



Contents

Volume 220

Hydrodynamic study on horizontal-axis tidal current turbine with coupling motions Gang Xu, Zhen Chen, Mingliang Hu, Shuqi Wang (China)	1
Carbon emission performance in logistics in the Yellow River basin Zhao-Xian Su, Guo-Xing Zhang, Long Xu (China), Gong-Han Geng (UK), Yi-Cun Wang (China), I. Ali (Pakistan)	14
Relationship between meteorological and hydrological drought in the mountain areas: a study in the upper reaches of Ying River, China Yongxiao Cao, Jianping Yuan, Huaibin Wei (China)	22
Thermodynamic and economic analysis of reverse osmosis and multi-effect thermal vapor compression desalination systems: a comparative study Ziyin Liu (UK), Shijun Zhang (China), Z.J. Kilburn (Estonia)	36
Analysis of diverse methods of water quality evaluation according to practical application Don-Woo Ha, Jeong-Soo Kim, Gwang-Yong Ko, Seok-Gyu Kim (Korea)	53
Preparation of hydrophilic nanofiltration membranes using κ -Carrageenan as additive and application to treatment of anionic colored wastewater S. Zeinali, A. Akbari (Iran)	63
A study of the factors that contribute to the corrosion process in produced water samples: a multivariate analysis approach A.K.S. Braz, L.M. Correia, J.C.S. dos Santos, F.B. Romero, C.B. Vidal, A.C.A. de Lima, R.F. do Nascimento (Brazil)	73
Simultaneous removal of organic carbon, nitrogen and sulfate, electricity generation and microbial community in anaerobic fluidized bed-microbial fuel cell Qin Cai, Lan Li, Changmiao Lai, Wei Liao, Youxian Gao, Ping Yang (China)	83
A comparison between anaerobic and aerobic biological treatment for real wastewater containing high concentration of dimethylamine: case study of wastewater from artificial leather production E. Najafi Savadroudbari, N. Fallah, L. Davarpanah, B. Nasernejad (Iran)	93
Comparison study of COD and ammoniacal nitrogen adsorption on activated coconut shell carbon, green mussel (<i>Perna viridis</i>), zeolite and composite material in stabilized landfill leachate treatment A. Detho (Malaysia, Pakistan), Z. Daud, M.A. Rosli, H. Awang, M.B. Bin Ridzuan, A. Abdul Halim, H.A. Bin Tajarudin (Malaysia)	101
Combination of chemical and biological processes for the treatment of tannery effluent of Fez city in Morocco K. Elkarrach, M. Merzouki, O. Laidi, A. Omor, S. Biyada, M. Benlemlih (Morocco)	109
Study on hydrodynamic characteristics and backwashing efficiency of three types turbines of axial dynamic backwashing technology for oilfield wastewater filter Zhen Wei, Yanxin Yu, Yujun Yi, Zhongchen Yu, Junfeng Li, Qiugang Wang (China)	116
Remediation of oil refinery wastewater implementing functionalized mesoporous materials MCM-41 in batch and continuous adsorption process K.R. Kalash, T.M. Albayati (Iraq)	130
Arsenate removal by chitosan iron oxyhydroxide beads: preparation, characterization, and adsorption studies J.R. González-Rodríguez, O. Rojas-Carrillo, L.G. Romero-Esquivel (Costa Rica)	142
Comparative removal of nickel ions from aqueous solution using adsorbents derived from agricultural biomasses: a kinetic modeling Á. Villabona-Ortiz, C. Tejada-Tovar, Á.D. González-Delgado (Colombia)	152

Removal of nickel from the actual electrolytic wastewater by bentonite supported nanoscale zero valent iron Bo Zhang, Bohong Zhu, Xiong Wang, Songbai You, Bo Wang (China)	159
Application of a chitosan bimetallic nanocomposite for the simultaneous removal of cadmium, nickel and lead from aqueous solution C. van der Horst, B. Silwana, M. Makombe, E. Iwuoha, V. Somerset (South Africa)	168
Effective removal of Cd(II) Pb(II) and Cr(VI) from aqueous solution using <i>Bauhinia variegata</i> leaves after chemical modifications S.M. Salman, M. Zahoor, A. Majeed, M. Wahab, D. Shahwar, S.N. Shah (Pakistan), E. Khan (Bahrain)	182
A sustainable material for removal of heavy metals from water: adsorption of Cd(II), Pb(II) and Cu(II) using kinetic mechanism R.M. Muthuraman, A. Murugappan, B. Soundharajan (India)	192
Removal mechanisms of Cd(II) and Pb(II) from aqueous solutions using straw biochar: batch study, Raman and X-ray photoelectron spectroscopy techniques Qingzhou Zhao (Australia, China), Yanfen Wang (China), Zhihong Xu (Australia), Zhisheng Yu (China)	199
Novel thin film nanocomposite forward osmosis membrane embedded with amine functionalized UiO-66 metal organic frameworks: as an effective way to remove heavy metal Cr ³⁺ ions T. Eghbalazar, A. Shakeri, A. Abbasi (Iran)	211
Surface modification of activated carbon via HCl or NH ₄ OH treatment to enhance the removal of Cr(VI) from aqueous solution M.R.R. Ferrer, Jin-Kyu Kang, Jae-Woo Choi, Chang-Gu Lee, Seong-Jik Park (Korea)	221
Design and preparation of novel functional resin D301-g-polyvinylimidazole for recovering Au(III) from aqueous solution Feng Gao, Wen-Hua Gao, Xiao-Qin Feng, Tuo-Ping Hu, Jian-Feng Gao, Fu-Qiang An (China)	232
Iron removal efficiency in irrigation water by a zeolite added to sand media filters L.A. Lima, Y.F. Silva (Brazil), P.L.T. Lima (USA)	241
Combination of zero-valent iron and persulfate radical under ultraviolet irradiation for enhanced phenol degradation M. Salehzadeh, A. Nejaei, M.E. Ramazani, M. Shokri, P. Alizadeh Eslami (Iran)	246
Photodegradation of sulfonamides in UV/ozone, UV/oxidant and UV/ozone/oxidant systems: comparison in terms of mineralization efficiency and power consumption An-Min Wang, Chung-Hsin Wu, Syuan-Ru Jhu, Cheng-Di Dong, Chiu-Wen Chen, Yi-Li Lin, Guan-Yu Su, Yi-Ting Tsai (Taiwan)	255
The feasibility of combining an electrocoagulation process and a biological treatment for the degradation of cutting oil emulsions A. Dermouchi (Algeria), T. Lendormi (France), S. Arris, R. Zerdazi (Algeria), J.-L. Lanoiselle (France), M. Bencheikh-Lehocine (Algeria)	265
Removal of chlorophyll-a and microcystin-LR from spiked water using poly(ethylenediamine)-grafted mesoporous zeolite Seung-Min Park, Bo-Mi Kim, Sangho Lee, Younghee Kim, Chan-gyu Park (Korea)	277
Photocatalytic degradation of anthracene using titanium dioxide-NPs doped with iron in the presence of UV radiation from the aqueous solution: by-products determination M. Khodadadi Saloot, S.M. Borghei, R.H.S.M. Shirazi (Iran)	287
Adsorption and desorption studies of phenolic compounds on hydroxyapatite-sodium alginate composite R. Benaddi, F. Aziz, K. El Harfi, N. Ouazzani (Morocco)	297
FeAlPO-34 molecular sieves with controllably high iron contents: ionothermal synthesis and catalytic performance in phenol hydroxylation Liang Zhou, Hongjian Li, Jinqu Wang, Runlin Han (China)	309
Application of magnetic activated carbon as a catalyst in catalytic ozonation process (COP) for removal and mineralization of humic acid from aqueous solution M.A. Zazouli, M. Roohafzaee, Y.D. Shahamat, M. Yousefi (Iran)	316
Comparative study of photocatalytic activity of nanocomposites prepared from biological wastes and ZnO nanoparticles C. Djilani, R. Zaghoudi, F. Djazi, A. Lallam, B. Bouchekima (Algeria), P. Magri (France)	329
Sequestration of crystal violet from aqueous solution using ash of black turmeric rhizome A. Patel, S. Soni, J. Mittal, A. Mittal, C. Arora (India)	342

A novel macrofungus for the biosorption of hazardous dye and its reuse potential: experimental design approach using response surface methodology O. Kaplan Ince, H. Alp, M. Ince, A. Onal (Turkey)	353
Mesoporous carbons as adsorbents to removal of methyl orange (anionic dye) and methylene blue (cationic dye) from aqueous solutions K. Jedynak, M. Repelewicz, K. Kurdziel, D. Wideł (Poland)	363
Residence time distribution studies and modeling of rotating biological contactor reactor for decolorization of Congo red from synthetic dye wastewater P. Vairavel, V. Ramachandra Murty (India)	380
Comparative adsorption of anionic dye Congo red and purification of olive mill wastewater by chitin and their derivatives R. Belhadj Ammar, A. Labidi (Tunisia), A.M. Salaberria, J. Labidi (Spain), S. Ayadi, M. Abderrabba (Tunisia)	392
Removal of brilliant green from aqueous solution by <i>Pirus pashia</i> leaves powder as an adsorbent: equilibrium, thermodynamic and kinetics studies F. Rashida, H. Muhammad, M. Rashid, A. Niaz, A. Bibi (Pakistan)	409
Hyperbranched polysiloxane functionalized coal fly ash as an inexpensive adsorbent for removing malachite green Mengmeng Zhang, Zhaojun He, Xin Chen (China)	421
Removal of azo dyes - tartrazine, carmoisine, and allura red - from wastewater using <i>Spirulina</i> biomass-immobilized alginate beads: equilibrium, kinetics, thermodynamics, desorption, and reusability D. Saloglu, O.I. Sahin (Turkey)	431
Local iron ore identification: comparison to synthesized Fe ₃ O ₄ nanoparticles obtained by ultrasonic assisted reverse co-precipitation method for Auramine O dye adsorption S. Ben Ayed (Tunisia), H.M. Sbihi, M. Azam, S.I. Al-Resayes (Saudi Arabia), M.T. Ayadi, F. Ayari (Tunisia)	446
Author Index	459