

International Journal of Agricultural and Biological Engineering (IJABE)

Open Access at <https://www.ijabe.org>

Table of Contents

Volume 10, Number 2, March, 2017

Overview Articles (OA)

Overview of advances in improving uniformity and water use efficiency of sprinkler irrigation
..... Ransford Opoku Darko, Yuan Shouqi, Liu Junping, Yan Haofang, Zhu Xingye (1)

Applied Science, Engineering and Technology (ASET)

Experiment and analysis on mechanical properties of *Artemisia selengensis* stalk
..... Shi Yinyan, Chen Man, Wang Xiaochan, Zhang Yongnian, Morice O. Odhiambo (16)

Power and Machinery Systems (PMS)

Stalk cutting mechanism of no-tillage planter for wide/narrow row farming mode
..... Jia Honglei, Jiang Xinming, Yuan Hongfang, Zhuang Jian, Zhao Jiale, Guo Mingzhuo (26)

Optimized design and performance evaluation of an electric cup-chain potato metering device
..... Niu Kang, Fang Xianfa, Liu Yangchun, Lü Chengxu, Yuan Yanwei (36)

Development and test of an automatic height-adjusting cotton toppler Chen Zhaoyang, Shi Lei (44)

Design and test of an inside-filling pneumatic precision centralized seed-metering device for rapeseed
..... Liao Yitao, Wang Lei, Liao Qingxi (56)

Information Technology, Sensors and Control Systems (ITSCS)

Universality of an improved photosynthesis prediction model based on PSO-SVM at all growth stages of tomato
..... Li Ting, Ji Yuhan, Zhang Man, Sha Sha, Li Minzan (63)

Apple leaf disease identification using genetic algorithm and correlation based feature selection method
..... Zhang Chuanlei, Zhang Shanwen, Yang Jucheng, Shi Yancui, Chen Jia (74)

Identification and location of grapevine sucker based on information fusion of 2D laser scanner and machine vision
..... Wang Yaxiong, Xu Shasha, Li Wenbin, Kang Feng, Zheng Yongjun (84)

Compressive sensing in wireless sensor network for poultry acoustic monitoring
..... Xuan Chuanzhong, Wu Pei, Zhang Lina, Ma Yanhua, Liu Yanqiu, Maksim (94)

Sub-pixel analysis to enhance the accuracy of evapotranspiration determined using MODIS images
..... Abdalhaleem A. Hassaballa, Abdul-Nasir Matori, Khalid A. Al-Gaadi,
Elkamil H. Tola, Rangaswamy Madugundu (103)

Pneumatic bio-soft robot module: Structure, elongation and experiment
..... Bao Guanjun, Yao Pengfei, Xu Zonggui, Li Kun, Wang Zhiheng, Zhang Libin, et al. (114)

Development of a low-cost GPS/INS integrated system for tractor automatic navigation
..... Xiongze Han, Hak-Jin Kim, Chan Woo Jeon, Hee Chang Moon, Jung Hun Kim (123)

Machine vision based expert system to estimate orange mass of three varieties
..... Hossein Javadikia, Sajad Sabzi, Hekmat Rabbani (132)

Biosystems, Biological and Ecological Engineering (BBEE)

Dynamic evolutions of ecological carrying capacity in poor areas using ecological footprint model at Ruyang County of China Wang Jun, Zhang Qiaoming, Zou Chunjing, Wang Jinxin, Li Yongsheng, Wang Mingchun (140)

Natural Resources and Environmental Systems (NRES)

Optimization of water use structure and plantation benefit of unit water consumption using fractional programming and conditional value-at-risk model Fu Qiang, Xiao Yuanyuan, Cui Song, Liu Dong, Li Tianxiao (151)

Effects of different fertilizations on fruit quality, yield and soil fertility in field-grown kiwifruit orchard Zhao Zuoping, Duan Min, Yan Sha, Liu Zhifeng, Wang Qi, Fu Jing, et al. (162)

Identification of sap flow driving factors of jujube plantation in semi-arid areas in Northwest China Wei Xinguang, Li Bo, Guo Chengjiu, Wang Youke, He Jianqiang, Shouyang Liu, et al. (172)

Simulating and validating the effects of slope frost heaving on canal bed saturated soil using coupled heat-moisture-deformation model Wang Enliang, Fu Qiang, Liu Xingchao, Li Tianxiao, Li Jinling (184)

Renewable Energy and Material Systems (REMS)

Effects of strain, nutrients concentration and inoculum size on microalgae culture for bioenergy from post hydrothermal liquefaction wastewater Zhang Li, Lu Haifeng, Yuanhui Zhang, Ma Shanshan, Li Baoming, Liu Zhidan, et al. (194)

Phase-feeding strategy for *Chlorella vulgaris* to enhance biomass and lipid productivity Chang Haixing, Liao Qiang, Fu Qian, Huang Yun, Xia Ao, Zheng Yaping, et al. (205)

Performance of alkaline pretreatment on pathogens inactivation and sludge solubilization Yin Fubin, Li Zifu, Mayiani Saino, Dong Hongmin (216)

Enhancing anaerobic biodegradability and dewaterability of sewage sludge by microwave irradiation Gao Fang, Xia Zhou, Wang Wei (224)

Empirical analysis of mass flow and operation performance of a full-scale biogas plant for human feces treatment Zhang Duoqiao, Duan Na, Lin Cong, Zhang Yilin, Xu Qiuzi, Liu Zhidan (233)

Properties and applications of biochars derived from different biomass feedstock sources Bai Xiaofeng, Zhou Xiaoqin, Li Zifu, Ni Jiewen, Bai Xue (242)

Agro-product and Food Processing Systems (AFPS)

Differentiation of storage time of wheat seed based on near infrared hyperspectral imaging Dong Gao, Guo Jian, Wang Cheng, Liang Kehong, Lu Lingang, Wang Jing, et al. (251)

Discrimination of brownheart of Korla pear using vibration frequency spectrum technique Xu Hubo, Wu Jie, Wang Zhaopeng, Gao Yongmao, Wang Zhipeng, Zhao Zhengqiang (259)

Cover Caption

Laboratory of Environment-Enhancing Energy, China Agricultural University (Cover, Inside Covers)

IJABE's First SCI JIF reaches 1.007, ranking 7th out of 14 (Back Cover)

Information

International Editorial Board (Front Insert I)