## International Journal of Agricultural and Biological Engineering (IJABE)

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

## **Table of Contents**

## Volume 10, Number 1, January, 2017

Overview Articles (OA)
Progress in microalgae cultivation photobioreactors and applications in wastewater treatment: A review
Research progress of siloxane removal from biogas
Gao Ruiling, Cheng Shikun, Li Zifu (30)
Applied Science, Engineering and Technology (ASET)
Analysis and experiment on cutting performances of high-stubble maize stalks
Zhao Jiale, Huang Dongyan, Jia Honglei, Zhuang Jian, Guo Mingzhuo (40)
Experimental study on mechanical characteristics of nut rupturing under impact loading
Power and Machinery Systems (PMS)
Optimization design and experiment on ripple surface type pickup finger of precision maize seed metering device
Optimization of movable irrigation system and performance assessment of distribution uniformity under varying
conditions ······Yuan Shouqi, Ransford Opoku Darko, Zhu Xingye, Liu Junping, Tian Kun (72)
Development and evaluation of power consumption model for no-till planter based on working parameters
·····Gao Dongming, Li Lianhao, Qiao Xiaodong, Khokan Kumer Sarker (80)
Information Technology, Sensors and Control Systems (ITSCS)
Simulation and test of an agricultural unmanned airboat maneuverability model
·····Yufei Liu, Noboru Noguchi, Roshanian Fard Ali (88)
Biosystems, Biological and Ecological Engineering (BBEE)
Improvement of microalgae lipid productivity and quality in an ion-exchange-membrane photobioreactor using real
municipal wastewater · · · · · · Chang Haixing, Fu Qian, Huang Yun, Xia Ao, Liao Qiang, Zhu Xun (97)
Comparative study on cultivation of microalgae for nutrient removal and lipid production in different artificial
wastewaters ········Hao Rui, Yu Zhen, Li Jinchen, Gao Min, Ma Weiling, Zhu Yi (107)
Raceway pond cultivation of a new Arthrospira sp. ZJWST-S1 in digested piggery wastewater treated by MBR and
ozonation ······Liu Rui, Yu Qiangqiang, Guo Qingqing, Zheng Wei, Wang Genrong, Chen Lujun (115)
Surface characteristics of microalgae and their effects on harvesting performance by air flotation
Wen Hao, Li Yanpeng, Shen Zhou, Ren Xiangying, Zhang Wenjun, Liu Jun (125)
Comparison of growth, hydrocarbon accumulation and metabolites of Botryococcus braunii between attached cultivation
and aqueous-suspension cultivation

Enhanced microalgae cultivation using digested kitchen waste sewage treated with struvite precipitation
Tian Chaoyu, Ye Xiao, Xu Yingying, Hua Wei, Wang Wanqing, Wu Shuang, et al. (142)
Renewable Energy and Material Systems (REMS)
Biocrude oil production from Chlorella sp. cultivated in anaerobic digestate after UF membrane treatment
Wang Meng, Wang Xinfeng, Zhu Zhangbing, Lu Jianwen, Yuanhui Zhang, Li Baoming, et al. (148)
Medium-low temperature hydrothermal hydrolysis kinetic characteristics of concentrated wet microalgae biomass
Ding Xiaojian, Huang Yun, Liao Qiang, Fu Qian, Xia Ao, Xiao Chao, et al. (154)
Application of zeolite adsorption and biological anaerobic digestion technology on hydrothermal liquefaction wastewater
Li Ruirui, Ran Xia, Duan Na, Yuanhui Zhang, Liu Zhidan, Lu Haifeng (163)
Preparation and application of a new catalyst to produce bio-oil from microalgae liquefaction
Wang Yipeng, Nan Ge, Wang Wenjia, Zhang Jinglai, Han Wei (169)
Online measurement of alkalinity in anaerobic co-digestion using linear regression method
Bai Xue, Li Zifu, Wang Xuemei, He Xi, Cheng Shikun, Bai Xiaofeng, et al. (176)
Effects of calcium carbonate on preparation and mechanical properties of wood/plastic composite
Bioreactor performance and microbial community dynamics in a production-scale biogas plant in northeastern China
Gao Yamei, Yang Anyi, Bao Jun, Ma Ruxia, Yan Lei, Wang Yanjie, et al. (191)
Maximal methane potential of different animal manures collected in northwest region of China  Chan Fan, Vy Cas, Li Wei, Liu Fanyay, Zhang Wyning, By Wychan, et al. (202)
Chen Fen, Yu Gao, Li Wei, Liu Fenwu, Zhang Wuping, Bu Yushan, et al. (202) CFD modeling and experiment of heat transfer in a tubular photo-bioreactor for photo-fermentation bio-hydrogen
productionZhang Zhiping, Zhang Quanguo, Yue Jianzhi, Li Lianhao, Zhang Tian, Liu Zhengbai (209)
Agro-product and Food Processing Systems (AFPS)
Nutritional compositions of various potato noodles: Comparative analysis
Xu Fen, Hu Honghai, Dai Xiaofeng, Liu Qiannan, Huang Yanjie, Zhang Hong (218) Grape size detection and online gradation based on machine vision
Wang Qiaohua, Tang Yihua, Xiao Zhuang (226)
Structures and Bio-environmental Engineering (SBEE)
Crack simulation and probability analysis using irregular truss structure modeling equivalent to a continuum structure
Safety, Health and Ergonomics (SHE)
Measurement and evaluation of whole body vibration of agricultural tractor operator
Md. Shaha Nur Kabir, Sun-Ok Chung, Yong-Joo Kim, Nam-Seok Sung, Soon-Jung Hong (248)
Cover Caption
Laboratory of Environment-Enhancing Energy, China Agricultural University
IJABE's First SCI JIF reaches 1.007, ranking 7th out of 14
Information
Fourth Environment-Enhancing Energy (E <sup>2</sup> -Energy) Conference in Beijing, China, July 8-10, 2016 ······(256)
International Editorial Board ·····(Front Insert I)