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(Research Article)
Visualization and analysis of scientific outputs on acoustic cavitation in Iran and worldwide: A scientometric study

S. Motiee[1], S. H. Momeni Masuleh[*1], M. Mokhtari Dizaji[2]
[1] Department of Mathematics, Faculty of Basic Science, Shahed University
[2] Department of Medical Physics, Faculty of Medical Sciences, Tarbiat Modares University

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Abstract

Mapping and analyzing scientific outputs are valuable methods for examining studies in specialized fields. In this regard, the most appropriate way is to investigate indexed documents in scientific databases. This article aims to draw scientific maps and analyze published documents in acoustic cavitation, providing a quantitative evaluation of research outputs, identifying active researchers, and exploring related fields. The research community is the documents indexed in the Scopus database from the first until the time of doing the research (March 2023). Data analysis was performed using Excel and VOSviewer software. The findings reveal an increasing trend in scientific outputs related to acoustic cavitation until the time of the study. Among the 63277 records obtained, Iran ranks 17th in the world with 722 scientific documents. Generally, the Chinese Academy of Sciences and the Ministry of Education of the People's Republic of China were identified among the international institutions and/or universities, and Sharif University of Technology and Tarbiat Modares University as domestic active universities in acoustic cavitation. Engineering and Physics have the most scientific outputs in the field of acoustic cavitation. The keywords of this field in Mathematics can be classified into five main clusters according to the co-occurrence index.

Keywords: Acoustic cavitation, Ultrasound waves, Concepts visualization, Map of science, VOSviewer software.

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[*] Corresponding author E-mail: momeni@shahed.ac.ir