Journal of Clean Energy Technologies

CONTENTS

Volume 4, Number 6, November 2016

- **Electrical Energy**
  Closed-Form Second-Order Power Transmission Characteristic Model of the Isolated Dual Active Bridge Converter .................................................................................................................. 384
    *Yunpeng Yao, Shen Xu, Shengli Lu, and Weifeng Sun*

  Performance Comparison of Artificial Intelligence Approaches for Battery Energy Storage Size Optimization in PV Micro-grid ........................................................................................................... 389
    *T. Kerdphol, K. Fuji, Y. Mitani, and Y. Qudaih*

  Research for Control Strategy of Smart Home Energy Management System with Distributed Photovoltaic Generation and Application Practice ........................................................................................................... 396
    *Jinfeng Li, Kai Jiang, Zhixin Wang, Xiaozhuo Xu, Liang Wang, and Chao Zhang*

  Adaptive Setting and Simulation of Distance Protection Relay in a Long Transmission System Connected to an Offshore Wind Farm ........................................................................................................... 401
    *Yuan-Kang Wu, Zhou-Ting Lin, Tung-Ching Lee, Ting-Yen Hsieh, and Wei-Min Lin*

  Transforming the Electricity Value Chain: A View from Consumer Demand .................................................................................................................. 408
    *Cuifen Bai, Fang Yang, and Yibin Zhang*

  Modeling of Electrical Characteristics of Photovoltaic Cell Considering Single-Diode Model .................................................................................................................. 414
    *M. Azzouzi, D. Popescu, and M. Bouchahdane*

- **Optical and Combustion Energy**
  Optimization of Fluctuation Suppression in Photovoltaic Power Generation Using Gas Cogeneration System .................................................................................................................. 420
    *Manimel Wadu Saminda Roshan, Yasunori Mitani, Masayuki Watanabe, and Yaser Qudiah*

  Study on Several Influencing Factors of Performance Evaluation Index of Photovoltaic System .................................................................................................................. 424
    *Qingguo Xu, Hongbo Li, Guoqiang Hao, and Yefei Ding*

  An Experimental Study on Industrial Boiler Burners Applied Low NOx Combustion Technologies .................................................................................................................. 430
    *Changyeop Lee, Sewon Kim, and Minjun Kwon*

- **Renewable Energy**
  Design and Thermal Performance Test of a Solar Photovoltaic/Thermal (PV/T) Collector .................................................................................................................. 435
    *Jiang Fan, Toh Peng Seng, Goh Leag Hua, Leung Kin On, and Kelvin Loh*

  Wind Turbine Blade Composites Assessment Using Non-Contact Ultrasound Method .................................................................................................................. 440
    *Rozina Steigmann, Nicoleta Iftimie, Adriana Savin, and Roman Sturm*

  A Novel Optimization Algorithm for Reliable Energy Generation Based on Wind, Solar and Fuel Cell .................................................................................................................. 444
    *Tara Khayyamin, Khosrow Hajsadeghi, and Abolghasem Zabihollah*
   Pei Y. Ong, Christina M. M. Chin, and Eng H. Yap

An Assessment of Wind Energy Potential as a Power Generation Source in Helwan……………………..453
   Ahmed E. Ghitas, A. Abulwfa, and Yasser A. Abdel-Hadi

• Energy-Saving Technology
Towards Energy-Efficient Ventilation in Buildings: Development of the Smart Window Ventilation System
………………………………………………………………………………………………..457
   Behrang Chenari, João Dias Carrilho, Gustavo Botte, and Manuel Gameiro da Silva

Comparative Life-Cycle Analysis of Insulation Materials in A Dwelling, Addressing Alternative Heating
Systems and Life Spans……………………………………………………………………………462
   Seyedeh Shiva Saadatian, Fausto Freire, and Nuno Simões