

A Bibliometric Review of Research Trends on Kenaf Fiber Reinforced Concrete

Abdullah O. Baarimah^{1,a}, Wesam Salah Alaloul^{1,b}, M. S. Liew^{1,c},
Salem O. Baarimah^{2,d}, Muhammad Ali Musarat^{1,e} and Aiman A. Bin Mokaizh^{3,f}*

¹Department of Civil & Environmental Engineering, Universiti Teknologi PETRONAS, 32610
Seri Iskandar, Perak, Malaysia

²Department of Petroleum Engineering, College of Engineering and Petroleum, Hadhramout
University, Al Mukalla 50512, Hadhramout, Yemen

³Faculty of Chemical and Process Engineering Technology, Universiti Malaysia Pahang,
26300 Gambang, Pahang, Malaysia

ABSTRACT

To prevent the excessive depletion of natural resources, sustainable development requires using alternate sustainable materials. Researchers in the field of advanced construction materials are increasingly paying attention to kenaf fibers as a "green" material because of their possible application in composites to advance sustainable development. However, there has been no attempt of scientometric analysis to investigate the comprehensive understanding of the present state of applications of kenaf fibers in reinforced concrete. The study aims to perform a bibliometric analysis of the existing kenaf fibers reinforced concrete literature and to provide a picture of the research status during the last ten years from 2013 to September 2022. There were 303 articles extracted from the Scopus database. The "VOSviewer" tool was employed to visualize the literature containing the most active scientific journals, countries, and highly used keywords in the field of fibers reinforced concrete. The outcomes showed that "Hybrid Composites", "Impact Strength", "Water Absorption", "Scanning Electron Microscopy", "Polypropylenes" and "Polymer Composite" have recently emerged as themes related to the applications of KFRC, and grabbed the interest of academics, may also offer future research opportunities. Additionally, according to the frequency of the keywords used, three important research domains associated with kenaf fibers within the concrete in the construction materials field have been identified, including "Mechanical Properties", "Fiber Reinforced Plastics", and "Tensile Strength". Furthermore, the recent studies on the impact of kenaf fiber utilization on the structural performance of reinforced concrete are reviewed. Accordingly, the explanations related to research findings, suggestions for future studies have been provided on the incorporation of kenaf fibers reinforced concrete in civil engineering applications.

KEYWORDS

Kenaf, Fiber, Reinforced Concrete, KFRC, Materials, Sustainability, Scientometric analysis, Review

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