH-GO/MWCNTs composite for simultaneous removal of Pb(II), Zn(II) and phenol from aqueous solution Lili Jiang, Chuantong Li, Haitao Yu, Zongshu Zou, Fengman Shen, Xingang Hou (China) .....	272
Cyanide adsorption from aqueous solution using mesoporous zeolite modified by cetyltrimethylammonium bromide surfactant F. Papari, S. Sahebi, E. Kouhgardi, R. Behresi, S. Hashemi, G. Asgari, S. Jorfi, B. Ramavandi (Iran) .....	285
Chitosan anchored zinc oxide nanocomposite as modified electrochemical sensor for the detection of Cd(II) ions G. Padmalaya, B.S. Sreeja, P. Senthil Kumar, M. Arivanandhan (India) .....	295
TiO <sub>2</sub> and modified TiO <sub>2</sub> /Fe on photocatalytic reduction of Hg <sup>2+</sup> using artificial and solar radiation A.L.S. Coelho, A.F. de Almeida Neto, F.F. Ivashita, G.G. Lenzi, L.M.M. Jorge, O.A.A. dos Santos (Brazil) .....	304
Dual sensing of Hg <sup>2+</sup> in water by a new naked-eye rhodamine base optical probe S. Rouhani (Iran, USA), M. Mahdiani, P. Rouhani (Iran) .....	315
Preparation of starch sulfate resin and its adsorption performance for malachite green Lei Guo, Yuanchao Cao, Guiying Li, Junshan Liu, Ling Han, Hanlin Zhang (China) .....	321
Equilibrium and kinetics study of reactive dyes removal from aqueous solutions by bentonite nanoparticles A. Naghizadeh, M. Kamranifar, A.R. Yari, M.J. Mohammadi (Iran) .....	329
Optimization, kinetics, equilibrium isotherms, and thermodynamics studies for Congo red dye adsorption using calcium alginate beads immobilized with dual adsorbent ( <i>Neurospora crassa</i> dead fungal biomass and wheat bran) P. Vairavel, V. Ramachandra Murty (India) .....	338
Author Index .....	363