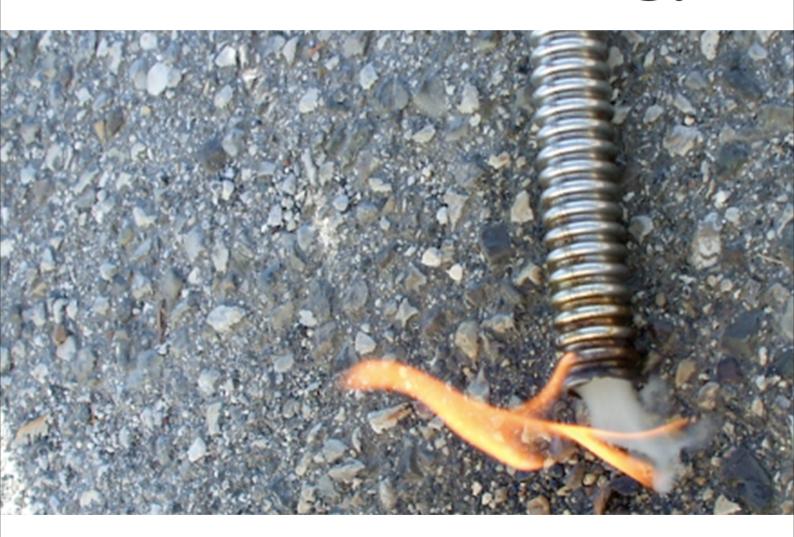


Smart Grid and Renewable Energy





Journal Editorial Board

http://www.scirp.org/journal/sgre

.....

Editors-in-Chief

Prof. Victor Sreeram University of Western Australia, Australia

Prof. Yuanzhang Sun Wuhan University, China

Editorial Advisory Board

Prof. Ching Chuen Chan University of Hong Kong, China

Dr. Yusheng Xue State Grid Electric Power Research Institute, China

Prof. Ryuichi Yokoyama Tokyo Metropolitan University, Japan

Dr. Xiaoxin Zhou Chinese Society of Electrical Engineering, China

Editorial Board

Prof. Gholam Hossein Bordbar Shiraz University, Iran

Prof. Ho Chang National Taipei University of Technology, Chinese Taipei

Dr. Seokheun Choi Binghamton University, USA

Prof. Kalyanmoy Deb Indian Institute of Technology, India

Prof. Volkmar Dierolf Lehigh University, USA

Dr. Daniel Garraín Spanish Ministry of Science and Innovation, Spain

Dr. Katerina Ioakeimidi Stanford University, USA

Dr. Herbert Iu The University of Western Australia, Australia

Prof. Chunxiang Li

Dr. Dylan Dah-Chuan Lu

Dr. Yang Shi

Dr. Pierluigi Siano

Shanghai University, China
University of Sydney, Australia
University of Victoria, Australia
University of Salerno, Italy

Prof. Igor I. Strakovsky The George Washington University, USA

Dr. Salahadin VaisiUniversity of Kurdistan, Iran

Prof. Huiming Wee Chung Yuan Christian University, Chinese Taipei

Prof. Daniele De WrachienState University of Milan, ItalyDr. Fuqian YangUniversity of Kentucky, USA

Prof. Changhui YeChinese Academy of Sciences, ChinaProf. Weiping ZhangShanghai Jiao Tong University, China



TABLE OF CONTENTS

Volume 4 Number 3	June 2013
First Measurements with a Linear Mirror Device of Second Generation	
H. Grassmann, J. J. H. Aguilar, E. Kapllaj	253
Design and Development of a Wind Turbine Simulator Using a Separately Excited DC M	otor
K. K. M. S. Kariyawasam, K. K. N. P. Karunarathna, R. M. A. Karunarathne, M. P. D. S. C. Kularathne,	
K. T. M. U. Hemapala	259
Effect of Energy Market Globalization over Power Sector of GCC Region: A Short Revie	w
A. Ahmad, M. Babar	265
Regulation of the Excitation Reactive Power of the Asynchronous Wind Turbine at Varia	ble Speed
T. Ouchbel, S. Zouggar, M. L. Elhafyani, M. Oukili, M. Sedik, A. Rabhi	272
Waste Frying Oils-Based Biodiesel: Process and Fuel Properties	
A. M. Syam, L. Maulinda, I. Ibrahim, S. Muhammad	281
DHW Design Flow Rates and Consumption Profiles in Educational, Office Buildings	
and Shopping Centres	
TA. Koiv, A. Mikola, A. Toode	287
High Impedance Fault Detection of Distribution Network by Phasor Measurement Units	
M. G. M. Zanjani, H. K. Karegar, H. A. Niaki, M. G. M. Zanjani	297
Optimum Efficiency of Photogalvanic Cell for Solar Energy Conversion: Lissamine	
Green B-Ascorbic Acid-NaLS System	
K. R. Genwa, K. Singh	306

The figure on the front cover is from the article published in Smart Grid and Renewable Energy, 2013, Vol. 4, No. 3, pp. 253-258 by H. Grassmann, *et al.*

Copyright © 2013 SciRes.

Smart Grid and Renewable Energy (SGRE)

Journal Information

SUBSCRIPTIONS

The Smart Grid and Renewable Energy (Online at Scientific Research Publishing, www.SciRP.org) is published monthly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$59 per copy.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: sub@scirp.org

COPYRIGHT

Copyright©2013 Scientific Research Publishing, Inc.

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as described below, without the permission in writing of the Publisher.

Copying of articles is not permitted except for personal and internal use, to the extent permitted by national copyright law, or under the terms of a license issued by the national Reproduction Rights Organization.

Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

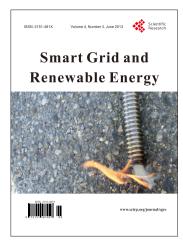
Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assumes no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: sgre@scirp.org

Call for Papers



Smart Grid and Renewable Energy

http://www.scirp.org/journal/sgre

Smart Grid and Renewable Energy (SGRE) is an international journal dedicated to the latest advancement of smart grid and renewable energy. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of smart grid and renewable energy.

Editors-in-Chief

Prof. Victor Sreeram University of Western Australia, Australia

Prof. Yuanzhang Sun Wuhan University, China

Editorial Advisory Board

Prof. Ching Chuen Chan University of Hong Kong, China

Dr. Yusheng Xue State Grid Electric Power Research Institute, China

Prof. Ryuichi Yokoyama Tokyo Metropolitan University, Japan

Dr. Xiaoxin Zhou Chinese Society of Electrical Engineering, China

Subject Coverage

All manuscripts submitted to SGRE must be previously unpublished and may not be considered for publication elsewhere at any time during SGRE's review period. Additionally, accepted ones will immediately appear online followed by printed in hard copy. The topics to be covered by Smart Grid and Renewable Energy include, but are not limited to:

- Bio-Energy Technologies, Process and Utilization
- Concept and Structure of Smart Grid
- Decision Making under Uncertainty in the Integration of Renewable Energy Systems
- Design of Sustainable Product-Service Business Models
- Development of Smart Grid
- Environmental-Friendly Technologies for Power Generation
- Geothermal and Tidal Wave Energy
- Hydropower Technologies and Applications
- Information and Smart Meter Reading
- Integrated Energy and Communications

- MEMS & NEMS and Their Applications for Power Generation
- New Technologies and Design for Energy Efficiency
- New Technologies for Minimizing CO₂ Generation
- Operations Research for Green Logistics
- Photovoltaic for Solar Power Applications
- Power System Analysis and Optimization
- Power System Planning and Operation
- Service Optimization for Renewable Energy Supply
- Solar Energy Utilization-Heat and Mass Transfer Technology
- Wind Power Generation and Utilization

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of the SGRE.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-Mail

http://www.scirp.org/journal/sgre E-mail: sgre@scirp.org