



Contents
Volume 125

Experimental investigation on the time dependant behaviour of productivity of a stacked solar still D.K. Murugan, N. Elumalai (India)	1
Multi-parameter analysis of water flows in nanochannels D. Spetsiotis, F. Sofos, T.E. Karakasidis, D. Kasiteropoulou, A. Liakopoulos (Greece)	8
Performance evaluation of the bench-scale hybrid alternating aerobic/anoxic activated sludge-membrane bioreactor system for the wastewater treatment and reuse Sangjin Park, Chang Min Park, Do-Hyung Kim (Korea)	16
Treatment of distillation residue waste liquid from NPEOs by hydrothermal carbonization process for resource recovery Jiexiu Hao, Wenqi Zhang, Gang Xue, Pinhua Rao, Runkai Wang (China)	26
Synthesis of nickel nanoparticle using ionic liquid based extract from <i>Polygonum minus</i> and their applications H. Ullah, C.D. Wilfred, M.S. Shaharun (Malaysia)	32
Simultaneous ammonium and colour removal from digested piggery wastewater for <i>Arthrospira</i> cultivation by coupling micro-electrolysis and cation exchange membrane Qiangqiang Yu, Rui Liu, Lujun Chen (China), Dong Xia (UK), Xiaobo Cai (China)	40
Inorganic and organic smectite for synthetic and real textile water treatment. Optical and luminescence properties F. Ayari, M. Trabelsi Ayadi (Tunisia)	47
Catalytic degradation of 4-chlorophenol by persulfate activated with magnetic $\text{CuFe}_2\text{O}_4\text{-Fe}_3\text{O}_4$ composite Junhua Ma, Yong Liu, Xinglong Jin, Jianfei Bai (China)	61
Degradation of aniline from aqueous solution by Fenton process: modeling and optimization S.A. Mousavi, F. Farrokhi, N. Kianirad, F. Falahi (Iran)	68
Efficiency and mechanism of water defluoridation by mixtures of Jordanian zeolite, Pozzolana, Feldspar, and Tripoli H. Etawi, A.E. Al-Rawajfeh, A. Al-Ma'abreh, M.N. Al-Amaireh, R.N. Alfwaer, S. Al-Hawamdeh, R.A. Al Dwairi, S.A. Ababneh (Jordan)	75
Adsorption and kinetic studies of hexavalent chromium by dehydrated <i>Scrophularia striata</i> stems from aqueous solutions M. Dehghani, M. Nozari, I. Golkari, N. Rostami, M. Ansari Shiri (Iran)	81
Removal of toxic methyl green (MG) in aqueous solutions by apricot stone activated carbon – equilibrium and isotherms modeling M. Abbas, T. Aksil, M. Trari (Algeria)	93
Synthesis, characterization and photocatalytic activity of $\text{CaZrO}_3\text{-SiO}_2$ nanocomposite for the decolorization of indigo carmine dye N. Kermani, S.S. Mirzaee, M.E. Olya, S.M.J. Mirzaei (Iran)	102

**Selected papers presented at the 4th Annual Science and Technology Conference (Tesseract'17)
10–12 November 2017, Gandhinagar, India**

Performance analysis of solar still using sensible heat materials for saline water P. Selvaraj, A. Manimaran, G. Nagaraj (India)	111
The research on new technology and separation performance of wastewater treatment for offshore field Z.G. Zhao, M.Q. Feng, J.G. Liu, Y.K. Tao, J.S. Wang, L. Wang, G.Q. Peng (China)	116
Optimization analysis of water resources value transfer in iron and steel enterprises Xu Xiao, Zhen Li, Yi Li, Zhifang Zhou, Xincheng Jiang (China)	124

Research on the supervision of water quality inspection bodies in China Yixian Wang, Zhaoying Zuo, Shangrui Wu (China)	132
Study on utilization efficiency of water resources in Shijiazhuang City Weimei Zhang (China)	137
Optical properties of chromophoric dissolved organic matter (CDOM) of water body in Sanyang wetland, China Qi Wang, Ying Liu, Hengguo Yu, Qiang Ke, Chuanhua Wang, Chuanjun Dai, Min Zhao (China)	141
The interactive relationship among construction land expansion, carbon emission, water resource and energy consumption in the suburb of Chongqing over the past 26 years Nanjie Li, Le Qi, Shuhui Jiang (China)	148
Research on dynamic model of optimal simulation system for urban water resources sustainable utilization based on complex scientific management Li Shi (China)	156
Integration of fuzzy theory and multi-hierarchy comprehensive index system for health assessment of water environmental ecosystem Ming Zhong, Tao Jiang, Kun Li, Shaoyun Pan (China)	164
Comprehensive risk assessment of the Luojiang River basin water environment in Western Guangdong Province Wenting Zhang, Yongzhi Liu (China)	171
An empirical study on reshape of industrial structures in the core water source area of the middle route of the South-to-North Water Diversion Project – a case study of Shiyan City in Hubei Province Shuang Yang, Jiancheng Chen, Xiuru Wang (China)	179
Algal community structure and water quality assessment in the drawdown area of Hanfeng Lake during the storage and dry periods of the Three Gorges Reservoir, China Fengling Gan, Binghui He, Bing Yang, Debao Wang (China)	187
Analysis and discussion of groundwater pollution source based on iterative local update set smoothing algorithm Xinhao Ji, Lei Qin (China)	193
Key methods of drinking water pollution caused by heavy metals Yuan Fu, Xin Liu, Guanyi Chen (China)	198
Encouraging water pollution control in the workplace: a survey on the pro-environmental behavior of employees Shengfang Lu, Yue Zhuang (China)	203
Wetland tourism park ecology and its application in water pollution control Xiao Luo, Weizhang Zhong (China)	211
Investigation on and analysis of pollution sources of Haojia village reservoir in Yibin, Sichuan Province, China Aijiang He, Lixiu Liu, Jun Li (China)	217
Synthesis of rare earth Ce-doped TiO ₂ -SBA-15 catalyst and its photocatalytic degradation of Rhodamine B Chunwei Shi, Junqiao Shao, Haiyang Wang, Qingquan Wei, Yili Duo (China)	222
Variation of total dissolved iron and its impacts during an extreme flooding event in a boreal forest catchment Jia Wang, Jiunian Guan, Liu Yang, Zirui Wang, Nan Lu, Ying Lu (China)	227
Sludge remnant treatment based on ultrasound Jincheng Xie, Dengpan Qiao, Tao Deng, Fei Huang, Yabin Mo, Jiashun Peng (China)	235
Analyses of DEM resolution on SWAT-simulated streamflow in Qihe watershed Chong Wei, Lianhai Cao, Zhiquan Huang, Zhihong Yao, Zhiqi Wang, Lu Zhang, Liangang Xiao, Lunguang Yao (China)	242
The performance study of eco-friendly alkali-activated oil shale cementing materials for wastewater treatment structure Rui Ding, Lijun Chen, Yinshan Jiang (China)	250
Ammonia emissions from soil water of wheat field as affected by different nitrogen and irrigation strategies Yuhai Tang, Zhengyong Cui, Dianliang Peng, Yanping Yin, Yong Li, Zhenlin Wang (China)	258
Experimental study of laterite soil slope influenced by water level fluctuation Xiaoyan Luo, Bing Yan, Weiping Liu, Fangqin Guo (China)	265
Interaction mechanism between stratified extracellular polymeric substances (EPS) from activated sludge and claforan in domestic wastewater Qi Wang, Junjun Li, Hengguo Yu, Jun Li, Xianfeng Huang, Qiongzhen Chen, Min Zhao (China)	271

Bioremediation technologies and mechanisms for pentachlorophenol contaminated soil and sediment of water environment	
Liangyuan Zhao, Weijie Guo, Weihua Zhao, Xianqiang Tang, Qingyun Li, Zhuo Huang (China)	278
Experimental study on car washing wastewater treatment by coagulation and nanofiltration method	
Jin Han, Hongmei Luo, Biyao Wang (China)	285
Methods and affecting factors of improving efficiency of biological removal of iron and manganese	
Wen-Jing OuYang, Lei Wang, Hai-Feng Bao, Chu-Hong Lin, Yang-Lun Cai, Kai Ren (China)	290
Study on dye wastewater treatment of tunable conductivity solid-waste-based composite cementitious material catalyst	
Le Kang, Hui Ling Du, Xian Du, Hai Ting Wang, Wan Li Ma, Ming Liang Wang, Feng Bo Zhang (China)	296
Study on the kinetics of the adsorption of reactive brilliant red K-2BP onto modified soybean straw activated carbon	
Yonggang Zeng, Wenyuan Li, Linlin Wang, Tingting Du, Jin Huang, Zhengwen Huang, Jin Wang, Jialin Tang, Mengke Wang, Jiamin Wang, Ciyang Jiang, Peng Yang (China)	302
Separating reservoir flood season into sub-seasons based on fractal theory	
Jiqing Li, Rongbo Li, Jianchang Li, Kaijie Xie, Yiping Miao (China)	310
Author Index	319