



Contents Volume 314

Insight into the impacts of acid and base pre-treatment on activated carbon and biochar electrodes in flow-electrode capacitive deionization H. Jaroszek, A. Siekierka, P. Copik, A. Korus (Poland)	1
Economic analysis of a business model of basin-type building material-based solar thermal desalination device S. Poonia, A.K. Singh, D. Singh, H.L. Kushwaha (India)	16
Valorization of bovine bones for the development of bio-ceramic ultrafiltration membranes for wastewater treatment M. Mallek, H. Elfeki (Tunisia), V. Salvadó (Spain)	24
Manufacturing of cost-effective sorbent from by-product materials for treating real and simulated groundwater contaminated with antibiotics L.A. Mokif, A.A.H. Faisal (Iraq)	35
Preparation of electrospun double-layer PVDF: PMMA membrane non-woven nanofibers for desalination by membrane distillation process N.N. Safi, B.I. Waisi (Iraq)	49
Effectiveness of ultra-, nanofiltration and selected photolytic processes in removing of selected priority substances from water D. Mroczko, I. Zimoch, M. Kryczka (Poland)	59
Impact of different external resistance, substrate and salt concentration on wastewater treatment and power generation in microbial desalination cell S. Majumder, D. Istalingamurthy, B.M. Sadashiva Murthy, B.M. Prakash (India)	70
Using banana waste biochar for simultaneous removal of heavy metals from raw real wastewater from the electroplating industry E. Arriola-Villaseñor, A.N. Ardila A., R. Barrera Z. (Colombia), J. Hernández (Mexico)	88
Removal of tetracycline from aqueous solution using nano zeolite modified by Al and Fe S. Pirouzi, B. Rahimian Zarif, N. Haghazar, C. Karami (Iran)	103
Valorization of dam sediments as an adsorbent of a cationic dye, kinetic, isotherm, and thermodynamic studies D. Addad, F. Mokhtari-Belkhadem (Algeria)	110
Facile preparation, characterization and photocatalytic properties of barium carbonate nanoparticles K. Bhuvaneshwari, E. Pitchaimani, S. Anand, R. Arunadevi (India)	122
Rapid and cost-effective detection of perchlorate in water using paper-based analytical devices P. Kumar, A. Kapoor, M.K. Raghunathan (India)	130
Characterization and evaluation analysis of a crown ether as an effective sorbent for selective sorption of copper ions N.K. Qutlimurotova, D.Sh. Mirsaidova, L.K. Kozinskaya (Uzbekistan), B. Lal (India), D.Kh. Mirkhamitova, N.A. Atakulova, E.T. Berdimurodov (Uzbekistan), A. Hosseini-Bandegharai (Iran)	141
Separation of heavy metal ions from multi-component solutions using ultrafiltration enhanced with complexing polymer I. Korus (Poland)	158
Removal of total organic carbon from surface waters by Ag ₂ O/CuFe ₂ O ₄ -loaded silica media filters N. Ghasemian, A.A. Babaei, R. Jalilzadeh Yengejeh, A. Takdastan, S. Sabzali Pour (Iran)	169
Antibiotic adsorbability and economic analysis of sodium alginate/chitosan composite-modified semi-carbonized fiber Jin-ni Wu, Wenkui Mu, Wen-bin Li, Hong-yan Deng, Tianjiang Jin (China), T. Abbas (Iran), Yu-ting Song, Jia-peng Pan, Bixia Wang (China)	176

Removal of cesium by batch and fixed bed column methods using a new nano-composite based on O-carboxymethyl chitosan and nano copper potassium hexacyanoferrate D.A. Fadel, M.M. Azab, A.M. Metwally, F.A. Abdelghany, H.A. ElKhawaga (Egypt)	185
Synthesized and characterization of calcium alginate beads as biosorbent of pollutants dye and phosphate from aqueous solution S. Ben Ayed (Tunisia), L. Aloui (France), L. Mansour (Saudi Arabia), F. Ayari (Tunisia)	199
Study and construction of a sustainable solar photocatalytic reactor: indigo blue food dye degradation C.T.A. Filho, M.C. de Almeida, F. Pereira de Sá, T. Ferreira de Oliveira (Brazil)	210
Degradation of Eriochrome Black T by heterogeneous electro-Fenton: a comparison study H. Belbel, R. Delimi, Z. Benredjem, K. Barbari, L. Rabah (Algeria)	219
Removal of Brilliant Green dye in aqueous solution using synthetic coagulation and flocculation technique S.K. Muniyasamy (India), A.A. AlObaid (Saudi Arabia), I. Warad (Palestinian Authority, UK), G. Ravindiran (India)	231
Preparation of composite of bentonite clay and <i>Azadirachta indica</i> (neem) leaves powder for the removal of Congo red from an aqueous solution A. Manzoor (Pakistan), N. Elboughdiri (Saudi Arabia, Tunisia), S. Zafar (Pakistan), M.I. Khan (UAE), S. Manzoor, J. Suleman, A.M. Zafar, S. Aslam (Pakistan), R. Rajput (India), A. Shanableh (UAE), R. Shuja, F. Ahmad, S. Shahida (Pakistan)	241
Nano-clay modified multi-walled carbon nanotube composite as a potential adsorbent towards Eriochrome Black T: a comparative study of isotherm and kinetic models S. Sultana, K. Rehan, I. Rehan (Pakistan), M.T.C. Arellano (Peru), R.O. Farqad, M.L. Shaghnaab (Iraq), A.M. Aljuwayid (Saudi Arabia), S. Nawaz, R. Gul (Pakistan)	251
Photo-assisted assembly of MgO/Fe ₂ O ₃ composites for photocatalytic Rhodamine B degradation and their mimicking activity M. Utaiyachandran (India), K. Durairaj, A. Jagadeesh Kumar, S. Sivakumar (Korea), V. Palanivel, P. Senthilkumar (India)	263
Biosorption study of basic dye using aerial part of widely growing weed <i>Chenopodium album</i> N. Rai, D.K. Sinha, S. Soni, S. Kumar, S. Sharma, J. Mittal, C. Arora (India)	276
Cluster deployment of sequencing for carbon capture, usage as water filters and storage at Yulin, Shaanxi Province, China Lin Li, Jinfeng Ma, Hao Jin, Haofan Wang, Yan Li, Guiwen Wang, Jun Gao, Yongping Liu, Yanmin Xiu (China)	286
Controllable robust optimization of ship concept design for quantifying uncertainty of marine water quality forecasts Quanmi Liao, Yang Wang, Weixing Liu, Zhiyang Zhang, Feigang Tan (China)	295
Application of simulated annealing algorithm in multi-objective allocation optimization of urban water resources Fu Wang, Weide Chun, Wenbin Wu (China)	304
Application of inductively coupled plasma optical emission spectrometer in water quality monitoring Yansheng Wu, Xiong Gao, Yan Li (China)	314
Underwater remotely operated vehicle control system with optimized PID based on improved particle swarm optimization Weixing Liu, Zihan Xia, Linyan Wu, Guangkuo Guo, Cheng Zhu, Zhiyang Zhang, Lin Cui (China)	322
Air gap fluid flow characteristics of high-power water-cooled submersible motors Shibin Zhang, Huayang Ren, Dingtang Zhang, Shuai Wang, Huyi Zhang, Rui Luo, Yunbing Feng (China)	330
Combining pore structure types and reservoir forming limits to determine the grading evaluation criteria of Chang 7 tight oil reservoirs in Jiyuan Area, Ordos Basin Jiangshan Li, Quanpei Zhang, Yong Li, Yong Huo, Chun Li, Duoduo Zhang, Kun Lin, Caiping Yi, Yalan Xue (China)	339
Multiple linear regression analysis of vertical distribution of nearshore suspended sediment Wenjin Zhu, Wei Yu, Xiaotian Dong, Zigui Jin, Shunqiu Hu (China)	352
Experimental study on the influence of CO ₂ concentration on the crystallization law of wastewater drainage pipes Yun Li, Zhenjiang Cui, Shiyang Liu, Xuefu Zhang, Feng Gao (China)	359

The analysis on the influence of heavy rain and flood on the design flood of Liqingdian Hydrological Station Yanhong Wu, Hongfei Zhu, Tao Luo, Jie Liu, Yaobin Zhang (China)	368
Distribution characteristics and seasonal seawater changes of fish eggs and larvae in the Northern South China Sea Chuqian Lu, Minxia Zhang, Tao Liu, XiaoJuan Peng, Xiaoyu Zhang, Xiuqin Li (China)	376
Design of intelligent water transport logistics management system based on cloud computing Jin Wang (China)	384
Optimized design of tidal current turbine airfoil for water efficiency Zhiyang Zhang, Bo Wu, Yongqing Liang, Jiaju Tang, Jun Li, Weixing Liu, Shaohua Chen, Lin Cui (China)	395
Author Index	406