Editorial: Biomaterials: a bibliometric analysis

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According to the US National Institutes of Health, biomaterials can be defined as "any substance or combination of substances, other than drugs, synthetic or natural in origin, which can be used for any period of time, which augments or replaces partially or totally any tissue, organ or function of the body, in order to maintain or improve the quality of life of the individual." There are several different types of biomaterials, including, metals, polymers, ceramics, composites, and natural materials (Davim 2012, 2019; Rezwan et al., 2006; Veiga et al., 2012).

The bibliometric analysis used the database Scopus/Elsevier to search for the documents. Using the term {biomaterials}, TITLE-ABS-KEY ({biomaterials}), 101,012 documents were identified (search carried out on 10th November 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 shown in the function of the number of documents produced: year 2023 (6,669), followed by the years 2022 (6,552) and 2021 (6,316); source *Biomaterials* – Elsevier (4,115) followed by *Journal of Biomedical Materials Research* – HeteroCorporation (1,784) and *Acta Biomaterialia* – Elsevier (1,678); author Reis, R.L. – Universidade do Minho (460), followed by Kaplan, D.L. – Tufts School of Engineering (371) and Boccaccini, A.R. – Friedrich-Alexander-Universität Erlangen-Nürnberg (257); affiliation Ministry of Education of China (2,310) followed by Chinese Academy of Sciences (1,914) and Sichuan University (1,218); country USA (23,980) followed by China (18,440) and India (6,318); document type article (64,861) followed by review (15,193) and conference paper (10,913); scientific area materials science (55,361) followed by engineering (45,759) and biochemistry, genetics and molecular biology (26,768) and funding support National Natural Science Foundation of China (8,397) followed by National Institutes of Health (4,743) and National Science Foundation (2,988).

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Table 1 Documents (101,012) by Scopus/Elsevier (10th November 2024)

	Year	*Source*	*Author*	*Affiliation*
1	2023 (6,669)	*Biomaterials* (4,115)	Reis, R.L. (460)	Ministry of Education of China (2,310)
2	2022 (6,552)	*Journal of Biomedical Materials Research* (1,784)	Kaplan, D.L. (371)	Chinese Academy of Sciences (1,914)
3	2021 (6,316)	*Acta Biomaterialia* (1678)	Boccaccini, A.R. (257)	Sichuan University (1,218)
4	2020 (5,564)	*Journal of Applied Polymer Science* (1,597)	Mano, J.F. (247)	CNRS Centre National de la Rech. Scientifique (1,040)
5	2019 (5,401)	*Journal of Biomedical Mat. Res. Part A* (1,571)	Langer, R. (186)	Massachusetts Institute of Technology (876)
6	2018 (5,154)	*Materials Letters* (1,298)	Webster, T.J. (179)	Harvard Medical School (872)
7	2017 (5,131)	*Materials Science and Engineering C* (1,186)	Khademhosseini, A. (174)	Universidade do Minho (809)
8	2016 (4,664)	*Journal of Materials Sc. Mat. in Medicine* (1,087)	Ratner, B.D. (173)	Consiglio Nazionale delle Ricerche (788)
9	2015 (4,311)	*Materials* (873)	Mozafari, M. (171)	Zhejiang University (756)
10	2014 (3,940)	*Journal of Biomedical Materials Res.* (828)	Ramakrishna, S. (168)	National University of Singapore (742)
	Country	*Type*	*Area*	*Funding support*
1	USA (23,980)	Article (64,861)	Materials Sc. (55,361)	National Natural Sci. Found. of China (8,397)
2	China (18,440)	Review (15,193)	Engineering (45,759)	National Institutes of Health (4,743)
3	India (6,318)	Conference paper (10,913)	Biochemistry, G.M. Bio. (26,768)	National Science Foundation (2,988)
4	UK (5,953)	Book chapter (6,722)	Chemical Eng. (22,181)	Ministry of Science and Technology of China (2,599)
5	Japan (5,689)	Book (889)	Chemistry (20,172)	U.S. Department of Health and Human Services (2,293)
6	Germany (5,587)	Editorial (796)	Physics and Astr. (15,922)	European Commission (2,080)
7	Italy (4,552)	Conference review (362)	Medicine (15,914)	National Key Res. and Dev. Program of China (1,739)
8	South Korea (3,733)	Short survey (285)	Pharmacology, T. Phar. (4,653)	Japan Society for the Promotion of Science (1,329)
9	France (3,643)	Note (264)	Environmental Sc. (3,113)	Fundamental Res. Funds for the Central Univ. (1,140)
10	Canada (3,471)	Letter (80)	Computer Science (2,920)	National Research Foundation of Korea (1,121)

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