

ISSN: 2161-7554

Volume 13, Number 1, January 2023



New Journal of Glass and Ceramics



ISSN: 2161-7554



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

Journal Editorial Board

ISSN Print: 2161-7554 ISSN Online: 2161-7562

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

Editor-in-Chief

Prof. Emad Ewais

Central Metallurgical R&D Institute (CMRDI), Egypt

Editorial Board

Dr. Claudia Belviso

The Institute of Methodologies for Environmental Analysis, Italy

Dr. Nikolaos Bouropoulos

University of Patras, Greece

Prof. Andrew E. Burns

Kent State University Stark Campus, USA

Dr. Luís Antônio S. de A. Prado

Technische Universität Hamburg-Harburg, Germany

Dr. Anirban Dhar

CSIR-Central Glass & Ceramic Research Institute, India

Prof. Aswini Ghosh

Indian Association for the Cultivation of Science, India

Prof. Michael T. Lanagan

Penn State University, USA

Dr. Hong Li

PPG Industries, Inc., USA

Prof. Ji-Guang Li

Northeastern University, China

Dr. Bouzid Menaâ

Fluorotronics, Inc, USA

Dr. Nelcy Della Santina Mohallem

Universidade Federal de Minas Gerais, Brazil

Dr. Faik Nuzhet Oktar

Marmara University, Türkiye

Dr. Dinesh Pathak

University of Pardubice, Czech Republic

Dr. Mukul Chandra Paul

Central Glass & Ceramic Research Institute, India

Prof. Zhijian Peng

China University of Geosciences, China

Dr. Gary R. Pickrell

Virginia Polytechnic Institute and State University, Germany

Dr. Liudvikas Pranevicius

Vytautas Magnus University, Lithuania

Prof. Giancarlo C. Righini

National Research Council, Italy

Prof. Sylwester Janusz Rzoska

Polish Academy of Sciences, Poland

Prof. Boris Subotic

Ruđer Boskoviæ Institute, Croatia

Prof. Maria Suszynska

Polish Academy of Sciences, Poland

Prof. Kulwant Singh Thind

Guru Nanak Dev University, India

Table of Contents

Volume 13 Number 1

January 2023

Chemical Durability, Properties and Structural Approach of the Glass Series

$x\text{Fe}_2\text{O}_3$ -(45-x) PbO -55 P_2O_5 (with $0 \leq x \leq 20$; mol%)

R. Makhlouk, Z. Chabbou, Y. Er-rouissi, M. Taibi, S. Aqdim.....1

New Journal of Glass and Ceramics (NJGC)

Journal Information

SUBSCRIPTIONS

The *New Journal of Glass and Ceramics* (Online at Scientific Research Publishing, <https://www.scirp.org/>) is published quarterly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$79 per issue.

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 © 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: njgc@scirp.org



New Journal of Glass and Ceramics

ISSN Print: 2161-7554 ISSN Online: 2161-7562

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

New Journal of Glass and Ceramics (NJGC) is an international, specialized, English-language journal devoted to publication of original contributions concerning all branches of glass and ceramics, their properties and applications. It is an open-access, peer-reviewed journal describing scientific and technological advances that cover the basic sciences, engineering aspects and applied technology of glass and ceramics as bulk and films.

Editorial Board

Dr. Claudia Belviso
 Dr. Nikolaos Bouropoulos
 Prof. Andrew E. Burns
 Dr. Luís António S. de A. Prado
 Dr. Anirban Dhar
 Prof. Aswini Ghosh
 Prof. Michael T. Lanagan
 Dr. Hong Li

Prof. Ji-Guang Li
 Dr. Bouzid Menaa
 Dr. Nelcy Della Santina Mohallem
 Dr. Faik Nuzhet Oktar
 Dr. Dinesh Pathak
 Dr. Mukul Chandra Paul
 Prof. Zhijian Peng
 Dr. Gary R. Pickrell

Dr. Liudvikas Pranevicius
 Prof. Giancarlo C. Righini
 Prof. Sylwester Janusz Rzoska
 Prof. Boris Subotic
 Prof. Maria Suszynska
 Prof. Kulwant Singh Thind

Subject Coverage

The journal publishes the highest quality original full articles, communications, notes, reviews, special issues and books, covering both the experimental and theoretical aspects including but not limited to the following materials, techniques and studies:

- Aerogels
- Automotive Glasses
- Bioceramics
- Bioglass
- Cements and Concrete
- Ceramic and Glass Powders
- Ceramic Composites
- Coatings Process
- Crystallization in Glass
- Decorative Glasses
- Glass Fibers
- Glass Polymers
- Low-Softening Temperature Glasses
- Nanoglass
- New Inorganic Glasses
- Organic-Inorganic Glasses
- Powder Preparation and Colloidal Sciences
- Refractories and Industrial Glasses and Ceramics
- Sol-Gel Glasses

With applications in: nanotechnology, optics, photonics, biomedical, biomaterials for implants and prosthesis, dentistry, environment, energy, thermal insulation, materials reinforcement, architectural restoration.

Contributions to fundamental and basic sciences of glass and ceramics research will be highlighted.

These concerns among others the properties and the characterization of glasses: glass structures studies, diffusion and kinetics in glasses, phase studies, thermodynamics, mechanical, thermal stability, salivation, surface properties, porosity, electrical, thermal, optical, magnetic and conductivity properties.

These concern also the theoretical aspect of the science of glass and ceramics with structure-properties relationship including modeling approaches, mechanisms. Manuscripts dealing with the technical aspect including the development of innovating tools for materials processes and productions as well as the characterization techniques of the materials are welcome.

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. Authors are responsible for having their papers checked for style and grammar prior to submission to NJGC. For more details about the submissions, please access the website.

Website and E-Mail

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

Email: njgc@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

Advertisement: service@scirp.org