Editorial: Surface roughness: a bibliometric analysis

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Surface roughness is a very important characteristic in industrial practice. Over the years, the characterisation and evaluation of surface roughness has constituted a challenging metrological problem that remains open, especially when there are requirements for high precision and/or functional performance (Davim, 2010; Petropoulos et al., 2010).

The bibliometric analysis used the database Scopus to search for the documents. Using the term {surface roughness}, TITLE-ABS-KEY ({surface roughness}), 183,951 documents were identified (search carried out on 1 June 2025).

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 2024 (11,803), followed by the years 2023 (10,370) and 2022 (10,370); source *Proceedings of SPIE – The International Society for Optical Engineering* (4,508) followed by *International Journal of Advanced Manufacturing Technology* – Springer (3,285) and *Applied Surface Science* – Elsevier (2,398); author Bhushan, B. – The Ohio State University (154), followed by Gupta, M.K. – Opole University of Technology (140) and He, N. – Nanjing University of Aeronautics and Astronautics (122); affiliation Ministry of Education of China (4,059) followed by Chinese Academy of Sciences (3,888) and CNRS – Centre National de la Recherche Scientifique (1,799); country China (39,516) followed by USA (29,720) and India (18,799); document type article (138,661) followed by conference paper (39,763) and review (2,346); scientific area engineering (101,490) followed by materials science (88,557) and physics and astronomy (68,537) and funding support National Natural Science Foundation of China (15,835) followed by Ministry of Science and Technology of China (9,049) and National Science Foundation (3,476).

Table 1 Documents (183,951)

	Year	*Source*	*Author*	*Affiliation*
1	2024 (11,803)	*Proceedings of SPIE* (4,508)	Bhushan, B. (154)	Ministry of Education of China (4,059)
2	2023 (10,370)	*Int. J. of Adv. Manuf. Tech.* (3,285)	Gupta, M.K. (140)	Chinese Academy of Sciences (3,888)
3	2022) (10,370)	*Applied Surface Science* (2,398)	He, N. (122)	CNRS Centre National de la Recher. Scientifique (1,799)

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Table 1 Documents (183,951) (continued)

	Year	*Source*	*Author*	*Affiliation*
4	2021 (9,324)	*Surface and Coatings Technology* (1,872)	Davim, J.P. (116)	Harbin Institute of Technology (1,547)
5	2020 (9,301)	*Thin Solid Films* (1,677)	Kang, R. (112)	Tsinghua University (1,233)
6	2019 (8,938)	*Materials Today Proceedings* (1,662)	To, S. (109)	University of Chinese Academy of Sciences (1,228)
7	2018 (7,883)	*Surface Science* (1,598)	Sahoo, A.K. (107)	Dalian University of Technology (1,094)
8	2017 (7,115)	*Key Engineering Materials* (1,534)	Persson, B.N.J. (105)	Nanjing Univ of Aeronautics and Astronautics (1,080)
9	2016 (6,399)	*Materials* (1,516)	Cheung, C.F. (101)	Shanghai Jiao Tong University (977)
10	2014 (6,049)	*Advanced Materials Research* (1,429)	Yallese, M.A. (101)	Xi'an Jiaotong University (940)
	Country	*Type*	*Area*	*Funding support*
1	China (39,516)	Article (138,661)	Engineering (101,490)	National Natural Sci. Found. of China (15,835)
2	USA (29,720)	Conference paper (39,763)	Materials Sci. (88,557)	Ministry of Science and Technology of China (9,049)
3	India (18,799)	Review (2,346)	Physics and Astr. (68,537)	National Science Foundation (3,476)
4	Japan (13,301)	Book chapter (1,737)	Chemistry (23,429)	National Key Res. and Dev. Program of China (2,684)
5	Germany (10,616)	Conference review (728)	Computer Sc. (18,986)	European Commission (2,367)
6	UK (8,250)	Note (149)	Chemical Eng. (17,053)	Fundamental Res. Funds for the Central Univ. (2,034)
7	South Korea (7,554)	Letter (115)	Earth and P. Sc. (11,105)	Japan Society for the Promotion of Science (1,639)
8	France (6,100)	Report (94)	Mathematics (10,841)	National Research Foundation of Korea (1,632)
9	Taiwan (4,706)	Short survey (64)	Environmental Sci. (7,612)	Ministry of Education of China (1,612)
10	Canada (4,285)	Editorial (39)	Energy (7,417)	D. Forschungsgemeinschaft (1,599)

Source: Scopus, 1 June 2025

References

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Petropoulos, G.P., Pandazaras, C.N. and Davim, J.P. (2010) 'Surface texture characterization and evaluation related to machining', in *Surface Integrity in Machining*, pp.37–66, Springer, London.