


Manufacturing: A Bibliometric Analysis

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ABSTRACT

Manufacturing is dedicated to industrial production, in which raw materials are transformed into finished products on a large scale and included in the economy's secondary sector. The Scopus database was used for the bibliometric analysis, based on the term {manufacturing}. The better result shows in the function of the number of documents produced: year 2023; source Proceedings of SPIE; author Franke J. and Wang, L.; affiliation Ministry of Education of China; country USA; document type article; scientific area engineering and funding support National Natural Science Foundation of China.

KEYWORDS

Manufacturing, Manufacturing Processes, Manufacture, Production

INTRODUCTION

Manufacturing is devoted to producing goods through labor, equipment, machines, tools, and chemical or biological processing. Currently, the manufacturing sector emphasizes on some modern subjects such as nanomanufacturing, biomanufacturing, as well as aspects related with sustainable and intelligent manufacturing. Cyber-physical systems research continues towards integrating IoT and cloud technology into an Internet-based environment in manufacturing. (Wang et al, 2015; Davim 2015, 2018).

The bibliometric analysis used the database Scopus/Elsevier to search for the documents. Using the term {manufacturing}, TITLE-ABS-KEY ({manufacturing}), 801272 documents were identified (a search carried out on October 13th, 2024).

The results obtained in documents can be seen in Table 1, for the first ten positions concerning year, source, author, affiliation, country, document type, scientific area, and funding support. The better results obtained show in function of the number of documents produced: year 2023 (59889), followed by the years 2022 (54615) and 2021 (16445); source Proceedings of SPIE - The International Society for Optical Engineering (9065) followed by International Journal of Advanced Manufacturing Technology - Springer (7631) and Procedia of CIRP - Elsevier (4093); author Franke J. - Friedrich-Alexander-Universität Erlangen-Nürnberg and Wang, L. - The Royal Institute of Technology (KTH) Stockholm (370), followed by Klocke, F. - Rheinisch-Westfälische Technische Hochschule Aachen (314); affiliation Ministry of Education of China (8419) followed by Chinese Academy of Sciences (7482) and CNRS Centre National de la Recherche Scientifique (4762); country USA (172434) followed by China (118091) and Germany (55727); document type Article (461888) followed by Conference Paper (237278) and Review (41884); scientific area Engineering (459425)

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Table 1. Documents (801272)

	Year	Source	Author	Affiliation
1	2023 (59889)	Proceedings of SPIE (16445)	Franke J. (370)	Ministry of Education of China (8419)
2	2022 (54615)	Int. J. Adv. Manuf. Tech. (7631)	Wang, L (370)	Chinese Academy of Sciences (7482)
3	2021) (50323)	Procedia CIRP (4963)	Klocke, F (314)	CNRS Centre National de la Rech. Scientifique (4762)
4	2020 (46205)	Int. J. Prod. Res.(4720)	Denkena, B. (304)	Tsinghua University (4578)
5	2019 (40972)	SAE Technical Papers (4664)	Reinhart, G. (300)	Huazhong Univ. of Science and Technology (3872)
6	2018 (35702)	AIP Conference Proceedings (4252)	Schuh, G. (289)	Shanghai Jiao Tong University (3792)
7	2017 (32016)	Lect, Notes Mech, Eng. (3977)	Gao, L. (260)	Rheinisch-Westfälische Tech Hochschule Aachen (3577)
8	2016 (28102)	Advanced Materials Research (3643)	Bergs, T. (244)	Harbin Institute of Technology (3482)
9	2015 (24723)	IOP Conf. Ser. Mater. Sci. Eng. (3549)	Aurich, J.C. (242)	Georgia Institute of Technology (3471)
10	2014 (24595)	Materials (3534)	Merklein, M. (237)	Zhejiang University (3412)
	Country	Type	Area	Funding Support
1	USA (172434)	Article (461888)	Engineering (459425)	National Natural Sci, Found. of China (38723)
2	China (118091)	Conference Paper (237278)	Materials Sci (200328)	National Science Foundation (13159)
3	Germany (55727)	Review (41844)	Computer Sci. (161871)	Ministry of Education of China (9764)
4	UK (48956)	Book Chapter (30098)	Physics and Astr. (109631)	European Commission (9616)
5	India (48427)	Conference Review (7622)	Business Mana. (83985)	National Key Res. and Dev. Program of China (8305)
6	Italy (28189)	Note (6446)	Matematics (65818)	Engineering and Physical Sci. Res. Council (5843)
7	Japan. (26172)	Book (5260)	Chemical Eng. (54169)	Horizon 2020 Framework Programme (5808)
8	France (5042)	Short Survey (5112)	Chemistry (50691)	Fundamental Res. Funds for the Central Univ. (5765)
9	South Korea (21430)	Editorial (2540)	Environmental Sci. (50535)	U.S. Department of Energy (5540)
10	Canada (19901)	Letter (786)	Energy (44257)	D. Forschungsgemeinschaft (5418)

Source Scopus/Elsevier, October 13th, 2024

followed by Materials Science (200328) and Computer Science (161871) and funding support National Natural Science Foundation of China (38723) followed by National Science Foundation (13159) and Ministry of Education of China (9764).

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