

Contents

Volume 76

| | |
|---|-----|
| Effect of cooling the glass cover of an inclined solar water distillation system under the climatic condition of Riyadh, Saudi Arabia P.O. Agboola, I.S. Al-Mutaz (Saudi Arabia) | 1 |
| Performance analysis of cascaded membrane distillation arrangements for desalination of brackish water A. Najib, J. Orfi, E. Ali, A. Ajbar, M. Boumaaza, K. Alhumaizi (Saudi Arabia) | 19 |
| Soft computing method for modeling and optimization of air and water gap membrane distillation – a genetic programming approach A. Asadi Tashvigh, B. Nasernejad (Iran) | 30 |
| Membrane distillation and reverse osmosis based desalination driven by geothermal energy sources J. Orfi, A. Najib, E. Ali, A. Ajbar, M. AlMatrafi, M. Boumaaza, K. Alhumaizi (Saudi Arabia) | 40 |
| Development of a flexible tool for the integrated techno-economic assessment of renewable desalination plants M. Moser, F. Trieb, J. Kern (Germany) | 53 |
| The role of desalination in water management in southeast Spain J.C. Hernández-Sánchez, N. Boluda-Botella, J.L. Sánchez-Lizaso (Spain) | 71 |
| Co-sintered synthesis of needle-like mullite porous membrane materials Gangling Chen, Yangyan, Youzhi Guo, Liang Guo, Jianying Zhang, Xiutao Ge (China) | 77 |
| Analysis of antifouling behavior of high dispersible hydrophilic poly(ethylene glycol)/vinyl functionalized SiO ₂ nanoparticles embedded polyethylene membrane A. Akbari, R. Yegani, B. Pourabbas, A. Behboudi (Iran) | 83 |
| Preparation and performance evaluation of cellulose acetate/nanodiamond nanocomposite membrane in the treatment of pharmaceutical wastewater by membrane bioreactor H. Etemadi, R. Yegani, M. Seyfollahi, V. Babaeipour (Iran) | 98 |
| Synthesis and characterization of silver decorated polysulfone/cellulose acetate hybrid ultrafiltration membranes using functionalized TiO ₂ nanoparticles K. Sindhu Sri, A.K. Nair, P.E. Jagadeesh Babu (India) | 112 |
| Fouling behavior investigation of a thermally modified RO membrane A. Djavanrouh, T. Mohammadi, O. Bakhtiari (Iran) | 121 |
| Cultivation of aerobic granules through synthetic petroleum wastewater treatment in a cyclic aerobic granular reactor S. Taghipour, B. Ayati (Iran) | 134 |
| Track-Etch membranes: the Kazakh experience A. Kozlovskiy, M. Zdorovets, E. Arkhangelsky (Kazakhstan) | 143 |
| Characterization of antioxidant incorporated polymeric blend membrane through in situ incorporation along with surface modification S. Rajesh, Z.V.P. Murthy (India) | 148 |
| Research on the application of the modified aquatic mat pond and integrated vertical-flow constructed wetland coupling process based on luffa sponges for micro-polluted water treatment Lingwei Kong, Feng He, Shibin Xia, Dong Xu, Yi Zhang, Lu Wang, Qiaohong Zhou, Zhenbin Wu (China) | 155 |
| Effect of aeration rates on the performance of an OSA-based sludge reduction process: limitations and implications Yingying Wang (China), Sihuang Xie, P.J. Strong (Australia), Guangxue Wu (China) | 166 |
| Appraisal of Hanna lake water quality assessment, Balochistan, Pakistan A. Alamgir, M.A. Khan, S. Shahid Shaukat, Omm-e-Hany, O.I. Khan, S. Zubair (Pakistan) | 174 |
| Controlling seawater intrusion by treated wastewater recharge. Numerical modelling and cost-benefit analysis (CBA) at Korba case study (Cap Bon, Tunisia) J. Sales, K. Tamoh (Spain), J.L. Lopez-Gonzalez (Mexico), N. Galooul (Tunisia), L. Candela (Spain) | 184 |

| | |
|---|-----|
| Metal bioaccumulation in tissues of <i>Puntius sarana</i> and <i>Labeo rohita</i> and its associated risk status: A case study of Damodar River, India Z. Usmani, V. Kumar (India) | 196 |
| Nutrient dynamics of the Brahmaputra (tropical river) during the monsoon period A. Das (India), F. Munoz-Arriola (USA), S.K. Singh, P.K. Jha, M. Kumar (India) | 212 |
| High turbid water treatment by Kenaf fibers: a practical method for individual water supply and remote area M. Mahdavi, A.H. Mahvi, H. Pourzamani, A. Fatehizadeh, A. Ebrahimi (Iran) | 225 |
| Adsorption of endocrine disruptor bisphenol A by carbonaceous materials: influence of their porosity and specific surface area A.C. Arampatzidou, D. Voutsas, E.A. Deliyanni, K.A. Matis (Greece) | 232 |
| Synthesis of magnetic nanohybrid of Fe ³⁺ -TMSPT-MNPs as a novel adsorbent: Optimization of Cr(VI) adsorption by response surface methodology N. Nikraftar, F. Ghorbani (Iran) | 241 |
| Biотemplated fabrication of hierarchically γ-AlO(OH)/CuMgAl-LDH for removal of Congo red Chaochao Xu, Jia Li, Hongyan Li, Min Zuo, Peng Song (China) | 254 |
| Removal of nitrate from aqueous solution using activated carbon modified with Fenton reagents M. Ahmadi, H. Rahmani, B. Ramavandi, B. Kakavandi (Iran) | 265 |
| Kinetics and thermodynamics of adsorption for arsenate ions on the hierarchical porous adsorbent of α-Fe ₂ O ₃ /Fe ₃ O ₄ /C with bamboo bio-template Yanhong Li, Yinian Zhu, Zongqiang Zhu, Wenhui Wei, Huan Deng, Yanpeng Liang, Xuehong Zhang, Dunqiu Wang (China) | 276 |
| Biodegradation of 2-methylisoborneol by <i>Bacillus idriensis</i> isolated from biological activated carbon Kang Du, Beihai Zhou, Rongfang Yuan (China) | 290 |
| The use of constructed wetlands for the treatment of agro-industrial wastewater – A case study in a dairy-cattle farm in Sicily (Italy) M. Licata, T. Tuttolomondo, G. Virga, C. Leto, S. La Bella (Italy) | 300 |
| Environmental effects of brine discharge from two desalinations plants in Algeria (South Western Mediterranean) A. Belatoui, H. Bouabessalam, O.R. Hacene (Algeria), J.A. de-la-Ossa-Carretero, E. Martinez-Garcia, J.L. Sanchez-Lizaso (Spain) | 311 |
| How could wastewater reuse in China meet the national ambitious water management strategy? Wenlong Zhang, Yi Li, Chao Wang, Peifang Wang, Qing Wang, Dawei Wang (China) | 319 |

***Selected papers presented at the 3rd International Congress on
Water, Waste and Energy Management, 18–20 July 2016, Rome, Italy***

| | |
|--|-----|
| Analysis of farmers' attitude toward irrigation with desalinated brackish water in Israel's Arava Valley A. Ghermandi, T. Minich (Israel) | 328 |
| Solar-powered desalination of brackish water with nanofiltration membranes for intensive agricultural use in Jordan, the Palestinian Authority and Israel A. Ghermandi (Israel), S. Naoum, F. Alawneh (Jordan), R. Offenbach, E. Tripler (Israel), J. Safi, M. Safi (Palestinian Authority), R. Messalem (Israel) | 332 |
| Cost-effective disposal of milk whey II: recovery and purification of lactose and pure water from the diafiltration permeate stream G. Di Giacomo, F. Scimia, L. Taglieri (Italy) | 339 |
| Purification of wastewater from chlorophosphate flame retardants production process B. Cichy, E. Kuźdżał, J. Kwiecień (Poland) | 343 |
| Application of nanofiltration for concentration of sodium sulfate waste solution B. Cichy, H. Jaroszek, W. Mikołajczak, M. Nowak, B. Pisarska, P. Markowicz, T. Malinowski (Poland) | 349 |
| Utilization of spent drilling fluids in soil fertility enrichment composition J. Gluzińska, P. Rusek, K. Borowik, A. Paszek (Poland) | 358 |
| Water use efficiency of urban households in the Mediterranean region of Turkey M. Gul, M.G. Akpinar, R.F. Ceylan (Turkey) | 364 |

| | |
|---|-----|
| Urban water management network of household expectations M.G. Akpinar, M. Gul, R.F. Ceylan (Turkey) | 369 |
| LCA of different energy sources for a water purification plant in Burkina Fasso B. Amante-García, V. López Grimau, L. Canals Casals (Spain) | 375 |
| An evaluation of operation and maintenance costs of wastewater treatment plants: Gebze wastewater treatment plant sample H. Turkmenler, M. Aslan (Turkey) | 382 |
| Efficacy of a photo-catalyst towards the degradation of a pharmaceutical compound, 4-aminopyridine by application of response surface methodology S. Chakraborty, S. Dutta, R. Saha, S.C. Moi, D. Sukul, S.S. Panja (India) | 389 |
| Author Index | 398 |