Board 97: Is There a Relation between Research Topics and High-Impact Journals in Biomedical Engineering?

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Abstract

Some early-career biomedical engineering researchers believe in a theory that some research articles are more likely to get published in high-impact journals simply because their research topics are favored. This theory is tested by regressing the journal impact metric against the biomedical engineering research topics across thousands of recent academic journal articles in biomedical engineering. The journal impact metric is operationalized as the CiteScore provided by Scopus, a citation database. To account for the variant spellings of the same topic, the research topics are generated using a research assessment tool named SciVal. The journal articles included in the analysis are also identified using Scopus, because journals indexed in Scopus have assigned subject categories, making it easy to identify journals relevant to biomedical engineering. The inclusion criteria for selecting articles are biomedical engineering journal articles that are (1) peer-reviewed, (2) published in the most recent four years (2018-2021) and (3) in English language. Using each article as an observation, how much more or less CiteScore is linked to the presence of a research topic is tested using linear regression. Several research topics exhibit statistically significant positive slopes, thus supporting the hypothesis that certain research topics have positive correlations with high-impact journals.

Introduction

Research topics always receive attention from early-career researchers because the choice of a research topic can greatly affect their research productivity. El-Omar emphasized the importance of choosing a research active area (also considered as a research topic) as one of the attributes of a manuscript accepted by a high-impact journal [1]; contrarily, a topic not of sufficient interest to journal readership can be a common reason for manuscript rejection [2, Table 2]. Hence, some early-career researchers believe in a theory that some articles are more likely to get published in high-impact journals simply because of favored research topics. The author tested the hypothesis that some articles with a particular research topic are associated with high-impact journals, by regressing the journal impact metric against the research topics across thousands of recent academic journal articles in biomedical engineering. The reason for choosing biomedical engineering is two-fold. Firstly, the author limited the test to a single subject field, as comparing the journal impact metric within a subject field or discipline is less biased than comparison across fields. Secondly, biomedical engineering is rapidly growing since 2000 as the U.S. National Institutes of Health has continuously increased funding for biomedical engineering [3, Fig. 1]. That means biomedical engineering is more likely to produce “trendy” research topics. Peer-reviewed journal articles published in 2018-2021 are identified in Scopus which is Elsevier's abstract and citation database. The journal impact metric is operationalized as the CiteScore, equivalent to Impact Factor. CiteScore counts citations received in a four-year window to articles, reviews, conference papers and other types of publications, and divides this by the number of publications published in the four years [4]. Since CiteScore is calculated based on Scopus’ citation data, it would be convenient to use Scopus and CiteScore together. Since some publications contain too many or fewer keywords, and not all publication records contain controlled terms such as Medical Subject Headings (MeSH) and Embase Subject Headings

(EMTREE medical terms) in the field of keywords, Elsevier's research assessment tool called SciVal [5] is used to generate controlled terms as topics for publications.

Literature Review

Bibliometric analysis is widely used to identify emerging trends in publications, collaboration patterns, and research performance of individuals and institutions [6]. As research topics usually reflect emerging trends, approaches on research topics range from co-word mapping to topic modeling [7]. Co-word mapping or co-word analysis can explore relationships among research topics and provide an overview of current research by analyzing the content of publications such as article titles, abstracts, keywords and even full text [6]. For example, Chang *et al.* uncovered main topics and trends in the library and information science from 1995 to 2014 through using co-word analysis to identify keywords with the highest frequencies from ten library and information science journals [8]. As topic modeling has become popular, multidisciplinary collaboration across institutions can be measured by research topics derived from faculty publications [9]. Topic modeling can also help librarians identify key research topics from faculty publication records for a college [10]. Besides co-word mapping and topic modeling, linear regression as an alternative approach can be used to examine the relation between research topics and publications. Behrens *et al.* not only identified keywords with highest frequencies in the field of neuroscience, but also explored the correlations between brain regions and the journal impact factor [11]. As a result, they found that some brain regions (which can be seen as research topics) are more likely to be published in journals with higher citation metrics [11]. Inspired by these previous studies [8]-[11], the author examined the relation between research topics and high-impact journals in biomedical engineering.

Methods

A list of 234 journal titles relevant to biomedical engineering along with CiteScore 2021 was identified by subject area in Scopus' source list [12]. Since CiteScore is an annual value, CiteScore 2021 was used as the most recent value during the project. Searches for journal titles in Appendix A were conducted on November 4-7, 2022. The year range of 2018-2021, source type of journal, document type of article and English language filters were applied. Although a long-time scale could capture more topical trends, 2018 throughout 2021 were selected because many articles published in November and December might not have been indexed by Scopus. The source type of journal and document type of article were applied to exclude non-original research or other types of publications such as Reviews and Letters. English was applied due to the author's language proficiency. Publication records (one per journal article) were exported and merged into a CSV file (102,206 records). Since there were inconsistent spellings or errors in journal titles, spellings were cleaned up. Corresponding CiteScore was added to the publication records as a new column. Since 36 journal titles that were not on the list were retrieved because of a loose phrase (quotation marks around the words to allow for wildcards and lemmatization) in the search, 8,224 records of these journal titles were removed, resulting in 93,982 records.

Next, EIDs (Scopus assigned unique academic work identifiers) of records were uploaded to SciVal for generating research topics. SciVal defined that a publication belongs to only one "topic" [6] which is composed of three controlled terms. The author separated the "topic" into

three terms to reflect the overlapping of some terms in publications. For example, a publication has three terms (Flow Cytometry, Immunophenotyping, Single-Cell Analysis) while the other publication also contains the same term of Single-Cell Analysis among its "topic" (Single-Cell Analysis, Small Cytoplasmic RNA, Single Cell RNA Seq). For consistent terminology, a term was treated as a topic. SciVal accepted a total of 88,233 EIDs and rejected 5,149 EIDs because SciVal could not retrieve their publication records. A total of 87,345 publications received topics while some did not receive any topics. 87,345 publication records were finally valid records to be analyzed.

Furthermore, corresponding CiteScore was added back to the publication records for analysis. Topics and CiteScore were extracted and reformatted. In the reformatted tabular structure as in Table 1 of Appendix B, column headings were thousands of topics as predictors and CiteScore; each row (also called observation) represented a publication record. The value of each topic was either 1 or 0, indicating whether each publication contains a certain topic or not. Linear regression was employed to predict CiteScore using topics as predictors. The threshold of the occurrence of each topic was set to 0.1% of the total number of publications, resulting in 538 unique topics. The selection of threshold values has trade-offs. If the threshold value is too small, overfitting in linear regression would occur because there would be a large number of topics as predictors compared to the number of observations. If the threshold value is large, some interesting topics may be excluded. A multiple-comparison correction is used when several statistically independent tests are being performed simultaneously [13]. That means when there are many independent tests (n tests), and a significance level of 0.05, the expected number of false positive results (Type-I error) would be $0.05 \times n$, which could be high if n is large. To control for false positives due to multiple comparisons, Bonferroni correction [14] was applied at the corrected significant level of 0.05 by setting the $\frac{0.05}{n}$. In order to measure topical trends in the four years, topics and CiteScore of publications for each year were processed using the same method.

Results

For 234 sampled journals relevant to biomedical engineering, a total of 87,345 publication records were included for analysis. The distribution of CiteScore of sampled journals is shown in Figure 1. About 80.73% of the entire publications are from journals with CiteScore between 1 and 11. *Nature Biotechnology* and *Nature Nanotechnology* are journals with the first (62) and second (57.3) highest CiteScore. The publications from the two journals only account for an extremely small portion (1.15%) of the entire publications. The publications from *Nature Biomedical Engineering* with the third highest CiteScore (32.1) account for 0.46% of the entire publications. The distributions of CiteScore of sampled journals published in each year as shown in Figure 2 seems indistinguishable from each other to a great extent as well as the distribution of CiteScore in four years.

Since the threshold of occurrence of each topic was set to 0.1% of the entire publications, 538 topics were taken as predictors. Linear regression on the four-year publications resulted in 196 statistically significant topics after correcting for multiple comparisons. A word cloud of the top 100 statistically significant topics is shown in Figure 3, and the top 50 topics with slopes are listed in Table 2 of Appendix B. The font size represents the slope of a topic. A higher slope

suggests that the presence of the topic is associated with CiteScore more. So, gene editing, bioenergy, magnetism, monolayer, topology, dendritic cells, small interfering RNA, microrna, genetic procedures and organoids are the top 10 topics.

Figure 1. The distribution of CiteScore of sampled journals published in four years

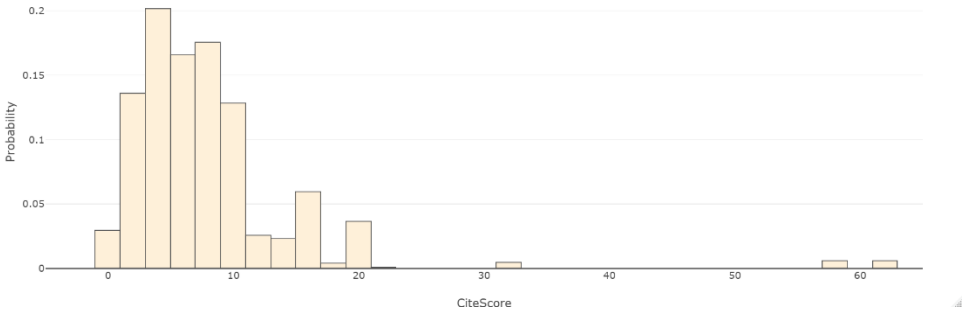


Figure 2. The distributions of CiteScore of sampled journals published in each year

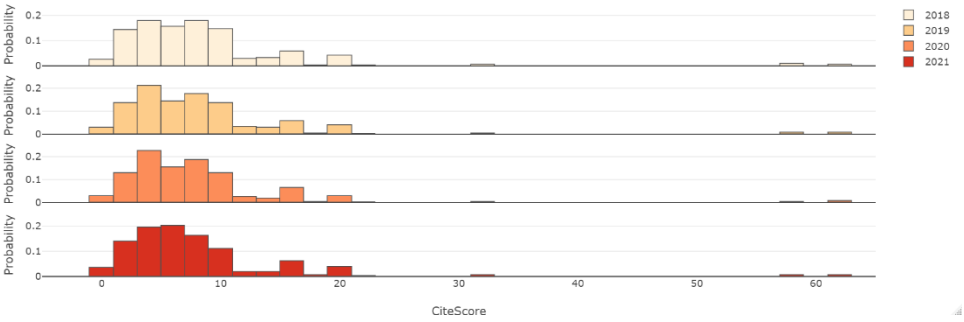
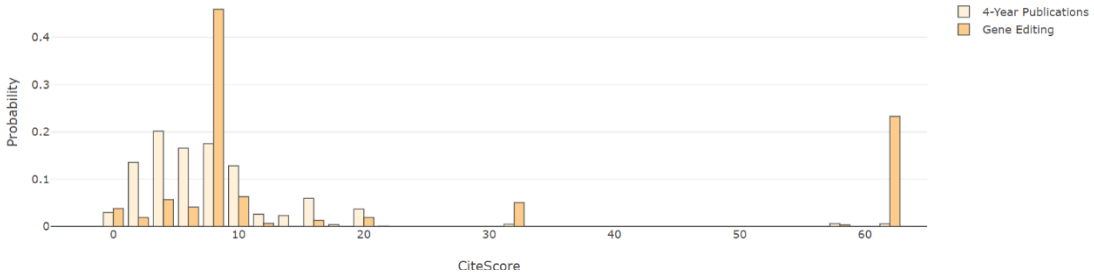


Figure 3. Word cloud of the first 100 statistically significant topics from the four-year publications

When a close look at a few topics with high slopes, the distribution of CiteScore for gene editing in Figure 4a has two peaks: one peak indicates 23.27% of this topic appear at CiteScore of 62 and the other peak indicates 45.91% appears at CiteScore of 8.3. Bioenergy in Figure 4b also has two peaks: one peak indicates where 56.83% of this topic appears at CiteScore of 20.2 and the other peak indicates 28.96% appears at CiteScore of 5.4. The distributions for CiteScore for a few topics with high slopes show that their presence is strongly linked to high-impact journals.

Figure 4. The distributions of CiteScore for certain topics

a. Gene Editing



b. Bioenergy

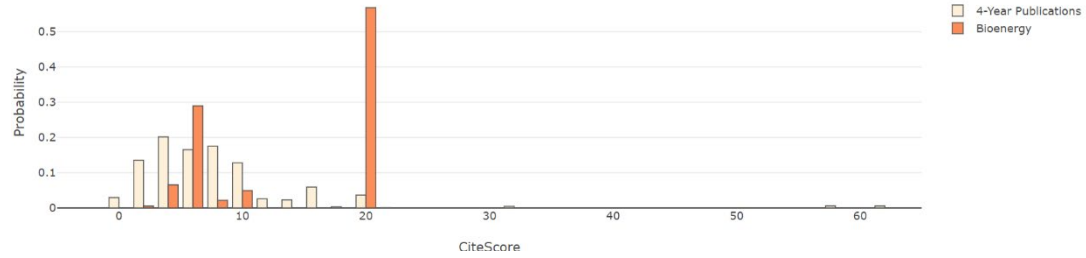
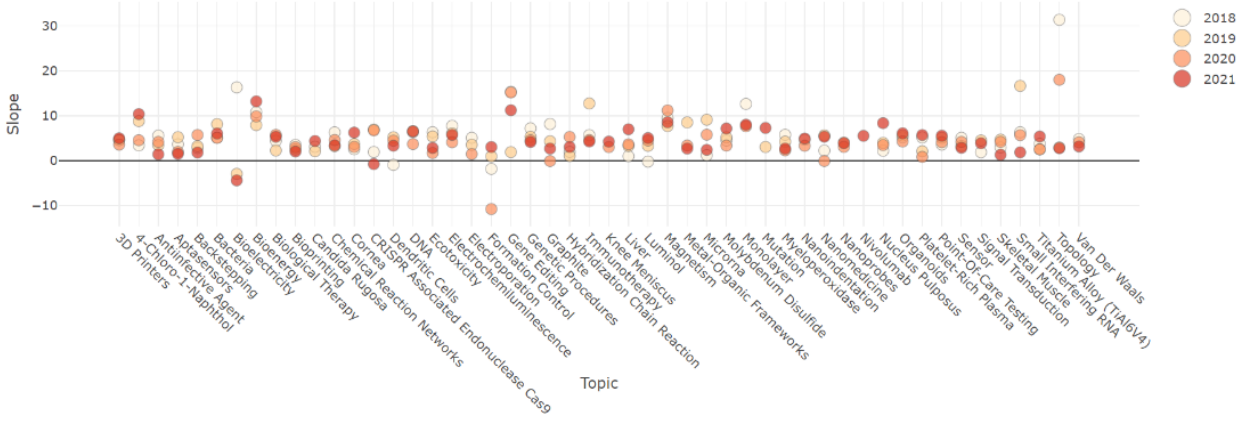


Figure 5. Topical trends in 2018-2021 (top 50 topics)



The top 50 topics from 196 statistically significant topics were exacted as topics of interest. Since topics and CiteScore of publications for each year had been tested using linear regression,

their corresponding slopes for each year were then compared. Since the slope of a topic can be interpreted as the popularity of the topic, Figure 5 shows how more or less popular the topics of interest received in the four years. Gene Editing was always "fashionable" as its slope was 11.2 in 2021, 15.3 in 2018 and 15.1 in 2020. Magnetism was still popular since its slope was between 7.7 and 11.2 in the four years. The popularity of Bioenergy was increasing as its slope was 10.8 in 2018, 7.9 in 2019, 9.8 in 2020 and 13.2 in 2021. Monolayer was moderately popular as its slope was 7.7 in 2020 and 8.0 in 2021. Topology was extremely popular in 2018 and 2020 while slightly popular in 2019 and 2021. Dendritic Cells was slightly declining since 2019 but was still positive in 2019-2021. Small Interfacing RNA had changed rapidly over the years. Bioelectricity was declining because its slop had become negative in 2019 and 2021. CRISPR Associated Endonuclease Cas9 was also declining because of a negative slope in 2021.

Discussion

As high-impact journals have high CiteScore values, the right-skewed distribution of CiteScore of sampled journals for four years in Figure 1 show that 80% publications are from journals of CiteScore ranged from 0 to 10 while only 5% publications are from high-impact journals with CiteScore ranged from 20 to 62. The distributions of CiteScore for a few topics with high slopes in Figure 4 provide support for a strong correlation between these topics and high CiteScore values given that only 5% publications are from high-impact journals.

The topical trends in Figure 5 provide an insight into how much more or less popular the topics of interest would be in the four-year window. Topics and CiteScore of publications for each year were processed using the same method as what were performed on the four-years publications. All topics of interest were captured using the same threshold of the occurrence of topic at 0.1%, suggesting that 0.1% is an appropriate threshold value.

Challenges and Limitations

One challenge for this project is the upload/export capacity with a maximum limit in Scopus and SciVal due to a large volume of publication records of retrieval. To avoid reaching Socpus' export capacity with a maximum of 20K publication records in the CSV format, 234 journal titles were grouped into 12 sets for separate searches. To avoid reaching SciVal's upload capacity with a maximum of 50K EIDs, EIDs of records were put into two sets for separate upload. Although SciVal accepted most EIDs, publications that were declined by SciVal might contain key topics that were not included in the analysis.

Besides the challenge of the upload/export capacity, the other challenge is the CSV file exported from SciVal. SciVal set three topics with commas in a column while the export CSV file was also comma-delimited, making it difficult to correctly split chemical names with commas such as 2-Vinyl-4,6-Diamino-1,3,5-Triazine within the same column. Splitting topics with multiple commas had to be manually processed.

One limitation in the project is that about 6.4% publication records of retrieval (6,037 records) were excluded during the process because SciVal could not retrieve them or generate research topics for them. These publications might contain some important research topics that should be

considered. The other implementation limitation is that the subscription-based tool SciVal may not be available to other academic institutions.

Conclusion

Overall, the observed research topics that may statistically significantly predict CiteScore in a positive manner provide support for the hypothesis that some research topics are correlated with high-impact journals in the field of biomedical engineering. Furthermore, a closer look at the predictive performance over a course of four years reveals diversity regarding how long the research topics remain popular.

The author hopes this project will serve as an example for others to identify research topics in high-impact journals and their trends in other subject fields. In addition, exploring an alternative way to generate research topics instead of using SciVal will be the next step after this project.

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Appendix A. Search Strategy for 234 Sampled Journals

"Nature Biotechnology" OR "Nature Nanotechnology" OR "Nature Biomedical Engineering" OR "IEEE Reviews in Biomedical Engineering" OR "Polymer Reviews" OR "Biosensors and Bioelectronics" OR "Nano Today" OR "Biomaterials Research" OR "Current Opinion in Biotechnology" OR "Annual Review of Biomedical Engineering" OR "Acta Biomaterialia" OR "Additive Manufacturing" OR "Advanced healthcare materials" OR "Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology" OR "Biofabrication" OR "Bioactive Materials" OR "Advanced Photonics" OR "Artificial Cells, Nanomedicine and Biotechnology" OR "Tissue Engineering - Part B: Reviews" OR "Nanomedicine: Nanotechnology, Biology, and Medicine" OR "Lab on a Chip" OR "Journal of Tissue Engineering" OR "npj Regenerative Medicine" OR "Journal of Materials Chemistry B" OR "Journal of Nanobiotechnology" OR "Osteoarthritis and Cartilage" OR "Journal of Functional Biomaterials" OR "Biomaterials Science" OR "IEEE Transactions on Biomedical Circuits and Systems" OR "ACS Materials Letters" OR "Bioconjugate Chemistry" OR "IEEE Transactions on Biomedical Engineering" OR "Journal of Tissue Engineering and Regenerative Medicine" OR "Nanobiomedicine" OR "Biomedical Engineering Letters" OR "Journal of Biological Engineering" OR "Nanotoxicology" OR "Biocybernetics and Biomedical Engineering" OR "Journal of Biomedical Materials Research - Part A" OR "Advances in Bioinformatics" OR "Journal of Neural Engineering" OR "Nanotheranostics" OR "ACS Biomaterials Science and Engineering" OR "ACS Synthetic Biology" OR "Nanomedicine" OR "APL Bioengineering" OR "Frontiers in Neuroinformatics" OR "IEEE Transactions on Neural Systems and Rehabilitation Engineering" OR "IEEE Robotics and Automation Letters" OR "Metabolic Engineering Communications" OR "Interface Focus" OR "Molecular Systems Design and Engineering" OR "Bio-Design and Manufacturing" OR "Journal of the Royal Society Interface" OR "Tissue Engineering - Part A." OR "Biosensors and Bioelectronics: X" OR "Bioprinting" OR "Journal of diabetes science and technology" OR "Materials Today Bio" OR "Biomedical Signal Processing and Control" OR "IEEE Transactions on Nanobioscience" OR "Cancer Nanotechnology" OR "Biochemical Engineering Journal" OR "Current Opinion in Biomedical Engineering" OR "Journal of Biomedical Materials Research - Part B Applied Biomaterials" OR "Advanced Biology" OR "Biomedical Microdevices" OR "IEEE Journal of Translational Engineering in Health and Medicine" OR "International Journal of Robust and Nonlinear Control" OR "Journal of Biomedical Optics" OR "Journal of the Mechanical Behavior of Biomedical Materials" OR "Synthetic and Systems Biotechnology" OR "Journal of Materials Science: Materials in Medicine" OR "Cell Transplantation" OR "Annals of Biomedical Engineering" OR "Molecular Imaging" OR "Tissue Engineering and Regenerative Medicine" OR "BioMedical Engineering Online" OR "International Journal of Biomaterials" OR "Journal of Biomaterials Science, Polymer Edition" OR

"Bioresources and Bioprocessing" OR "International journal of computer assisted radiology and surgery" OR "Physiological Measurement" OR "Tissue Engineering - Part C: Methods" OR "Biochip Journal" OR "Biosensors" OR "Nanotechnology, Science and Applications" OR "Biomedical Materials (Bristol)" OR "Biomicrofluidics" OR "Frontiers in Bioengineering and Biotechnology" OR "Medical and Biological Engineering and Computing" OR "Bioengineering and Translational Medicine" OR "Biomimetics" OR "BioTech" OR "Smart Materials in Medicine" OR "ASAIO Journal" OR "Healthcare Informatics Research" OR "International Journal for Numerical Methods in Biomedical Engineering" OR "Pharmaceutical Nanotechnology" OR "Physical and Engineering Sciences in Medicine" OR "ACS Applied Bio Materials" OR "IRBM" OR "Journal of Applied Biomaterials and Functional Materials" OR "Progress in Biomedical Engineering" OR "BioNanoScience" OR "Frontiers in Neurorobotics" OR "Synthetic Biology" OR "EJNMMI Physics" OR "IEEE Open Journal of Engineering in Medicine and Biology" OR "Journal of Biomaterials Applications" OR "Biotechnology and Bioprocess Engineering" OR "Health Policy and Technology" OR "Magnetic Resonance Imaging" OR "Cardiovascular Engineering and Technology" OR "Expert Review of Medical Devices" OR "JMIR Serious Games" OR "Regenerative Medicine" OR "Regenerative Therapy" OR "Biotechnology and Applied Biochemistry" OR "Cytotechnology" OR "Journal of Biomechanics" OR "Journal of Experimental Nanoscience" OR "Micro and Nano Systems Letters" OR "Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization" OR "HardwareX" OR "Journal of Medical Robotics Research" OR "Artificial Organs" OR "Medical Engineering and Physics" OR "Recent Advances in Drug Delivery and Formulation" OR "Disability and Rehabilitation: Assistive Technology" OR "JMIR Diabetes" OR "Nano Futures" OR "Burns and Trauma" OR "Regenerative Engineering and Translational Medicine" OR "Science as Culture" OR "Brain-Computer Interfaces" OR "Laser Therapy" OR "Journal of Biomechanical Engineering" OR "Journal of Innovative Optical Health Sciences" OR "Journal of Medical and Biological Engineering" OR "Translational Vision Science and Technology" OR "Journal of Applied Biomedicine" OR "JMIR Pediatrics and Parenting" OR "Ontario Health Technology Assessment Series" OR "Applied Bionics and Biomechanics" OR "Biomedizinische Technik" OR "Health and Technology" OR "Organogenesis" OR "Current Nanoscience" OR "Journal of Laser Applications" OR "Open Biotechnology Journal" OR "Theoretical and Applied Mechanics Letters" OR "IEEE Transactions on Medical Robotics and Bionics" OR "Medical Devices: Evidence and Research" OR "Photobiomodulation, Photomedicine, and Laser Surgery" OR "Critical Reviews in Biomedical Engineering" OR "Journal of Healthcare Engineering" OR "Nano Biomedicine and Engineering" OR "Sports Engineering" OR "Biomedical Physics and Engineering Express" OR "Computer Methods in Biomechanics and Biomedical Engineering" OR "Measurement Science Review" OR "Avicenna Journal of Medical Biotechnology" OR "Journal of Porous Media" OR "Cell and Tissue Banking" OR "Human Factors and Mechanical Engineering for Defense and Safety" OR "Journal of Artificial Organs" OR "Journal of Electrical Bioimpedance" OR "Journal of Medical Engineering and Technology" OR "Bio-Medical Materials and Engineering" OR "International Journal of Artificial Organs" OR "International Journal of Computer Science in Sport" OR "Micro and Nano Letters" OR "Journal of Medical Signals and Sensors" OR "Transactions of the ASABE" OR "Bioelectricity" OR "Technology and Health Care" OR "Open Biomedical Engineering Journal" OR "Plasma Medicine" OR "ACM Transactions on Computing for Healthcare" OR "Acta of Bioengineering and Biomechanics" OR "Journal of Participatory Medicine" OR "International Journal of Biomedical Engineering and Technology" OR "Physical Activity and Health" OR "Advanced Biomedical Engineering" OR "Periodicals of Engineering and Natural Sciences" OR "Open Bioinformatics Journal" OR "Defence Science Journal" OR "Digest Journal of Nanomaterials and Biostructures" OR "IEEE Pulse" OR "International Biomechanics" OR "Biomedical Engineering - Applications, Basis and Communications" OR "Biosurface and Biotribology" OR "Journal of Biomimetics, Biomaterials and Biomedical Engineering" OR "Journal of Prosthetics and Orthotics" OR "Studies in Health Technology and Informatics" OR "Expert Review of Ophthalmology" OR "Journal of Mechanics in Medicine and Biology" OR "Journal of Medical Devices, Transactions of the ASME" OR "Research on Biomedical Engineering" OR "BMJ Surgery, Interventions, and Health Technologies" OR "Nanobiotechnology Reports" OR "Bio-Medical Engineering" OR "Frontiers in Nanotechnology" OR "Journal of Biomechanical Science and Engineering" OR "Drug Delivery Letters" OR "Journal of Biomedical Photonics and Engineering" OR "NanoWorld Journal" OR "Technology and Disability" OR "Current Nanomedicine" OR "Footwear Science" OR "Gerontechnology" OR "Journal of Reports in Pharmaceutical Sciences" OR "Mathematical Biology and Bioinformatics" OR "Current Directions in Biomedical Engineering" OR "Applied Computer Science" OR "International Journal of Bioinformatics Research and Applications" OR "International Journal of Biology and Biomedical Engineering" OR "Journal of Long-Term Effects of Medical Implants" OR "Nano Biomedicine" OR "Assistive Technology Outcomes and Benefits" OR "International Journal of Medical Engineering and Informatics" OR "Nanomedicine Journal" OR "Series on Biomechanics" OR "Frontiers in Biomedical Technologies" OR "International Journal of Nano and Biomaterials" OR "Genes and Cells" OR "Revista Mexicana de Ingenieria Biomedica" OR "Cell and Organ Transplantology" OR "Egyptian Journal of Basic

and Applied Sciences" OR "Medicine in Novel Technology and Devices" OR "Eurobiotech Journal" OR "Genetic Engineering and Biotechnology News" OR "IRBM News"

Appendix B

Table 1. Reformatted tabular structure for topics and CiteScore

Bioenergy	Bioelectricity	Enzymatic Fuel Cells	Bioanodes	Regenerative Fuel Cells	...	CiteScore
1	1	0	0	1		20.2
1	0	1	1	0		20.2
1	1	0	0	1		8.3
1	0	1	1	0		10.3
1	1	0	0	1		6.7
1	1	0	0	1		7.3
1	1	0	0	1		5.4

Note: Hundreds of unique topics and observations are intentionally omitted in the table. Topics are predictors and CiteScore is dependent variable in linear regression. Each row is an observation, representing a publication record. 1 means that the publication contains the topic while 0 means that it does not contain the topic.

Table 2. Top 50 topics with slopes

Topic	Slope
Gene Editing	11.68355
Bioenergy	10.91970
Magnetism	10.39378
Monolayer	8.957285
Topology	8.933189
Dendritic Cells	6.695134
Small Interfering RNA	5.788966
Microrna	5.752699
Genetic Procedures	5.740489
Organoids	5.587738
Bacteria	5.533898
4-Chloro-1-Naphthol	5.478356
Mutation	5.419078
Metal-Organic Frameworks	5.353717
DNA	5.289880
Knee Meniscus	5.225596
Sensor	5.199921
Immunotherapy	5.186202
Antiinfective Agent	5.182852
Electrochemiluminescence	5.079288
3D Printers	4.953666
Nanoindentation	4.928197
Biological Therapy	4.794492

Molybdenum Disulfide	4.726177
Nanomedicine	4.701571
Point-Of-Care Testing	4.627847
Nanoprobes	4.627755
Chemical Reaction Networks	4.610996
Myeloperoxidase	4.603001
Hybridization Chain Reaction	4.579770
Skeletal Muscle	4.447488
Titanium Alloy (TiAl6V4)	4.427433
Backstepping	4.328785
Ecotoxicity	4.320501
Platelet-Rich Plasma	4.280498
Luminol	4.271820
Electroporation	4.237328
Formation Control	4.157088
Bioelectricity	3.997474
Nivolumab	3.838322
CRISPR Associated Endonuclease Cas9	3.832561
Signal Transduction	3.809134
Aptasensors	3.692471
Liver	3.678671
Bioprinting	3.660796
Cornea	3.659163
Van Der Waals	3.651572
Nucleus Pulposus	3.609769
Candida Rugosa	3.579576

Note: The slope represents how much more CiteScore on average the articles with the topic have than articles without the topic.