



Contents
Volume 209

| | |
|--|-----|
| Energy and exergy analysis of a solar/hybrid humidification-dehumidification desalination system W. Abdelmoez, N.M. Sayed, E.A. Ashour (Egypt) | 1 |
| Evaluation of removing monovalent and divalent ions of brackish water in Qom Province using membrane processes of nanofiltration, reverse osmosis and hybrid system A.H. Mahvi, M. Talaeipour, J. Nouri, A.H. Hassani, R.A. Tadi (Iran) | 16 |
| Tuning the RO membranes using the spin-assisted layer by layer assembly of polyelectrolytes S. Javed (Saudi Arabia, Pakistan), I.H. Aljundi (Saudi Arabia) | 24 |
| CNTs induced irregular 2D nanosheet SnS composites as active materials of electrodes for capacitive deionization Pengxiao Liu, Ling Feng, Jing Lu, Ying Li, Bin Hou, Zhumei Sun, Xu Wang (China) | 37 |
| Protein extraction from excess sludge by thermal-acid pretreatment Jianlei Gao, Qikun Wang, Yixin Yan, Zheng Li, Wei Weng (China) | 48 |
| Electrocoagulation associated with CO ₂ mineralization applied to fluoride removal from mining industry wastewater E.M. Nigri, A.L.A. Santos, S.D.F. Rocha (Brazil) | 58 |
| Characteristics of phosphate biosorption on nanoparticles of different woody-sawdust used for controlling P runoff and a supplemental P-fertilizer A.M. Ali, A.M. Mahdy, M.Z. Salem (Egypt) | 71 |
| The use of diatometes for different water and wastewater treatment A. Yinanç (Turkey) | 82 |
| Kinetic and isotherm study of Cr(VI) biosorption from industrial effluents by biomass of dried sludge F. Kariminejad, S.B. Ghadimi, F. Rahmini, M. Haghghi, R. Akbari Sene, M.A. Zazouli, E. Sadat Heydari (Iran) | 91 |
| Investigation on the effect of ozonation process before and after coagulation on reduction in leachate pollutants M. Behnezhad, F. Hashemzadeh, A.H. Hassani (Iran) | 105 |
| Application of magnetic separation for oil spill remediation and recovery in Kuwait sea water R. Malhas, Y. Al-Ibrahim, A. Al-Meraj, H. Abdullah, A. Alshatti (Kuwait) | 114 |
| Treating Kuwait's oilfield water via conventional methods and membrane technology R.N. Malhas, S.G. Marquez, A.N. AlSalem, A.M. Al Saeedi, M.H. Badieli (Kuwait) | 121 |
| Feasibility and assessment of the phytoremediation potential of green microalga and duckweed for zeta-cypermethrin insecticide removal Ö. Yılmaz, B. Taş (Turkey) | 131 |
| Preparation and characterization of high performance anion exchange membranes for acid recovery M.I. Khan, Jinzhan Su, Liejin Guo (China) | 144 |
| A new synthesis of Fe _{1-x} -Mn _x O ₃ /PVA nanocomposites for the removal of heavy metals from water Z. Wahab, M. Nawaz, M.I. Khan, A. Bahader, A. Niaz, A. Rahim, M. Ismail, A. Ur Rehman, (Pakistan) Rongchao Jin (USA) | 155 |
| Adsorptive behavior of biochar and zinc chloride activated hydrochar prepared from <i>Acacia leucophloea</i> wood sawdust: kinetic equilibrium and thermodynamic studies S. Nirmaladevi, P.N. Palanisamy (India) | 170 |
| Evaluation of the efficiency of native plant species integrated with sand filters for greywater reclamation: a pilot study D. Prabha, G. Laxmipriya, S. Sudha, K. Sujatha (India), S. Sivakumar (Korea) | 182 |
| Effect of geometrical and operating mixing parameters on copper adsorption on zeolite NaX A. Bašić, S. Svilović (Croatia) | 197 |

| | |
|---|-----|
| Preparation and characterization of chitosan/hyaluronic acid/itaconic acid hydrogel composite to remove manganese in aqueous solution B. Taşdelen, D.İ. Çifçi, S. Meriç (Turkey) | 204 |
| Investigation of the effect of magnesium and activated carbon on the photocatalytic degradation reaction of ZnO photocatalyst M. Sait Çevik, Ö. Şahin, O. Baytar, S. Horoz, A. Ekinci (Turkey) | 212 |
| Optimization and modeling of the photocatalytic activities of a novel visible driven CNT/TiO ₂ /BiOBr/Bi ₂ S ₃ nanocomposite M. Asadpoor, M. Arjmand, M. Farhadian, M.R. Omidkhan (Iran), A.A. Zinatizadeh (Iran, South Africa) | 219 |
| A novel Al ⁰ -CNTs-Fe ₃ O ₄ for the removal of low concentration sulfamethoxazole from aqueous solution by a couple of adsorption and degradation processes Yunbo Liu, Jing Tian, Ruofan Pu, Bingqing Wang, Baohua An, Yong Liu (China) | 230 |
| Determining the best and simple intelligent models for evaluating BOD ₅ of Ahvaz wastewater treatment plant M. Ghaed Rahmati, P. Tishehzan, H. Moazed (Iran) | 242 |
| Comparative assessment and optimization of Pb(II), Ni(II) and Zn(II) biosorption onto <i>Gelidiella acerosa</i> in single systems: equilibrium and kinetic modeling J. Vijayaraghavan, D. Zunaithur Rahman, J. Thivya (India) | 254 |
| Enhanced visible light photocatalysis of Bi ₂ O ₃ /BiVO ₄ and Bi ₂ O ₃ /Ag ₃ VO ₄ heterojunctions: effects of synthetic procedures Chung-Hsin Wu, Cheng-Di Dong, Chiu-Wen Chen, Yi-Li Lin, Syuan-Ru Jhu, Yong-Hui Lin (Taiwan) | 267 |
| Fixed bed column adsorption of vanadium from water using amino-functional polymeric adsorbent S. Aydın, H.M. Nur, A.M. Traore, E. Yıldırım, S. Emik (Turkey) | 280 |
| Tetracycline adsorption from aqueous solutions by a magnetic nanoadsorbent modified with ionic liquid R. Kasraei, M. Malakootian (Iran) | 289 |
| Efficient photocatalytic degradation of tetracycline in wastewater with non-layered 2D PbMoO ₄ Zhengping He, Yaohui Wu, Zhenggang Xu, Xinjiang Hu, Yonghong Wang, Gaoqiang Liu, Yunlin Zhao (China) | 302 |
| Kinetics and adsorption isotherms of the removal of ibuprofen on a porous adsorbent made from agroindustrial waste Á. Villabona-Ortíz, C. Tejada-Tovar, R. Ortega-Toro (Colombia) | 316 |
| New eco-friendly composite beads from biomass activated carbon for removal of highly toxic 2, 4-dichlorophenol from aqueous medium: equilibrium, modeling and thermodynamic studies G. Derafa, H. Zaghouane-Boudiaf (Algeria) | 324 |
| Effects of Chlorella extracellular polymeric substances on the aggregation and stability of TiO ₂ nanoparticles as electrolytes Yanyan Zhang, Xuankun Li, Juan Du, Lihui Pu, Sihao Chen (China) | 334 |
| Development of triethanolamine functionalized-anion exchange membrane for adsorptive removal of methyl orange from aqueous solution M.I. Khan, Jinzhan Su, Liejin Guo (China) | 342 |
| Simultaneous removal of Cr(VI) and orange G6 by polyaniline/attapulgite supported nano zero-valent iron activate persulfate Hui Xu, Lei Tian, Yajuan Zhang, Ming Zhang Chen, Xudong Jiang, Weiguo Tian, Yong Chen (China) | 353 |
| Enhance the adsorption behavior of methylene blue from wastewater by using ZnCl ₂ modified neem (<i>Azadirachta indica</i>) leaves powder S.K. Mustafa, H.A. Al-Aoh, S.A. Bani-Atta (Saudi Arabia), L.R. Alrawashdeh (Jordan), M.M.H. Aljohani, M.A. Alsharif (Saudi Arabia), A.A.A. Darwish (Saudi Arabia, Yemen), H.S. Al-Shehri, M.A. Ahmad, J.N. Al-Tweher, M.A. Alfaidi (Saudi Arabia) | 367 |
| Box–Behnken experimental design for the optimization of Basic Violet 03 dye removal by groundnut shell derived biochar J. Jegan, S. Praveen, B. Muthu Kumar, T. Bhagavathi Pushpa, R. Gokulan (India) | 379 |
| Comparative adsorptive and kinetic study on the removal of Malachite Green in aqueous solution using titanium coated graphite and titanium coated graphite with CNT-ABS nanocomposite U. Jinendra, B.M. Nagabhushana, D. Bilehal (India) | 392 |

| | |
|--|-----|
| Characteristics of Er-doped zinc oxide layer: application in synthetic dye solution color removal H. Chemingui, J.C. Mzali, T. Missaoui (Tunisia), M. Konyar (Turkey), M. Smiri (Tunisia, Saudi Arabia), H. Cengiz Yatmaz (Turkey), A. Hafiane (Tunisia) | 402 |
| Prospective scenarios for the management of wastewater resources in Mostaganem region, Algeria S. Dairi, M. Dounia, B. Sofiane, D. Yassine (Algeria), A. Habib (Tunisia) | 414 |
| Effect of reactional parameters on the elimination of Congo Red by the combination of coagulation-flocculation with aluminum sulphate S. Goudjil, S. Guergazi, T. Masmoudi, S. Achour (Algeria) | 429 |
| Effect of future environmental laws on the WWTP sustainability in Algeria – case study on phosphorus discharges and sewage sludge management M. Belhani, H. Boutaghane, R.-A. Boufas (Algeria) | 437 |
| Kinetic and thermodynamic study for the removal of cadmium (II) ions from aqueous media by <i>Aucoumea klaineana</i> sawdust E.-K. Guechi, O. Hamdaoui, S. Benabdesselam (Algeria) | 447 |
| Author Index | 454 |