



# **Journal of Minerals and Materials Characterization** and Engineering



# **Journal Editorial Board**

ISSN: 2327-4077 (Print) ISSN: 2327-4085 (Online)

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

## Editor-in-Chief

Prof. Jiann-Yang (Jim) Hwang Michigan Technological University, USA

#### **Editorial Board**

Prof. Chenguang BaiChongqing University, ChinaProf. Jinxiang ChenSoutheast University, ChinaDr. Mohan B. DangiCalifornia State University, USADr. Govindhan DhanarajStony Brook University, USA

**Prof. Wenfeng Ding** Nanjing University of Aeronautics and Astronautics, China

**Dr. Jaroslow W. Drelich** Michigan Technological University, USA

Prof. Donato FirraoPolitecnico di Torino, ItalyDr. Yi HuangUniversity of Southampton, UK

Dr. Bowen LiMichigan Technological University, USAProf. Hsing K. LinUniversity of Alaska Fairbanks, USA

Prof. Xuewei LvChongqing University, ChinaDr. Ali MeratiUniversity of Ottawa, Canada

**Dr. Miguel Miranda**National Laboratory of Engineering and Geology, Portugal

**Dr. Zhiwei Peng** Michigan Technological University, USA

Dr. Dolores Eliche Quesada University of Jaén, Spain

Prof. Veena SahajwallaUniversity of New South Wales, AustraliaProf. Gehad Mohamed SalehNuclear Materials Authority (NMA), EgyptDr. Ramesh S. SharmaVisvesvaraya Technological University, India



Volume 6 Number 1

ISSN Online: 2327-4085 ISSN Print: 2327-4077

# **Table of Contents**

Volume 6 Number 1	January 2018
Inhibition of Aluminium Corrosion Using Carica papaya Leaves Ex	tract in Sulphuric Acid
B. Kasuga, E. Park, R. L. Machunda	1
Effect of Atmospheric Plasma Paint Removal on the Fatigue Perform of 2024-T3 Aluminium Alloy Sheet	mance
M. Yanishevsky, A. Merati, Y. Bombardier	15
Study of Durability of Siliceous Sand Based Mortars in Togo, and o of Plastic Bags of the Kind "Voltic": Hydrocarbons' Effect	f Binder
K. B. Amey, OD. Samah, K. Neglo, A. P'Kla, K. M. Sounsah, K. Amousson	u, A. Vianou25
Characterization of Natural Vuggy Fractured Porous Medium: Its F Porosity and Permeability	Physicochemical Properties,
E. T. Romero-Guzmán, L. R. Reyes-Gutiérrez, J. Klapp, H. Hernández-Mer	ndoza38
Fabrication and Analysis of Vanadium-Based Metal Powders for Se	lective Laser Melting
J. L. Yang, J. F. Li	50
Phase, Microstructure and Beneficiation of Manganese Ore by Acid	l Leaching
S. Ali, Y. Iqbal, K. Ahmad, B. Afridi	60
Characterization of Metallic Formation on Ion Exchange/Chelating by Various Metal Groups and Extrapolation to Molecular Models	g Resins
S. Dudley, R. Avci, W. Gleason, W. Hill, J. Howery, M. Jaqua, D. Margrave	e72
Metakaolin as an Active Pozzolan for Cement That Improves Its Pr Its Pollution Hazard	operties and Reduces
S. S. Ibrahim, A. A. Hagrass, T. R. Boulos, S. I. Youssef, F. I. El-Hossiny, M.	R. Moharam86
Carbon Nanotube Filters for Removal of Air Pollutants from Mobil	e Sources
L. Romero-Guzmán, L. R. Reyes-Gutiérrez, E. T. Romero-Guzmán, E. Save	dra-Labastida105
Characterization and Evaluation of the Potential Uses of Mouyond	zi Clay
J. M. Moutou, P. M. Foutou, L. Matini, V. B. Samba, Z. F. D. Mpissi, R. Lou	baki119
Effects of Machine Parameter and Natural Factors on the Productive Haulage Equipment	rity of Loading and
M. I. Kulula, I. M. Akande	139

## Journal of Minerals and Materials Characterization and Engineering (JMMCE) Journal Information

#### **SUBSCRIPTIONS**

The *Journal of Minerals and Materials Characterization and Engineering* (Online at Scientific Research Publishing, www.SciRP.org) is published bimonthly by Scientific Research Publishing, Inc., USA.

#### Subscription rates:

Print: \$59 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: <a href="mailto:sub@scirp.org">sub@scirp.org</a>

#### **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: jmmce@scirp.org

# Call for Papers



# Journal of Minerals and Materials Characterization and Engineering

ISSN: 2327-4077 (Print) ISSN: 2327-4085 (Online) http://www.scirp.org/journal/jmmce

The Journal of Minerals and Materials Characterization and Engineering is an international peer-reviewed journal for the publication of original research in the fields of characterization of the minerals, metals and materials and its applications to the processing of them. Characterization has become the foundation for the discovery of new materials, the determination of their properties, understanding the occurrences and structures of materials, investigating on the performances, trouble shooting of feedstock, processes and products, and providing solutions for the industrial operations. The goal of this journal is to provide a platform for people to publish their findings in these subjects. In addition, the journal can be quite interdisciplinary for people researching in different fields being able to learn from each other and to broaden their perspectives and applications based on a common theme of characterization.

## **Subject Coverage**

The journal publishes original research and review papers related to characterization in the areas of minerals, ceramics, metals, refractories, metallurgy, materials, energy, fillers, recycling and environmental issues. Specifics may include but not limited to the following fields:

- Aerosols
- Bio and Medical Minerals and Materials
- Ceramics
- Characterization Technologies
- Chemical and Physical Processing of Minerals, Energy and Resources
- Crystal Growth
- Electrochemical Processing
- Electromagnetic Field Interactions with Materials
- Emission Particulate Matters
- Environment
- Fillers and Polymers
- Fine Particulates
- Hydrometallurgical Processing
- Light and Wave Interactions with Materials
- Materials
- Metals

- Microscopic Investigations
- Microwave and Infrared Interactions with Materials
- Minerals, Energy and Natural Resources
- Mining
- Nanostructures
- Pyrometallurgical Processing
- Recycling
- Refractories
- Salt and Brines
- Separation and Extractive Processes
- Slag
- Sound Interactions with Materials
- Spectrometry
- Synthesis of Materials
- Thermal Characterizations
- Waste Processing

All manuscripts must be prepared in English, and are subject to a rigorous peer-review process. Accepted papers will immediately appear online followed by printed in hard copy.

### Website and E-Mail

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





Website: http://www.scirp.org Subscription: sub@scirp.org Advertisement: service@scirp.org