

ISSN: 2156-8359

Volume 14, Number 8, August 2023



# International Journal of Geosciences



ISSN: 2156-8359



<https://www.scirp.org/journal/ijg>

# Journal Editorial Board

ISSN: 2156-8359 (Print) ISSN: 2156-8367 (Online)

<https://www.scirp.org/journal/ijg>

---

## Editors-in-Chief

**Prof. Jacques Bourgois**  
**Prof. Shuanggen Jin**

Université Pierre et Marie Curie, France  
Shanghai Astronomical Observatory, CAS, China

## Editorial Board

<b>Dr. John S. Armstrong-Altrin</b>	National Autonomous University of Mexico, Mexico
<b>Prof. Jong-Jin Baik</b>	Seoul National University, South Korea
<b>Prof. Rajasekhar Balasubramanian</b>	National University of Singapore, Singapore
<b>Prof. Charles E. Button</b>	Central Connecticut State University, USA
<b>Dr. Jian Chen</b>	University of North Alabama, USA
<b>Prof. Ferid Dhahri</b>	Tunis El Manar University, Tunisia
<b>Dr. Paul R. Eizenhöfer</b>	University of Tübingen, Germany
<b>Dr. Dionisios Gasparatos</b>	Aristotle University of Thessaloniki, Greece
<b>Prof. Yury G. Gatinsky</b>	Vernadsky State Geological Museum, Russia
<b>Prof. Ruixia Hao</b>	Peking University, China
<b>Prof. T. Harinarayana</b>	BSAR Crescent Institute of Science and Technology, India
<b>Prof. Oleg B. Khavroshkin</b>	Russian Academy of Sciences, Russia
<b>Dr. Bing Lu</b>	Department of Geography Simon Fraser University, Canada
<b>Prof. Anthony Lupo</b>	University of Missouri-Columbia, USA
<b>Prof. Ashok K. Mishra</b>	Clemson University, USA
<b>Dr. Massimo Mucciardi</b>	University of Messina, Italy
<b>Prof. Gerel Ochir</b>	Mongolian University of Science and Technology, Mongolia
<b>Prof. Junbom Park</b>	Seoul National University, South Korea
<b>Dr. Tarek Awad Seleem Salama</b>	Suez Canal University, Egypt
<b>Dr. Mark J. Sciuchetti Jr.</b>	Jacksonville State University, USA
<b>Prof. Mahmoud Mohamed Senosy</b>	Assiut University, Egypt
<b>Dr. Shailesh Kumar Singh</b>	National Institute of Water and Atmospheric Research, New Zealand
<b>Prof. Xianfang Song</b>	Chinese Academy of Sciences, China
<b>Dr. Agata Di Stefano</b>	University of Catania, Italy
<b>Prof. Khalid Tarawneh</b>	Amman Arab University, Jordan
<b>Dr. Donald M. Thieme</b>	Valdosta State University, USA
<b>Prof. George Tsiambaos</b>	National Technical University of Athens, Greece
<b>Prof. Yaw A. Twumasi</b>	Southern University and A&M College, USA
<b>Prof. Bernd Wünnemann</b>	Freie Universität Berlin, Germany
<b>Prof. Fawu Wang</b>	Shimane University, Japan
<b>Prof. Xinghui Xia</b>	Beijing Normal University, China
<b>Dr. Jianwen Yang</b>	University of Windsor, Canada
<b>Prof. Xiaohuan Yang</b>	Chinese Academy of Sciences, China
<b>Prof. Lianyang Zhang</b>	University of Arizona, USA
<b>Prof. A-Xing Zhu</b>	University of Wisconsin, USA

# Table of Contents

**Volume 14    Number 8**

**August 2023**

<b>Contamination, Precision and Accuracy of pXRF Geochemistry: Case Study-Polymetals Resources Ltd., Mansala Gold Project, Siguiri Basin, Northeast Guinea</b>	
N. Y. Asante .....	677
<b>Cycle Time Analysis of Open Pit Mining Dump Trucks</b>	
B. Enkhchuluun, B.-O. Batgerel, C. Ping .....	689
<b>Identification of Mine Water Inrush Source Based on PCA-BP Neural Network</b>	
M. C. Ning, H. F. Lu.....	710
<b>Groundwater Potential Mapping in Lapan Gwari Community Using Integrated Remote Sensing and Electrical Resistivity Soundings</b>	
A. D. Mangs, J. S. Ejepu, C. C. Nkemkah, S. N. Yusuf, A. K. Sallau, J. A. Yakubu, Y. Ibrahim, W. M. Wakili .....	719
<b>Petrography, Geochemistry and Relative Chronology of Quaternary Volcanic Formations in the Mermoz and Fann Sectors, West Senegal</b>	
M. Fall, I. Labou, P. M. Ndiaye .....	733
<b>Transmission Line Modelling of Geomagnetic Induction in the Ocean/Earth Conductivity Structure</b>	
D. H. Boteler, S. Chakraborty, X. Shi, M. D. Hartinger, X. Wang.....	767
<b>Characterization of Sandstone Reservoir at Bokor Formation, Kampot Province, Kampong Som Basin, Onshore Cambodia</b>	
V. Oeur, C. Or, C. Eng, S. Pech, L. Thorng, S. Sio, R. Heng .....	792

# International Journal of Geosciences (IJG)

## Journal Information

### SUBSCRIPTIONS

The *International Journal of Geosciences* (Online at Scientific Research Publishing, <https://www.scirp.org/>) is published monthly by Scientific Research Publishing, Inc., USA.

#### **Subscription rates:**

Print: \$79 per copy.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### SERVICES

#### **Advertisements**

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

#### **Reprints (minimum quantity 100 copies)**

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

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### COPYRIGHT

#### **Copyright and reuse rights for the front matter of the journal:**

Copyright © 2023 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 © 2023 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: [ijg@scirp.org](mailto:ijg@scirp.org)



# International Journal of Geosciences

ISSN: 2156-8359 (Print) ISSN: 2156-8367 (Online)  
<https://www.scirp.org/journal/ijg>

*International Journal of Geosciences (IJG)* is an international refereed journal dedicated to the latest advancement of geosciences. The goal of this journal is to keep a record of the state-of-the-art research and to promote study, research and improvement within its various specialties.

## Editors-in-Chief

Prof. Jacques Bourgois  
 Prof. Shuanggen Jin

Université Pierre et Marie Curie, France  
 Shanghai Astronomical Observatory, CAS, China

## Subject Coverage

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

- > Atmosphere
- > Biosphere
- > Cartography
- > Climate Change
- > Earth System Modelling
- > Earthquake and Seismology
- > Environmental Science
- > Estuarine and Coasts
- > Geochemistry
- > Geodesy and Surveying
- > Geographic Information System
- > Geography
- > Geo-Instrument Developments
- > Geology
- > Geomechanics
- > Geomorphology and Surficial Process
- > Geophysics
- > Geostatistics
- > Glaciology
- > Hydrosphere
- > Lithosphere or Geosphere
- > Marine Resources
- > Mineralogy
- > NASA Earth Science Enterprise
- > Oceanography
- > Pedosphere
- > Petrology
- > Seismology
- > Soil Science

We are also interested in: 1) Short Reports—2 to 5 pages where the paper is intended to present either an original idea with theoretical treatment or preliminary data and results; 2) Book Reviews—Comments and critiques of recently published books in Geosciences.

## 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

<https://www.scirp.org/journal/ijg>

E-mail: [ijg@scirp.org](mailto:ijg@scirp.org)

## ***What is SCIRP?***

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

## ***What is Open Access?***

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience



**Scientific  
Research  
Publishing**

**Website: <https://www.scirp.org>**

**Subscription: [sub@scirp.org](mailto:sub@scirp.org)**

**Advertisement: [service@scirp.org](mailto:service@scirp.org)**