JOURNAL IMPACT FACTOR (JIF): THE MOST IMPORTANT MEASURE OF QUALITY OF QUARTILE1 (Q1) GEOLOGY JOURNALS

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ABSTRACT

This paper evaluates quarter one (Q1) Geology journals in Scopus database using the journal metrices such as CiteScore, SCImago Journal Rank (SJR), Eigenfactor Score (ES) Source Normalized Impact per Paper (SNIP), h-index and Journal Impact Factor (JIF). Sixty-one Q1 Geology journals were selected from the Geology subject category of Scopus Source List (SSL). The JIF, ES metrics were extracted from Journal Citation Reports (JCR) of Web of Science (WoS). The metrics of CS, SJR and SNIP extracted from SSL and the metrics h-index was extracted from SCImago Journal and Country Rank. On analysis, it is found that a substantial difference exists only in one indicator, the h-index when comparing Open Access (OA) and Non–Open Access (Non-OA) journals with respect to their journal metrics CS, SJR, h-index, ES, SNIP and JIF. Bivariate correlation coefficient. Was considered, and a high Spearman's correlation coefficient found between SNIP and JIF (0.852). SJR and CiteScore have the next highest and strongest correlation (0.791). Thus six journal quality indices (JIF, ES, SJR, CiteScore, h-index, and SNIP) were studied and analyzed for Sixty-one Q1 Geology journals in this study. The study concluded that the Journal Impact Factor (JIF) is the most important metric that the scholarly community can use to measure the quality of Q1 Geology journals, followed by CiteScore and SJR. Consequently, the JIF, CiteScore, and SJR indices are recommended for assessing the quality of Q1 Geology journals in Scopus.

***Keywords:** Scientometrics, Scientometric Indicators, Growth Pattern, Geology Journals, Open Access Journals, Scopus, Quarter one Journals, Journal Metrics, Journal Impact Factor, SCImago Journal Rank, h-index, Source Normalized Impact, Journal Citation Reports, Eigenfactor, Cite Score, Web of Science.*

1. Introduction

Scientometric indicators are quantitative assessments of publication performance. Scientometrics is the study of the quantitative aspects of science as a communication system. In recent years, it has become increasingly significant in the measurement and evaluation of research performance. Over the preceding two decades, scholarly publishing has undergone a dramatic and global upheaval, with the trend toward system-wide Open Access, signaling a drastic shift in major publishers' revenue models away from journal subscriptions (Tennant et al., 2016). Over the previous few decades, the number of open access publications has increased in practically all areas. Scientometric analysis is becoming more popular for assessing the performance of various aspects of the scholarly and scientific communication. Several citation databases, including Scopus, are available for analyzing academic communication in numerous domains. Elsevier's Scopus is an abstracting and indexing database with full-text links. Scientometric methods and instruments are commonly used to evaluate the quality of research and scientific journals. Some of the most widely used bibliometric and scientometric metrics include Journal Impact Factor (JIF), CiteScore, Eigenfactor Score (ES), and SCImago Journal Rank (SJR).

2. Review of Literature

The main goal of the study done by Sudhi and Renjith (2021) is to examine the growth pattern of Q1 LIS journals in the SCImago Journal and Country Rank database from 1999 to 2020. The report discusses the top Q1 journals in LIS in terms of scientometric indicators such as SJR, *h*-index, CiteScore, and Impact Factor. The authors discovered that *'Information Systems Research'* has the highest SJR value of 3.507, and *'IEEE Transactions on Information Theory'* has the highest h-index value of 286.

In an article, Akbash et al. (2021) sought to assess the degree of influence of parameters such as university profile, year of establishment, number of research and teaching staff, etc., on the indicators of the publishing activity rating of faculty members at Ukrainian institutions. As statistical analytic tools, analysis of variance and multiple regression models were utilized. The study revealed that the profile of an educational institution has a significant impact on the *h*-index and general citation indicators for all universities in Ukraine.

The most commonly used scientometric indicators are Scimago Journal Rank, Eigenfactor Score, and H5 Index. Ahmed et al. (2018) investigated the role of bibliometric indicators and scientometric instruments in evaluating the quality of construction and building technology publications. The study focused on the performance of 61 prestigious and highly cited journals, as well as the informative correlations predicted by sophisticated algorithms utilizing four bibliometric research quality criteria. The study was based on Web of Science papers in the field of construction and building technology. The study indicated that the journal Impact Factor (JIF) is the most important indicator for ranking construction and building technology journals, magazines, bulletins, and other publications.

Waris et al. (2017) examined the quality indices of Sports Science journals, focusing on the Journal Impact Factor, Journal Rank indicator, Eigen factor Score (ES), and *h*-index. The primary goal of this study was to determine sports science journal database coverage in Scopus and Web of Science, as well as to investigate the strength of correlations between bibliometric factors and their subsequent relevance in determining the influence and prestige of sports science journals. The study found a satisfactory and identical link between JIF and SJR indicators, JIF and ES rankings, and JIF and H5 for sports science publications.

3. Objectives of the Study

1. To identify the growth pattern of Q1Geology journals in Scopus from 2011 to 2020.
2. To find out the scientometric indicators of open and non-open access Q1 Geology journals in Scopus.

3. To find out the bivariate correlation among scientometric indicators of Q1 Geology journals in Scopus.

4. Methodology

4.1. Data Collection

On 20/01/2022, we acquired data on Q1 Geology journals from Scopus Source List (SSL) 2020, which is available at https://www.scopus.com/sources.uri. Scopus, the world's largest indexing and abstracting database, offers a journal classification system. Journal classification systems are crucial in bibliometric analysis. The classification of journals into study topics is an important topic for bibliometric investigations. The 'All Science Journal Classification (ASJC)' is the Scopus journal classification system. It is divided into two tier, with 304 categories at the bottom level and 27 categories at the highest level. The authors gathered information only on the listed journals from the bottom level category "Geology," which is part of the top level category "Earth and Planetary Sciences." Under the top level category "Earth and Planetary Sciences" the sub disciplines (bottom level category) include "General Earth and Planetary Sciences", "Earth and Planetary Sciences (miscellaneous)", "Atmospheric Science", "Computers in Earth Sciences", "Earth-Surface Processes", "Economic Geology", "Geochemistry and Petrology", "Geology", "Geophysics", "Geotechnical Engineering and Engineering Geology", "Oceanography", "Paleontology", "Space and Planetary Science" and "Stratigraphy".

We additionally narrowed the list to find Geology Open Access (OA) journals. If a journal is listed in the Directory of Open Access Journals (DOAJ) and/or the Directory of Open Access Scholarly Resources, it is considered open access (ROAD). Scopus Source List 2020 lists 68 Geology journals as Q1 journals. Only 61 journals have Journal Impact Factor (JIF) and Eigenfactor Score (ES) values in Web of Science's Journal Citation Report (JCR) 2020. So, for the sake of analysis, these 61 journals with all of the scientometric indicators were chosen for the current study.

4.2. Scientometric Indicators

For each journal selected, we extracted the following variables:

- **CiteScore**: CiteScore measures average citations received per document published in the serial.
- **SCImago Journal Rank**: SCImago Journal Rank measures weighted citations received by the serial. Citation weighting depends on subject field and prestige (SJR) of the citing serial.
- **Source Normalized Impact per Paper (SNIP)**: Source Normalized Impact per Paper measures actual citations received relative to citations expected for the serial's subject field.
- ***h*-index** (Hirsch's *h* index): The largest number of (*h*) publications that have been cited at least "*h*" times, while all other publications have less than "*h*" citations.
- **Journal Impact Factor** (JIF): In a given year, the impact factor of a certain journal is defined as the average value of citations per paper received by the items published in the journal in two previous years.
- **Eigenfactor Score** (ES): A score that takes into account not only the quantity of citations but also their "quality" by assigning weights to the source of the citations, similar to Google's rank of websites.

4.3. Statistical Analysis

For analysis, the SPSS version 22.0 was employed. We report data in median form in the descriptive analysis section (25 percent to 75 percent quartiles), because none of the journals' scientometric indicators follow normality (the distribution of the data was checked with a Kolmogorov-Smirnov test), the nonparametric Mann-Whitney test was used to examine the relationship between scientometric indicators and journal status (OA or Non OA). Spearman's correlation coefficient was used to assess the correlations between the derived indicators.

5. Analysis of Data

5.1. Growth Pattern of Q1 Geology Journals in Scopus from 2011 to 2020

Figure 1 depicts the growth trend of Scopus Q1 Geology journals. The number of Q1 journals for 2020 is 68, compared to 51 at the start of 2011. While the number of Q1 Geology journals is increasing, a decreasing trend can also be seen for 2017 and 2018. From 2011 to 2020, the number of Q1 journals climbed from 51 to 68. Open Access journals are growing at a similar rate in Q1. In the case of OA journals, there is evidence of erratic growth.

Similarly, the number of Non-Open Access journals in Q1 2020 is 54, up from 44 in 2011. The rise of Non-OA journals in Q1 is unsteady, according to the analysis. From 2016 to 2018, the number of non-open access journals in Q1 decreased steadily.

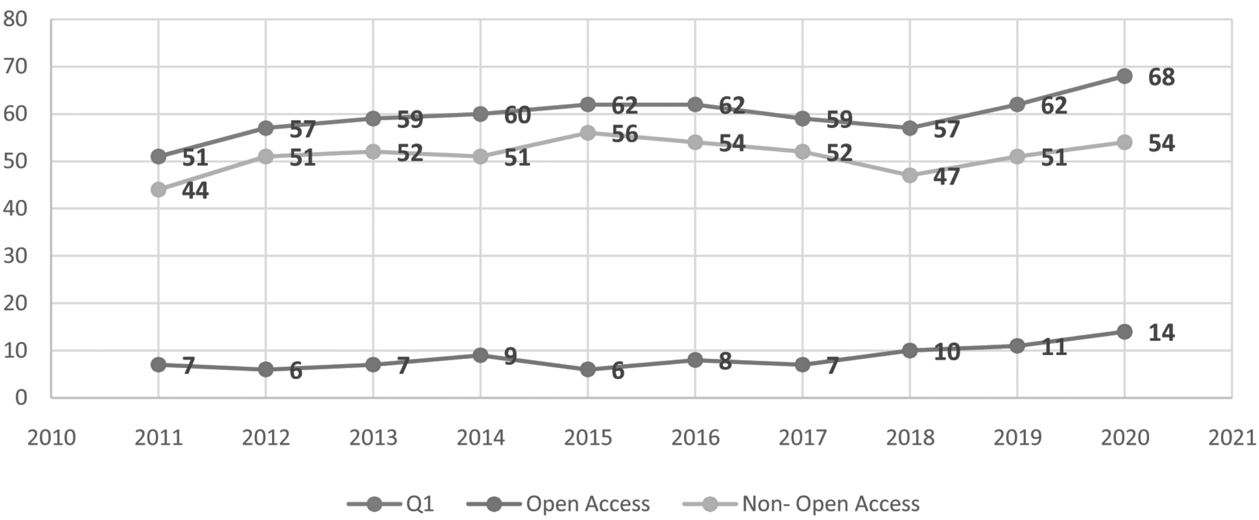

Fig. 1. Growth of Q1 Geology Journals in Scopus for the period 2011-2020

5.2. Scientometric Indicators of Selected Open and Non-Open Access Q1 Geology Journals in Scopus Source List 2020

Tables were used to portray data in median (25 percent to 75 percent) quartiles as well as mean. Table 1 displays the descriptive statistics of scientometric indicators for 61 Q1 Geology journals in Scopus 2020.

The descriptive statistics of scientometric indicators for 11 OA Q1 Geology journals in Scopus 2020 are shown in Table 2. Table 3 displays descriptive data for scientometric indicators from 50 non-OA Q1 Geology publications in Scopus 2020. Table 4 shows the inferential analysis using Mann-Whitney U Test showing the differences in journal metrics. According to descriptive data, the CiteScore for OA journals (median = 5, mean rank = 24.09) was comparable to that of Non-OA journals (median = 6, mean rank = 32.52). In terms of the metric CiteScore, there is no significant difference between OA and non-OA journals in Q1 (P > 0.05). Descriptive data for SNIP revealed that OA journals (median = 1.34300, mean rank = 25.41) and non-OA journals (median = 1.46600, mean rank = 32.23) were similar. There was no statistically significant difference in SNIP between OA and non-OA Geology journals in Q1 (p > 0.05), according to the p-value. Similarly, the SJR of OA journals (median = 1.19400, mean rank = 30.09) finds no significant difference with the SJR of non-OA journals (median = 1.26850, mean rank = 31.20) because the p value is greater than 0.05. When compared with OA journals in JIF and ES to non-OA journals, we found no significant difference (p> 0.05). JIF for OA (median = 3.37500, mean rank = 28.09), non-OA (median = 3.83850, mean rank = 31.64). OA journals (median = 0.00440000, mean rank = 22.82) and non-OA journals (median = 0.00570500, mean rank= 32.80) for ES.

The authors discovered a substantial difference in only one indicator, the h-index, when comparing OA and non-OA journals. H-index (p < 0.01) of OA journals has a median of 44 (mean rank = 14.36) and of non-OA journals a median of 103.50 (mean rank =34.66).

Table 1

Descriptive Statistics for Metrics of Selected 61 Geology Journals

	CiteScore	SNIP	SJR	H index	JIF	ES
N	61	61	61	61	61	61
Mean	6.303	1.47511	1.40354	90.21	3.91023	0.00893295
Percentiles 25 (Q1)	4.650	1.19900	.94000	44.50	2.98700	0.00279500
50 (Median (Q2))	5.900	1.42000	1.23600	83.00	3.80300	0.00506000
75 (Q3)	6.900	1.64750	1.78250	126.00	4.31400	0.01175500

Table 2

Descriptive Statistics for Metrics of 11 OA Geology Journals

	CiteScore	SNIP	SJR	H index	JIF	ES
N	11	11	11	11	11	11
Mean	5.636	1.34982	1.37473	44.18	3.73973	0.00401455
Percentiles 25 (Q1)	4.400	1.18500	.75900	34.00	3.26300	0.00225000
50(Median (Q2))	5.000	1.34300	1.19400	44.00	3.37500	0.00440000
75 (Q3)	5.800	1.48800	1.87900	51.00	4.09000	0.00506000

Table 3

Descriptive Statistics for Metrics of 50 Non-OA Geology Journals

		CiteScore	SNIP	SJR	H index	JIF	ES
N		50	50	50	50	50	50
Mean		6.450	1.50268	1.40988	100.34	3.94774	0.01001500
Percentiles	25 (Q1)	4.875	1.20050	0.96500	56.75	2.95600	0.00280750
	50(Median (Q2))	6.000	1.46600	1.26850	103.50	3.83850	0.00570500
	75 (Q3)	7.025	1.66425	1.69625	132.25	4.32700	0.01651750

Table 4

Mann-Whitney U Test Showing the Differences in Journal Metrics

Scientometric Indicators	Status		Z value	P value
	Open Access Journals (Mean Rank)	Non-open Access Journals (Mean Rank)		
CiteScore	24.09	32.52	1.427	0.154
SNIP	25.41	32.23	1.154	0.249
SJR	30.09	31.20	0.188	0.851
h-index	14.36	34.66	3.434	0.001
JIF	28.09	31.64	0.600	0.548
ES	22.82	32.80	1.688	0.091

5.3. Bivariate Correlation among Scientometric Indicators of Selected Q1 Geology Journals in Scopus

Bivariate correlation is measured and shown in table 5. All relationships have a positive correlation. According to Cohen (1988), correlations less than 0.3 are weak, those between 0.3 and 0.6 are moderate, and those greater than 0.6 are strong. Correlation matrix (table 5) demonstrates that there are moderate to substantial relationships between scientometric indicators of Q1 Geology journals. These connections demonstrate that when one indicator rises, the other rises as well. Furthermore, all of the relationships are significant at the 1% level.

The strongest and greatest level of connection, 0.852, is found between SNIP and JIF. SJR and CiteScore have the next highest and strongest correlation. The correlation coefficient in this case is 0.791. The correlation coefficient between the ES and the h-index is 0.782. JIF vs. CiteScore has a score of 0.771, SJR vs. JIF has a score of 0.721, SNIP vs. CiteScore has a score of 0.704, and SNIP vs.

SJR has a score of 0.644. All of the above correlations have values more than 0.6, indicating that they are strong.

The highest level of association among moderate associations is 0.599 between ES and SNIP, followed by ES vs. JIF (0.580), ES vs. SJR (0.575), SJR vs. *h*-index (0.526), ES vs. CiteScore (0.478), *h*-index vs. CiteScore (0.404), h index vs. SNIP (0.402), and *h*-index vs. JIF (0.402 (0.388). All of these correlations are considered moderate because the correlation values range between 0.3 and 0.6.

Table 5

Bivariate Correlation among Scientometric Indicators

Scientometric Indicators	CiteScore	SNIP	SJR	H Index	JIF	ES
CiteScore	1.000	0.704**	0.791**	0.404**	0.771**	0.478**
SNIP	0.704**	1.000	0.644**	0.402**	0.852**	0.599**
SJR	0.791**	0.644**	1.000	0.526**	0.721**	0.575**
H Index	0.404**	0.402**	0.526**	1.000	0.388**	0.782**
JIF	0.771**	0.852**	0.721**	0.388**	1.000	0.580**
ES	0.478**	0.599**	0.575**	0.782**	0.580**	1.000

**Correlation is significant at the 0.01 level (2-tailed).

6. Major Findings

a) Country-by-country wise analysis of selected Q1 Geology publications in Scopus 2020 shows that the United Kingdom contributes highest percentage (31.1%) of the journals, followed by the Netherlands (24.6%), the United States (23%), Germany (8.2%), China (4.9%), and Switzerland (3.3%). France, Austria, and Italy each contribute 1.6% of all journals.

b) According to the status of the selected journals, there are 11 OA and 50 Non-OA journals in Geology.

c) In terms of OA journal contributions, the Geological Society of America and Springer Nature each publish two OA journals, while Elsevier, the European Association of Geochemistry, the University of California Press, Science Press, Copernicus, Cambridge University Press, and the Guangzhou Institute of Geochemistry each contribute one.

d) Elsevier publishes one third (21 i.e. 34.4%), Wiley Blackwell and Taylor & Francis 5 (8.2%) each, and Springer Nature 6 (9.8%). The Geological Society of America publishes four (6.6%) periodicals, while the European Association of Geochemistry publishes three (4.9%). Science Press and Cambridge University Press each publish two journals (3.3%). The remaining 13 publishers each contribute one journal (1.6%).

e) Only one of the selected Q1 Geology journals had the same rating across all journal indices. The journal *Remote Sensing of Environment* ranks the same in all journal indices. As a result, relating metrics information and measuring across distinct indications is tough.

f) In relation to JIF, the top- three most-referenced Q1 Geology journals are *Remote Sensing of Environment* (10.164), *International Journal of Coal Geology* (6.806), and *Engineering Geology* (6.755). These journals were closely followed by *Rock Mechanics and Rock Engineering* (6.730), *Elements* (6.053), and *Gondwana Research* (6.051), while the *Italian Journal of Geosciences* received the fewest citations (1.852).

g) According to Eigen factor scores, the top three class journals were *Remote Sensing of Environment* (0.053400), *Geology* (0.031440), and *Quaternary Science Reviews* (0.029750). For the Q1 journals, *Geochemical Perspectives* had the lowest ES score (0.000150).

h) According to SJR, the top three journals are *Remote Sensing of Environment* (3.611), *Gondwana Research* (2.859), and *Geochemical Perspectives* (3). *Petroleum Geoscience* (0.541) is the journal with the lowest SJR rank.

i) The top three journals in terms of *h*-index are *Remote Sensing of Environment* (281), *Geology* (215), and *Chemical Geology* (202). *Geochemical Perspectives* has the lowest *h*-index value of 12.

j) According to CiteScore, the top three Q1 Geology journals in terms of citations are *Remote Sensing of Environment* (17.6), *Gondwana Research* (11.8), and *Geochemical Perspectives* (11.4). The *International Journal of Coal Geology* followed closely (11.3). *GeografiskaAnnaler, Series A: Physical Geography,* and *Journal of Mountain Science*, on the other hand, received the fewest citations (3.1 each).

k) According to SNIP, the top three journals were *Remote Sensing of Environment* (3.345), *Engineering Geology* (2.86), and *Rock Mechanics and Rock Engineering* (2.468). For the Q1 journals, the *Italian Journal of Geosciences* had the lowest SNIP score (0.723).

l) When the difference between Geology OA and non-OA journals is examined, just one journal index, the *h*-index, shows a meaningful difference. The *h*-index for OA has a median of 44 (25-75 percent: 34 - 51) (mean rank = 14.36) and a median of 103.5 (25-75 percent: 56.75 – 132.25) (mean rank = 34.66).

m) A bivariate connection exists between the six indices (JIF, ES, SJR, CiteScore, *h*-index, and SNIP) used to rank the selected Q1 Geology journals (table 5). There is a substantial and moderate Spearman's rho statistical association between several journal indices of chosen Q1 Geology journals, as indicated in the table.

7. Conclusion

The journal percentiles as quartiles, Q1 to Q4, are corroborated by Scopus and Web of Science. Q1 represents the top 25% SJR distribution (99th–75th CiteScore Percentile), Q2 represents the middle–high SJR distribution (between 50% and top 25%, i.e. 74th–50th CiteScore percentile), Q3 represents the middle-low SJR distribution (between 75 percent and top 50%, i.e. 49th–25th CiteScore percentile), and Q4 represents the lowest SJR distribution (bottom 25% SJR distribution, i.e. 24th–0 CiteScore Percentile). CiteScore percentile denotes a serial title's position in its topic field. A serial with a CiteScore percentile of 96 percent, for example, is ranked as high as or higher than 96 percent of titles in that category. Each subject area in which a title is indexed in Scopus is assigned a CiteScore percentile. As a result, the most prestigious journals in an area are included in the first quartile, or Q1. The current study, as emphasized earlier, takes into account Scopus Q1 journals in Geology for the year 2020.

Six bibliometric research quality indices (JIF, ES, SJR, CiteScore, *h*-index, and SNIP) were studied and analyzed for 61 Q1 Geology journals in this study. According to the findings, the Journal Impact Factor (JIF) is the most important metrics that the scholarly community can use to measure the quality of Q1 Geology journals, followed by CiteScore and SJR. As a result, the JIF, CiteScore, and SJR indices are recommended for assessing the quality of Q1 Geology journals in Scopus.

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APPENDIX

Comparative Rankings of Selected Q1 Geology Journals by 2020 JIF, ES, SJR and H-Index

Journal	Journal Impact Factor (JIF)		Eigen factor Score (ES)		SCImago Journal Rank (SJR)		H-Index		CiteScore		SNIP	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank
Remote Sensing of Environment	10.164	1	0.053400	1	3.611	1	281	1	17.6	1	3.345	1
International Journal of Coal Geology	6.806	2	0.011680	16	2.048	10	136	8	11.3	4	2.288	5
Engineering Geology	6.755	3	0.019790	9	2.441	6	136	8	9	6	2.86	2
Rock Mechanics and Rock Engineering	6.730	4	0.019390	10	2.14	9	91	25	9	6	2.468	3
Elementa	6.053	5	0.005060	30	2.011	11	34	44	8.5	8	1.488	25
Gondwana Research	6.051	6	0.019840	8	2.859	2	135	9	11.8	2	2.382	4
Geochemical Perspectives Letters	5.567	7	0.003280	41	2.653	3	22	49	9.4	5	1.42	30
Applied Clay Science	5.467	8	0.016280	13	1.062	40	131	13	9	6	1.657	15
Geology	5.399	9	0.031440	2	2.609	5	215	2	8.6	7	1.668	13
Journal of Metamorphic Geology	4.850	10	0.004410	34	2.639	4	114	18	8.3	9	1.571	21
Bulletin of the Geological Society of America	4.799	11	0.009150	18	2.197	8	151	7	6.8	14	1.683	12
Precambrian Research	4.725	12	0.017230	12	2.358	7	163	6	7.4	11	1.589	18
Economic Geology	4.490	13	0.005380	29	1.672	18	113	19	7	13	1.733	9
Marine and Petroleum Geology	4.348	14	0.020260	7	1.336	27	116	17	6.7	15	1.72	10
International Journal of Disaster Risk Reduction	4.320	15	0.010030	17	1.161	38	45	39	5.5	26	2.072	6
Basin Research	4.308	16	0.003560	39	1.522	21	83	28	7.7	10	1.483	26
Bulletin of Engineering Geology and the Environment	4.298	17	0.006790	23	0.945	45	59	33	4.5	32	1.421	29
Geothermics	4.284	18	0.006540	24	1.329	28	71	31	7.1	12	1.869	8
Anthropocene Review	4.182	19	0.002210	47	1.103	39	25	47	6.2	20	1.71	11
Sedimentology	4.155	20	0.005720	27	1.494	22	108	21	6.2	20	1.501	24
Quaternary Science Reviews	4.112	21	0.029750	3	1.884	13	182	4	6.8	14	1.582	19
Petroleum Science	4.090	22	0.002250	46	0.679	52	31	45	4.2	34	1.319	39
International Journal of Mining, Reclamation and Environment	4.084	23	0.004220	36	0.65	54	23	48	4.8	31	1.602	17
Progress in Oceanography	4.080	24	0.011830	15	1.487	23	132	12	6.5	17	1.517	22
Chemical Geology	4.015	25	0.027000	4	1.54	19	202	3	6.4	18	1.365	34
Lithos	4.004	26	0.024250	6	1.899	12	166	5	6	21	1.46	28
International Geology Review	3.958	27	0.005380	29	1.188	36	88	27	6	21	1.175	47
Georisk	3.868	28	0.000950	53	1.062	40	27	46	6	21	1.472	27

Ore Geology Reviews	3.809	29	0.015660	14	1.413	25	97	24	6.7	15	1.638	16
ShiyouKantan Yu Kaifa/ Petroleum Exploration and Development	3.803	30	0.004400	35	1.796	15	51	37	4.9	30	1.992	7
Petroleum Exploration and Development	3.803	30	0.004400	35	0.759	50	50	38	4.1	35	1.506	23
Journal of the Geological Society	3.800	31	0.004830	32	1.429	24	114	18	5.7	24	1.256	42
Geostandards and Geoanalytical Research	3.620	32	0.002820	43	1.037	41	73	30	5.7	24	1.302	40
Journal of Structural Geology	3.571	33	0.007120	22	1.533	20	127	14	5.5	26	1.602	17
Marine Geology	3.548	34	0.007990	21	1.236	31	134	10	5.6	25	1.573	20
AAPG Bulletin	3.529	35	0.004980	31	1.232	33	133	11	6.3	19	1.663	14
Journal of Asian Earth Sciences	3.449	36	0.018340	11	1.317	29	125	15	6	21	1.401	32
Sedimentary Geology	3.397	37	0.008450	20	1.234	32	113	19	5.3	27	1.411	31
Lithosphere	3.375	38	0.003280	41	1.737	17	43	41	5.5	26	1.185	46
Solid Earth	3.337	39	0.004790	33	1.194	35	44	40	4.5	32	1.26	41
Aeolian Research	3.336	40	0.002830	42	1.203	34	43	41	5.9	22	1.352	36
Journal of Sedimentary Research	3.324	41	0.004050	37	1.176	37	105	22	4.2	34	1.202	44
Geosphere	3.298	42	0.006310	26	1.879	14	58	34	5.7	24	1.365	34
GeologieenMijnbouw/ Netherlands Journal of Geosciences	3.263	43	0.000710	56	0.914	47	45	39	5.8	23	1.343	38
Terra Nova	3.037	44	0.002770	44	1.353	26	89	26	4.9	30	0.972	52
Geochemical Perspectives	3.000	45	0.000150	58	1.301	30	12	50	11.4	3	1.348	37
Newsletters on Stratigraphy	2.974	46	0.001000	52	0.97	43	36	43	6.6	16	1.353	35
International Journal of Sediment Research	2.902	47	0.001260	49	0.739	51	37	42	4.5	32	1.385	33
Quaternary Geochronology	2.865	48	0.005690	28	1.769	16	63	32	6	21	1.247	43
Environmental Earth Sciences	2.784	49	0.025010	5	0.641	56	118	16	4.5	32	1.11	49
Journal of Geology	2.701	50	0.001450	48	1.011	42	102	23	4.5	32	0.91	53
Boreas	2.587	51	0.002640	45	0.95	44	74	29	5.1	28	0.977	51
Geological Magazine	2.452	52	0.003550	40	0.935	46	83	28	4.2	34	1.026	50
Continental Shelf Research	2.391	53	0.006410	25	0.893	48	111	20	5	29	1.196	45
Earth, Planets and Space	2.363	54	0.008640	19	0.835	49	74	29	4.4	33	1.116	48
Petroleum Geoscience	2.323	55	0.001010	51	0.541	60	57	35	4	36	0.825	56
Swiss Journal of Geosciences	2.185	56	0.001040	50	0.665	53	34	44	5	29	0.854	55
Journal of Mountain Science	2.071	57	0.003730	38	0.551	59	34	44	3.1	39	0.866	54
Facies	1.932	58	0.000890	55	0.647	55	56	36	3.2	38	0.823	57
GeografiskaAnnaler, Series A: Physical Geography	1.881	59	0.000700	57	0.563	58	51	37	3.1	39	0.78	58
Italian Journal of Geosciences	1.852	60	0.000940	54	0.584	57	37	42	3.3	37	0.723	59