

2015 International Conference on Sustainable Energy Engineering and Application (ICSEEA 2015)

**Bandung, Indonesia
5-7 October 2015**



**IEEE Catalog Number: CFP15AAF-POD
ISBN: 978-1-5090-0194-1**

**Copyright © 2015 by the Institute of Electrical and Electronic Engineers, Inc
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

******This publication is a representation of what appears in the IEEE Digital Libraries. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number: CFP15AAF-POD
ISBN (Print-On-Demand): 978-1-5090-0194-1

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

Contents

Urine Powered Battery (UPB) for Low Power Sensors <i>Amarveer Singh, Akshay Kumar and Tejinder K. Gill, Ekambir Sidhu</i>	1
Smart Grid Technology: Communications, Power Electronics and Control System <i>Normazlina Binti Mat Isa, Tan Chee Wei, Abd Halim Mohd Yatim</i>	10
Permanent Magnet Motors Used for Optimum Electric Generating from Small Windmill <i>B. Dwiseno Wihadi, Y.B. Lukiyanto</i>	15
Four Wheel Torque Blending for Slip Control in a Hybrid Electric Vehicle with a Single Electric Machine <i>Mohd Sofian Basrah, Efsthios Velenis, and Dongpu Cao</i>	19
Biogas Desulphurization by Iron Oxide Impregnated Coco Coir in Laboratory Scale Fixed Bed Reactor <i>Muchlis Hasan, Agus Jatnika Effendi</i>	25
Methane Potential of Food Waste from Engineering Faculty Cafeteria in Universitas Indonesia <i>Budiasti Wulansari, Gabriel Andari Kristanto</i>	30
Design and Implementation of Biodiesel Washing Automation System with Set of Sensors and Programmable Logic Controller Device <i>Gitta Septiani, Rivon Tridesman, Estiyanti Ekawati</i>	35
Quick MPPT Microconverter using a Limited General Regresion Neural Network with Adaptive Forgetting <i>Hidekazu Kato, Koichiro Yamauchi</i>	42
Strength Analysis of 157 BQTN-EX Materials for Biogas Reactor Tanks <i>Mamat, Tarzan Sembiring, Suharwadi Sentana, Neni Sintawardani, Dewi Nilawati, Tuti J. Triastuti, Ekaputro Agung Priantoro, Ary Mauliva Hada Putri</i>	49
Battery State of Charge Estimation by Using a Combination of Coulomb Counting and Dynamic Model With Adjusted Gain <i>Asep Nugroho, Estiko Rijanto, F. Danang Wijaya, Prapto Nugroho</i>	54
Optimal Power and Cost on Placement of Wind Turbines using Firefly Algorithm <i>Dwiana Hendrawati, Adi Soeprijanto, Mochamad Ashari</i>	59
Effectiveness of On-grid and Off-grid Rural Electrification Approaches in India <i>Nagarjun Y.</i>	65
A Study of Micro Hydro Generator Performance Using Rainwater For Domestic Energy Harvesting. Stator Design (Part 1) <i>Pusparini Dewi Abd Aziz, Noor Hidayah Mohd Yunus, Nor Shafiqin Shariffuddin, Najiyah Saleh, Sarina Zakaria, Norhafiza Mohamad, Abdul Malik Mohd Ali, Fatimah Zaharah Hamidon</i>	71

Application of LED Technology into Public Road Lighting in Malaysia for Replacing The High Pressure Sodium Vapour Lighting <i>Rohaida M. Ramli, Yanuar Z. Arief, Pusparini Dewi Abd Aziz</i>	76
Tire-Road-Friction-Estimation-based Braking Force Distribution for AWD Electrified Vehicles with a single Electric Machine <i>Deepak Paul, Efstathios Velenis, Dongpu Cao</i>	82
Numerical Simulation of the Effect of Flow Direction Angle at Inlet Boundary Condition on Flow Characteristics and Performance of Axial Flow Hydraulic Propeller Turbine Runner <i>Qidun Maulana B.S., Anjar Susatyo, Muhammad Fathul H., Suherman</i>	88
Flapping Foil Power Generation: Review and Potential in Pico-Hydro Application Young, J., Lai, J. C. S., Platzer, M. F.	95