Editorial: Metal matrix composites: a bibliometric analysis

J. Paulo Davim

Department of Mechanical Engineering,
University of Aveiro,
Campus Santiago, 3810-193 Aveiro, Portugal
Email: pdavim@ua.pt

Metal matrix composites (MMCs) are materials consisting of a metallic matrix reinforced with another material, typically a ceramic, to improve properties such as stiffness, strength and wear resistance. Machining MMCs is a complex task due to their heterogeneity and the fact that the reinforcements are extremely abrasive, resulting in high tool wear and an inferior surface finish (Davim, 2012, 2014).

The bibliometric analysis used the database Scopus/Elsevier to search for the documents. Using the term {metal matrix composites}, TITLE-ABS-KEY ({metal matrix composites}), 18,331 documents were identified (search carried out on 26th December 2025).

Table 1 Documents (18,331) by Scopus/Elsevier (26th December 2025)

	Year	*Source*	*Author*	*Affiliation*
1	2022 (1,058)	*Materials Today Proceedings* (897)	Gupta, M. (125)	Shanghai Jiao Tong University (391)
2	2020 (1,035)	*Materials Science and Engineering A* (696)	Zhang, D. (91)	Harbin Institute of Technology (370)
3	2019 (1,012)	*Journal of Alloys and Compounds* (513)	Li, Z. (74)	Ministry of Education of China (292)
4	2024 (986)	*Materials Science Forum* (345)	Rohatgi, P.K. (66)	Chinese Academy of Sciences (244)
5	2023 (973)	*Materials and Design* (265)	Lavernia, E.J. (64)	Anna University (202)
6	2021 (961)	*AIP Conference Proceedings* (252)	Pai, B.C. (63)	Northwestern Polytechnical University (195)
7	2018 (935)	*Key Engineering Materials* (230)	Geng, L. (61)	National University of Singapore (180)
8	2017 (679)	*Journal of Materials Science* (209)	Guo, Q. (61)	Vellore Institute of Technology (157)
9	2012 (608)	*Lecture Notes in Mech. Engineering* (208)	Fan, G. (56)	University of Science and Technology Beijing (142)
10	2015 (596)	*Advanced Materials Research* (200)	Mortensen, A. (53)	Saveetha School of Engineering (142)

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Table 1 Documents (18,331) by Scopus/Elsevier (26th December 2025) (continued)

	Country	*Type*	*Area*	*Funding support*
1	India (5,730)	Article (12,319)	Materials science (13,033)	National Natural Science. Foundation of China (1,431)
2	China (3,307)	Conference paper (4,403)	Engineering (12,741)	National Key Res. and Dev. Program of China (263)
3	USA (2,524)	Review (633)	Physics and astr. (5,415)	Fundamental Res. Funds for Central Universities (216)
4	UK (848)	Book chapter (611)	Chemistry (1,119)	National Science Foundation (179)
5	Germany (781)	Conference review (203)	Chemical eng. (1,022)	D. Forschungsgemeinschaft (135)
6	Japan (541)	Book (54)	Computer science (999)	China Postdoctoral Science Foundation (126)
7	Turkey (484)	Letter (18)	Mathematics (623)	Engineering and Physical Sc. Research Council (95)
8	Iran (472)	Editorial (16)	Energy (392)	Natural Sc. and Engineering Res. Council of Canada (92)
9	France (442)	Report (12)	Earth and planet. sciences (378)	Dep. of Science and Technology, India (90)
10	Canada (423)	Short survey (11)	Environmental science (325)	National Research Foundation of Korea (90)

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 shown in the function of the number of documents produced: year 2022 (1,058), followed by the years 2020 (1,035) and 2019 (1,012); source *Materials Today Proceedings* – Elsevier (897) followed by *Materials Science and Engineering A* – Elsevier (696) and *Journal of Alloys and Compounds* – Elsevier (513); author Gupta, M. – National University of Singapore (125), followed by Zhang, D. – Shanghai Jiao Tong University (91) and Li, Z. – Shanghai Jiao Tong University (74); affiliation Shanghai Jiao Tong University (391) followed by Harbin Institute of Technology (370) and Ministry of Education of China (292); country India (5,730) followed by China (3,307) and USA (2,524); document type article (12,319) followed by conference paper (4,403) and review (633); scientific area materials science (13,033) followed by engineering (12,741) and physics and astronomy (5,415) and funding support National Natural Science Foundation of China (1,431) followed by National Key Research and Development Program of China (263) and Fundamental Research Funds for the Central Universities (216).

References

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