



JOURNAL OF RENEWABLE ENERGIES

Revue des Energies Renouvelables

Volume 25, Issue 1

June 2022

**Published by the
Renewable Energy Development Center**

(Centre de Développement des Energies Renouvelables)

BP. 62 Route de l'Observatoire Bouzaréah 16340, Algiers, Algeria

ISSN: 1112-2242

EISSN: 2716-8247

Legal Deposit 1177-98

Editorial Team

Editor in chief:

Amar Hadj Arab, Director of Research
Renewable Energy Development Center (CDER), Algiers, Algeria
a.hadjarab@cder.com

Associate Editor:

Abdul Ghani Olabi, Professor
University of Sharjah, United Arab Emirates
aolabi@sharjah.ac.ae

Saad Mekhilef, Professor
University of Malayadised, Kuala Lumpur,
Malaysia
saad@um.edu.my

Karim Salim Allaf, Professor
La Rochelle University, France
kallaf@univ-lr.fr

Seddik Bacha, Professor
Universite Grenoble Alpesdisabled, Saint Martin
d'Herès, France
Seddik.Bacha@g2elab.grenoble-inp.fr

Mahmoud Bourouis, Professor
Universitat Rovira i Virgili - Campus Sescelades:
Tarragona, Spain
mahmoud.bourouis@urv.cat

Mohamed BENBOUZID, Professor
Electrical Engineering, University of Brest, France
mohamed.benbouzid@univ-brest.fr

Josep Guerrero, Professor
Aalborg University, Denmark
joz@et.aau.dk

Yahia Baghzouz, Professor
University of Nevada, Las Vegasdisabled, Las
Vegas, United States
yahia.baghzouz@unlv.edu

Notton Gilles, Professor
Université de Corse Pascal Paoli, France
notton@univ-corse.fr

Noureddine Yassaa, Professor
Commissariat aux Energies Renouvelables et à
l'Efficacité Energétique, Algiers, Algeria
n.yassaa@cerefe.gov.dz

El Madjid BERKOUK, Professor
National Polytechnic School (ENP), Algiers, Algeria
emberkouk@yahoo.fr

Djafer Djelloul, Director of Research
Applied Research Unit in Renewable Energies,
URAER-CDER, Ghardaïa, Algeria
adjafer@yahoo.com

Ouahiba GUERRI, Director of Research
Renewable Energy Development Center (CDER),
Algiers, Algeria
o.guerri@cder.dz

Amar Hadj Arab, Director of Research
Renewable Energy Development Center (CDER),
Algiers, Algeria
a.hadjarab@cder.dz

Secretary:

Rafik Halalchi
Renewable Energy Development Center (CDER), Algiers, Algeria
rafikhalalchi@gmail.com

Journal of Renewable Energies

Revue des Energies Renouvelables

Volume 25, Issue 1 (2022)

Table of Contents

Improvement of the energy production of a photovoltaic-wind hybrid system using NF-PSO MPPT <i>Paul Abena Malobé, Philippe Djondiné, Pascal Ntsama Eloundou and Hervé Abena Ndongo</i>	5 - 25
Technical and environmental performance of a solar/gas driven absorption chiller using $\text{NH}_3/\text{LiNO}_3$ <i>Carlos Amaris, Andres Rodriguez and Mahmoud Bourouis</i>	27 - 42
Determination of the heat transfer coefficient by convection, according to shape of the baffles (solar air collector) <i>Zouhair Aouissi, Foued Chabane, Mohamed-Salah Teguiiaa, Djamel Bensahal, Nouredine Moumami and Abdelhafid Brima</i>	43 - 54
Response surface methodology (RSM) for biodiesel production from waste cooking oil: Study of fatty acid methyl ester (FAME) yield <i>Nejib Hidouri and Mawaheb Mouftahi</i>	55 - 70
Study of mixed convection in a horizontal cylindrical pipe partially filled with a porous medium saturated with a single fluid <i>Amira Houichi, Hassina Ghodbane and Azeddine Soudani</i>	71 - 91
Experimental Comparative Study to Achieve the Maximum Power Point Tracking of a PV System <i>Tahar Merizgui, Oumelkheir Bouchiba, Bachir Gaoui and Mouhoub Birane</i>	93 - 107
Evaluation of the Wind Power Potential in the Northeast of Chad <i>Mahamat Kher Nediguina, Abakar Mahamat Tahir, Mahamat Barka, Marcel Hamda soulouknga and Jean Luc Nsouandele</i>	109 - 126
Cost optimization of a wind-solar-diesel system with battery storage <i>Djohra Saheb-Koussa and Nawel Aries</i>	127 - 151

Editorial

The editor-in-chief thanks the editorial staff of the journal, the reviewers, and the administration of the CDER who contributed to the publication of this issue.