

Volume 5, Numero 2, Jun 2019

University of Boumerdes  
Faculty of engineering  
Research Laboratory of Food Technology

ISSN: 2437-1114  
EISSN : 2478-0030

# ALGERIAN JOURNAL OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY

An International Research Journal Of Environmental Science And Technology



**ALJEST**



[www.aljest.org](http://www.aljest.org)

## Editorial

# Algerian Journal of Environmental Sciences and Technology

An International Research Journal of Environmental Sciences And Technology

<http://www.aljest.org> ALJEST Tertiary Publication

*Algerian Journal of Environmental Science and Technology* is an open access journal, free of charges, published three times a year by Faculty of Engineer Technology University of Boumerdes, ALGERIA. The journal is dedicated to research of all aspects of Environmental science and Technology. Authors can send their views and comments to the Editor in chief: [louhab\\_ka@yahoo.fr](mailto:louhab_ka@yahoo.fr)

The *Algerian Journal of Environmental Science and Technology* publishes papers, in English, French and Arabic languages

**Edited by:** Faculty of engineering, University of Boumerdes / FSI, Frantz Fanon City, 35000 Boumerdes, Algeria  
**Tel/Fax:** 00213 (0) 24 91 11 16

**E-mail:** [aljest2015@yahoo.com](mailto:aljest2015@yahoo.com) / [louhab\\_ka@yahoo.fr](mailto:louhab_ka@yahoo.fr)

**Web:** [www.aljest.org](http://www.aljest.org)

### Topics:

Papers are solicited from, but not limited to the following topics:

- All aspects of Environmental physics,
- Basic and applied research on atmospheric,
- Terrestrial and aquatic environments pollution control and abatement technology, Conservation of natural resources,
- Environmental health study and toxicology,
- Environmental quality assessment,
- Environmental standards and criteria
- Environmental impact and risk assessment
- Environmental studies using Electrochemical process

### Honorary Editor-in-Chief

**Prof. Ahmed KETTAB** (The National Polytechnic School, Algeria)

**Member of the world Water council**

**Member of French Water Academy**

**Founder member of the Arab Water Council**

Copyright © 2019, Algerian Journal of Environmental Science and Technology, All rights reserved

Vice president of Mediterranean network of Schools and universities of engineers - RMEI

**Editor in chief**

**Prof. Krim LOUHAB** Univ. Boumedes, Algeria  
**Faculty of Engineering**  
**University of Boumerdes**  
**DZ-35000 Boumerdes- ALGERIA**  
[louhab\\_ka@yahoo.fr](mailto:louhab_ka@yahoo.fr)  
[aljest2015@yahoo.com](mailto:aljest2015@yahoo.com)  
Tel/Fax : 00 213 24911117

**Editorial Board**

**Pr. BELHANECHÉ- BENSEMRA N.** (The National Polytechnic School, Algeria)  
**Pr. SULTAN T. ABU-ORABI.** (Secretary General Association of Arab Universities, AArU)  
**Pr. YUH-SHAN HO.** (Peking University, China)  
**Pr. ALWARTHAN. A. A.** (Univ. King Saud, Riyadh, Saudi Arabia)  
**Pr. SZYMCZYK A** (Univ. Rennes 1, France)  
**Pr. BRUZZONITI M. C** (Univ. Torino, Turin, Italy)  
**Pr. LARACHI F.** (Univ. LAVAL, Quebec, Canada)  
**Pr. AMRANE A.** (Univ. Rennes 1, France)  
**Pr. DEL BUBBA M.** (Univ. Firenze, Italy)  
**Pr. SIMONESCU C .M.** (Polytechnic University of Bucharest, Romania)  
**Pr. MALOLLARI I.** (Univ. Tirana, Albania)  
**Pr. BOUROUIS M.** (Univ. RoviraiVirgili, Spain)  
**Pr. SHARROUK P.J.** (Univ. Paul Sabatier, Toulouse, France)  
**Pr. MANDI L.** (Univ. Cadi Ayyad, Marrakech, Morocco)  
**Pr. SANJA MARTINEZ.** (Univ. of Zagreb, Croatia)  
**Pr. ZABANIOTOU N.** (Univ. Aristotle, Greece )  
**Pr. BELBRAOUE T S.** (Univ. Moncton, Canada)  
**Pr. EL SAYED H. EL ASHRY.** (Uni. Alexandria, Egypt)  
**Pr. ENOS M. R. KIREMIRE.**(Univ. Namibia, Windhoek, Namibia)  
**Pr. BENADDA B.** (INSA de Lyon, France)  
**Pr. LOUDYI D.** (Univ. Hassan II, Casablanca, Morocco)  
**Pr. HARMOUNI B.** (Univ. El Manar, Tunisia)  
**Pr. TEBBAL S.** (SET Laboratories TEXAS, USA)  
**Pr. BOUKHERROUB R.** (Research Director CNRS. Univ. Lille, France)  
**Pr. LOULERGUE P.** (Univ. Rennes 1, France)  
**Pr. SAFI M.**(Ecole Nationale d'Ingénieur, Tunis, Tunisia)  
**Pr. VILLEMIN D.** (Univ. Caen, France)  
**Pr. FALAH. H .Hssein.** (Univ. Bbylon, Iraq)  
**Pr. DAKO E.** (Univ. Moncton, Canada)  
**Pr. OUAZZANI N.** (Univ. Cadi Ayyad, Marrakech, Morocco)  
**Pr. ASSADI A.A.** (Ecole Nationale Supérieure de Chimie of Rennes, France)  
**Pr. BELKACEMI K.** (Univ. LAVAL, Quebec, Canada )  
**Pr. OULD-DRIS A.** Technology University of Compiègne, France)  
**Pr. BOUNOUGHAZ M.** (Univ. Boumerdes, Algeria)  
**Pr. MOHAMMEDI K.** (Univ. Boumerdes, Algeria)  
**Pr. HACHEMI M.** (Univ. Boumerdes, Algeria)  
**Pr. SELATNIA A.** (The National Polytechnic School, Algeria)  
**Pr. TOUAIBIA M.** (Univ. Moncton, Canada)  
**Pr. BENRACHEDI K.** (Univ. Boumerdes, Algeria)

Pr. **CHEMANI H.** (Univ. Boumerdes, Algeria)  
Pr. **AFFOUNE A.M.** (Univ. Guelma, Algeria)  
Pr. **DAGHBOUCHE Y.** (Univ. Blida, Algeria)  
Pr. **KHEIRDDINE H.** (Univ. Bejaia, Algeria)  
Pr. **BOUTALEB A.** (Univ. Houari Boumediene/USTHB, Algeria)  
Dr. **SMOLINSKA B.** (Univ. Lodz of Technology, Poland)  
Dr. **MEKKI A.** (Univ. Manchester, United Kingdom UK)  
Dr. **ABBEDDOU S** (International Atomic Energy Agency | Vienna International Center, Austria)  
Dr. **DJELAL H.** (Ecole des Métiers de l'Environnement (EME), Bruz, France)  
Dr. **SAIDAN M.** (Univ of Jordan, Amman, Jordan)  
Dr. **URSZULA GURIZ.** (Univ Silesia in Katowice. Poland)  
Dr. **DANA A. M.** (Univ Plymouth. United Kingdom UK)  
Dr. **KORBAHTI B.K.** (Univ Mersin, Mersin, Turkey)  
Dr. **KIANY D.**(Institute for international energy studies (IIES), Tehran, Iran)  
Dr. **MALTINI F.** (Univ of Sheffield, United Kingdom UK)  
Dr. **EL WESHAH R.** (Univ of Jordan, Amman, Jordan)  
Dr. **AYAD A. H. FAISAL.**(Univ. Baghdad, Iraq)  
Dr. **NASRALLAH N.** (Univ. Houari Boumediene USTHB, Algeria)  
Dr. **NOUANI A.** (Univ. Boumerdes, Algeria)  
Dr. **RUMOLINO C.** (Univ. Bordeaux, France)

## **Indexing Databases**

- **UIF** / Universal Impact Factor IF: 044
- **DAIJ** / Directory of abstract indexing for Journals
- **JIF** / The Journals Impact Factor
- **DRJI** / Directory of Research Journals Indexing
- **OCLC** / World Cat
- **Cite Factor** / Academic Scientific Journals
- **Research Bib**/ Academic Ressouece Index
- **PBN** / Polish Scholarly Bibliography
- **Academic Keys**
- **ASJR** / American Standards for Journals and Research
- **Journal Index**
- **EZ3** / Electronic Journals Library
- **Pak Academic Search**
- **MIAR** / (Information Matrix for the Analysis of Journals)
- **ESJI** / Eurasian Scientific Journal Index

Prospective author(s) should submit their complete Manuscripts accompanied with a cover letter to: [aljest2015@yahoo.com](mailto:aljest2015@yahoo.com)

Honorary Editor-in-Chief

**Prof. Ahmed KETTAB**(The National Polytechnic School, Algeria)

Editor in chief

**Prof. Krim LOUHAB**

**Table Of Contents**

-Studies on adsorptive removal of an antibiotic drug using ion exchange resin. H. Kais, N. Yeddou-Mezenner.....	pp 923/929
-Protective effect of olive mill wastewater against lipid metabolism perturbation induced in cafeteria diet fed rats. D. Messaoudi, Z. Bouallagui, A. Haina, F. Moulti-Mati.....	pp 930/936
-The isolation and characterization of yeast strains <i>saccharomyces cerevisiae</i> cultivated on musts of common dates: Physiological studies of the adaptation and the resistance to ethanol. S. Chibi, D. El Hadi.....	pp 937/946
-Study of the adsorption of methylene blue by natural materials (olive stone, date pit and their mixture) in fixed bed column. F. Abed, K. Louhab, N. Abai, N. Babakhouya.....	pp 947/954
-Characterization by spectrometric methods of chitin produced from white shrimp shells of <i>Parapenaeus longirostris</i> by <i>Lactobacillus helveticus</i> cultivated on glucose or date waste. W. Arbia, L. Arbia, L. Adour, A. Amrane, A. Benhadji, H. Lounici.....	pp 955/963
-Quantitative and Qualitative Determination of the Impact of Solid Content on the Methane Potential from Thermophilic Digestion of Waste Activated Sludge. S. Maamri, M. Amrani.....	pp 964/976
-Évaluation numérique des rejets de CO <sub>2</sub> , gaz à effets de serre, au niveau de la zone industrielle d'Arzew, ALGÉRIE. S. Hennane, A. Hamou, S. Chemani, G. Janin, A. Tayeb.....	pp 977/982
-Removal of methylene blue in aqueous solution by oxidation with hydrogen peroxide in presence of copper-impregnated activated alumina. Dj. Bousalah, A. R. Yeddou, M. HACHEMI, B. Nadjemi.....	pp 983/989
-Qualité écologique via la faune macro-invertébrée benthique et devenir du niveau de contamination par le Cr et le Pb des sédiments de l'oued Boumerzoug (Constantine, Algérie). D. Keddari, F-Z. Afri-Mehennaoui, L. Sahli, S. Mehennaoui.....	pp 990/998
-The bio-material as sorbent for 2,4-Dichlorophenoxyacetic acid removal from aqueous solution. I. Boughaita, Ch. Bouchelta, M. S. Medjram, P. Magri.....	pp 999/1005