

## Contents

### Volume 226

Concentrated solar thermal cogeneration for zero liquid discharge seawater desalination in the Middle East: case study on Kuwait I.H. Alhajri (Kuwait), B.M. Goortani (Canada) .....	1
Study of scale inhibitor SI-4497 effect on calcareous deposit N. Ghemmi-Doulache, D. Bourouis, F. Bounechache (Algeria) .....	9
Water quality assessment of the Mopanshan Reservoir in the northeast China Xiaodong Wang, Tingting Cao, Xindong Wei, Jinming Jiang, Chongwei Cui (China), Weijun Gao (China, Japan) .....	15
Water quality studies using fuzzy-analytic hierarchical procedure method to identify their suitability for drinking, industry and agriculture – a case study E. Adeli Moghadam, E. Derikvand, H. Eslami, H. Ghorbanizadeh Kharazi, M. Razaz (Iran) .....	25
Changes of microbiological parameters of water in domestic distribution system in terms of water supply safety J. Żywiec, B. Tchórzewska-Cieślak, D. Papciak, A. Domoń (Poland) .....	37
Stability evaluation of Tigris River raw water and treated drinking water from main water treatment plants within Mosul City M.A. Al-Tamir (Iraq) .....	52
Effect of initial treatment of surface water at an artificial infiltration intake J. Jeż-Walkowiak, A. Makała, B. Mądręcka-Witkowska, M. Michałkiewicz, N. Kolwicz (Poland) .....	62
Early warning activated sludge bulking by margin of safety for processing indicators in municipal sewage treatment plant Yuying Dong, Songmei Zhu, Yuting Chen, Jian Jiao, Zhixin Sha, Xuejun Zou (China) .....	77
Potential application of carbon nanotubes in wastewater treatment compared with conventional methods R.N. Malhas, S.G. Marquez (Kuwait), P.K. Khoshouei (Iran) .....	85
Screening and quantification of pharmaceuticals and their metabolites in municipal wastewater treatment facilities in Guangzhou, China Zhineng Liu, Hongwei Rong, Zhaorui Chu, Huayong Luo, Meihua Zhao, Randeng Wang, Chaosheng Zhang (China) .....	95
Removal of real multicomponent textile wastewater by adsorption onto graphene oxide nanoparticles: optimization of operating parameters E. Mohammadi Maroufi, L. Amirkhani, H. Zakaryazadeh (Iran) .....	104
Green synthesis of graphene-coated glass as novel reactive material for remediation of fluoride-contaminated groundwater Z.T. Abd Ali (Iraq) .....	113
Decomposition of nitrobenzene in wastewater using persulfate combined with Ag/PbO under ultrasonic irradiation Wen-Shing Chen, Tang-Yao Chang (Taiwan) .....	125
Catalytic destruction of 2,4-D in aqueous environment using transition metal-doped ZnO nanoparticles under ultrasonic waves, UV and visible light R. Ebrahimi, A. Maleki, K. Godini, R. Rezaee, A. Jafari (Iran), Seung-Mok Lee, Jeong Hyub Ha (Korea) .....	137
Ultrasonic supported deletion of Rhodamine B on ultrasonically synthesized zinc hydroxide nanoparticles on activated carbon concocted from wood of cherry tree: experimental design methodology and artificial neural network M. Kiani, S. Bagheri, A. Khalaji, N. Karachi (Iran) .....	147

Immobilizing laccase to cellulose-biochar composite beads for removing phenol from an aqueous system Yue Yang, Xingan Wu, Xueru Sheng, Jian Zhang, Peng Lu, Na Li, Qingwei Ping (China)	157
Preparation and deodorization behavior of copper-modified mesostructured MCM-41 for the treatment of malodorous gas in sewage plants Fan Zhu Meng, Fen Li (China), Jinguang Hu (Canada), Cailian Yu, Baocai Ge (China)	167
Contribution of the electrocoagulation method in the removal of fluorine ions from aqueous solutions M. Abbas (Algeria)	177
Simultaneous removal of phosphate and nitrate from polluted water using Zr-alginate beads doped with green synthesized nano-CeO <sub>2</sub> and active carbon of <i>Epipremnum aureum</i> plant as an effective adsorbent W.K. Biftu (India, Ethiopia), K. Ravindhranath (India)	184
Sorption behavior of perfluorooctane sulfonate on hydrous ferric oxide from aqueous solution Ji Zang, TianTian Wu, Jun Yang, Zhengxin Xie, Shisuo Fan, Jun Tang (China)	197
Preparation of polyamine grafted silica gels supported naphthaldehyde Schiff's base and their adsorption properties as Cu <sup>2+</sup> ions adsorbents Minghua Wang, Aili Wang, Honglan Cai, Yuzhong Niu (China)	208
Thermal and chemical pretreatment of <i>Cassia sieberiana</i> seed as biosorbent for Pb <sup>2+</sup> removal from aqueous solution S.I. Eze, H.O. Abugu, L.C. Ekwo (Nigeria)	223
Application of response surface methodology to optimize lead(II) ion adsorption by activated carbon fabricated from de oiled soya S. Sujatha, R. Sivarethnamohan (India)	242
Adsorption of Pb(II) from aqueous solutions by montmorillonite/Fe <sub>3</sub> O <sub>4</sub> nanoparticles: batch and column studies M.H. Mehdinejad, F. Hamidi, Y. Katoki, Y. Dadban Shahamat, A. Parvizimehr, N. Mengelizadeh (Iran)	251
Cadmium(II) ions removal using dried banana bunch powder: experimental, kinetics, and equilibria T.A.A. Moussa (Saudi Arabia, Egypt), M.S. Mohy Eldin (Egypt), A. Alkaldi (Saudi Arabia)	263
Modeling and assessment of adsorption ability of mussel powdered sunflower seed shell for Cr(VI) removal in batch and bed column systems A. Lahmar, S. Nouacer (Algeria), R. Djellabi (Italy), Z. Hattab, Y. Berredjem, K. Guerfi (Algeria)	276
Adsorption of molybdenum(VI) by low-temperature biochar derived from activated sludge and application in reservoir water purification Guotong Li, Shuaiyang Zhang, Xiao Mi, Yiping Guo, Yujie Guo (China), Tannaz Pak (UK)	292
Facile fabrication of a novel silico vanadate ion exchanger: evaluation of its sorption behavior towards europium and terbium ions E.A. Abdel-Galil, A.B. Ibrahim, W.M. El-Kenany (Egypt)	303
Aminated chitosan-g-poly(butyl acrylate) copolymer for heavy oil spills removal: kinetic, isotherm, and thermodynamic investigations T.M. Tamer, A.M. Omer, R.E. Khalifa, A.A. Ali, Y.A. Ammar, M.S. Mohy Eldin (Egypt)	319
Application of NaOH-treated rice husk for adsorptive discharge of cobalt ions from wastewater S. Zafar (Pakistan), M.I. Khan (UAE), W. Hassan, S. Mubeen, T. Javed, S. Shahida, S. Manzoor (Pakistan), A. Shanableh (UAE), A. ur Rehman, M.L. Mirza, N. Khalid, M.H. Lashari (Pakistan)	328
High-efficiency degradation of the azo dye methyl orange using Co-Mn/ZrO <sub>2</sub> via catalytic ozonation process Likun Zhou, Mingming Hu, Qiang Liu (China)	339
Efficient removal of Reactive Orange 13 with magnetic <i>Mucor circinelloides</i> from mill scale P. Aytar Çelik, A.M.K. Abutaha, B. Nural Yaman, H. Çakmak, S. Hoşgün, A. Çabuk (Turkey)	347
Discoloration and mineralization of Direct Orange 39 textile dye in water by atmospheric plasma and ferrous ion C. Torres Segundo, J. Vergara Sánchez, E. Montiel Palacios, A. Gómez Díaz, P.G. Reyes Romero, H. Martínez Valencia (Mexico)	362
Definitive screening design (DSD) optimization of methyl orange adsorption onto Moroccan clay A. Mansouri, A. Ait Aghzzaf, K. Draoui (Morocco)	372

Synergistic effect of bacterial-fungal consortium for enhanced degradation of azo dyes – a novel approach M. Arunkumar, S.S. Sheik Abdulla (India) .....	382
Effectiveness and efficiency between CuO/natural zeolite catalysts and ZnO/natural zeolite in naphthol blue black waste management by photolysis degradation method Zilfa, B. Arifin, R. Zein, Rahmayeni, S. Ummi, S. Ramadhan (Indonesia) .....	400
Integration of water treatment sludge and agriculture waste as low-cost adsorbent for remazol red dye removal S. Hamzah, N.B. Swan, N.A. Razali, N.A. Mohammad, N. Rasit, A. Ali, M.S. Sulaiman, A. Jusoh, N.H.H. Hairom, N. Ali, N.I. Yatim (Malaysia) .....	408
Sulfhydryl modified $\beta$ -cyclodextrin/ $\text{Fe}_3\text{O}_4$ /graphene oxide magnetic nanohybrid for the adsorption of silver ions and cationic dye methylene blue Xin Li, Yingxia Ma, Xiaofeng Shi, Xiaoya Kang, Fengming Bai, Dingjun Zhang (China) .....	419
Sm-Co substituted M-type lead hexaferrite for dielectric properties and visible light driven methylene blue degradation in industrial wastewater M. Jamshaid (Pakistan), M.I. Khan (UAE), H.M. Khan, A. Rauf, O.P. Kumar, M.N. Akhtar, S. Iqbal (Pakistan), A. Shanableh (UAE), A. ur Rehman (Pakistan) .....	431
Application of response surface methodology for optimization of methylene blue adsorption onto activated carbons prepared from chestnut shell Mingyang Zhang, Xinzhe Liu, Wenda Li, Lili Guo, Zhuowei Tan, Qian Wang, Linhua Zhang (China) .....	441
Author Index .....	452