International Journal of Agricultural and Biological Engineering (IJABE)

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

Table of Contents

Volume 12, Number 5, September, 2019

Overview Articles (OA)

Research exploring greenhouse environment control over the last 50 years ···········Tadashi Takakura (1) Nutrients removal and biomass production from anaerobic digested effluent by microalgae: A review
Gang Li, Xue Bai, Huan Li, Zhitao Lu, Yuguang Zhou, Yingkuan Wang, et al. (8)
Applied Science, Engineering and Technology (ASET)
An effective spray drift-reducing method for a plant-protection unmanned aerial vehicle
Visual response effects of western flower thrips manipulated by different light spectra
·······Qihang Liu, Yueli Jiang, Jin Miao, Zhongjun Gong, Tong Li, Yun Duan, et al. (21)
Animal, Plant and Facility System (APFS)
Towards sustainable plant factories with artificial lighting (PFALs) for achieving SDGs ······· Toyoki Kozai (28) Effects of short light/dark cycles on photosynthetic pathway switching and growth of medicinal <i>Dendrobium officinale</i> in aeroponic cultivation ····· Yongsan Cheng, Dongxian He, Jie He, Genhua Niu, Fang Ji (38) Effects of LED light quality on the growth of pepper seedling in plant factory Nan Liu, Fang Ji, Lijun Xu, Dongxian He (44)
Light spectrum preference of Nile Tilapia (Oreochromis niloticus) under different hunger levels
Damage index estimation by analysis of meteorological disasters on film plastic greenhouses
Power and Machinery Systems (PMS)
Performance of waterjet on cutting maize stalks: A preliminary investigation
Experiment and analysis of potato-soil separation based on impact recording technology
Zhongcai Wei, Hongwen Li, Yijin Mao, Chuanzhu Sun, Xueqiang Li, Wenzheng Liu, et al. (71) Simulation and experiment on prediction of total rice seeds mass in vibrating tray for vacuum plate seeder
Zhan Zhao, Mingzhi Jin, Chunjie Tian, Fang Qin (81) Critical equation of seedling block falling off in transplanting process and the optimization experiment of rape blanket seedling transplanter ————————————————————————————————————

Analysis and evaluation of vibration characteristics of a new type of electric mini-tiller based on vibration test
Development of a PVDF sensor for potted seedling clamping force of vegetable transplanting
Jiangtao Ji, Jingwei Sun, Xin Jin, Mingyong Li, Xinwu Du (111)
Natural Resources and Environmental Systems (NRES)
Quantitative analysis of irrigation water productivity in the middle reaches of Heihe River Basin, Northwest China
····· Donghao Li, Taisheng Du, Yue Cao, Manoj Kumar Shukla, Di Wu, Xiuwei Guo, et al. (119)
Modelling soil water dynamics and root water uptake for apple trees under water storage pit irrigation
Xianghong Guo, Tao Lei, Xihuan Sun, Juanjuan Ma, Lijian Zheng, Shaowen Zhang, et al. (126)
Influence analysis of sprinkler irrigation effectiveness using ANFIS
Zhongwei Liang, Xiaochu Liu, Guilin Wen, Xuefeng Yuan (135)
Information Technology, Sensors and Control Systems (ITSCS)
A novel wavelength selection strategy for chlorophyll prediction by MWPLS and GA
····· Haojie Liu, Minzan Li, Junyi Zhang, Dehua Gao, Hong Sun, Man Zhang, et al. (149)
Measurement and prediction of tomato canopy apparent photosynthetic rate
Jian Yin, Xinying Liu, Yanlong Miao, Yang Gao, Ruicheng Qiu, Man Zhang, et al. (156)
Association rule mining algorithm based on Spark for pesticide transaction data analyses
Xiaoning Bai, Jingdun Jia, Qiwen Wei, Shuaiqi Huang, Weicheng Du, Wanlin Gao (162)
Biosystems, Biological and Ecological Engineering (BBEE)
Development of automatic and efficient immuno-separator of foodborne pathogenic bacteria using magnetophoresis and
magnetic mixing · · · · Yuhe Wang, Gaozhe Cai, Maohua Wang, Jianhan Lin (167)
Reduction of environmental pollution by using RTK-navigation in soil cultivation
Damijan Kelc, Denis Stajnko, Peter Berk, Jurij Rakun, Peter Vindiš, Miran Lakota (173)
Renewable Energy and Material Systems (REMS)
Treatment of recalcitrant wastewater and hydrogen production via microbial electrolysis cells
······ Ruixia Shen, Lixin Zhao, Jianwen Lu, Jamison Watson, Buchun Si, Xi Chen, et al. (179)
Biorefinery process for production of bioactive compounds and bio-oil from Camellia oleifera shell
Cover Caption
Plant Environmental Physiology Laboratory, CAU
Information
Third-term IJABE International Editorial Board ······ (Front Insert I)