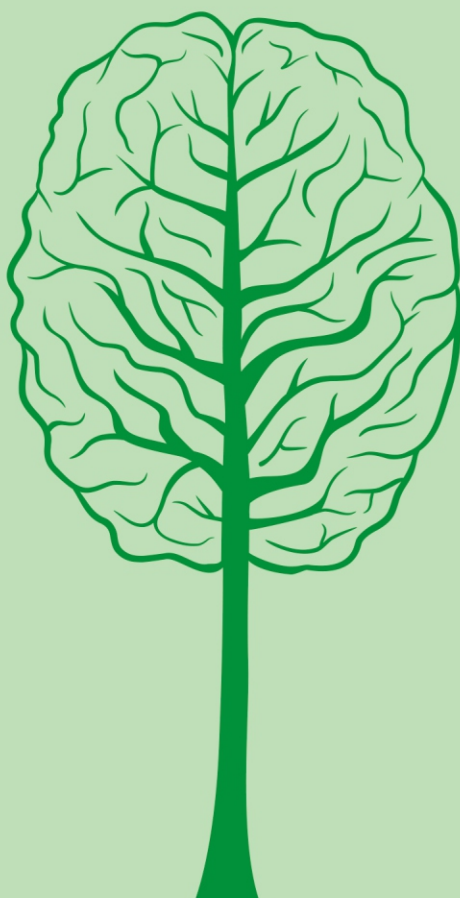


Natural Science



ISSN: 2150-4091



Honorary Editor-in-Chief
Kuo-Chen Chou
www.scirp.org/journal/ns

Journal Editorial Board

ISSN: 2150-4091 (Print) ISSN: 2150-4105 (Online)

<http://www.scirp.org/journal/ns>

Honorary Editor-in-Chief

Prof. Kuo-Chen Chou

Gordon Life Science Institute, USA

Associate Editor

Prof. Sheng-Xiang Lin

Laval University Medical Center, Quebec, Canada

Editorial Board

Prof. Tarek Aboul-Fadl

Assiut University, Egypt

Prof. Fridoon Jawad Ahmad

King Edward Medical University, Pakistan

Prof. Hakan Arslan

Mersin University, Turkey

Dr. Lincoln Lima Corrêa

Para West Federal University, Brazil

Prof. Khalil El-Hami

Kyoto University, Japan

Dr. Marina Frontasyeva

Joint Institute for Nuclear Research, Russia

Prof. Reba Goodman

Columbia University Health Sciences, USA

Prof. M. Amin Hariri-Ardebili

University of Colorado at Boulder, USA

Prof. Tai-Yin Huang

Pennsylvania State University-Lehigh Valley, USA

Prof. Syed Kamrul Islam

University of Tennessee, USA

Prof. Robert H. Kretsinger

University of Virginia, USA

Prof. Peng Li

University of California, USA

Prof. Giulio Lorenzini

University of Parma, Italy

Prof. Mark Lee Morrissey

University of Oklahoma, USA

Prof. Sunil Nautiyal

Institute for Social and Economic Change, India

Dr. Edward Lee Nelson

University of California, USA

Prof. Dimitrios P. Nikolelis

University of Athens, Greece

Dr. Dongfeng Pan

University of Virginia, USA

Dr. Ram Vinod Roy

Saint Louis University, USA

Prof. Caesar Saloma

University of the Philippines Diliman, Philippines

Dr. Victor B. Semikoz

Russian Academy of Sciences, Russia

Dr. Mohammad Reza Shadnam

KPMG LLP, Canada

Prof. Kenji Sorimachi

Dokkyo Medical University, Japan

Dr. Marco Taddia

University of Bologna, Italy

Dr. Giancarlo T. Tomezzoli

European Patent Office, USA

Prof. Chao-Fu Wang

National University of Singapore, Singapore

Prof. Xin Wang

Nanjing Institute of Geology and Palaeontology, China

Dr. Sharif H. Zein

University of Hull, UK

Dr. Li-Ru Zhao

SUNY Upstate Medical University, USA

Dr. Weizhu Zhong

Pfizer Global Research and Development, USA

Table of Contents

Volume 10 Number 1

January 2018

The Greenhouse Effect: An Evaluation of Arrhenius' Thesis and a New Energy Equilibrium Model

W. Stannard.....1

Physical Reality and Essence of Imaginary Numbers in Astrophysics: Dark Matter, Dark Energy, Dark Space

A. A. Antonov.....11

Cicada (*Magicicada*) Tree Damage Detection Based on UAV Spectral and 3D Data

Â. M. K. Hentz, M. P. Strager.....31

Empirical Analysis of Decision Making of an AI Agent on IBM's 5Q Quantum Computer

W. Hu.....45

Natural Science (NS)

Journal Information

SUBSCRIPTIONS

The *Natural Science* (Online at Scientific Research Publishing, www.SciRP.org) is published monthly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$89 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 and reuse rights for the front matter of the journal:

Copyright © 2018 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

Copyright for individual papers of the journal:

Copyright © 2018 by author(s) and Scientific Research Publishing Inc.

Reuse rights for individual papers:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

Disclaimer of liability

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 assume 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: ns@scirp.org

Call for Papers

Natural Science

A Journal Published by Scientific Research Publishing, USA
www.scirp.org/journal/ns

Honorary Editor-in-Chief

Prof. Kuo-Chen Chou

Gordon Life Science Institute, USA

Associate Editor

Prof. Sheng-Xiang Lin

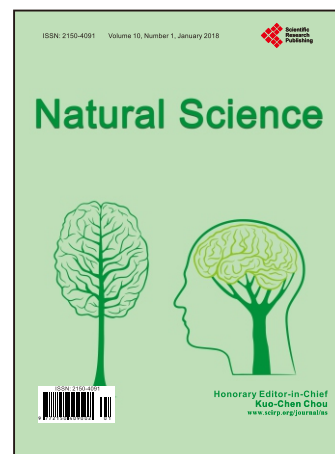
Laval University Medical Center, Quebec, Canada

Editorial Board

Prof. Tarek Aboul-Fadl
Prof. Fridoon Jawad Ahmad
Prof. Hakan Arslan
Dr. Lincoln Lima Corrêa
Prof. Khalil El-Hami
Dr. Marina Frontasyeva
Prof. Reda Goodman
Prof. M. Amin Hariri-Ardebili
Prof. Tai-Yin Huang
Prof. Syed Kamrul Islam

Prof. Robert H. Kretsinger
Prof. Peng Li
Prof. Giulio Lorenzini
Prof. Mark Lee Morrissey
Prof. Sunil Nautiyal
Dr. Edward Lee Nelson
Prof. Dimitrios P. Nikolelis
Dr. Dongfeng Pan
Dr. Ram Vinod Roy
Prof. Caesar Saloma

Dr. Victor B. Semikoz
Dr. Mohammad Reza Shadnam
Prof. Kenji Sorimachi
Dr. Marco Taddia
Dr. Giancarlo T. Tomezzoli
Prof. Chao-Fu Wang
Prof. Xin Wang
Dr. Sharif H. Zein
Dr. Li-Ru Zhao
Dr. Weizhu Zhong



Natural Science is an international journal dedicated to the latest advancement of natural sciences. 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 natural sciences. All manuscripts must be prepared in English, and are subject to a rigorous and fair peer-review process. Accepted papers will immediately appear online followed by printed hard copy. The journal publishes original papers including but not limited to the following fields:

- **Astronomy & Space Sciences**
 - ◆ Astronomy
 - ◆ Astrophysics
 - ◆ Atmospheric Science
 - ◆ Space Physics
- **Earth Science**
 - ◆ Geography
 - ◆ Geology
 - ◆ Geophysics/Geochemistry
 - ◆ Oceanography
- **Chemistry**
 - ◆ Analytical Chemistry
 - ◆ Biochemistry
 - ◆ Computational Chemistry
 - ◆ Inorganic Chemistry
 - ◆ Organic Chemistry
 - ◆ Physical Chemistry
- **Life Science**
 - ◆ Cell Biology
 - ◆ Computational Biology
- ◆ Genetics
- ◆ Immunology
- ◆ Medicine/Diseases
- ◆ Microbiology
- ◆ Molecular Biology
- ◆ Neuroscience
- ◆ Pharmacology/Toxicology
- ◆ Physiology
- ◆ Psychology
- ◆ Virology
- **Physics**
 - ◆ Applied Physics
 - ◆ Atomic, Molecular, and Optical Physics
 - ◆ Biophysics
 - ◆ High Energy/Particle Physics
 - ◆ Material Science
 - ◆ Plasma Physics
- **Others**
 - ◆ Education
 - ◆ History of Science
 - ◆ Science and Innovations

We are also interested in: 1) Short Reports—2-5 page papers where an author can either present an idea with theoretical background but has not yet completed the research needed for a complete paper or preliminary data; 2) Book Reviews—Comments and critiques.

Notes for Intending Authors

Submitted papers should not be previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. For more details, please access the website.

Website and E-Mail

<http://www.scirp.org/journal/ns>

E-mail: ns@scirp.org