

International Conference on Environmental Engineering and Sustainable Development (CEESD 2016)

IOP Conference Series: Earth and Environmental Science
Volume 51

Sanya, China
9 – 11 December 2016

Editor:

Hsin Chu

ISBN: 978-1-5108-3595-5
ISSN: 1755-1307

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2016) by the Institute of Physics
All rights reserved. The material featured in this book is subject to
IOP copyright protection, unless otherwise indicated.

Printed by Curran Associates, Inc. (2017)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

Table of contents

Volume 51

2016 International Conference on Environmental Engineering and Sustainable Development (CEESD 2016)

9–11 December 2016, Sanya, China

Accepted papers received: 10 January 2017

Published online: 4 February 2017

Preface

011001

OPEN ACCESS

[2016 International Conference on Environmental Engineering and Sustainable Development \(CEESD 2016\)](#)

011002

OPEN ACCESS

[COMMITTEES](#)

011003

OPEN ACCESS

[Peer review statement](#)

Environmental Engineering

012001

OPEN ACCESS

[Characterization, Degradation, and Reaction Pathways of Indoor Toluene over Visible-light-driven S, Zn Co-doped TiO₂](#)

H Chu, Y H Lin and C Y Lin.....1

012002

OPEN ACCESS

[Numerical Investigation of Nanofluid Laminar Forced Convective Heat Transfer inside an Equilateral Triangular Tube](#)

Amin Etminan, Zambri Harun and Ahmad Sharifian.....6

012003

OPEN ACCESS

[Research Progress of Artificial Forest in the Remediation of Heavy Metal Contaminated Soils](#)

MA Jiafang, MENG Guangtao, HE Liping and LI Guixiang.....12

012004

OPEN ACCESS

[Review on Nano zerovalent Iron \(nZVI\): From Modification to Environmental Applications](#)

Xing Chen, Dandan Ji, Xiqing Wang and Lihua Zang.....17

012005

OPEN ACCESS

[From Centralized Disassembly to Life Cycle Management: Status and Progress of E-waste Treatment System in China](#)

Xiaolong Song, Jianxin Yang, Bin Lu and Dong Yang.....23

012006

OPEN ACCESS

[Simulation and Experimental Study on Cavitating Water Jet Nozzle](#)

Wei Zhou, Kai He, Jiannan Cai, Shaojie Hu, Jiuhua Li and Ruxu Du.....30

012007

OPEN ACCESS

[The Inter-provincial Transfer of Transportation Hidden Carbon in China's Provinces](#)

Ping Jiao, Jian Wei Wang and Shuai Zhang.....36

012008

OPEN ACCESS

[Removal of Suspended Solids in Anaerobically Digested Slurries of Livestock and Poultry Manure by Coagulation Using Different Dosages of Polyaluminum Chloride](#)

P Li, C J Zhang, T K Zhao and H Zhong.....43

012009

OPEN ACCESS

[Research of Isolation and Degradation Conditions of Petroleum Degrading Marine](#)

Guo Fangrui.....49

012010

OPEN ACCESS

[The Wireless Sensor Network \(WSN\) Based Coal Ash Impoundments Safety Monitoring System](#)

E J Sun, A Nieto and X K Zhang.....55

012011

OPEN ACCESS

[Green Innovation Design of Products under the Perspective of Sustainable Development](#)

Guo yi-fei.....61

Sustainable urban planning and development

012012

OPEN ACCESS

[A Study on China's System of Public Participation in Environmental Protection ---- Taking Haikou's "Two Constructions" for Example](#)

Wang Xi.....66

012013

OPEN ACCESS

["Decoupling" Indicators for Evaluation of Urban Low-Carbon Economy Development: a Case Study of Shanghai](#)

Jing Zhao, Ting Xu, Daqiang Yin, Weihua GU and Qing Huang.....71

012014

OPEN ACCESS

[The Influence of Older Age Groups to Sustainable Product Design Research of Urban Public Facilities](#)

Zhang Wen-juan and Song Hou-peng.....76

Water and wastewater treatment

012015

OPEN ACCESS

[Identification of Bacterial Species in Kuwaiti Waters Through DNA Sequencing](#)

K Chen.....81

012016

OPEN ACCESS

[Performance of the Iron-Caron Coupling Constructed Wetland for Rural Sewage Treatment](#)

Ruize Xia, Yutao Peng, Shan Zhong, Lijun Tu, Yuanshan Xie and Lishan Zhang.....91

012017

OPEN ACCESS

[Evaluation and Prediction of Water Resources Based on AHP](#)

Shuai Li and Anqi Sun.....97

012018

OPEN ACCESS

[Performance of Multilevel Contact Oxidation in the Treatment of Wastewater from Automobile Painting Industry](#)

Tong Zhu, Yufang Zhu, Udo Fienko, Xie Yuanhua and Zhang Kuo.....105

012019

OPEN ACCESS

[Adsorption Characteristics of Macroporous Resin for Oil Removal from Desulphurization Wastewater on Board](#)

Tie Li, Chen Chen, Qi Jin, Jiao Zhao, Xiaojia Tang and Yimin Zhu.....112

012020

OPEN ACCESS

[Freshwater Sediment Characterization Factors of Copper Oxide Nanoparticles](#)

Yubing Pu, Bertrand Laratte and Rodica Elena Ionescu.....118

012021

OPEN ACCESS

[Phosphorus Sorption Capacities of Steel Slag in Pilot-Scale Constructed Wetlands for Treating Urban Runoff: Saturation Potential and Longevity](#)

W J Guo, L Y Zhao, W H Zhao, Q Y Li and Z B Wu.....123

012022

OPEN ACCESS

[Study on Fluoride Removal from Aqueous Solutions by a Novel Defluoridation Adsorbent NEWDEF[®]](#)

Chi Zhu, Shui Wang, An-juan Cai, Dong Wang, Wei-Xia Wang, Jia-ming Zhu and Kai Nong.....130

012023

OPEN ACCESS

[Dormant Protagale Banks of Cladoceran Communities and Hatching Success from the Sediment in China](#)

Chi Zhu, Shui Wang and Fan-xiang Kong.....136

012024

OPEN ACCESS

[Effects of Irradiation on Microbial Community Structure in the Yangtze River and Selection of Representative Microorganisms](#)

J B Song and L P Kuai.....141

Hydrology

012025

OPEN ACCESS

[Area Estimation and Distribution Analysis of Subsurface Flow Constructed Wetlands at Regional Scale--Take Guangzhou City for Example](#)

S X Yuan, G L Tang, H X Xiong, J Chen, X L Yin and G Q Huang.....148

012026

OPEN ACCESS

[The Response of Lake to Glacier in Akesu River-Kaidu River Small Watershed during 30 Years](#)

Hanwen Cui and Qigang Jiang.....158

012027

OPEN ACCESS

[The Hydrological Regimes Brought by the Three Gorges Project Affected Riparian Vegetation Distribution and Diversity in 2009 and 2010](#)

Ling-Feng Miao, Wei-Wei Liu and Fan Yang.....164

012028

OPEN ACCESS

[Characteristics of Summer Runoff Variations in the Yangtze River Basin and its Connections with Asian Summer Monsoons](#)

Jian Tang, Qingyun Li and Jin Chen.....174

012029

OPEN ACCESS

[Sustainable Improvement of Urban River Network Water Quality and Flood Control Capacity by a Hydrodynamic Control Approach-Case Study of Changshu City](#)

Chen Xie, Fan Yang, Guoqing Liu, Yang Liu, Long Wang and Ziwu Fan.....179

012030

OPEN ACCESS

[Capabilities of Seven Species of Aquatic Macrophytes for Phytoremediation of Pentachlorophenol Contaminated Sediment](#)

Liangyuan Zhao, Weijie Guo, Qingyun Li, Huan Li, Weihua Zhao and Xiaohuan Cao.....184