

**Issues 1–2**

**Selected papers presented at EuroMed 2008, Desalination for Clean Water and Energy**

**Cooperation among Mediterranean Countries of Europe and the MENA Region**

**9–13 November 2008, King Hussein Bin Talal Convention Center, Dead Sea, Jordan**

Ultrafiltration pretreatment to reverse osmosis for seawater desalination — three years field experience in the Wangtan Datang power plant M. Busch (Rheinmünster, Germany), R. Chu (Shanghai, China), U. Kolbe (Wesseling, Germany), Q.Q. Meng and S.J. Li (Tang Shan, China) .....	1
Optimum RO system design with high area spiral-wound elements C. Bartels, M. Hirose, S. Rybar and R. Franks (Oceanside, CA 92058, USA) .....	21
Hybrid growth membrane bioreactor (HG-MBR): The indirect impact of sludge retention time on membrane fouling W. Ying, M. Herzberg, F. Yang (Beer Sheva), A. Bick (Jerusalem, Ramat-Gan) and G. Oron (Beer Sheva, Israel) .....	27
Characterization of nanoscale zero valent iron modified by nonionic surfactant for trichloroethylene removal in the presence of humic acid: A research note Y.-C. Lee, C.-W. Kim (Daejeon), J.-Y. Lee (Gyeonggi-do), H.-J. Shin (Gwangju) and J.-W. Yang (Daejeon, Korea) .....	33
Effect of antiscalants for inhibition of calcium sulfate deposition in thermal desalination systems N.N. Al-Mutairi, F.A. Aleem and M.I. Al-Ahmad (Riyadh, Saudi Arabia) .....	39
Determination of the selectivity coefficient of the CMX cationic membrane at various ionic strengths Ch. Hannachi (Manar), M. Ben Sik Ali (Soliman) and B. Hamrouni (Manar, Tunisia) .....	47
Boron removal by Donnan dialysis M. Turek, B. Bandura-Zalska and P. Dydo (Gliwice, Poland) .....	53
Boron removal from dual-staged seawater nanofiltration permeate by electrodialysis M. Turek, P. Dydo and B. Bandura-Zalska (Gliwice, Poland) .....	60
MFI–UF constant pressure at high ionic strength conditions S.G. Salinas Rodríguez, B. Al-Rabaani, M.D. Kennedy, G.L. Amy and J.C. Schippers (Delft, The Netherlands)....	64
Effect of hydrochloric acid on the transport properties of tin through ion-exchange membranes M. García-Gabaldón, V. Pérez-Herranz, J. García-Antón and J.L. Guiñón (Valencia, Spain) .....	73
Effective depth, initial head loss and backwashing criteria as the key factors of burned oil palm shell (BOPS) granular filtration A. Jusoh, A. Nora'aini (Kuala Terengganu), A.G. Halim (Selangor) and W.N. Norsani (Kuala Terengganu, Malaysia).....	80
Evaluation on different forms of <i>Moringa oleifera</i> seeds dosing on sewage sludge conditioning K.T. Wai, A. Idris, M.M.N. Megat Johari, T.A. Mohammad, A.H. Ghazali (Serdang) and S.A. Muyibi (Kuala Lumpur, Malaysia) .....	87
Utilization of floc characteristics for the evaluation of seawater coagulation process S.-H. Kim, J.-S. Yoon (Masan) and S. Lee (Seoul, Korea) .....	95
The advantages of NF desalination of brackish water for sustainable irrigation: The case of the Arava Valley in Israel A. Ghermandi and R. Messalem (Beer Sheva, Israel).....	101
Cleaning clay from fouled membranes M.W. Armstrong, S. Gallego and S.P. Chesters (Winsford, UK) .....	108
The effect of temperature and impregnation ratio on the active carbon porosity N. Bouchemal, M. Belhachemi, Z. Merzougui and F. Addoun (Algiers, Algeria) .....	115

Optimization of inline coagulation in integrated membrane systems: A study of FeCl <sub>3</sub>	
S.S.A. Tabatabai, S.I. Gaulinger, M.D. Kennedy, G.L. Amy and J.C. Schippers (Delft, The Netherlands).....	121
Salt production from brine of desalination plant discharge	
F. Alberti, N. Mosto and C. Sommariva (Abu Dhabi, UAE).....	128
An approach to theoretical prediction of permeate flux decline in ultrafiltration	
M.-C. Vincent-Vela (Valencia, Spain), E. Bergantiños-Rodríguez (Havana, Cuba), S. Álvarez-Blanco and J. Lora-García (Valencia, Spain) .....	134
Prediction of ultrafiltration permeate flux decline by means of a shear induced diffusion model with empirical estimation of the gel layer concentration	
M.-C. Vincent-Vela, S. Álvarez-Blanco, J. Lora-García (Valencia, Spain) and E. Bergantiños-Rodríguez (Havana, Cuba).....	139
Linearization of ultrafiltration models: analysis of experimental data from ultrafiltration tests	
M.-C. Vincent-Vela, S. Álvarez-Blanco, J. Lora-García (Valencia, Spain) and E. Bergantiños-Rodríguez (Havana, Cuba).....	144
Pilot plant for wastewater treatment involving septic pit and biological filtration on sand of dunes of the Algerian Sahara	
Y. Touil (Ouargla, Algeria), S. Taha (Rennes, France), R. Issaadi (Blida, Algeria) and A. Amrane (Rennes, France ) .....	148
Novel pilot plant-scale graywater treatment system using titanium ball, membrane and advanced oxidation process	
J. Kim, I. Song, S. Lee, P. Kim, M. Lee and Y. Choung (Seoul, Korea) .....	153
Degradation of polycyclic aromatic hydrocarbons in soil with sewage sludges	
E. Stanczyk-Mazanek, L. Stepienak and U. Kepa (Częstochowa, Poland).....	158
Assessment of the world fresh water resources through energy requirements in desalination technologies	
A. Martínez, J. Uche, A.A. Bayod (Zaragoza, Spain) and C. Rubio (Morelia, Mexico) .....	165
Cleaning ultrafiltration membranes by different chemical solutions with air bubbles	
J.M. Arnal, B. García-Fayos, M. Sancho and G. Verdú (Valencia, Spain).....	175
The role of reaction time in organic phase on the preparation of thin-film composite nanofiltration (TFC-NF) membrane for dye removal	
A. Nora'aini, A. Norhidayah and A. Jusoh (Terengganu, Malaysia).....	181
Optimal systems engineering and control co-design for water and energy production: A European project	
A. Gambier, M. Wolf, T. Miksch, A. Wellenreuther and E. Badreddin (Mannheim, Germany).....	192
Control system design of reverse osmosis plants by using advanced optimization techniques	
A. Gambier, A. Wellenreuther and E. Badreddin (Mannheim, Germany) .....	200
The role of membrane distillation/crystallization technologies in the integrated membrane system for seawater desalination	
Sulaiman Al Obaidani (Al-Khod, Oman and Rende, Italy), E. Curcio, G. Di Profio and E. Drioli (Rende, Italy).....	210
Application of salinity gradient power for brines disposal and energy utilisation	
M. Ahmad and P. Williams (Swansea, UK).....	220
Flexibility study for an MSF desalination plant	
E.E. Tarifa, S. Franco, D. Humana (San Salvador de Jujuy) and S. Mussati (Santa Fe, Argentina).....	229
Heat and mass transfer in a horizontal pipe absorber for a heat transformer	
D. Juárez-Romero (Morelos, Mexico), N. Shah (London, UK), F. Pliego-Solórzano, J.A. Hernández, J. Siqueiros and A. Huicochea (Morelos, Mexico).....	238
IMS SWRO Kindasa — Two years of operational experience	
A.H. Gulamhusein, A.S. Al Sheikh Khalil, I.A. Fatalah (Jeddah, Saudi Arabia), R. Boda and S. Rybar (Glasgow, Scotland, UK) .....	245
Fujairah SWRO — management of membrane replacement	
S.S. Mitra, M.K. Sharma (Fujairah, UAE), S. Rybar, C. Bartels and L. Pelegrin (Dubai, UAE) .....	255
Comparison of 3DTA and VSEP systems during the ultrafiltration of sweet whey	
C. Hodúr, Sz. Kertész, J. Csanádi and G. Szabó (Szeged, Hungary).....	265
Preliminary evaluation of a hydrophilic microfiltration membrane in treating high strength wastewater	
T.A. Mohammad, M.M.N. Megat Johari and L.A. Abdul Ghani (Selangor, Malaysia) .....	272

**Issue 3**

Wireless water resources management for remote installations S.A. Avlonitis, M. Pappas, K. Moutesidis (Psaxna Evia), A. Chalaris and I. Birbilis (Fira, Greece).....	281
MTBE removal from contaminated water by the UV/H <sub>2</sub> O <sub>2</sub> process R. Alnaizy and T.H. Ibrahim (Sharjah, UAE).....	291
Surface modification of nanofiltration membrane for reduction of membrane fouling M.N. Abu Seman, D. Johnson, S. Al-Malek and N. Hilal (Nottingham, UK) .....	298
A new multi-effect desalination system with heat pipes by falling film evaporation in the vacuum P. Gao (Jiangsu and ShaanXi), L. Zhang and H. Zhang (ShaanXi, China) .....	306
Study on heat transfer of falling film evaporation characteristics on heat pipes in negative pressure P. Gao (Jiangsu and ShaanXi), L. Zhang and H. Zhang (ShaanXi, China) .....	311
Removal of copper from aqueous solution by <i>Retama raetam</i> Forssk. growing in Algerian Sahara A. Cheriti, M.F. Talhi (Bechar Algeria), N. Belboukhari (Bechar Algeria, and Marseille, France), S. Taleb (Sidi Bel Abbes, Algeria) and C. Roussel (Marseille, France) .....	317
A review and comparison of solar distillation: Direct and indirect type systems H.S. Aybar and H. Assefi (Mersin, Turkey).....	321
Performance of hydrophobic ultrafiltration membranes in the treatment and protein recovery from palm oil mill effluent (POME) A.W. Mohammad, P.T. Yap and T.Y. Wu (Selangor, Malaysia) .....	332
Author Index.....	339

