

**Contents**

**Volume 57 Issue 46**

New material for the wire mesh demister

H.T. El-Dessouky and O.A. Al Marshad (Riyadh, Saudi Arabia) ..... 21665

Feasibility analysis of solar combi-system for simultaneous production of pure drinking water

via membrane distillation and domestic hot water for single-family villa:

pilot plant setup in Dubai

M. Asim (Lahore, Pakistan), N.T. Uday Kumar (Ras Al Khaimah, UAE)

and A.R. Martin (Stockholm, Sweden) ..... 21674

Performance improvement of membrane distillation of high-concentration saline solution  
with pulse feeding

Yuqin Xiong, Ting Peng, Zaifeng Shi, Qiang Lin, Meimei Zhang, Shichao Wang

and Hao Li (Haikou, China) ..... 21685

CCD series no-19: The lowest energy prospects for SWRO through single-element modules  
under plug-flow and closed-circuit desalination conditions

A. Efraty (Har-Adar, Israel) ..... 21696

Environmental implications of Tajoura reverse osmosis desalination plant

B. Brika (Tripoli, Libya) ..... 21712

Studies on treatment of egg processing industry wastewater using electrocoagulation method:  
optimization using response surface methodology

K. Thirugnanasambandham, V. Sivakumar (Chennai, India) and K. Shine (Riyadh, Saudi Arabia) ..... 21721

The effect of HRT and carriers on the sludge specifications in MBR to remove VOCs  
from petrochemical wastewater

H. Hazrati, J. Shayegan and S. Mojtaba Seyed (Tehran, Iran) ..... 21730

Comparison of flocculant aids as pretreatment reagent for membrane filtration process  
by fingerprint analysis of organic matters in secondary effluent

Fang Tang (Beijing), Hong-Ying Hu (Beijing and Shenzhen), Li-Juan Sun, Xin Tang (Beijing, China),

N. Azuma and M. Oinuma (Tokyo, Japan) ..... 21743

Effect of anoxic:oxic ratio on the efficiency and performance of sequencing batch reactor (SBR) system  
for treatment of industrial estate wastewater containing Cr<sup>3+</sup> and Ni<sup>2+</sup>

M. Rarunroeng and S. Sirianuntapiboon (Bangkok, Thailand) ..... 21752

Liquid–liquid separation of aqueous ammonia using a hollow-fibre membrane contactor

Md.M. Hossain and O. Chaalal (Al Ain, UAE) ..... 21770

Synthesis of coal cinder balls and its application for COD<sub>Cr</sub> and ammonia nitrogen removal  
from aqueous solution

Yongmei Wang, Weijun Tian, Chenglin Wu, Jie Bai and Yangguo Zhao (Qingdao, China) ..... 21781

Identification of irreversible UF membrane foulants by fluorescence excitation–emission matrix  
coupled with parallel factor analysis

Jiayu Tian, Huarong Yu, Yiwei Shen, Wenxin Shi, Dongmei Liu, Shanshan Gao

and Fuyi Cui (Harbin, China) ..... 21794

Relationship between nitrogen transformation and its related genes: comparison among riparian,  
marsh, and full-scale constructed wetlands

Jianing Liu, Zhongchen Yang, Wenjun Yu, Jiannan Hu, Huijun Xie, Shuning Wang

and Jian Zhang (Jinan, China) ..... 21806

Landfill leachate treatment by a coagulation–flocculation process:

effect of the introduction order of the reagents

M. Assou (Casablanca), L. El Fels (Marrakesh), A. El Asli (Ifrane), H. Fakidi,

S. Souabi (Casablanca) and M. Hafidi (Marrakesh, Morocco) ..... 21817

Extraction of copper from wastewater through supported liquid membrane using tri-ethanolamine as a carrier R. Nawaz, K. Ali and M. Khan (Peshawar, Pakistan) .....	21827
Facile synthesis of $\beta$ -FeOOH nanoparticle-loaded secondary fly ash composites for enhanced removal of copper ion Heng Yang, Qi Zhou, Wenjun Luo and Chunjie Yan (Wuhan, China) .....	21842
Lead and cadmium sorption in water samples using modified nano-sized cobalt aluminate M.H. Morcali (Kahramanmaraş) and A. Baysal (İstanbul, Turkey) .....	21855
Fabrication of MWCNTs/ThO <sub>2</sub> nanocomposite and its adsorption behavior for the removal of Pb(II) metal from aqueous medium A. Mittal (Bhopal, India), Mu. Naushad (Riyadh, Saudi Arabia), G. Sharma (Solan, India), Z.A. AlOthman, S.M. Wabaidur and M. Alam (Riyadh, Saudi Arabia) .....	21863
Comparative study of the removal of nickel(II) and chromium(VI) heavy metals from metal plating wastewater by two nanofiltration membranes G. Basaran, D. Kavak (Eskisehir), N. Dizge (Mersin), Y. Asci, M. Solener (Eskisehir) and B. Ozbey (Kocaeli, Turkey) .....	21870
Zinc and nickel adsorption onto a low-cost mineral adsorbent: kinetic, isotherm, and thermodynamic studies A. Emami and A. Rahbar-Kelishami (Tehran, Iran) .....	21881
Solid-phase extraction of Cu, Zn, and Mn from Nile river and tap water prior to flame atomic absorption determination S.M. Abdel Azeem (Fayoum, Egypt and Shagra, Saudi Arabia), S.M. Attaf (Sirte, Libya) and M.F. El-Shahat (Cairo, Egypt) .....	21893
Removal of Zn(II) ions from aqueous media on thermal activated sawdust G. Nacu, D. Bulgariu, M.C. Popescu, M. Harja, D. Toader Juravle and L. Bulgariu (Iasi, Romania) .....	21904
Continuous manganese(II) ions removal from aqueous solutions using rice husk ash-packed column reactor Ningning Li, Jiaying Zhao, Zhao Jiang, Bo Cao, Yan Lu, Dexin Shan and Ying Zhang (Harbin, China) .....	21916
Adsorption kinetics and isotherms for the removal of nickel ions from aqueous solutions by an ion-exchange resin: application of two and three parameter isotherm models N.S. Yousef, R. Farouq and R. Hazzaa (Alexandria, Egypt) .....	21925
A kinetic and thermodynamic study of cyanide adsorption in activated carbon G.G. Stavropoulos, M. Papadopoulou and K. Papadimitriou (Thessaloniki, Greece) .....	21939
Removal of fluoride from aqueous solution by natural and acid-activated diatomite and ignimbrite materials E. Kir, H. Oruc, I. Kir and T. Sardohan-Koseoglu (Isparta, Turkey) .....	21944
Comparison of physicochemical properties of activated carbons derived from biomass wastes by H <sub>4</sub> P <sub>2</sub> O <sub>7</sub> activation: adsorption of trimethoprim Zizhang Guo, Li Xu (Jinan, China), Cui Liu (Lubbock, TX, USA), Fengkai Sun, Yan Kang and Shuang Liang (Jinan, China) .....	21957
Yeast-activated sludge model for aerobic degradation of a non-fermentable substrate M.D. Frigon, Dongfang Liu (Tianjin, China) and J. Young (Fayetteville, AR, USA) .....	21968
Hydrothermal synthesis of NiO nanostructures for photodegradation of 4-nitrophenol S. Safa, R. Hejazi, M. Rabbani and R. Azimirad (Tehran, Iran) .....	21982
Biological denitrification using rice washing drainage (RWD) as carbon source for removing nitrate from groundwater Qiaochong He, Chuaping Feng, Qili Hu, Rui Li and Nan Chen (Beijing, China) .....	21990
Removal of tetrabromobisphenol-A from aqueous solution by Al <sub>13</sub> -montmorillonite modified with different types of surfactants and transition metals Xiang Li, Qian Deng, Zaili Zhang and Xiaoshan Jia (Guangzhou, China) .....	22000
Photocatalytic degradation of reactive red 3 and alachlor over uncalcined Fe-TiO <sub>2</sub> synthesized via hydrothermal method K.K.P. Rivera (Quezon, Philippines and Khon Kaen, Thailand), M.D.G. de Luna (Quezon, Philippines), T. Suwannaruang and K. Wantala (Khon Kaen, Thailand) .....	22017
Photocatalytic degradation of methyl orange and cyanide by using TiO <sub>2</sub> /CuO composite H. Koohestani (Semnan) and S.K. Sadrnezhaad (Tehran, Iran) .....	22029
Resin-supported Fe(III) as an efficient heterogeneous Fenton catalyst for degradation of Reactive Black 5 Yan Wang, Yan Chen, Jianfei Wang and Jiaoqiao Lu (Fengyang, China) .....	22039

Development of grafted cotton fabrics ions exchanger for dye removal applications: methylene blue model M.S. Mohy Eldin (Jeddah, Saudi Arabia and Alexandria, Egypt), M.H. Gouda, M.A. Abu-Saied, Y.M.S. El-Shazly and H.A. Farag (Alexandria, Egypt) .....	22049
Removal of the anionic dye Biebrich scarlet from water by adsorption to calcined and non-calcined Mg-Al layered double hydroxides D. Chebli, A. Bouguettoucha (Sétif), A. Reffas (M'sila), C. Tiar, M. Boutahala (Sétif, Algeria), H. Gulyas (Hamburg, Germany) and A. Amrane (Rennes, France) .....	22061
Cu-doped ZnO nanoparticle for removal of reactive black 5: application of artificial neural networks and multiple linear regression for modeling and optimization K. Salehi, H. Daraei, P. Teymouri, B. Shahmoradi and A. Maleki (Sanandaj, Iran) .....	22074
Photocatalytic degradation of <i>p</i> -nitrotoluene (PNT) using TiO <sub>2</sub> -modified silver-exchanged NaY zeolite: kinetic study and identification of mineralization pathway P.K. Surolia and R.V. Jasra (Bhavnagar, India) .....	22081
Isolation and characterization of <i>Candida vishwanathii</i> strain TERI MS1 for degradation of petroleum hydrocarbons in marine environment A. Priya, P.M. Sarma and B. Lal (New Delhi, India) .....	22099

***Selected papers presented at the Sustainable Water Management Conference on  
Sustainable Domestic Water Use in Mediterranean Regions (SWMED)  
19–21 February 2015, Tunis, Tunisia***

Chemical treatment of orange tree sawdust for a cationic dye enhancement removal from aqueous solutions: kinetic, equilibrium and thermodynamic studies A.A. Azzaz (Soliman and Bizerte), S. Jellali (Soliman, Tunisia), A.A. Assadi (Rennes, France) and L. Bousselmi (Soliman, Tunisia) .....	22107
Electrochemical degradation of dye on lead dioxide electrodeposited on stainless steel: effect of cyclic voltammetry parameters I. Elaissaoui, H. Akroud and L. Bousselmi (Soliman, Tunisia) .....	22120
Application of bioinoculation to enhance rhizocompetence of horizontal subsurface flow constructed wetland system M. Ben Saad, M. Ben Said, L. Bousselmi and A. Ghrabi (Soliman, Tunisia) .....	22133
Aeration length phase control using on-line ammonia and dissolved oxygen feedback control at Choutrana II WWTP S. Hajji (Tunis, Tunisia), S. Safa (Stuttgart, Germany), A. Ouali (Soliman), H. Shayeb and M.L. Marouani (Tunis, Tunisia) .....	22140
Assessment of heavy metals pollution using multivariate statistical analysis methods in Wadi El Bey (Tunisia) T. Gasmi (Soliman and Tunis), I. Khouni and A. Ghrabi (Soliman, Tunisia) .....	22152
Diagnosis and characteristics of water quality along the Wadi El Bey River (Tunisia). Coagulation/flocculation essays of textile effluents discharged into the Wadi F. Mhamdi (Soliman and Jarzouna), I. Khouni and A. Ghrabi (Soliman, Tunisia) .....	22166
Author Index .....	22189