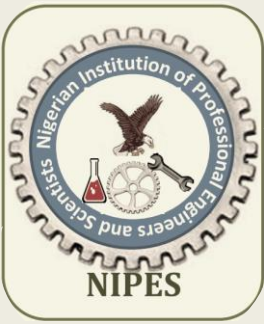


Volume 2(1) 2023

February, 2023

www.nipesjournals.org.ng



**Nigerian Institution of Professional
Engineers and Scientists (NIPES)
Journal of Materials
Engineering,
Structures and
Computation**





NIPES

Journal of
**Materials
Engineering,
Structures and
Computation**

Volume 2(1) 2023

The Nigerian Institution of Professional Engineers and Scientists

© 2023 NIPES Publications. All rights reserved

The Nigerian Institution of Professional Engineers and Scientists (NIPES)

The Nigerian Institution of Professional Engineers and Scientists (NIPES) is a research community consisting of field experts in engineering and science. It was founded by a group of researchers in the University of Benin, Nigeria. NIPES is a member organization of Crossref (USA) and is duly registered in accordance with the provision of the Allied Matters Act, Cap. C20, Laws of the Federation of Nigeria through the Commission. NIPES stands to promote and facilitate the exchange of research information among engineers and scientists and provide opportunities for interaction among members in the field including those in academia, research institutions, government agencies and industry.

Our Mission

To promote engineering-science interaction and maintain very high standard research publications through critical review of manuscripts and ensure its entrenchment to reputable ethical code of practice

Our Vision

To be the leading gateway for disseminating high quality and innovative research in engineering and science across Africa

Journal Scope

The Journal of Materials Engineering, Structures and Computation focus on novel aspects and latest development in engineering materials, structures and computation.

Editorial Board Members

Chief Editor

Prof. B. O. Onyekpe

University of Benin

Associate Editors

Prof. V. S. Aigbodion

University of Nigeria, Nsukka

Dr. (Mrs.) M. Awotunde

University of Johannesburg, South Africa

Dr. N. Enoma

University of Benin

Dr. S. Ikpeseni

Delta State University

Dr. B. O. Oreko

Federal University of Petroleum Resources

Dr. O. AwHEME

University of Benin

Dr. (Mrs.) M. O Oisakede

University of Benin

Managing Editor

Dr (Mrs.) U. G. Unueroh

University of Benin

Executive Council Members

Dr. Collins Chike Kwasi-Effah University of Benin- Chairman

Dr. Osarobo O. Ighodaro- University of Benin - Chief Executive Officer

Prof. Albert I. Obonor- University of Benin -President (Research)

Prof. Godfrey O. Ariavie- University of Benin -Executive Vice President (Research)

Dr. Godwin E. Sadjere- University of Benin -President (Operations)

Dr. S. Ikpeseni- Delta State University Executive Vice President (Operations)

Dr. Uche P. Onochie-Alex Ekweme University Ebonyi -Technical Associate (Research)

Engr. Osemudiamen Efosa University of Benin Executive Secretary

Correspondence:

c/o Department of Mechanical Engineering, University of Benin, Benin City, Nigeria

Email: nipesjournals@gmail.com Website: www.nipesjournals.org.ng Phone No: +2349057781486

The National Secretariat of NIPES, 22 Mashun Crescent, Cadastral Zone 4, Gwagwalada, Abuja

Editorial Office: Rm 137 Department of Mechanical Engineering, Faculty of Engineering, University of Benin, PMB 1154 Ugbowo, Edo

Table of Contents

Title	Author	Page
Experimental Analysis of Anisotropic Surface Texturing Process of Crystalline Silicon Wafers	Adama K. K., Emegha J. O., Ukhurebor E.K., Modebe L.U.	1-11
Modeling the Strength Properties of OPC/RPFA Concrete	Umeonyiagu I.E, Ogbonna N.P, Buruche P.N	12-23
Comparative Analysis of Composite Box Girder Bridges Using Beam on Elastic Foundation (BEF) Method, Space Frame Method, Finite Element Method and Computer Programming	Umeonyiagu I.E., Nnebe F.O., Ogbonna N.P.	24-35
A Review of Short-Term Electrical Load Forecasting Using Ensemble Stacking Generalization with Artificial Neural Network	Are, M. T, Okorie, P. U., Olarinoye, G. A.	36-52