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November, 2023 Int J Agric & Biol Eng Open Access at https://www.ijabe.org Vol. 16 No.6 305 Natural Resources and Environmental Systems (NRES) Effects of urea-N and CO2 coupling fertilization on the growth, photosynthesis, yield and anthocyanin content of hydroponic purple cabbage Brassica campestris ssp. chinensis .....Danyan Chen, Yuanyuan Feng, Ya Liu, Juan Hu, Shilong Li, Jingze Ma, et al. 5 (123)Effects of water, fertilizer, dissolved oxygen and temperature coupling on the photosynthesis, quality and yield of lettuce ······ Zan Ouyang, Juncang Tian 5 (132)Effects of drip irrigation and cropping on soil salinity, ionic composition and waxy corn production in a severely saline and calcareous and gypsiferous soil ...... Junli Tan, Yaohu Kang, Yanping Jiao, Shuqin Wan, Xina Wang, Juncang Tian, et al. 5 (142)Information Technology, Sensors and Control Systems (ITSCS) Slip-draft embedded control system by adaptively adjusting the battery position for electric tractors ..... Minghui Wang, Pucai Ning, Ke Su, Gejima Yoshinori, Wei Wang, Yongjie Cui, et al. 5 (155)Film identification method based on improved deeplabv3+ for full-film double-ditch corn seedbed ······Fei Dai, Xiangzhou Li, Ruijie Shi, Fengwei Zhang, Wuyun Zhao, Wenjuan Guo 5 (165)Remnant fertilizer monitoring system for maize fertilizer applicators ······Yaohui Zhang, Kailiang Zhang, Yang Yu, Dongxing Zhang, Li Yang, Tao Cui, et al. 5 (173)Detection and classification of pesticide residues in dandelion (Taraxacum officinale L.) by electronic nose combined with chemometric approaches ...... Jianlei Qiao, Xinmei Jiang, Xiaohui Weng, Hongbo Cui, Chang Liu, Yuanjun Zou, et al. 5 (181)Novel method for the visual navigation path detection of jujube harvester autopilot based on image processing .....Xiongchu Zhang, Bingqi Chen, Jingbin Li, Xin Fang, Congli Zhang, Shubo Peng, et al. 5 (189)Novel real-time safety algorithm for predicting multi-targets in the farmland road .....Xiaoming Liang, Fu'en Chen, Longhan Chen, Deyue Li, Bin Guo, Yubo Liang, et al. 5 (198)**Renewable Energy and Material Systems (REMS)** Application of different molecular sieves in photothermal catalysis of Jatropha oil ······ Yijie Yang, Longlong Ma, Lumin Sun, Xinghua Zhang, Gui Chao, Yubao Chen 5 (204)**Biosystems, Biological and Ecological Engineering (BBEE)** Reducing the carbon emissions from Qianxi tomato fruits preservation by cold atmospheric plasma ······ Tao Jin, Yan Chen, Chenwei Dai, Jimin Deng, Qinghua Xu, Zhengwei Wu 5 (213)Analyses of energy use and greenhouse gas emissions (GHG) in watermelon production...... Cihan Demir 5 (221)Removal of Cd<sup>2+</sup> from aqueous solution using graphene oxide modified activate carbon derived from peanut shell ······ Yilu Du, Hui Wang, Jiangtao Ji, Xin Jin, Yang Song, Hao Zhang, et al. 5 (226)Safety, Health and Ergonomics (SHE) Optimization of the key position parameters for tractor steering wheel based on a driver's arm muscle load analysis ..... Hongmei Xu, Hao Yang, Yujun Shang, Yinpei Zhang, Zhangfen Liu, Qichao Wang, et al. 5 (236)Agro-product and Food Processing Systems (AFPS) Fracture mechanism and separation conditions of pineapple fruit-stem and calibration of physical characteristic parameters ······ Mutong Li, Lin He, Dandan Yue, Binbin Wang, Junlue Li 5 (248)Development and experiment of the mechanism for oolong tea stirring motion based on the manual stirring characteristics analysis ..... Jianneng Chen, Kun Yao, Binsong Zhou, Xiong Zhao, Xianbing Bian, Zheng Zhu, et al. 5 (260)Dynamic simulation of China's water-grain-meat system and evaluation of its support capability based on water footprint theory

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