

India's S & T Publication Productivity (2000-2004)

An analysis based on selected indicators

**Report submitted to the NSTMIS Division of the
Department of Science and Technology
Ministry of Science and Technology
Govt. of India**

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October 2006

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Executive Summary

This report provides the empirical data and results derived from the extraction and analyses of India's performance in Science as viewed from the publication profiles reflected in the international database Expanded Science Citation Index (SCI).

The report presents India's scientific research productivity in the publication period 2000-2004 based on the indexed articles and other significant source items published in the most influential journals of science and technology. Journals covered by the SCI are the selections among hundreds of thousands of journals published across countries.

The papers extracted from SCI database are analysed for the subject orientation, institutional productivity, citation impact of such productivity (assessed from the standing of the journals preferred by the Indian authors) and the relative changes in the observed period. The impact of productivity is normalized by using standardized measures. A small effort is made to compare the S & T performance of India with China and South Korea.

Publication of papers from India in the last ten years is reported to be on increase although the increase is skewed for a couple of years. The publication output of China and South Korea has increased significantly in the last decade. After doing some in-depth analyses, it is observed that the (Institute for Scientific Information) ISI dataset has increased its coverage for Chinese and Korean journals while the number of journals from India remains constant. The database coverage has considerable influence on the publication count.

The impact of scientific publications (assessed through the citations) from Korea is high followed by India and China. In other words, the citation impact of India is more than China. However, the citation impact of these three countries is lesser than US and many European countries.

The scientific output is increasing in Chemical sciences, Medical Sciences and Biological sciences. In physical sciences and Engineering and Technology, the increase is less. In Mathematics and Earth Sciences the scientific output has not increased in the last five years. In Agricultural sciences, the output (covered in international database) is decreased in the observed period.

Universities contribute largely to the publication share in India and research institutions stand a distant second while industries and private enterprises have little impact. The increase of scientific output of All India Institute of Medical Sciences, Indian Institute of Technology (Kharagpur and Roorkee), Center for Cellular & Molecular Biology, Indian Council Medical Research, Panjab University, Bharathidasan University, University of Delhi and Christian Medical College & Hospital is significant in the last five years.

A large number of papers are published in national journals. Out of the top ten Indian scientists preferred journals, only two are non-Indian. Five among top 20 and 8 among the top 25 are non-Indian journals.

Chemistry and Medicine publication output in India is not only increased but the most of the high impact papers are also published in these fields.

The total citation impact of fields such as Medicine, Chemistry and Biology has increased in the last five years while in Agriculture it is decreased. However, the increase or decrease is not consistent across sub-fields.

More than one fourth of total Indian S & T papers were published in high impact journals. The percentage is on increase barring a small drop in 2004.

The policy of journals has considerable influence in improving the quality of papers. To understand in depth, the quality of Indian journals, an extensive analysis on Indian science journals is carried out. Just 4 % of the Indian journals have peer reviewing practices and only one percent of the Indian journals are covered by SCI. Indian journals instead of orienting the researchers and scientists in the research path, lead them in the wrong way by accepting many 'so-called' scientific papers without peer review.

The data and results presented in the report serve as an instrument in identifying the scientific research carried out in India. It is acknowledged that a refined assessment depends on comparing the scientific input and output where the publications serve as a part of the output. Research infrastructure, particularly the research space and its quality, cyber space occupied by scientists and degree of collaboration are some of the potential requirements to increase the quality of publications. In the knowledge-driven world, cross border knowledge transfer enable a nation's increased scientific research quality.

Prelude to the Report

The National Science, Technology, Management Information System (NSTMIS) division of the Department of Science and Technology (DST), Govt. of India has sanctioned this project which intends to assess the contribution of Indian scientists and institutions to scientific research. The major goal of the study is to track the research contribution of the scientists in the five years (2000-2004) in different sectors and to assess the productivity and perceived 'quality' of the contribution. Although quality is difficult to define, a proxy measure is employed based on citation counts. This study also provides a few data which enable to look at the Indian S & T publications in relation to the countries such as China and South Korea. Besides, this study has critically assessed the quality of Indian journals in science and technology.

Scope of the study

The contribution of a nation to research promotes the knowledge building process. Understanding the research contribution of a nation is the basic component in science policy. In reality, science auditing is a complex process. The science policy makers employ a large number of science indicators - not all are equally important. Metrics employed in this report are not comprehensive as they are limited to scientific publications. Science auditing is not confined to a small set of indicators. To arrive at a broad science policy, we need to use many other indicators.

The report presents the data and analyses and we refrain from the review or evaluation of Indian research productivity from the derived data. The descriptions presented are the reflection of publication profile only and no way conclusive.

Introduction

Measuring the Science and Technology performance of a country is a complex process. The comprehensive science and technology assessment system consists of four major components. They are-

1. S & T input
2. S & T activities
3. S & T output
4. Impact or value of the output

The inputs include many variables such as funding, research infrastructure including S & T equipments, man power, R & D environment and so on. Activities include the S & T education, training, research programmes and so on. The output mainly consists of the knowledge generated from S & T activities which can be measured by different ways such as publications, patents etc. Impact or value measurement if carried out in short term involves the measurement of the applications of research outcome for technology, the products generated and the application for subsequent research. When it is a long-term process, it includes the use of research for economic growth, productivity and social welfare.

By realizing the need to audit the S & T investment of nations, many science funding and policy making bodies initiate efforts to track the pay off in S & T. Science auditing reveals the pay off for investments and identifies the strength and weakness of S & T system. This will enable to fix priorities for the future. Identifying the perceived growth and differences in research performance has policy significance.

The findings presented in this report, we hope will serve as an important benchmark highlighting the performance of India's research. We expect that the data presented in the report may enable to do in-depth studies on specific issues. We also hope that this kind of exercise in subsequent years would enable to speak the volume and impact of research. In particular, it will contribute to assessments of the impact of research initiatives.

Bibliometric Indicators

Assessing the S & T performance of nations and institutions is a complex activity as the assessment is not confined to few or any set of indicators. Peer review and other indicators have more promises; however, a comprehensive assessment based on peer review or uniform indicators has difficulties. A common way of assessing S & T performance is the use of bibliometric measures where mainly the publication record of a country is monitored.

Bibliometric data answer no single question in science assessment. This information must be seen alongside other measures of esteem, performance, visibility and the perceptions of peers in relation to the activity.

Database

The dataset for the project was created from data downloaded from the *Science Citation Index Expanded (SCI)/Web of Science* of the Institute for Scientific Information (ISI), and this study was conducted covering the period 2000–2004. It captures all publications with an Indian address in the major ISI Indices. Other supplementary datasets include *Journal Citation Reports (JCR)*, and the *Essential Citation Indicators*. Besides many journal listings and directories, and Indian journals are scanned.

Specific Measures Employed

Using mainly the ISI datasets, the publications of Indian S & T are recorded. These include total publications, publications from institutions, in sub disciplines, perceived impact and growth. The impact is observed not in terms of raw citations but measured using normalized counts.

Database coverage

The implication for this study is that, while the ISI database provides a comprehensive coverage of the major journals in many sub-fields, it is not universal. Some journals with low citations find a place in ISI databases, while some journals with reasonable visibility are ignored by them.

Data cleaning exercise

Many databases are prone to incomplete information and errors. As data is fed manually, error and lack of uniformity in data description occur in databases. When the data is processed for the study, incomplete data and errors are checked to ensure high degree of validity. Even when we did so in this study, we are not able to register a hundred percent accuracy.

Scientific output

In the period 1994- 2005, the Indian S & T output as reflected in ISI database, is skewed. In the last five years (2001-2005) a significant growth is observed. Particularly in the year 2005, there is remarkable increase of 22% in scientific publications than the previous year. The table 1 shows the total S & T papers produced by Indian scientists in the ten years period.

Table 1- S & T Publication Productivity of India during the last 10 years (as covered in ISI databases)

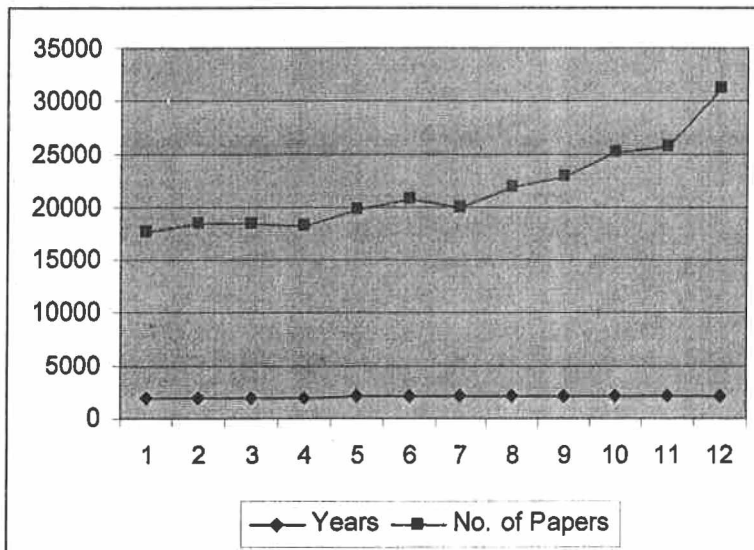
| | Papers | % of change |
|------|--------|-------------|
| 1994 | 15652 | |
| 1995 | 16373 | + 4.60 |
| 1996 | 16486 | + 0.69 |
| 1997 | 16269 | - 0.01 |
| 1998 | 17740 | + 9.04 |
| 1999 | 18726 | + 5.55 |
| 2000 | 17934 | - 4.22 |
| 2001 | 19832 | + 10.58 |
| 2002 | 20847 | + 5.11 |
| 2003 | 23038 | + 10.5 |
| 2004 | 23745 | + 3.06 |
| 2005 | 29,190 | + 22.08 |

Before arriving at decisions, the intriguing factors underlying such data have to be discussed. The ISI has framed a policy for selecting journals in their databases. The primary criteria for such selection include peer review, international authorship, citations the journals receive and timeliness in publication. However, the selection despite the spelling of the strategy is not explicit. They do not reveal why a journal is removed or added?

It should be noted that the content of journals include full papers, short communications, reviews, letters and so on. The ISI indexes the short communications and letters of some journals and leave the same type of communication in other journals. For example, the letters to the editors published in *Nature* and brief communication reported in *Current Science* are accounted by SCI, these items from many journals are ignored while indexing.

The figure 1 below presents the growth pattern of publication of science papers in SCI indexed journals in the last ten years.

Figure 1- Growth of Indian publications in the period 1994-2005



Many studies in the recent period analyse the scientific output of a country from three perceptions. (i) Tracking the publication output and the growth in relation to previous years, (ii) Taking the percentage of growth or decline in relation to the total world scientific output, and (iii) Comparing the output with similar* countries (* The term similar is not clear as people treat similar countries in terms of economy, population, geographical proximity etc). Many S & T indicators such as Science and Engineering Indicators (NSF) provide the data on the relative output of a country, comparison of a country's output with other countries in many specific studies. The comparison is also discussed widely in many S & T forums.

In the last few years, debates and discussions are initiated about the scientific output of India in comparison with China and South Korea. The aim of this report is not to analyse or critically compare the outputs. However, this report presents some data which need to be considered while inferring about the S & T comparison among nations. The scientific output of US, Canada and UK in the last couple of years remain constant while there is a significant increase for China and South Korea.

Below, the S & T publication output from China and South Korea in the last five years are given. (Table 2)

Table 2. S & T Publications from China and South Korea (2000 – 2004)

| Years | China Papers | % of change | South Korea papers | % of change |
|-------|--------------|-------------|--------------------|-------------|
| 2000 | 31,455 | | 14,819 | |
| 2001 | 36,838 | 17.11 | 17,639 | 19.02 |
| 2002 | 42,056 | 14.16 | 18,750 | 5.92 |
| 2003 | 51,187 | 21.71 | 23,363 | 19.74 |
| 2004 | 58,785 | 14.84 | 24,827 | 5.89 |

The mean annual growth rate of India in the last five years is over 10, whereas for China and South Korea, it is 16 and 12 respectively.

The growth of China and South Korea is also skewed to certain degree. One could raise the question that how in particular years the growth was negligible for all the analysed countries? We provide further evidences to show the influence of database coverage on S& T publications estimate of countries.

The prestigious high impact scientific journals, publish more papers of international authorship. However, the journals that have moderate or less impact publish more national papers. This is true for the journals published in the Asian and Latin American countries. Among the Chinese, South Korean and Indian journals, only two Chinese and One Indian journals have the impact factor* of more than 1. The impact factor values of 145 Chinese, South Korean and Indian journals(covered in ISI) is very less and can deemed as national rather than international because of their low visibility and less international reception. Notwithstanding, the coverage of a specific country's journals has influence on the publication profile of a country and such influence is reflected in databases.

In the table 3 below the number of Chinese, Indian and South Korean journals indexed by ISI databases and the papers published in these journals are given.

Table 3. Number of Chinese, Indian and South Korean journals indexed in ISI databases

| | 2000 | 2001 | 2002 | 2003 | 2004 |
|-------------|---------|---------|----------|----------|----------|
| China | 46/6543 | 57/9666 | 60/10648 | 68/12417 | 71/14280 |
| India | 47/4237 | 43/4352 | 50/4526 | 47/4725 | 47/4704 |
| South Korea | 17/2252 | 18/2607 | 21/2805 | 24/3321 | 27/3390 |

Source: Journal Citation Reports of the years 2000-2004

*Impact factor is the ratio between the total citations received in the current year for the articles published in the previous two years and total papers published in the previous two years.

The coverage of Chinese and South Korean journals is on increase, while the number of Indian journals remains almost constant in the last five years. The Indian journal papers also remained almost same while the Chinese and South Korean papers continue to increase. If the papers of the national journals are removed from the data, the publication profile of India, China and South Korea presents a change.

Since database coverage has considerable influence over the publication data, the discussions using standard journal set offer meaningful equations.

Output in different scientific disciplines

The publication output in different disciplines is measured through the counting of papers in ISI recognized subjects. The ISI assigns papers to specific disciplines based on their subject classification. The table 4 below presents the publication output in disciplines for the five years period.

It should be noted that ISI allocates some journals to more than one subject category with the effect of some double counting between fields and/or subfields.

The ISI dataset is not a perfect tool to understand the subject output as a few significant journals are left and consequently, it is not representative of the discipline output.

Table 4 - Subject Output for the five years period

| Total Number of Papers | | | | | | |
|------------------------|----------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Serial Number | Subject Categories | 2000 Number of Papers | 2001 Number of Papers | 2002 Number of Papers | 2003 Number of Papers | 2004 Number of Papers |
| 1 | ACOUSTICS | 5 | 5 | 4 | 6 | 5 |
| 2 | AGRICULTURE DIARY | 501 | 282 | 459 | 582 | 575 |
| 3 | AGRICULTURE ECONOMICS | 2 | 2 | 4 | 3 | 3 |
| 4 | AGRICULTURE ENGINEERING | 7 | 13 | 2 | 10 | 12 |
| 5 | AGRICULTURE MULTIDISCIPLINARY | 276 | 244 | 171 | 90 | 54 |
| 6 | AGRICULTURE SOILS | 68 | 51 | 63 | 65 | 51 |
| 7 | AGRONOMY | 286 | 316 | 262 | 333 | 212 |
| 8 | ALLERGY & ASTHMA | 19 | 13 | 18 | 9 | 13 |
| 9 | ANATOMY | 5 | 5 | 4 | 13 | 19 |
| 10 | ANDROLOGY | 13 | 19 | 17 | 22 | 12 |
| 11 | ANESTHESIOLOGY | 71 | 48 | 58 | 70 | 76 |
| 12 | ASTRONOMY & ASTROPHYSICS | 183 | 252 | 209 | 216 | 170 |
| 13 | BIOCHEMICAL RESEARCH METHODS & BIOTECHNOLOGY | 25 | 26 | 49 | 76 | 60 |
| 14 | BIOCHEMISTRY | 434 | 443 | 533 | 712 | 585 |

| Total Number of Papers | | | | | | |
|------------------------|------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Serial Number | Subject Categories | 2000 Number of Papers | 2001 Number of Papers | 2002 Number of Papers | 2003 Number of Papers | 2004 Number of Papers |
| | MOLECULAR BIOLOGY | | | | | |
| 15 | BIOLOGY | 61 | 101 | 90 | 80 | 64 |
| 16 | BIOPHYSICS | 10 | 20 | 28 | 32 | 67 |
| 17 | BIOTECHNOLOGY | 187 | 287 | 238 | 194 | 225 |
| 18 | CARDIAC & CARDIOVASCULAR SYSTEM | 58 | 77 | 42 | 110 | 58 |
| 19 | CELL BIOLOGY | 97 | 142 | 164 | 175 | 139 |
| 20 | CHEMISTRY ANALYTICAL | 158 | 180 | 201 | 205 | 208 |
| 21 | CHEMISTRY APPLIED | 70 | 85 | 119 | 123 | 162 |
| 22 | CHEMISTRY INORGANIC | 221 | 241 | 308 | 316 | 342 |
| 23 | CHEMISTRY MEDICINAL | 184 | 234 | 225 | 351 | 338 |
| 24 | CHEMISTRY MULTIDISCIPLINARY | 859 | 1197 | 1316 | 1091 | 1348 |
| 25 | CHEMISTRY ORGANIC | 765 | 886 | 953 | 1103 | 1170 |
| 26 | CHEMISTRY PHYSICAL | 514 | 623 | 616 | 696 | 945 |
| 27 | CLINICAL NEUROLOGY | 42 | 53 | 36 | 90 | 116 |
| 28 | COMPUTER SCIENCE ARTIFICIAL INTELLIGENCE | 27 | 39 | 15 | 40 | 18 |
| 29 | COMPUTER SCIENCE CYBERNETICS | 13 | 10 | 12 | 11 | 19 |
| 30 | COMPUTER SCIENCE HARDWARE | 31 | 39 | 23 | 34 | 49 |
| 31 | COMPUTER SCIENCE INFORMATION SYSTEMS | 27 | 18 | 34 | 34 | 32 |
| 32 | COMPUTER SCIENCE INTERDISCIPLINARY | 53 | 56 | 62 | 56 | 43 |
| 33 | COMPUTER SCIENCE SOFTWARE | 23 | 38 | 19 | 36 | 30 |
| 34 | COMPUTER SCIENCE THEORY | 54 | 33 | 30 | 51 | 28 |
| 35 | CRITICAL CARE MEDICINE | 27 | 23 | 10 | 34 | 15 |
| 36 | CRYSTALLOGRAPHY | 181 | 205 | 196 | 346 | 277 |
| 37 | DENTISTRY | 15 | 36 | 26 | 27 | 29 |
| 38 | DERMATOLOGY | 49 | 68 | 133 | 109 | 104 |
| 39 | DEVELOPMENTAL BIOLOGY | 8 | 12 | 4 | 8 | 3 |
| 40 | ECOLOGY | 37 | 40 | 47 | 63 | 69 |
| 41 | ELECTROCHEMISTRY | 154 | 112 | 115 | 90 | 84 |
| 42 | EMERGENCY MEDICINE | 1 | 2 | 7 | 3 | 10 |
| 43 | ENDOCRINOLOGY & METABOLISM | 57 | 62 | 63 | 101 | 73 |
| 44 | ENERGY & FUELS | 73 | 58 | 46 | 43 | 65 |

| Total Number of Papers | | | | | | |
|------------------------|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Serial Number | Subject Categories | 2000 Number of Papers | 2001 Number of Papers | 2002 Number of Papers | 2003 Number of Papers | 2004 Number of Papers |
| 45 | ENGINEERING AERONAUTIC | 44 | 46 | 47 | 26 | 40 |
| 46 | ENGINEERING BIOMEDICAL | 11 | 7 | 5 | 4 | 15 |
| 47 | ENGINEERING CHEMICAL | 343 | 403 | 316 | 413 | 479 |
| 48 | ENGINEERING CIVIL | 63 | 72 | 71 | 114 | 83 |
| 49 | ENGINEERING ELECTRONICS | 370 | 305 | 570 | 474 | 545 |
| 50 | ENGINEERING ENVIRONMENTAL | 34 | 49 | 38 | 68 | 83 |
| 51 | ENGINEERING GEOLOGICAL | 44 | 36 | 37 | 26 | 24 |
| 52 | ENGINEERING INDUSTRIAL | 135 | 154 | 108 | 186 | 145 |
| 53 | ENGINEERING MANUFACTURING | 25 | 37 | 69 | 55 | 48 |
| 54 | ENGINEERING MARINE | ***** | 1 | 1 | 1 | ***** |
| 55 | ENGINEERING MECHANICAL | 176 | 213 | 183 | 262 | 244 |
| 56 | ENGINEERING MULTIDISCIPLINARY | 125 | 171 | 107 | 176 | 155 |
| 57 | ENGINEERING OCEAN | 8 | 15 | 9 | 13 | 11 |
| 58 | ENGINEERING PETROLEUM | 30 | 10 | 16 | 16 | 7 |
| 59 | ENTOMOLOGY | 54 | 70 | 58 | 55 | 63 |
| 60 | ENVIRONMENTAL SCIENCES | 180 | 205 | 232 | 302 | 267 |
| 61 | EVOLUTIONARY BIOLOGY | 3 | 9 | 5 | 3 | 9 |
| 62 | FISHERIES | 21 | 19 | 25 | 15 | 40 |
| 63 | FOOD SCIENCE & TECHNOLOGY | 172 | 205 | 154 | 211 | 198 |
| 64 | FORESTRY SCIENCE | 8 | 12 | 6 | 18 | 13 |
| 65 | GASTROENTEROLOGY & HEPATOLOGY | 65 | 54 | 109 | 89 | 70 |
| 66 | GENETICS & HEREDITY | 111 | 165 | 87 | 117 | 169 |
| 67 | GEOCHEMISTRY & GEOPHYSICS | 53 | 59 | 30 | 54 | 63 |
| 68 | GEOGRAPHY | 11 | 10 | 10 | 12 | 15 |
| 69 | GEOLOGY | 11 | 15 | 31 | 12 | 12 |
| 70 | GEOSCIENCE | 303 | 304 | 178 | 344 | 292 |
| 71 | HEMATOLOGY | 56 | 63 | 55 | 82 | 80 |
| 72 | HORTICULTURE | 31 | 27 | 55 | 31 | 40 |
| 73 | IMMUNOLOGY | 59 | 64 | 84 | 127 | 101 |
| 74 | INFECTIOUS DISEASES | 92 | 122 | 94 | 126 | 122 |
| 75 | INSTRUMENTS & INSTRUMENTATION | 27 | 14 | 8 | 26 | 2 |
| 76 | MARINE & FRESH WATER | 38 | 30 | 47 | 56 | 88 |

| Total Number of Papers | | | | | | |
|------------------------|----------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Serial Number | Subject Categories | 2000 Number of Papers | 2001 Number of Papers | 2002 Number of Papers | 2003 Number of Papers | 2004 Number of Papers |
| | BIOLOGY | | | | | |
| 77 | MATERIALS BIOMATERIALS | 11 | 15 | 15 | 14 | 13 |
| 78 | MATERIALS CERAMICS | 60 | 74 | 82 | 69 | 113 |
| 79 | MATERIALS CHARACTERIZATION | 23 | 30 | 13 | 67 | 17 |
| 80 | MATERIALS COATINGS | 18 | 26 | 18 | 27 | ***** |
| 81 | MATERIALS COMPOSITE | 52 | 56 | 72 | 54 | 66 |
| 82 | MATERIALS MULTIDISCIPLINARY | 630 | 853 | 804 | 960 | 1005 |
| 83 | MATERIALS TEXTILE | 68 | 60 | 58 | 53 | 52 |
| 84 | MATHEMATICS | 196 | 236 | 211 | 239 | 188 |
| 85 | MATHEMATICS APPLIED | 109 | 97 | 128 | 149 | 121 |
| 86 | MATHEMATICS INTERDISCIPLINARY | 3 | 3 | 7 | 15 | 13 |
| 87 | MECHANICS | 75 | 83 | 65 | 59 | 95 |
| 88 | MEDICAL LABORATORY TECHNOLOGY | 47 | 50 | 62 | 80 | 63 |
| 89 | MEDICAL RESEARCH | 126 | 111 | 117 | 143 | 168 |
| 90 | MEDICINAL LEGAL | 9 | 18 | 23 | 65 | 30 |
| 91 | MEDICINE GENERAL | 163 | 191 | 161 | 217 | 230 |
| 92 | MEDICINE INFORMATICS | 7 | 2 | 6 | 8 | 6 |
| 93 | METALLURGY & METALLURGICAL ENGINEERING | 141 | 120 | 124 | 181 | 178 |
| 94 | METEOROLOGY & ATMOSPHERIC SCIENCES | 40 | 31 | 28 | 41 | 24 |
| 95 | MICROBIOLOGY | 117 | 139 | 201 | 138 | 178 |
| 96 | MINERALOGY | 7 | 18 | 17 | 11 | 25 |
| 97 | MINING | 11 | 11 | 11 | 4 | 27 |
| 98 | MULTIDISCIPLINARY SCIENCE | 680 | 689 | 584 | 742 | 794 |
| 99 | MYCOLOGY | 26 | 18 | 30 | 46 | 20 |
| 100 | NEUROSCIENCES | 169 | 200 | 188 | 236 | 351 |
| 101 | NUCLEAR SCIENCE & TECHNOLOGY | 97 | 100 | 116 | 179 | 103 |
| 102 | NUTRITION & DIETETICS | 84 | 68 | 83 | 104 | 98 |
| 103 | OBSTETRICS & GYNECOLOGY | 61 | 69 | 71 | 118 | 98 |
| 104 | OCEANOGRAPHY | 101 | 61 | 50 | 67 | 49 |
| 105 | ONGOLOGY | 84 | 78 | 312 | 118 | 98 |
| 106 | OPERATIONAL RESEARCH | 37 | 32 | 35 | 26 | 55 |

| Total Number of Papers | | | | | | |
|------------------------|----------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Serial Number | Subject Categories | 2000 Number of Papers | 2001 Number of Papers | 2002 Number of Papers | 2003 Number of Papers | 2004 Number of Papers |
| 107 | OPHTHALMOLOGY | 122 | 148 | 138 | 226 | 173 |
| 108 | OPTICS | 95 | 109 | 118 | 135 | 151 |
| 109 | ORTHOPEDICS | 8 | 11 | 16 | 20 | 21 |
| 110 | OTORHINOLARYNGOLOGY | 12 | 24 | 17 | 26 | 22 |
| 111 | PARASITOLOGY | 25 | 11 | 11 | 18 | 48 |
| 112 | PATHOLOGY | 35 | 19 | 24 | 47 | 33 |
| 113 | PEDIATRICS | 83 | 96 | 157 | 157 | 106 |
| 114 | PERIPHERAL VASCULAR DISEASE | 34 | 20 | 12 | 39 | 77 |
| 115 | PHARMACOLOGY & PHARMACY | 128 | 160 | 203 | 224 | 256 |
| 116 | PHYSICS APPLIED | 225 | 308 | 309 | 299 | 283 |
| 117 | PHYSICS ATOMIC | 137 | 192 | 239 | 306 | 194 |
| 118 | PHYSICS CONDENSED | 278 | 268 | 341 | 303 | 352 |
| 119 | PHYSICS FLUID | 58 | 62 | 33 | 45 | 69 |
| 120 | PHYSICS MATHEMATICAL | 134 | 153 | 162 | 140 | 114 |
| 121 | PHYSICS MULTIDISCIPLINARY | 638 | 628 | 699 | 686 | 665 |
| 122 | PHYSICS NUCLEAR | 172 | 185 | 169 | 214 | 208 |
| 123 | PHYSICS PARTICLE | 150 | 215 | 157 | 129 | 146 |
| 124 | PHYSIOLOGY | 18 | 14 | 14 | 9 | 16 |
| 125 | PLANT SCIENCE | 200 | 195 | 234 | 213 | 278 |
| 126 | POLYMER SCIENCE | 365 | 382 | 379 | 500 | 442 |
| 127 | PSYCHIATRY | 41 | 40 | 38 | 48 | 42 |
| 128 | PSYCHOLOGY | 1 | | 2 | 4 | 17 |
| 129 | PUBLIC ENVIRONMENT & OCCUPATION HEALTH | 40 | 40 | 48 | 71 | 52 |
| 130 | RADIOLOGY | 131 | 119 | 113 | 77 | 157 |
| 131 | REHABILITATION | 6 | 2 | 1 | 3 | 1 |
| 132 | REMOTE SENSING | 42 | 34 | 26 | 25 | 19 |
| 133 | REPRODUCTIVE BIOLOGY | 30 | 19 | 44 | 30 | 40 |
| 134 | RESPIRATORY SYSTEM | 5 | 12 | 10 | 9 | 17 |
| 135 | RHEUMATOLOGY | 6 | 20 | 11 | 17 | 16 |
| 136 | ROBOTICS | 3 | 3 | 7 | 4 | 4 |
| 137 | SPECTROSCOPY | 91 | 86 | 91 | 99 | 124 |
| 138 | SPORTS SCIENCE | 1 | 2 | 3 | 1 | 10 |
| 139 | STATISTICS & PROBABILITY | 65 | 60 | 70 | 73 | 56 |
| 140 | SUBSTANCE ABUSE | 4 | 4 | 6 | 3 | 12 |
| 141 | SURGERY | 140 | 143 | 149 | 129 | 176 |

| Total Number of Papers | | | | | | |
|------------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Serial Number | Subject Categories | 2000 Number of Papers | 2001 Number of Papers | 2002 Number of Papers | 2003 Number of Papers | 2004 Number of Papers |
| 142 | TELECOMUNICATION | 7 | 7 | 10 | 15 | 14 |
| 143 | THERMODYNAMICS | 46 | 37 | 41 | 28 | 50 |
| 144 | TOXICOLOGY | 88 | 133 | 63 | 84 | 116 |
| 145 | TRANSPLANTATION | 11 | 29 | 9 | 16 | 37 |
| 146 | TRANSPORTATION SCIENCE | 7 | 5 | 7 | 2 | 3 |
| 147 | TROPICAL MEDICINE | 95 | 88 | 120 | 93 | 100 |
| 148 | UROLOGY & NEPHROLOGY | 53 | 67 | 63 | 73 | 102 |
| 149 | VETERINARY SCIENCES | 353 | 530 | 403 | 276 | 355 |
| 150 | VIROLOGY | 35 | 41 | 40 | 62 | 79 |
| 151 | WATER RESOURCES | 26 | 33 | 36 | 13 | 49 |
| 152 | ZOOLOGY | 54 | 32 | 24 | 30 | 62 |

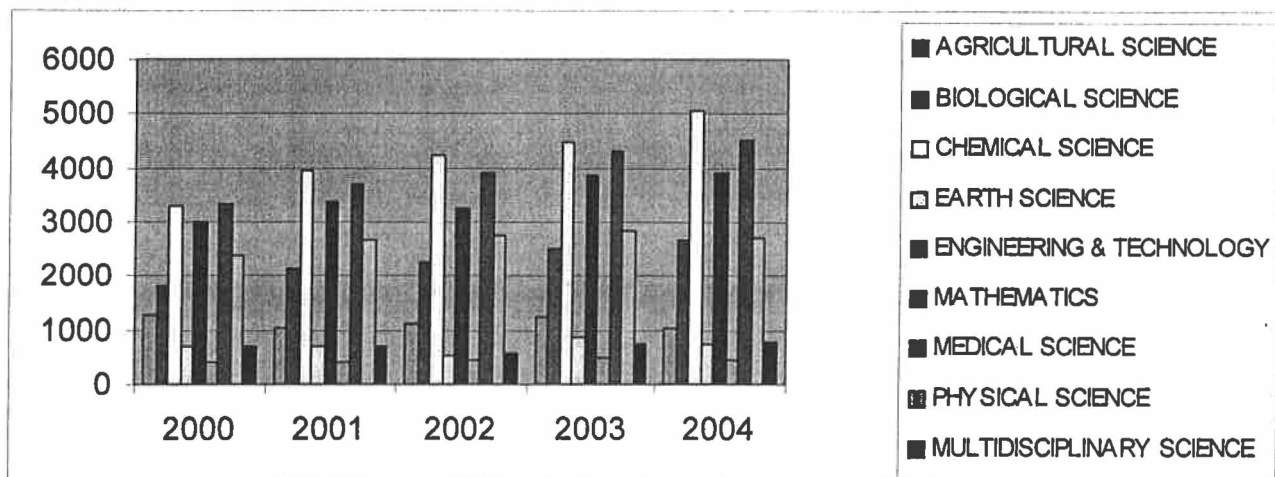
The Department of Science and Technology (DST) has a broad classification of science and technology. It has recognized eight broad S & T fields viz., Agricultural sciences, biological sciences, chemical sciences, earth sciences, engineering and technology, medical sciences, mathematics and physical sciences. The ISI assigned papers are now relocated and fitted in the eight DST recognized broad subjects. However, the ISI category the 'multidisciplinary sciences' cannot be placed in any of the DST eight categories and now kept separately. The table 5 and figure 3 provide an understanding about the publication output in the analysed period.

Table 5 - Total number of papers in broad disciplines

| Total number of papers in broad disciplines | | | | | | |
|---------------------------------------------|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Serial Number | Subject Categories | 2000 Number of Papers | 2001 Number of Papers | 2002 Number of Papers | 2003 Number of Papers | 2004 Number of Papers |
| 1 | AGRICULTURAL SCIENCE | 1259 | 1035 | 1100 | 1233 | 1043 |
| 2 | BIOLOGICAL SCIENCE | 1817 | 2148 | 2245 | 2510 | 2654 |
| 3 | CHEMICAL SCIENCE | 3297 | 3958 | 4249 | 4486 | 5064 |
| 4 | EARTH SCIENCE | 700 | 685 | 523 | 876 | 732 |
| 5 | ENGINEERING & TECHNOLOGY | 3007 | 3356 | 3263 | 3864 | 3923 |
| 6 | MATHEMATICS | 410 | 428 | 451 | 502 | 433 |
| 7 | MEDICAL SCIENCE | 3330 | 3694 | 3901 | 4309 | 4517 |
| 8 | PHYSICAL SCIENCE | 2384 | 2683 | 2749 | 2838 | 2724 |
| 9 | MULTIDISCIPLINARY SCIENCE* | 680 | 689 | 584 | 742 | 794 |

* Not recognized in DST classification

Figure 2. Growth pattern of publications in broad disciplines



The growth in biological, chemical and medical sciences is significant in terms of number of papers in the five years period.

Institutional Productivity

In the presentations below, the productivity of papers from institutions across countries is given.

In the year 2004, 6132 Indian institutions have contributed 23745 papers in Science and Technology. Academic institutions have contributed 15880 papers among the total output. For the remaining years also the academic institutions contribute significantly in S & T output. Academic institutions share the major responsibility of S & T research in India. In the table 6, the productivity from different types of institutions are given.

Table 6- Papers from different types of institutions in the five years period

| Type of the Institutions | 2000 papers | 2001 papers | 2002 papers | 2003 paper | 2004 papers |
|--------------------------|-------------|-------------|-------------|------------|-------------|
| Academic Institutions | 13779 | 12978 | 13591 | 19714 | 15880 |
| Research Institutions | 6641 | 7446 | 6306 | 7029 | 7135 |
| Private Institutions | 1213 | 469 | 964 | 570 | 562 |

The top 100 institutions in terms of papers are listed below in the table 7. The Indian Institute of Science occupied the top position followed by BARC, AIIMS and other institutions.

In the year 2004, out of the top 100 high productive institutions, 61 are academic institutions, 38 are research laboratories and just one came from industry/private players.

The number of SCI indexed papers from India in the previous four years 2000, 2001, 2002 and 2003 are given in the appendix. (Appendix 1).

Table 7 - Publications from the high productive institutions in 2004 (Top 100)

| Institutions list | | |
|-------------------|----------------------------------|------------------|
| Sl No | Name | Number of papers |
| 1 | Indian Inst Sci | 1192 |
| 2 | Bhabha Atom Res Ctr | 691 |
| 3 | All India Inst Med Sci | 661 |
| 4 | Univ Delhi | 602 |
| 5 | Indian Inst Technol, Kharagpur | 569 |
| 6 | Indian Inst Technol, New Delhi | 526 |
| 7 | Indian Inst Chem Technol | 500 |
| 8 | Tata Inst Fundamental Res | 495 |
| 9 | Indian Inst Technol, Bombay | 472 |
| 10 | Indian Inst Technol, Kanpur | 469 |
| 11 | Natl Chem Lab | 449 |
| 12 | Jadavpur Univ | 426 |
| 13 | Indian Inst Technol, Madras | 406 |
| 14 | Banaras Hindu Univ | 389 |
| 15 | Postgrad Inst Med Educ & Res | 359 |
| 16 | Natl Inst Technol | 291 |
| 17 | Anna Univ | 286 |
| 18 | Indian Assoc Cultivat Sci | 278 |
| 19 | Univ Madras | 251 |
| 20 | Indian Stat Inst | 230 |
| 21 | Univ Calcutta | 218 |
| 22 | Aligarh Muslim Univ | 196 |
| 23 | Panjab Univ | 195 |
| 24 | Jawaharlal Nehru Ctr Adv Sci Res | 191 |
| 25 | Univ Hyderabad | 185 |
| 26 | Indian Inst Technol, Roorke | 181 |

| Institutions list | | |
|-------------------|----------------------------------------|------------------|
| Sl No | Name | Number of papers |
| 27 | Saha Inst Nucl Phys | 178 |
| 28 | Indian Agr Res Inst | 176 |
| 29 | Christian Med Coll & Hosp, Vellore | 171 |
| 30 | Univ Rajasthan | 170 |
| 31 | Jawaharlal Nehru Univ | 164 |
| 32 | Annamalai Univ | 157 |
| 33 | Indira Gandhi Ctr Atom Res | 156 |
| 34 | Sanjay Gandhi Postgrad Inst Med Sci | 150 |
| 35 | Ctr Cellular & Mol Biol | 147 |
| 36 | Natl Phys Lab | 145 |
| 37 | Cent Drug Res Inst | 142 |
| 38 | Univ Mysore | 140 |
| 39 | Cent Leather Res Inst | 140 |
| 40 | Guru Nanak Dev Univ | 137 |
| 41 | Indian Vet Res Inst | 129 |
| 42 | Osmania Univ | 123 |
| 43 | Univ Bombay | 119 |
| 44 | Cochin Univ Sci & Technol | 118 |
| 45 | Cent Food Technol Res Inst | 117 |
| 46 | Bharathidasan Univ | 116 |
| 47 | Indian Inst Chem Biol | 113 |
| 48 | Bharathiar Univ | 112 |
| 49 | Punjab Agr Univ | 110 |
| 50 | Andhra Univ | 105 |
| 51 | Univ Lucknow | 104 |
| 52 | Sri Venkateswara Univ | 103 |
| 53 | Madurai Kamaraj Univ | 102 |
| 54 | Karnatak Univ | 102 |
| 55 | Indian Council Med Res | 101 |
| 56 | Natl Inst Oceanog | 101 |
| 57 | Maharaja Sayajirao Univ Baroda | 97 |
| 58 | Bose Inst | 95 |
| 59 | Reg Res Lab | 90 |
| 60 | Phys Res Lab | 89 |
| 61 | Univ Burdwan | 88 |
| 62 | Bangalore Univ | 87 |
| 63 | Punjabi Univ | 86 |
| 64 | Inst Math Sci | 85 |
| 65 | Govind Ballabh Pant Univ Agr & Technol | 85 |

| Institutions list | | |
|-------------------|--------------------------------------------|------------------|
| Sl No | Name | Number of papers |
| 66 | Jamia Millia Islamia | 84 |
| 67 | Ind Toxicol Res Ctr | 84 |
| 68 | Inst Phys | 80 |
| 69 | Natl Inst Mental Hlth & Neurosci | 77 |
| 70 | Reg Res Lab, Trivandrum | 77 |
| 71 | Cent Electrochem Res Inst | 77 |
| 72 | Univ Poona | 77 |
| 73 | Natl Met Lab | 77 |
| 74 | Univ Jammu | 76 |
| 75 | Geol Survey India | 76 |
| 76 | Vikram Sarabhai Space Ctr | 76 |
| 77 | Univ Allahabad | 73 |
| 78 | Raman Res Inst | 73 |
| 79 | Natl Geophys Res Inst | 72 |
| 80 | Tata Mem Hosp | 72 |
| 81 | Maulana Azad Med Coll | 71 |
| 82 | Natl Bot Res Inst | 70 |
| 83 | Sardar Patel Univ | 70 |
| 84 | Shivaji Univ | 70 |
| 85 | Ctr Adv Technol, Indore | 68 |
| 86 | Sree Chitra Tirunal Inst Med Sci & Technol | 67 |
| 87 | SN Bose Natl Ctr Basic Sci | 67 |
| 88 | Univ Kalyani | 66 |
| 89 | Kurukshetra Univ | 65 |
| 90 | Hamdard Univ | 65 |
| 91 | Indian Inst Astrophys | 65 |
| 92 | Alagappa Univ | 63 |
| 93 | NE Hill Univ | 63 |
| 94 | Cent Glass & Ceram Res Inst | 61 |
| 95 | Ctr Nucl Sci | 59 |
| 96 | Kakatiya Univ | 57 |
| 97 | Visva Bharati Univ | 57 |
| 98 | Def Met Res Lab | 56 |
| 99 | Pondicherry Univ | 55 |
| 100 | Kasturba Med Coll & Hosp | 53 |

* Abbreviations as used by Institute for Scientific Information

It is essential to identify the high productive institutions in the analysed period, i.e, the institutions that have highest papers in all the analysed period. In the table 8 the top 15 institutions for the analysed five years are given.

Table 8- Highest productivity institutions in the five years period

| Institution Name | 2000 papers | 2001 papers | 2002 papers | 2003 papers | 2004 papers |
|--------------------------------|-------------|-------------|-------------|-------------|-------------|
| Indian Inst Sci | 839 | 937 | 950 | 999 | 1192 |
| Bhabha Atom Res Ctr | 491 | 570 | 628 | 631 | 691 |
| All India Inst Med Sci | 363 | 442 | 493 | 550 | 661 |
| Univ Delhi | 349 | 420 | 430 | 477 | 602 |
| Indian Inst Technol, Khargpur | 414 | 424 | 411 | 472 | 569 |
| Indian Inst Technol, New Delhi | 320 | 355 | 381 | 471 | 526 |
| Indian Inst Chem Technol | 260 | 275 | 311 | 410 | 500 |
| Tata Inst Fundamental Res | 431 | 440 | 467 | 345 | 495 |
| Indian Inst Technol, Bombay | 322 | 274 | 295 | 422 | 472 |
| Indian Inst Technol, Kanpur | 319 | 343 | 351 | 401 | 469 |
| Natl Chem Lab | 279 | 341 | 348 | 404 | 449 |
| Jadavpur Univ | 240 | 267 | 256 | 343 | 426 |
| Indian Inst Technol, Madras | 336 | 307 | 262 | 342 | 406 |
| Banaras Hindu Univ | 373 | 367 | 330 | 350 | 389 |
| Postgrad Inst Med Educ & Res | 199 | 238 | 255 | 307 | 359 |

The observation of the above table enables us to find the institutions that have higher growth and those with insignificant growth.

Growth is a natural phenomenon in Science and Technology. Most scientific productivity measurement systems consider and discuss the relative growth of S & T output. We have observed and calculated the growth in terms of number of SCI indexed papers by Indian institutions during the period 2000-2004. This has been carried out mainly for the top 100 institutions. We have calculated the growth percentage of the high growth and top productivity institutions and presented the data below. The renowned institutions such as *Indian Institute of Technology, Roorke, Center for Cellular and Molecular Biology* and *Indian Council of Medical Research* have recorded significant rise in the number of research publications. In the academic sector, *Kakatiya, Hamdard, Panjan, Jamia Millia Islamia, University of Allahabad, University of Delhi* and a few more have recorded notable growth of S & T publications. The high productivity institutions barring *IIT, Roorke* and *Kharagpur* have recorded only nominal growth. The table 9 below presents the data such as the institution's rank in 2004, the 2004 papers and percentage of increase for the five year period 2000-2004.

Table 9- Productivity growth of top 100 institutions

| 2004 RANK | Institution | 2004 papers | Percentage of Increase 2000-2004 |
|-----------|------------------------------------|-------------|----------------------------------|
| 100 | Kasturba Med Coll & Hosp | 53 | 307.69 |
| 26 | Indian Inst Technol, Roorke | 181 | 196.72 |
| 96 | Kakatiya Univ | 57 | 171.42 |
| 90 | Hamdard Univ | 65 | 160 |
| 74 | Univ Jammu | 76 | 153.33 |
| 35 | Ctr Cellular & Mol Biol | 147 | 137.09 |
| 55 | Indian Council Med Res | 101 | 129.54 |
| 46 | Bharathidasan Univ | 116 | 118.86 |
| 23 | Panjab Univ | 195 | 107.44 |
| 66 | Jamia Millia Islamia | 84 | 104.87 |
| 77 | Univ Allahabad | 73 | 102.77 |
| 4 | Univ Delhi | 602 | 098.02 |
| 97 | Visva Bharati Univ | 57 | 096.55 |
| 51 | Univ Lucknow | 104 | 085.71 |
| 7 | Indian Inst Chem Technol | 500 | 084.50 |
| 81 | Maulana Azad Med Coll | 71 | 082.05 |
| 29 | Christian Med Coll & Hosp, Vellore | 171 | 081.91 |
| 73 | Natl Met Lab | 77 | 080.95 |
| 48 | Bharathiar Univ | 112 | 080.64 |
| 6 | Indian Inst Technol, New Delhi | 526 | 064.37 |
| 10 | Indian Inst Technol, Kanpur | 469 | 047.02 |
| 9 | Indian Inst Technol, Bombay | 472 | 046.58 |
| 3 | All India Inst Med Sci | 661 | 041.54 |
| 5 | Indian Inst Technol, Khargpur | 569 | 037.43 |
| 8 | Tata Inst Fundamental Res | 495 | 029.24 |
| 1 | Indian Inst Sci | 1192 | 028.58 |
| 2 | Bhabha Atom Res Ctr | 691 | 022.51 |

Journals preferred by Indian Scientists

In the year 2004, Indian scientists have published 23745 papers in 3341 journals. The journals preferred by them are given in the table by arranging the journals in the descending frequency of papers. In the table 10, the top 100 journals are given. The complete list is given in the appendix 2. In the top 10 journals, 8 and in the top 20, 14 are Indian journals. The significant high impact journals where substantial number of Indian papers have appeared are Tetrahedron Letters (222 papers with IF *Journal of Applied Polymer Science* (192 papers with IF 1.021), *Journal of Molecular Catalysis A* (124 papers with IF 2.316), *Physical Review B* (115

papers with IF 3.075) *Synthetic Communications* (111 papers with if 0.965) and *Physical Review Letters* (92 papers with IF 7.218). Most of the high impact journal papers are in the Chemical and Medical sciences. Large number of Chemistry and Physics papers is published in the high impact journals. Since the papers are assessed to certain degree for quality using the impact factor, danger lies in using impact factor for comparing the papers published across different disciplines. As size and volume of scientific efforts (number of papers produced in disciplines) vary for different disciplines, the impact factor cannot be used to compare the journals. For example an impact factor of 3 in biology is not high, whereas in Mathematics it is significant. Hence, a degree of normalization is required to convert the impact factor into a refined indicator. A major refined indicator is the Subfield Corrected Impact Factor* (description of its calculation in given in the appendix 3) which enables the comparison of journals of different disciplines. In the table 10, the number of papers with impact factor, subject category of the journals and calculated sub field corrected impact factors of journals are given. The total subfield impact factor is the multiplication of subfield corrected impact factors and number of papers in a journal. The subfield corrected impact factor and total subfield corrected impact factor of journals provide an insight and understanding of the contribution of scientists in specific fields (through the journals). Indian scientists have significant contribution in the following high impact journals like *Physical Review Letters*, *Tetrahedron Letters* and *Lancet*. The high impact (factor) journals such as *Nature*, *Science*, *New England Journal of Medicine* and *Cell* have not published significant number of Indian papers.

For the years from 2000 to 2003 the top Indian scientists preferred 100 journals are given in the appendix 2 . The years 2000 - 2003 do not show any significant variation with respect to the preference of journals by the Indian scientists.

Table 10 - Journals preferred by Indian Scientists for publications

| 2004 | | | | |
|---------------------------------------------------------------------------------------|--------------|---------------|---------------------------|--------------------------|
| Name of the Journal | No of Papers | Impact Factor | Subject Category | Sub Field Impact Factor* |
| CURRENT SCIENCE | 632 | 0.688 | MULTIDISCIPLINARY SCIENCE | 3.0931792 |
| ASIAN JOURNAL OF CHEMISTRY | 395 | 0.262 | CHEMISTRY | 1.407988 |
| INDIAN VETERINARY JOURNAL | 266 | 0.051 | VETERINARY SCIENCES | 0.7207422 |
| JOURNAL OF THE INDIAN CHEMICAL SOCIETY | 256 | 0.36 | CHEMISTRY | 1.93464 |
| INDIAN JOURNAL OF AGRICULTURAL SCIENCES | 254 | | AGRICULTURE SCIENCE | |
| INDIAN JOURNAL OF CHEMISTRY SECTION B-ORGANIC CHEMISTRY INCLUDING MEDICINAL CHEMISTRY | 230 | 0.476 | CHEMISTRY | 2.558024 |
| INDIAN JOURNAL OF ANIMAL SCIENCES | 228 | | VETERINARY SCIENCES | |
| TETRAHEDRON LETTERS | 222 | 2.484 | CHEMISTRY | 13.349016 |

| 2004 | | | | |
|-----------------------------------------------------------------------------------------------------------|--------------|---------------|----------------------------------|--------------------------|
| Name of the Journal | No of Papers | Impact Factor | Subject Category | Sub Field Impact Factor* |
| INDIAN JOURNAL OF CHEMISTRY SECTION A-INORGANIC BIO-INORGANIC PHYSICAL THEORETICAL & ANALYTICAL CHEMISTRY | 216 | 0.509 | CHEMISTRY | 2.735366 |
| JOURNAL OF APPLIED POLYMER SCIENCE | 192 | 1.021 | POLYMER SCIENCE | 8.4317243 |
| NEUROLOGY INDIA | 185 | 0.339 | NEUROSCIENCES | 1.1487354 |
| PRAMANA-JOURNAL OF PHYSICS | 153 | 0.301 | PHYSICS | 1.6813559 |
| INDIAN JOURNAL OF PURE & APPLIED PHYSICS | 130 | 0.399 | PHYSICS | 2.2287741 |
| JOURNAL OF MOLECULAR CATALYSIS A-CHEMICAL | 124 | 2.316 | CHEMISTRY | 12.446184 |
| JOURNAL OF THE GEOLOGICAL SOCIETY OF INDIA | 121 | 0.345 | GEOSCIENCES | 3.0138855 |
| JOURNAL OF FOOD SCIENCE AND TECHNOLOGY-MYSORE | 118 | 0.234 | FOOD SCIENCE & TECHNOLOGY | 2.7149148 |
| PHYSICAL REVIEW B | 115 | 3.075 | PHYSICS | 17.1766425 |
| SYNTHETIC COMMUNICATIONS | 111 | 0.965 | CHEMISTRY | 5.18591 |
| INDIAN JOURNAL OF PHYSICS AND PROCEEDINGS OF THE INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE | 101 | | PHYSICS | |
| INDIAN JOURNAL OF MEDICAL RESEARCH | 97 | 0.6 | MEDICINE | 2.48838 |
| MATERIALS LETTERS | 95 | 1.186 | MATERIALS SCIENCE | 10.8956634 |
| JOURNAL OF SCIENTIFIC & INDUSTRIAL RESEARCH | 94 | 0.191 | ENGINEERING | 2.5227662 |
| INDIAN JOURNAL OF CHEMICAL TECHNOLOGY | 93 | 0.235 | ENGINEERING | 3.103927 |
| PHYSICAL REVIEW LETTERS | 92 | 7.218 | PHYSICS | 40.3190262 |
| CHEMICAL PHYSICS LETTERS | 88 | | CHEMISTRY | |
| MATERIALS CHEMISTRY AND PHYSICS | 86 | 1.113 | MATERIALS SCIENCE | 10.2250197 |
| INDIAN JOURNAL OF HETEROCYCLIC CHEMISTRY | 86 | 0.345 | CHEMISTRY | 1.85403 |
| BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS | 84 | 2.904 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 8.3307048 |
| JOURNAL OF NEUROCHEMISTRY | 84 | 4.824 | NEUROSCIENCES | 16.3466064 |
| MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING | 80 | 1.445 | MATERIALS SCIENCE | 13.2750705 |
| JOURNAL OF MATERIALS SCIENCE | 79 | 0.864 | MATERIALS SCIENCE | 7.9374816 |
| PHYSICAL REVIEW D | 78 | 5.156 | PHYSICS | 28.8009004 |
| TETRAHEDRON | 77 | 2.643 | CHEMISTRY | 14.203482 |

| 2004 | | | | |
|--------------------------------------------------------------------------------------------------------------------|--------------|---------------|----------------------------------------------|--------------------------|
| Name of the Journal | No of Papers | Impact Factor | Subject Category | Sub Field Impact Factor* |
| JOURNAL OF PHYSICAL CHEMISTRY B | 76 | 3.834 | CHEMISTRY | 20.603916 |
| PHYSICAL REVIEW C | 75 | 3.125 | PHYSICS | 17.4559375 |
| SPECTROCHIMICA ACTA PART A- MOLECULAR AND BIOMOLECULAR SPECTROSCOPY | 75 | 1.188 | SPECTROSCOPY | 6.4596312 |
| ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE | 75 | 0.491 | CRYSTALLOGRAPHY | 3.3664433 |
| BIOORGANIC & MEDICINAL CHEMISTRY LETTERS | 73 | 2.333 | CHEMISTRY | 12.537542 |
| PHYSICS LETTERS B | 72 | 4.619 | PHYSICS | 25.8012721 |
| NATIONAL MEDICAL JOURNAL OF INDIA | 70 | 0.626 | MEDICINE | 2.5962098 |
| ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY | 69 | NA | CHEMISTRY | NA |
| JOURNAL OF ETHNOPHARMACOLOGY | 69 | 1.42 | CHEMISTRY | 7.63108 |
| JOURNAL OF CHEMICAL PHYSICS | 69 | 3.105 | PHYSICS | 17.3442195 |
| BIOORGANIC & MEDICINAL CHEMISTRY | 67 | 2.018 | CHEMISTRY | 10.844732 |
| SYNLETT | 67 | 2.738 | CHEMISTRY | 14.714012 |
| NATIONAL ACADEMY SCIENCE LETTERS-INDIA | 65 | 0.1 | MULTIDISCIPLINARY SCIENCE | 0.44959 |
| JOURNAL OF CHEMICAL RESEARCH-S | 65 | 0.368 | CHEMISTRY | 1.977632 |
| JOURNAL OF APPLIED PHYSICS | 64 | 2.255 | PHYSICS | 12.5962045 |
| SYNTHESIS AND REACTIVITY IN INORGANIC AND METAL-ORGANIC CHEMISTRY | 63 | 0.715 | CHEMISTRY | 3.84241 |
| OXIDATION COMMUNICATIONS | 63 | 0.241 | CHEMISTRY | 1.295134 |
| PHYSICAL REVIEW E | 63 | 2.352 | PHYSICS | 13.1380368 |
| INDIAN JOURNAL OF PHYSICS AND PROCEEDINGS OF THE INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE-PART A | 62 | | PHYSICS | |
| IETE JOURNAL OF RESEARCH | 61 | 0.075 | ENGINEERING | 0.990615 |
| JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS | 61 | 1.031 | MATERIALS SCIENCE | 9.4716939 |
| INDIAN JOURNAL OF AGRONOMY | 60 | 0.036 | AGRONOMY | 0.4049028 |
| INDIAN JOURNAL OF SOCIAL WORK | 60 | | ----- | 0 |
| IONICS | 60 | | MATERIALS SCIENCE | |
| TRANSACTIONS OF THE INDIAN INSTITUTE OF METALS | 60 | 0.114 | METALLURGY & METALLURGICAL ENGINEERING | 1.8949422 |
| PHYSICA B-CONDENSED MATTER | 59 | 0.679 | PHYSICS | 3.7928261 |
| INDIAN JOURNAL OF ENGINEERING AND MATERIALS SCIENCES | 58 | 0.087 | ENGINEERING | 1.1491134 |

| 2004 | | | | |
|-----------------------------------------------------------------------------------------------------------|--------------|---------------|----------------------------------|--------------------------|
| Name of the Journal | No of Papers | Impact Factor | Subject Category | Sub Field Impact Factor* |
| JOURNAL OF COLLOID AND INTERFACE SCIENCE | 57 | 1.784 | CHEMISTRY | 9.587216 |
| JOURNAL OF ALLOYS AND COMPOUNDS | 56 | 1.562 | CHEMISTRY | 8.394188 |
| JOURNAL OF BIOLOGICAL CHEMISTRY | 55 | 6.355 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 18.2305885 |
| TRANSITION METAL CHEMISTRY | 55 | 0.857 | CHEMISTRY | 4.605518 |
| NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS | 54 | 0.997 | PHYSICS | 5.5691423 |
| SOLID STATE COMMUNICATIONS | 53 | 1.523 | PHYSICS | 8.5073257 |
| BRITISH MEDICAL JOURNAL | 53 | 7.038 | MEDICINE | 29.1886974 |
| JOURNAL OF CRYSTAL GROWTH | 53 | 1.707 | CRYSTALLOGRAPHY | 11.7037041 |
| IETE TECHNICAL REVIEW | 51 | 0.092 | ENGINEERING | 1.2151544 |
| DEFENCE SCIENCE JOURNAL | 50 | 0.121 | MULTIDISCIPLINARY SCIENCE | 0.5440039 |
| BIOLOGIA PLANTARUM | 49 | 0.744 | PLANT SCIENCE | 4.6473216 |
| LANGMUIR | 49 | 3.295 | CHEMISTRY | 17.70733 |
| SYNTHESIS-STUTT GART | 48 | 2.203 | CHEMISTRY | 11.838922 |
| GEOPHYSICAL RESEARCH LETTERS | 48 | 2.378 | GEOSCIENCES | 20.7739702 |
| BULLETIN OF MATERIALS SCIENCE | 48 | 0.554 | MATERIALS SCIENCE | 5.0895426 |
| INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH | 48 | | ENGINEERING | |
| EPILEPSIA | 48 | 3.329 | CLINICAL NEUROLOGY | 16.9026646 |
| APPLIED SURFACE SCIENCE | 47 | 1.497 | CHEMISTRY | 8.044878 |
| JOURNAL OF PHYSICS-CONDENSED MATTER | 47 | 2.049 | PHYSICS | 11.4455091 |
| MATERIALS SCIENCE AND ENGINEERING B-SOLID STATE MATERIALS FOR ADVANCED TECHNOLOGY | 46 | 0.924 | MATERIALS SCIENCE | 8.4886956 |
| PHYTOTHERAPY RESEARCH | 46 | 0.975 | CHEMISTRY | 5.23965 |
| INDIAN JOURNAL OF PHYSICS AND PROCEEDINGS OF THE INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE-PART B | 46 | | PHYSICS | |
| JOURNAL OF ORGANIC CHEMISTRY | 45 | 3.462 | CHEMISTRY | 18.604788 |
| INDIAN JOURNAL OF BIOCHEMISTRY & BIOPHYSICS | 45 | 0.308 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 0.8835596 |
| FASEB JOURNAL | 45 | 6.82 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 19.564534 |
| APPLIED PHYSICS LETTERS | 45 | 4.308 | PHYSICS | 24.0640572 |
| INORGANIC CHEMISTRY | 44 | 3.454 | CHEMISTRY | 18.561796 |

| 2004 | | | | |
|--------------------------------------------------------|--------------|---------------|------------------------------------|--------------------------|
| Name of the Journal | No of Papers | Impact Factor | Subject Category | Sub Field Impact Factor* |
| PHYSICS OF PLASMAS | 44 | 1.894 | PHYSICS | 10.5796946 |
| ASTROPHYSICAL JOURNAL | 44 | 6.237 | ASTRONOMY & ASTROPHYSICS | 23.881473 |
| ASIAN-AUSTRALASIAN JOURNAL OF ANIMAL SCIENCES | 44 | | AGRICULTURE SCIENCE | |
| LANCET | 43 | 21.713 | MEDICINE | 90.0503249 |
| POLYHEDRON | 43 | 1.586 | CHEMISTRY | 8.523164 |
| PHYSICS LETTERS A | 43 | 1.454 | PHYSICS | 8.1218986 |
| JOURNAL OF PHYSICAL CHEMISTRY A | 42 | 2.639 | CHEMISTRY | 14.181986 |
| APPLIED CATALYSIS A-GENERAL | 42 | 2.378 | CHEMISTRY | 12.779372 |
| MATERIALS SCIENCE AND TECHNOLOGY | 41 | 0.639 | MATERIALS SCIENCE | 5.8704291 |
| PLANT SCIENCE | 40 | 1.389 | PLANT SCIENCE | 8.6762496 |
| INDIAN JOURNAL OF MARINE SCIENCES | 40 | 0.15 | OCEANOGRAPHY | 1.217145 |
| SADHANA-ACADEMY PROCEEDINGS IN ENGINEERING SCIENCES | 40 | 0.183 | ENGINEERING | 2.4171006 |
| BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY | 40 | 0.528 | ENVIRONMENTAL SCIENCES; TOXICOLOGY | 3.4903968 |

Impact Indicators

In scientific research assessment system, considerable significance is attached to the quality of output. Investments in S & T research demands payoff. However, quality is difficult to measure and it is not confined to specific criteria. Hence, certain proxy measures such as citations to scientific papers, (total citations, mean number of citations, the ratio between the total number of papers and citations in a given period and other normalized counts) are widely employed in many scientific output assessment systems.

Measuring Impact of publications

Scientific performance monitoring often involves the recording of return for research. However, in practice the problem lies in using the suitable parameters to do this work. Many bibliometric indicators construct the measurements using citations, the scientific papers receive from other papers. 'Citations per paper' is generally accepted as a parameter to measure scientific quality. However, it has its own pitfalls. The benefits and limitations of it have been widely discussed in literature. The citation at a large aggregate such as for nations and fields has fewer shortcomings than citations to individual papers and authors. Now in this study, we look at the citation data from two

perspectives. First, we use the total citations against the total number of papers, and second, the citation data of individual papers.

To infer the total citations and total papers for each of sub-field, we use the data derived by the Essential Citation Indicators (ECI). The Essential Citation Indicators have been providing measurements of total papers and citations for each country in different fields. The total papers, total citations and citations per paper for major fields for three countries India, China and South Korea are produced in the tables 11 to 13. The data given below cover the period from January 1, 1996 to September 1, 2006.

Table 11- Total papers and citations data for sub-fields - India

FIELD RANKINGS FOR INDIA

| | Field | Papers | Citations | Citations Per Paper |
|----|-----------------------------------------|--------|-----------|---------------------|
| 1 | <u>CHEMISTRY</u> | 44,341 | 192,506 | 4.34 |
| 2 | <u>PHYSICS</u> | 25,098 | 125,040 | 4.98 |
| 3 | <u>CLINICAL MEDICINE</u> | 16,919 | 68,976 | 4.08 |
| 4 | <u>BIOLOGY & BIOCHEMISTRY</u> | 10,084 | 49,267 | 4.89 |
| 5 | <u>MATERIALS SCIENCE</u> | 14,032 | 42,978 | 3.06 |
| 6 | <u>ENGINEERING</u> | 17,478 | 36,210 | 2.07 |
| 7 | <u>PLANT & ANIMAL SCIENCE</u> | 16,704 | 29,573 | 1.77 |
| 8 | <u>GEOSCIENCES</u> | 6,466 | 20,459 | 3.16 |
| 9 | <u>MOLECULAR BIOLOGY & GENETICS</u> | 2,438 | 16,515 | 6.77 |
| 10 | <u>PHARMACOLOGY & TOXICOLOGY</u> | 4,004 | 16,283 | 4.07 |
| 11 | <u>SPACE SCIENCE</u> | 2,528 | 14,980 | 5.93 |
| 12 | <u>ENVIRONMENT/ECOLOGY</u> | 4,690 | 14,511 | 3.09 |
| 13 | <u>MICROBIOLOGY</u> | 2,479 | 13,379 | 5.40 |
| 14 | <u>AGRICULTURAL SCIENCES</u> | 8,568 | 13,253 | 1.55 |
| 15 | <u>NEUROSCIENCE & BEHAVIOR</u> | 2,181 | 8,664 | 3.97 |
| 16 | <u>IMMUNOLOGY</u> | 1,129 | 7,299 | 6.47 |
| 17 | <u>MATHEMATICS</u> | 4,010 | 5,505 | 1.37 |
| 18 | <u>COMPUTER SCIENCE</u> | 3,022 | 5,178 | 1.71 |

| | | | | |
|----|---------------------------------|---------|---------|------|
| 19 | <u>SOCIAL SCIENCES, GENERAL</u> | 1,909 | 2,818 | 1.48 |
| 20 | <u>PSYCHIATRY/PSYCHOLOGY</u> | 505 | 2,441 | 4.83 |
| 21 | <u>MULTIDISCIPLINARY</u> | 1,911 | 2,022 | 1.06 |
| 22 | <u>ECONOMICS & BUSINESS</u> | 701 | 1,527 | 2.18 |
| | <u>ALL FIELDS*</u> | 191,197 | 689,384 | 3.61 |

Table 12- Total papers and citations data for sub-fields - China

| | <u>Field</u> | <u>Papers</u> | <u>Citations</u> | <u>Citations Per Paper</u> |
|----|-----------------------------------------|---------------|------------------|----------------------------|
| 1 | <u>CHEMISTRY</u> | 92,256 | 338,486 | 3.67 |
| 2 | <u>PHYSICS</u> | 65,576 | 236,894 | 3.61 |
| 3 | <u>CLINICAL MEDICINE</u> | 23,960 | 143,307 | 5.98 |
| 4 | <u>MATERIALS SCIENCE</u> | 41,995 | 104,624 | 2.49 |
| 5 | <u>ENGINEERING</u> | 37,646 | 78,402 | 2.08 |
| 6 | <u>BIOLOGY & BIOCHEMISTRY</u> | 14,362 | 58,307 | 4.06 |
| 7 | <u>GEOSCIENCES</u> | 11,638 | 48,999 | 4.21 |
| 8 | <u>PLANT & ANIMAL SCIENCE</u> | 12,119 | 37,539 | 3.10 |
| 9 | <u>MOLECULAR BIOLOGY & GENETICS</u> | 3,684 | 31,459 | 8.54 |
| 10 | <u>MATHEMATICS</u> | 14,711 | 26,261 | 1.79 |
| 11 | <u>NEUROSCIENCE & BEHAVIOR</u> | 3,256 | 24,088 | 7.40 |
| 12 | <u>ENVIRONMENT/ECOLOGY</u> | 6,504 | 23,534 | 3.62 |
| 13 | <u>SPACE SCIENCE</u> | 3,799 | 18,208 | 4.79 |
| 14 | <u>PHARMACOLOGY & TOXICOLOGY</u> | 4,934 | 17,875 | 3.62 |
| 15 | <u>MICROBIOLOGY</u> | 2,149 | 13,697 | 6.37 |
| 16 | <u>COMPUTER SCIENCE</u> | 11,702 | 11,790 | 1.01 |
| 17 | <u>AGRICULTURAL SCIENCES</u> | 2,513 | 7,372 | 2.93 |
| 18 | <u>IMMUNOLOGY</u> | 1,188 | 6,938 | 5.84 |

| | | | | |
|----|---------------------------------|---------|-----------|------|
| 19 | <u>SOCIAL SCIENCES, GENERAL</u> | 3,089 | 6,088 | 1.97 |
| 20 | <u>PSYCHIATRY/PSYCHOLOGY</u> | 1,475 | 5,914 | 4.01 |
| 21 | <u>ECONOMICS & BUSINESS</u> | 1,947 | 5,369 | 2.76 |
| 22 | <u>MULTIDISCIPLINARY</u> | 1,732 | 2,789 | 1.61 |
| | <u>ALL FIELDS*</u> | 362,235 | 1,247,940 | 3.45 |

Table 13- Total papers and citations data for sub-fields - South Korea

| | | | | |
|----|-----------------------------------------|--------|---------|------|
| 1 | <u>CHEMISTRY</u> | 26,087 | 141,906 | 5.44 |
| 2 | <u>PHYSICS</u> | 26,510 | 136,562 | 5.15 |
| 3 | <u>CLINICAL MEDICINE</u> | 18,312 | 107,164 | 5.85 |
| 4 | <u>BIOLOGY & BIOCHEMISTRY</u> | 9,913 | 67,569 | 6.82 |
| 5 | <u>MATERIALS SCIENCE</u> | 16,148 | 58,253 | 3.61 |
| 6 | <u>ENGINEERING</u> | 21,409 | 48,899 | 2.28 |
| 7 | <u>MOLECULAR BIOLOGY & GENETICS</u> | 2,530 | 23,076 | 9.12 |
| 8 | <u>NEUROSCIENCE & BEHAVIOR</u> | 2,661 | 22,080 | 8.30 |
| 9 | <u>PHARMACOLOGY & TOXICOLOGY</u> | 4,320 | 19,835 | 4.59 |
| 10 | <u>MICROBIOLOGY</u> | 3,850 | 19,669 | 5.11 |
| 11 | <u>PLANT & ANIMAL SCIENCE</u> | 4,358 | 19,413 | 4.45 |
| 12 | <u>IMMUNOLOGY</u> | 1,143 | 9,263 | 8.10 |
| 13 | <u>COMPUTER SCIENCE</u> | 9,085 | 9,244 | 1.02 |
| 14 | <u>ENVIRONMENT/ECOLOGY</u> | 2,074 | 8,584 | 4.14 |
| 15 | <u>GEOSCIENCES</u> | 1,671 | 7,432 | 4.45 |
| 16 | <u>SPACE SCIENCE</u> | 881 | 6,825 | 7.75 |
| 17 | <u>AGRICULTURAL SCIENCES</u> | 2,003 | 6,390 | 3.19 |
| 18 | <u>MATHEMATICS</u> | 3,635 | 6,322 | 1.74 |
| 19 | <u>ECONOMICS & BUSINESS</u> | 1,203 | 3,990 | 3.32 |
| 20 | <u>SOCIAL SCIENCES, GENERAL</u> | 1,409 | 2,772 | 1.97 |

| | | | | |
|----|------------------------------|---------|---------|------|
| 21 | <u>PSYCHIATRY/PSYCHOLOGY</u> | 536 | 2,712 | 5.06 |
| 22 | <u>MULTIDISCIPLINARY</u> | 91 | 139 | 1.53 |
| | <u>ALL FIELDS*</u> | 159,829 | 728,099 | 4.56 |

The ECI dataset is so large that take into account long window period. The strength and weakness (partially?) of countries across fields are visible from the tables given above.

Molecular biology, Immunology, Space Science and Microbiology are some fields where Indian papers have better citation rate, Neuroscience, Clinical Medicine, Molecular biology, and Immunology have better rate for Chinese papers, and South Korea has more impact in Space Science besides biomedical sciences. However, it is important that mean citation rate is higher in biomedical science than rest globally.

The overall impact of papers is high for South Korea whereas India has a moderate high rate than China. The data given above have raised questions about the validity of assumptions and claim that Indian S & T productivity and impact is lesser than the other comparable countries such as China and South Korea.

The major limitations of considering the total SCI papers for assessment are:

1. A substantial number or percentage of papers has no or less subsequent impact in scientific research; and
2. SCI total papers count includes less significant items such as letters to editors, short communications and related ones.

Hence, a discussion on the mean number of citations for a country in a given field is significant. It is important that productivity of a country among fields should not be compared as citation practices and mean number of citations vary across fields. We limit our discussions only to the comparison of fields among nations and total citation rate of countries.

In constructing an indicator, we face choices as to how best to normalize the data. Citation counts to individual papers have validity and reliability issues. Hence, to assess the impact or value of a paper, the value the journal (which published a paper) is considered as a proxy as well as a reliable measure. Based on this premises many bibliometric indicators are constructed.

Total Subfield Impact Factor Values of Subfields

The SCI has classified the journals in subfields. The impact of publication output in different subfields is measured in the following way. The impact (factor) of papers in each subfield is calculated and then the corresponding subfield impact factors (description given in the appendix 3) are measured for each of the subfield. The total subfield impact factor values of all the sub fields are now available for the analysed five years and presented in the table 14.

Table 14. Total subfield impact factor values of all fields for India for the period 2000-2004

| Total Sub Field Impact Factor | | | | | | |
|-------------------------------|----------------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Serial Number | Total Number of Subject Categories (Papers) | 2000 Total SUB FIELD IF | 2001 Total SUB FIELD IF | 2002 Total SUB FIELD IF | 2003 Total SUB FIELD IF | 2004 Total SUB FIELD IF |
| 1 | AGRICULTURE SCIENCE | 3055.332904 | 2066.475163 | 2415.841755 | 4441.550905 | 1472.944924 |
| 2 | AGRONOMY | 1073.29679 | 1169.13204 | 1531.297158 | 2619.5496 | 1439.277586 |
| 3 | ALLERGY & ASTHMA | 158.2366266 | 99.697483 | 238.621848 | 157.1024 | 210.2699775 |
| 4 | ANATOMY | 46.433047 | 48.086565 | 20.839005 | 112.017156 | 132.2815256 |
| 5 | ANDROLOGY | 144.3312918 | 260.2831608 | 130.2970406 | 193.601232 | 126.3838131 |
| 6 | ANESTHESIOLOGY | 1115.49046 | 574.1933026 | 740.8109042 | 761.799985 | 807.8387913 |
| 7 | ASTRONOMY & ASTROPHYSICS | 2146.276669 | 3386.437849 | 2719.690673 | 3321.404216 | 2654.385328 |
| 8 | BIOCHEMICAL RESEARCH METHODS & BIOTECHNOLOGY | 261.18501 | 249.4748795 | 523.3716063 | 740.378775 | 556.9496154 |
| 9 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 3415.571602 | 3615.60389 | 4346.092901 | 6198.028318 | 5414.510603 |
| 10 | BIOLOGY | 229.536286 | 540.5725587 | 449.1619776 | 499.830768 | 532.5207594 |
| 11 | BIOPHYSICS | 64.8770448s | 203.651245 | 303.7628568 | ***** | 816.19469 |
| 12 | BIOTECHNOLOGY | 1273.794529 | 1764.75835 | 1633.747076 | 1506.28275 | 1875.670298 |
| 13 | CARDIAC & CARDIOVASCULAR SYSTEM | 835.3752767 | 800.4434914 | 508.3236492 | 1483.826245 | 779.2783035 |
| 14 | CELL BIOLOGY | 697.6854896 | 787.8636498 | 848.3900772 | 852.10378 | 1237.193103 |
| 15 | CHEMISTRY | 20696.40959 | 24748.78391 | 30366.63554 | 30717.78019 | 35526.34247 |
| 16 | CLINICAL NEUROLOGY | 465.202101 | 492.3188723 | 262.1429328 | 911.204658 | 1302.561273 |
| 17 | COMPUTER SCIENCE | 1989.10414 | 2075.477238 | 1944.438599 | 2368.220882 | 1829.939213 |
| 18 | CRITICAL CARE MEDICINE | 213.0115764 | 193.286379 | 93.502728 | 336.5146928 | 123.9921114 |
| 19 | CRYSTALLOGRAPHY | 1548.101591 | 1979.59417 | 1749.806733 | 2130.5081 | 1889.616849 |
| 20 | DENTISTRY | 167.6242141 | 342.2275576 | 285.4334595 | 263.587815 | 291.6201117 |
| 21 | DERMATOLOGY | 414.2738382 | 647.3321064 | 1299.927983 | 1021.247212 | 1170.202564 |
| 22 | DEVELOPMENTAL BIOLOGY | 45.1581795 | 88.3823 | 38.7339588 | 45.942 | 13.8555648 |
| 23 | ECOLOGY | 276.9741216 | 335.0399559 | 424.1159244 | 555.706052 | 519.1730816 |
| 24 | ELECTROCHEMISTRY | 542.9326903 | 689.5718576 | 721.308594 | 515.45247 | 707.2985898 |
| 25 | EMERGENCY MEDICINE | 9.0795648 | 26.7687192 | 47.6231562 | 25.316208 | 69.610722 |
| 26 | ENDOCRINOLOGY & METABOLISM | 474.9125202 | 561.684832 | 623.7379353 | 1150.7274 | 675.6186339 |
| 27 | ENERGY & FUELS | 650.3540736 | 601.5662107 | 529.389458 | 494.325798 | 835.826004 |
| 28 | ENGINEERNIG | 12887.08559 | 14187.26218 | 13426.5515 | 15952.30176 | 17128.75038 |
| 29 | ENTOMOLOGY | 447.545241 | 628.880564 | 506.8510564 | 702.956914 | 657.3460894 |

| Total Sub Field Impact Factor | | | | | | |
|-------------------------------|----------------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Serial Number | Total Number of Subject Categories (Papers) | 2000 Total SUB FIELD IF | 2001 Total SUB FIELD IF | 2002 Total SUB FIELD IF | 2003 Total SUB FIELD IF | 2004 Total SUB FIELD IF |
| 30 | ENVIRONMENTAL SCIENCES | 1219.760352 | 1509.000492 | 1730.040996 | 2317.945223 | 2369.326442 |
| 31 | EVOLUTIONARY BIOLOGY | 24.6431698s | 78.8039658 | 44.8001284 | 29.1029976 | 87.8116422 |
| 32 | FISHERIES | 191.4524892 | 215.1087162 | 258.116144 | 136.55178 | 281.6896668 |
| 33 | FOOD SCIENCE & TECHNOLOGY | 792.0751486 | 995.2814868 | 979.1027986 | 1114.65756 | 1105.040939 |
| 34 | FORESTRY SCIENCE | 74.8959806 | 116.415552 | 73.8866964 | 212.967708 | 132.2479927 |
| 35 | GASTROENTEROLOGY & HEPATOLOGY | 1078.782407 | 770.3726832 | 1162.793017 | 1295.5943 | 942.0910372 |
| 36 | GENETICS & HEREDITY | 1038.149563 | 1971.431979 | 543.5210266 | 1713.144552 | 1122.036392 |
| 37 | GEOCHEMISTRY & GEOPHYSICS | 803.084324 | 559.5927808 | 442.1222656 | 851.269692 | 891.9185465 |
| 38 | GEOSCIENCES | 1894.155864 | 1939.520138 | 1345.039369 | 2815.120665 | 2871.675664 |
| 39 | HEMATOLOGY | 566.1060648 | 682.3112016 | 570.5637288 | 1412.931856 | 1340.966611 |
| 40 | HORTICULTURE | 251.7415236 | 254.4324048 | 332.7036791 | 278.220544 | 286.0077386 |
| 41 | IMMUNOLOGY | 483.6133658 | 551.9857172 | 717.7644898 | 850.701038 | 624.2281394 |
| 42 | INFECTIOUS DISEASES | 974.4845808 | 1170.622488 | 847.8846262 | 1290.53427 | 1268.878077 |
| 43 | INSTRUMENTS & INSTRUMENTATION | 353.9970024 | 177.2912128 | 49.7937876 | 173.2433834 | 17.7998892 |
| 44 | MARINE & FRESH WATER BIOLOGY | 331.4404608 | 356.7813364 | 556.0846037 | 662.981878 | 1088.542053 |
| 45 | MATERIALS SCIENCE | 8834.800589 | 12042.33469 | 10925.72423 | 12323.78909 | 12878.21479 |
| 46 | MATHEMATICS | 1768.399786 | 2132.923855 | 2182.101147 | 2542.116318 | 2092.45699 |
| 47 | MECHANICS | 889.7203719 | 617.7912825 | 597.9250542 | 431.412768 | 960.1798908 |
| 48 | MEDICAL LABORATORY TECHNOLOGY | 371.8288698 | 436.3598323 | 395.7763756 | 694.936398 | 613.3249612 |
| 49 | MEDICINE | 3428.338964 | 4217.795021 | 4705.57475 | 7205.453928 | 8847.8042 |
| 50 | METALLURGY & METALLURGICAL ENGINEERING | 1067.785685 | 1258.783392 | 1313.741339 | 1095.079401 | 1409.704018 |
| 51 | METEOROLOGY & ATMOSPHERIC SCIENCES | 437.9461152 | 310.6038384 | 187.1259234 | 400.597164 | 165.887874 |
| 52 | MICROBIOLOGY | 900.4066442 | 1114.517779 | 1612.92502 | 1280.175372 | 1517.152248 |
| 53 | MINERALOGY | 64.1910131 | 220.76046 | 175.456206 | 136.352848 | 331.1722724 |
| 54 | MINING | 118.958086 | 139.1600708 | 158.9814 | ***** | 311.6071357 |
| 55 | MULTIDISCIPLINARY SCIENCE | 5035.064637 | 5230.19957 | 2609.93299 | 3530.2428 | 5669.527719 |
| 56 | MYCOLOGY | 150.90096 | 125.7100344 | 246.946662 | 417.15132 | 211.745351 |
| 57 | NEUROSCIENCES | 762.8437882 | 841.106511 | 872.5259473 | 675.82317 | 2462.885162 |
| 58 | NUCLEAR SCIENCE & | 649.520802 | 799.8238196 | 969.2189924 | 1739.144064 | 687.1474698 |

| Total Sub Field Impact Factor | | | | | | |
|-------------------------------|----------------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Serial Number | Total Number of Subject Categories (Papers) | 2000 Total SUB FIELD IF | 2001 Total SUB FIELD IF | 2002 Total SUB FIELD IF | 2003 Total SUB FIELD IF | 2004 Total SUB FIELD IF |
| | TECHNOLOGY | | | | | |
| 59 | NUTRITION & DIETETICS | 624.5377911 | 655.5106395 | 811.616504 | 896.283686 | 1026.385524 |
| 60 | OBSTETRICS & GYNECOLOGY | 575.8160945 | 572.1739065 | 674.8735276 | 1139.736815 | 922.113125 |
| 61 | OCEANOGRAPHY | 408.6449576 | 239.726073 | 185.4244518 | 414.335064 | 172.185446 |
| 62 | ONGOLOGY | 675.4932198 | 714.0281487 | 3706.111681 | 983.651652 | 904.7111239 |
| 63 | OPERATIONAL RESEARCH | 418.0831704 | 334.658652 | 290.8669485 | 214.333224 | 515.6651662 |
| 64 | OPHTHALMOLOGY | 1901.252221 | 2006.300377 | 1455.617184 | 2945.368967 | 1964.077617 |
| 65 | OPTICS | 989.1644673 | 1053.978505 | 1065.795592 | 1387.472984 | 1517.503663 |
| 66 | ORTHOPPEDICS | 59.3428212 | 95.1808376 | 186.9091576 | 274.651728 | 341.862144 |
| 67 | OTORHINOLARYNGOLOGY | 63.5942427 | 141.674305 | 79.5184225 | 189.035325 | 96.0216141 |
| 68 | PARASITOLOGY | 301.755576 | 100.317528 | 77.8491126 | 242.774267 | 529.6456582 |
| 69 | PATHOLOGY | 605.3659916 | 206.6518332 | 286.3354476 | 499.63758 | 368.1821109 |
| 70 | PEDIATRICS | 906.5004501 | 808.0466013 | 1307.018185 | 1812.966896 | 872.4514236 |
| 71 | PERIPHERAL VASCULAR DISEASE | 447.354028 | 199.4391555 | 113.8046334 | 446.13743 | 1671.608211 |
| 72 | PHARMACOLOGY & PHARMACY | 903.056337 | 1160.432438 | 1392.543825 | 1642.22243 | 1553.430231 |
| 73 | PHYSICS | 21054.95266 | 29522.59982 | 26007.70612 | 25139.54424 | 25144.49874 |
| 74 | PHYSIOLOGY | 74.2275198 | 85.8646404 | 87.9817707 | 36.753728 | 75.340916 |
| 75 | PLANT SCIENCE | 1452.557126 | 1399.790463 | 1993.579868 | 1751.756712 | 2231.61385 |
| 76 | POLYMER SCIENCE | 4003.704302 | 4121.608776 | 3904.992608 | 4667.285672 | 4720.54338 |
| 77 | PSYCHIATRY | 542.3795076 | 697.0299051 | 675.1065684 | 632.001588 | 512.8084952 |
| 78 | PSYCHOLOGY | 8.7882269 | ***** | 14.685432 | 35.296002 | 95.675844 |
| 79 | PUBLIC ENVIRONMENT & OCCUPATION HEALTH | 508.1437746 | 557.755501 | 813.2682327 | 889.071348 | 678.737708 |
| 80 | RADIOLOGY | 1282.973507 | 1068.020118 | 1410.424645 | 1046.375106 | 1314.829476 |
| 81 | REHABILITATION | 39.1273932 | 26.7511524 | 4.3588032 | 43.87596 | 11.0183072 |
| 82 | REMOTE SENSING | 431.9324082 | 331.7354304 | 364.5311615 | 272.269729 | 223.5304656 |
| 83 | REPRODUCTIVE BIOLOGY | 420.5186745 | 275.570813 | 534.3432324 | 411.168648 | 537.0761159 |
| 84 | RESPIRATORY SYSTEM | 62.5531052 | 163.3113062 | 98.9096149 | 68.736591 | 281.0670095 |
| 85 | RHEUMATOLOGY | 69.7361405 | 251.9329681 | 128.73124 | 159.310732 | 188.9694954 |
| 86 | ROBOTICS | 47.7034662 | 26.4905325 | 69.6178791 | 20.407848 | 53.613612 |
| 87 | SPECTROSCOPY | 690.5140326 | 583.745081 | 595.5373854 | 739.699025 | 873.9098028 |
| 88 | SPORTS SCIENCE | 7.618324 | 10.8633024 | 48.2921022 | 8.13618 | 111.3898979 |
| 89 | STATISTICS & PROBABILITY | 363.1668972 | 412.3214024 | 420.8819472 | 359.108728 | 320.3333805 |
| 90 | SUBSTANCE ABUSE | 47.4012994 | 36.433308 | 54.2779913 | ***** | 139.5439262 |
| 91 | SURGERY | 1860.520479 | 1697.086123 | 1862.768388 | 1485.575377 | 2092.693882 |
| 92 | TELECOMUNICATION | 88.7058816 | 63.036752 | 114.8627964 | 131.324232 | 140.1641191 |

| Total Sub Field Impact Factor | | | | | | |
|-------------------------------|---------------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Serial Number | Total Number of Subject Categories (Papers) | 2000 Total SUB FIELD IF | 2001 Total SUB FIELD IF | 2002 Total SUB FIELD IF | 2003 Total SUB FIELD IF | 2004 Total SUB FIELD IF |
| 93 | THERMODYNAMICS | 400.1156718 | 387.597154 | 406.9988656 | 245.507352 | 492.879855 |
| 94 | TOXICOLOGY | 498.2761336 | 827.5482339 | 504.9565666 | 728.797089 | 1186.613954 |
| 95 | TRANSPLANTATION | 87.715381 | 192.7537418 | 73.3050912 | 215.46096 | 421.469344 |
| 96 | TRANSPORTATION SCIENCE | 108.456246 | 61.6545248 | 62.3475858 | ***** | 29.5991745 |
| 97 | TROPICAL MEDICINE | 799.3806868 | 812.176631 | 841.0842972 | 953.706672 | 1094.127568 |
| 98 | UROLOGY & NEPHROLOGY | 461.1736489 | 603.4541649 | 714.4413876 | 626.8928694 | 1365.367988 |
| 99 | VETERINARY SCIENCES | 819.7651752 | 1198.476479 | 907.139217 | 811.134132 | 1002.976366 |
| 100 | VIROLOGY | 303.38019 | 315.6196428 | 285.08855 | 493.100522 | 726.470605 |
| 101 | WATER RESOURCES | 269.5332882 | 369.1904624 | 434.056805 | 144.447707 | 538.235505 |
| 102 | ZOOLOGY | 347.0209797 | 238.9538112 | 252.0984012 | 226.677144 | 262.284663 |

The cumulative impact of the physical sciences is more than the other subjects. More specifically the subfields Chemistry, Physics and Material Science have earned high impact than the other subfields. Other subfields have distant lower ranks. This result correlates with our other analyses (given earlier) and also the data given by the Essential Citation Indicators.

The quality of papers is measured by the publication in high impact journals. Since the impact factors are raw values, the refined indicator, Subfield corrected impact factor is used to identify the high impact papers. The subfield corrected impact factor values are calculated for all the Indian papers in the analysed five years. The journals that scored more than 10 in subfield corrected impact factor values are identified and listed in the decreasing frequency of its values. The threshold 10 even seems to be at random, it has identified the top journals across subfields. Accordingly for the analysed five years, the data about the journals and papers are given below.

The table 15 below presents for five years (2000-2004) the number of journals where Indian papers have appeared that have the sub field impact factor of more than 10 and the corresponding total papers published in these journals.

Table 15. Number of papers that have high sub field impact factor (≥ 10)

| Year | No. of Journals | No of Papers | % of the total Indian output |
|------|-----------------|--------------|------------------------------|
| 2000 | 776 | 4726 | 26.35 |
| 2001 | 830 | 5727 | 28.87 |
| 2002 | 783 | 5955 | 28.56 |
| 2003 | 867 | 6663 | 28.92 |
| 2004 | 912 | 6428 | 27.07 |

The number of high impact factors in the analysed period has increased except for the year 2004 (where a small reduction is observed from 2003). The number of high impact journals that have published Indian papers in the analysed period is skewed. However, barring a small drop in 2004, the percentage of papers in high impact journals continue to increase marginally.

It is significant to note that in all the five years the high impact journals where Indian scientists have published papers are in non-Indian journals. No Indian journal has found a place in the high impact journals. In the table 16, the top 50 high impact journals are given with the data such as number of Indian papers, subject category, subfield impact factor and total subfield impact factor values. The complete lists of journals for the analysed five years are given in the appendix 4.

Table 16. List of Indian papers in high impact journals (top 50)

| top papers 2004 | | | | | | | |
|---------------------------------------------------|--------------|---------------|---------------------------|------------|-------------------------|-------------------------------|--|
| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor | |
| NEW ENGLAND JOURNAL OF MEDICINE | 11 | 38.57 | MEDICINE | 4.15 | 159.961361 | 1759.574971 | |
| NATURE | 13 | 32.182 | MULTIDISCIPLINARY SCIENCE | 4.50 | 144.6870538 | 1880.931699 | |
| SCIENCE | 10 | 31.853 | MULTIDISCIPLINARY SCIENCE | 4.50 | 143.2079027 | 1432.079027 | |
| NATURE MEDICINE | 2 | 31.223 | MEDICINE | 4.15 | 129.4911479 | 258.9822958 | |
| NATURE MATERIALS | 3 | 13.531 | MATERIALS SCIENCE | 9.19 | 124.3079439 | 372.9238317 | |
| CHEMICAL REVIEWS | 2 | 20.233 | CHEMISTRY | 5.37 | 108.732142 | 217.464284 | |
| NATURE BIOTECHNOLOGY | 2 | 22.355 | BIOTECHNOLOGY | 4.67 | 104.4313825 | 208.862765 | |
| NATURE REVIEWS MOLECULAR CELL BIOLOGY | 1 | 33.17 | CELL BIOLOGY | 2.81 | 93.071703 | 93.071703 | |
| LANCET | 43 | 21.713 | MEDICINE | 4.15 | 90.0503249 | 3872.163971 | |
| PHYSICS REPORTS-REVIEW SECTION OF PHYSICS LETTERS | 4 | 14.742 | PHYSICS | 5.59 | 82.3473378 | 329.3893512 | |
| PLOS BIOLOGY | 1 | 13.868 | BIOLOGY | 5.82 | 80.7686188 | 80.7686188 | |
| CELL | 3 | 28.389 | CELL BIOLOGY | 2.81 | 79.6566951 | 238.9700853 | |
| ADVANCED MATERIALS | 10 | 8.079 | MATERIALS SCIENCE | 9.19 | 74.2209651 | 742.209651 | |
| TRENDS IN PLANT | 1 | 11.833 | PLANT SCIENCE | 6.25 | 73.9136512 | 73.9136512 | |

top papers 2004

| Journal Name | No. of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|----------------------------------------------------------------|---------------|---------------|-------------------------------|------------|-------------------------|-------------------------------|
| SCIENCE | | | | | | |
| ANNUAL REVIEW OF FLUID MECHANICS | 1 | 6.694 | MECHANICS | 10.99 | 73.5523332 | 73.5523332 |
| ACCOUNTS OF CHEMICAL RESEARCH | 5 | 13.154 | CHEMISTRY | 5.37 | 70.689596 | 353.44798 |
| PLANT CELL | 1 | 11.295 | PLANT SCIENCE | 6.25 | 70.553088 | 70.553088 |
| PROGRESS IN POLYMER SCIENCE | 4 | 8.482 | POLYMER SCIENCE | 8.26 | 70.0469006 | 280.1876024 |
| MICROBIOLOGY AND MOLECULAR BIOLOGY REVIEWS | 1 | 17.037 | MICROBIOLOGY | 3.63 | 61.9209765 | 61.9209765 |
| ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES | 2 | 15.231 | ASTRONOMY & ASTROPHYSICS | 3.83 | 58.319499 | 116.638998 |
| IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE | 2 | 4.352 | ENGINEERING | 13.21 | 57.4820864 | 114.9641728 |
| ANNALS OF INTERNAL MEDICINE | 1 | 13.114 | MEDICINE | 4.15 | 54.3876922 | 54.3876922 |
| APPLIED CATALYSIS B-ENVIRONMENTAL | 8 | 4.042 | ENGINEERING | 13.21 | 53.3875444 | 427.1003552 |
| GASTROENTEROLOGY | 3 | 13.092 | GASTROENTEROLOGY & HEPATOLOGY | 4.02 | 52.6049652 | 157.8148956 |
| ADVANCED FUNCTIONAL MATERIALS | 3 | 5.679 | MATERIALS SCIENCE | 9.19 | 52.1724051 | 156.5172153 |
| BIOMATERIALS | 9 | 3.799 | ENGINEERING | 13.21 | 50.1779518 | 451.6015662 |
| IEEE SIGNAL PROCESSING MAGAZINE | 2 | 3.707 | ENGINEERING | 13.21 | 48.9627974 | 97.9255948 |
| NEURON | 2 | 14.439 | NEUROSCIENCES | 3.39 | 48.9279954 | 97.8559908 |
| IEEE JOURNAL OF QUANTUM ELECTRONICS | 1 | 3.675 | ENGINEERING | 13.21 | 48.540135 | 48.540135 |
| CIRCULATION | 6 | 12.563 | PERIPHERAL VASCULAR DISEASE | 3.83 | 48.1627731 | 288.9766386 |
| MOLECULES AND CELLS | 2 | 16.811 | CELL BIOLOGY | 2.81 | 47.1699849 | 94.3399698 |
| PROCEEDINGS OF | 5 | 10.452 | MULTIDISCIPLINARY | 4.50 | 46.9911468 | 234.955734 |

top papers 2004

| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|------------------------------------------------------------------|--------------|---------------|---------------------------------|------------|-------------------------|-------------------------------|
| THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA | | | SCIENCE | | | |
| ANNUAL REVIEW OF BIOPHYSICS AND BIOMOLECULAR STRUCTURE | 1 | 13.462 | BIOPHYSICS | 3.42 | 46.006385 | 46.006385 |
| ANNALS OF SURGERY | 2 | 5.907 | SURGERY | 7.50 | 44.2900953 | 88.5801906 |
| NANOTECHNOLOGY | 8 | 3.322 | ENGINEERING | 13.21 | 43.8776404 | 351.0211232 |
| JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY | 9 | 9.133 | CARDIAC & CARDIOVASCULAR SYSTEM | 4.69 | 42.7926715 | 385.1340435 |
| NATURAL PRODUCT REPORTS | 1 | 7.89 | CHEMISTRY | 5.37 | 42.40086 | 42.40086 |
| LANCET NEUROLOGY | 1 | 8.34 | CLINICAL NEUROLOGY | 5.08 | 42.345516 | 42.345516 |
| IEEE TRANSACTIONS ON NANOTECHNOLOGY | 2 | 3.176 | ENGINEERING | 13.21 | 41.9492432 | 83.8984864 |
| HEPATOLOGY | 5 | 10.416 | GASTROENTEROLOGY & HEPATOLOGY | 4.02 | 41.8525296 | 209.262648 |
| LANCET INFECTIOUS DISEASES | 6 | 10.788 | INFECTIOUS DISEASES | 3.77 | 40.6416324 | 243.8497944 |
| PHYSICAL REVIEW LETTERS | 92 | 7.218 | PHYSICS | 5.59 | 40.3190262 | 3709.35041 |
| ADVANCES IN ATOMIC MOLECULAR, AND OPTICAL PHYSICS, VOL 49 | 1 | 7.214 | PHYSICS | 5.59 | 40.2966826 | 40.2966826 |
| TRENDS IN BIOTECHNOLOGY | 4 | 8.606 | BIOTECHNOLOGY | 4.67 | 40.202929 | 160.811716 |
| PLANT JOURNAL | 2 | 6.367 | PLANT SCIENCE | 6.25 | 39.7708288 | 79.5416576 |
| CLINICAL CHEMISTRY | 5 | 6.501 | MEDICAL LABORATORY TECHNOLOGY | 5.96 | 38.7628626 | 193.814313 |
| JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY | 2 | 7.205 | ALLERGY & ASTHMA | 5.35 | 38.5287375 | 77.057475 |

| top papers 2004 | | | | | | |
|-----------------------------------------------|--------------|---------------|----------------------|------------|-------------------------|-------------------------------|
| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
| JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY | 11 | 6.644 | UROLOGY & NEPHROLOGY | 5.75 | 38.1943628 | 420.1379908 |
| JOURNAL OF THE NATIONAL CANCER INSTITUTE | 1 | 13.856 | ONCOLOGY | 2.70 | 37.4430688 | 37.4430688 |

Indian Journals in Science and Technology - Where do they stand?

When an Indian author writes a qualitative scientific paper, he/she likes to publish the paper in an international reviewed journal. The simple reason is that barring a very few most of the Indian S & T journals lack perceived quality and the reception to them at the international level is very poor. The number of Indian journals covered in the international databases such as *ISI*, *Scopus* is very less. The citation record assessed through *Science Citation Index* or *Goolge Scholar* or other sources is not satisfactory. Hence, we have carried out an exercise of identifying and documenting the Indian S & T journals with the important data, 'extent of peer review'.

There is no comprehensive list available on the journals published in India in Science and Technology. The Indian National Scientific Documentation Center (INSDOC now NISCAIR) has published the Directory of S and T journals in 1992. Since then, no list was compiled and no record is available. Hence, the list of S and T journals published was compiled by direct scanning of all the journals published in S and T. We were mindful that only the publications that meet the characteristics of journals are included in this list. For each of the identified journal, basic data such as title, subject, editorial board availability - whether the editorial board (national or international), peer reviewing system, online availability, authorship constitution etc are collected. The collective data is presented below.

Total Journals in Science and Technology published in India - 1645

Editorial board availability in the journal issue - 417 (25.34%)

International Editorial Board - 141 (8.57%)

Peer Reviewed - 66 (4.01%)

Online availability - 207 (12.58%)

Many journals call themselves as journals but do not enjoy the characteristics of journals. These journals are not considered for our study. In the above table, only the base data are presented. Out of the 1645 journals identified in S and T, only one fourth (417) journals have listed their editorial board; and just 141, i.e., 8.5% have international editorial board. However it is not clearly known how many journals really send the

papers to the editorial board members for review or consultation. Editorial board constitution is the basic norm, a journal has to follow which is not employed by many journals.

Peer Review: The most important measure to ensure quality of journal is the peer review system. It has been criticized that many Indian journals do not have peer review system. Hence, in the current initiative, the peer review system followed by Indian journals is completely investigated. To understand the peer review system, the following practice is followed.

1. Whether the Indian journals are listed in peer reviewed databases such as *web of science*, *scopus* etc?
2. Whether the journals clearly specify the peer review system?
3. Whether the papers in the journals mention the date of receipt, review including revision and acceptance details of papers?
4. Whether the journals receive reasonable citations from international journals?

Based on the above parameters the journals are classified into 'peer reviewed' and 'not peer reviewed'. The results are dismal as just 66 journals or 4 percentage of the journals come under the category 'peer reviewed'. Even it is difficult to know how many journals undergo review by international peers, based on the scanning of all journals and the available data, we estimated that just 20 to 30 of the 1845 Indian journals undergo international peer review.

It should be noted that peer review systems enable the authors to enhance the quality of papers and experiments/investigations are put in the right direction by experts. In the absence of peer review mechanisms, journals are likely to publish trivial content. Encouraging young researchers and motivating them still challenges S and T research, despite many avenues to do. Peer reviewed journals enable young researchers to access to authoritative content.

We are concerned with poor peer reviewing practice of Indian journals. Unless the institutions insist their scientists to opt for publications in the peer reviewed journals and to consider the publications in the peer reviewed journals *only*, the Indian journals will continue to be in the vicious circle.

Summary and Conclusion

Data about the scientific publications presented in this study show that India increased its overall science and technology publications significantly during the last ten years (as measured by all indicators considered.) Growth measured in different angles show that it is also skewed to a certain degree. The skewness is not due to the relative growth or decline but it is mainly due to the inconsistency in database coverage. Even China and South Korea have shown high growth rate than India in the last five years in terms of number of papers, the in-depth analyses show contradictory results. We mention two highlights from this study.

1. The total comprehensive S & T impact of Indian publications is higher than China and slightly lower than South Korea.
2. ISI databases continue to index more Chinese and South Korean journals than Indian journals without any valid reasons.

ISI databases are inadequate to represent the volume of science done in the country. We advocate the databases such as '*scopus*' which indexes more peer reviewed journals.

Bibliometric measures are not the only indicators for understanding the science done in a country or arriving at science policy decisions. The pitfalls in bibliometrics measures are extensively addressed. These measures should be combined with other indicators to evolve science policy decisions.

The science indicators are not limited to publications alone. Many governments regularly compile indicators to understand the performance of scientists and institutions in their countries. They use several indicators to audit the scientific investment of their countries. One of the most comprehensive indicators is the *Science and Engineering Indicators* of the *National Science Foundation (NSF)* of the United States. NSF employs a wide set of indicators; however they give due importance to Number of papers in top quality, refereed journals. Similarly in many of the science indicators, papers in the quality and refereed journals are given priority than any other indicator. Thus, we defend the most crucial measure, we have used in this report.

Concrete analysis on Indian scientific productivity will emerge only if a comprehensive set of indicators is arrived including the documentation on the input and its correlation with output. Extensive and specific analyses are also required to understand the reasons for growth and success and the causes for failure. Best performance institutions, groups and authors need to be identified and this is possible when we resort to the employment of specific indicators.

The correlation between input and output in S & T offer more meaningful equations. The physical infrastructure of academic institutions and research laboratories is critical to support R&D activities. Research infrastructure, particularly the research space and its quality, cyber space occupied by scientists and degree of collaboration are some of the potential requirements to increase the quality of publications. In the knowledge-driven world, cross border knowledge transfer enables a nation's increased scientific research quality.

Appendix 1

Top 100 high productive institutions

| Institutional Productivity 2003 | |
|-------------------------------------|------------------|
| Institution Name | Number of Papers |
| Indian Inst Sci | 1203 |
| Bhabha Atom Res Ctr | 770 |
| All India Inst Med Sci | 715 |
| Univ Delhi | 544 |
| Indian Inst Technol, Karagpur | 524 |
| Indian Inst Technol, New Delhi | 509 |
| Indian Inst Technol, Kanpur | 444 |
| Postgrad Inst Med Educ & Res | 432 |
| Indian Inst Technol, Bombay | 421 |
| Indian Inst Chem Technol | 415 |
| Banaras Hindu Univ | 408 |
| Natl Chem Lab | 400 |
| Indian Inst Technol, Madras | 377 |
| Tata Inst Fundamental Res | 370 |
| Jadavpur Univ | 334 |
| Univ Madras | 329 |
| Indian Assoc Cultivat Sci | 313 |
| Indian Stat Inst | 265 |
| Anna Univ | 256 |
| Christian Med Coll & Hosp | 244 |
| Sanjay Gandhi Postgrad Inst Med Sci | 234 |
| Indira Gandhi Ctr Atom Res | 232 |
| Aligarh Muslim Univ | 224 |
| Univ Rajasthan | 216 |
| Univ Calcutta | 209 |
| Panjab Univ | 196 |
| Saha Inst Nucl Phys | 196 |
| CSIR | 192 |
| Univ Hyderabad | 186 |
| Jawaharlal Nehru Univ | 184 |
| Jawaharlal Nehru Ctr Adv Sci Res | 184 |
| Cent Drug Res Inst | 183 |
| Indian Agr Res Inst | 182 |
| Punjab Agr Univ | 171 |
| Cent Food Technol Res Inst | 162 |
| Reg Res Lab | 156 |
| Phys Res Lab | 150 |

| Institutional Productivity 2003 | |
|--------------------------------------------|------------------|
| Institution Name | Number of Papers |
| Indian Vet Res Inst | 148 |
| Madurai Kamaraj Univ | 144 |
| Annamalai Univ | 143 |
| Indian Inst Technol, Roorkee | 141 |
| Cent Leather Res Inst | 140 |
| Osmania Univ***** | 133 |
| no address | 132 |
| Guru Nanak Dev Univ | 129 |
| Bharathidasan Univ | 128 |
| Govind Ballabh Pant Univ Agr & Technol | 126 |
| Univ Bombay | 126 |
| Andhra Univ | 125 |
| Ist Nazi Fis Nucl | 124 |
| Univ Mysore | 122 |
| Cochin Univ Sci & Technol | 121 |
| Natl Phys Lab | 120 |
| Maharaja Sayajirao Univ Baroda | 120 |
| Natl Inst Mental Hlth & Neurosci | 114 |
| Punjabi Univ | 113 |
| Sri Venkateswara Univ | 110 |
| Indian Council Med Res | 107 |
| Indian Inst Chem Biol | 103 |
| Karnatak Univ | 98 |
| Inst Phys | 92 |
| Bharathiar Univ | 91 |
| Vikram Sarabhai Space Ctr | 88 |
| Bangalore Univ | 88 |
| Univ Poona | 85 |
| Reg Engn Coll | 84 |
| Natl Geophys Res Inst | 84 |
| Ctr Adv Technol | 84 |
| Inst Math Sci | 83 |
| Maulana Azad Med Coll | 83 |
| Natl Inst Oceanog | 82 |
| Haryana Agr Univ | 82 |
| Tamil Nadu Agr Univ | 82 |
| Univ Kalyani | 81 |
| Ctr Cellular & Mol Biol | 81 |
| Univ Allahabad | 80 |
| Sree Chitra Tirunal Inst Med Sci & Technol | 79 |
| Mangalore Univ | 78 |
| Tata Mem Hosp | 77 |

| Institutional Productivity 2003 | |
|---------------------------------|------------------|
| Institution Name | Number of Papers |
| Kasturba Med Coll & Hosp | 76 |
| Mahatma Gandhi Univ | 74 |
| Univ Lucknow | 73 |
| Bose Inst | 73 |
| Shivaji Univ | 73 |
| Geol Survey India | 72 |
| Ind Toxicol Res Ctr | 72 |
| Pondicherry Univ | 71 |
| NE Hill Univ | 69 |
| Utkal Univ***** | 68 |
| Natl Met Lab | 68 |
| Indian Inst Astrophys | 68 |
| Birla Inst Technol & Sci | 65 |
| Saurashtra Univ | 64 |
| Sardar Patel Univ | 64 |
| LV Prasad Eye Inst | 64 |
| Jamia Millia Islamia | 63 |
| Assam Agr Univ | 63 |
| Ctr Nucl Sci | 63 |
| Raman Res Inst | 62 |
| Kakatiya Univ | 62 |

| Institutional Productivity 2002 | |
|---------------------------------|------------------|
| Name of the Institutions | Number of papers |
| Indian Inst Sci | 985 |
| Bhabha Atom Res Ctr | 663 |
| All India Inst Med Sci | 630 |
| Univ Delhi | 418 |
| Indian Inst Technol, Kharagpur | 411 |
| Postgrad Inst Med Educ & Res | 390 |
| Indian Inst Technol, Delhi | 381 |
| Tata Inst Fundamental Res | 380 |
| Natl Chem Lab | 365 |
| Indian Inst Technol, Kanpur | 351 |
| Banaras Hindu Univ | 337 |
| Indian Inst Chem Technol | 335 |
| Indian Inst Technol, Mumbai | 295 |
| Indian Inst Technol, Madras | 266 |

| Institutional Productivity 2002 | |
|-------------------------------------|------------------|
| Name of the Institutions | Number of papers |
| Indian Assoc Cultivat Sci | 253 |
| Jadavpur Univ | 245 |
| Univ Calcutta | 214 |
| Univ Madras | 205 |
| Anna Univ | 203 |
| Indian Stat Inst | 200 |
| Sanjay Gandhi Postgrad Inst Med Sci | 180 |
| Univ Hyderabad | 172 |
| Indian Vet Res Inst | 167 |
| Indira Gandhi Ctr Atom Res | 167 |
| Jawaharlal Nehru Univ | 165 |
| Aligarh Muslim Univ | 161 |
| Jawaharlal Nehru Ctr Adv Sci Res | 150 |
| Cent Drug Res Inst | 149 |
| Univ Rajasthan | 142 |
| Univ Mysore | 140 |
| Christian Med Coll & Hosp | 137 |
| Saha Inst Nucl Phys | 137 |
| Guru Nanak Dev Univ | 135 |
| Other Institutions | 130 |
| Panjab Univ | 130 |
| Indian Agr Res Inst | 129 |
| Andhra Univ | 129 |
| Cochin Univ Sci & Technol | 127 |
| Reg Res Lab, Trivandrum | 125 |
| Osmania Univ | 121 |
| Punjab Agr Univ | 116 |
| Madurai Kamaraj Univ | 114 |
| Cent Food Technol Res Inst | 111 |
| Tata Mem Hosp | 110 |
| Cent Leather Res Inst | 109 |
| Univ Bombay | 106 |
| Natl Phys Lab | 103 |
| Bose Inst | 101 |
| Ctr Adv Technol | 97 |
| Bharathiar Univ | 97 |
| Phys Res Lab | 96 |
| Punjabi Univ | 96 |
| Indian Inst Chem Biol | 87 |
| Bharathidasan Univ | 87 |
| Indian Inst Technol, Roorke | 84 |
| Karnatak Univ | 82 |

| Institutional Productivity 2002 | |
|--------------------------------------------|------------------|
| Name of the Institutions | Number of papers |
| Sri Venkateswara Univ | 81 |
| Annamalai Univ | 80 |
| Vikram Sarabhai Space Ctr | 80 |
| Univ Poona | 78 |
| SN Bose Natl Ctr Basic Sci | 77 |
| Sree Chitra Tirunal Inst Med Sci & Technol | 77 |
| Cent Electrochem Res Inst | 76 |
| Govind Ballabh Pant Univ Agr & Technol | 74 |
| Ind Toxicol Res Ctr | 74 |
| Mangalore Univ | 73 |
| Deemed Univ | 71 |
| Ctr Cellular & Mol Biol | 71 |
| Haryana Agr Univ | 71 |
| Univ Mumbai | 69 |
| Inst Phys | 69 |
| Shivaji Univ | 69 |
| Bangalore Univ | 68 |
| Kasturba Med Coll & Hosp | 67 |
| Inst Math Sci | 66 |
| Pondicherry Univ | 66 |
| Indian Inst Astrophys | 66 |
| GB Pant Hosp | 66 |
| Univ Lucknow | 64 |
| Univ Kalyani | 64 |
| Cent Inst Med & Aromat Plants | 64 |
| Univ Kerala | 64 |
| Univ Agr Sci Bangalore | 63 |
| Univ Allahabad | 62 |
| Assam Agr Univ | 61 |
| Indian Council Med Res | 60 |
| Mahatma Gandhi Univ | 59 |
| Natl Inst Oceanog | 59 |
| Natl Inst Mental Hlth & Neurosci | 59 |
| Natl Geophys Res Inst | 58 |
| Maharaja Sayajirao Univ Baroda | 57 |
| Reg Res Lab, Jorhat | 57 |
| Tamil Nadu Agr Univ | 57 |
| Natl Dairy Res Inst | 56 |
| Saurashtra Univ | 55 |
| Raman Res Inst | 54 |
| NE Hill Univ | 54 |
| Reg Res Lab, Bhubaneswar | 54 |

| Institutional Productivity 2002 | |
|---------------------------------|------------------|
| Name of the Institutions | Number of papers |
| Geol Survey India | 51 |
| Jamia Millia Islamia | 51 |

| Institutional Productivity 2001 | |
|-------------------------------------|------------------|
| Name of the Institutions | Number of papers |
| Indian Inst Sci | 1022 |
| Bhabha Atom Res Ctr | 650 |
| All India Inst Med Sci | 606 |
| Indian Inst Technol, Kharagpur | 424 |
| Banaras Hindu Univ | 400 |
| Tata Inst Fundamental Res | 397 |
| Univ Delhi | 397 |
| Natl Chem Lab | 368 |
| Indian Inst Technol, Delhi | 361 |
| Postgrad Inst Med Educ & Res | 353 |
| Indian Inst Technol, Kanpur | 343 |
| Indian Inst Technol, Madras | 313 |
| Indian Inst Chem Technol | 294 |
| Indian Inst Technol, Roorkee | 277 |
| Indian Inst Technol, Bombay | 274 |
| Jadavpur Univ | 269 |
| Indian Assoc Cultivat Sci | 258 |
| Univ Madras | 221 |
| Indian Stat Inst | 208 |
| Saha Inst Nucl Phys | 199 |
| Anna Univ | 178 |
| Univ Hyderabad | 177 |
| Univ Calcutta | 168 |
| Jawaharlal Nehru Univ | 167 |
| Indian Vet Res Inst | 167 |
| Christian Med Coll & Hosp | 165 |
| Sanjay Gandhi Postgrad Inst Med Sci | 164 |
| Aligarh Muslim Univ | 157 |
| Indian Agr Res Inst | 157 |
| Indira Gandhi Ctr Atom Res | 155 |
| Jawaharlal Nehru Ctr Adv Sci Res | 153 |
| Univ Roorkee | 149 |
| Cent Food Technol Res Inst | 142 |

| Institutional Productivity 2001 | |
|--------------------------------------------|------------------|
| Name of the Institutions | Number of papers |
| Cent Drug Res Inst | 139 |
| Univ Rajasthan | 130 |
| Sri Venkateswara Univ | 123 |
| Panjab Univ | 121 |
| Osmania Univ | 120 |
| Univ Bombay | 117 |
| Madurai Kamaraj Univ | 116 |
| Phys Res Lab | 116 |
| Christian Med Coll | 114 |
| Punjab Agr Univ | 112 |
| Univ Mysore | 109 |
| Reg Res Lab, Trivandrum | 108 |
| Andhra Univ | 107 |
| Cochin Univ Sci & Technol | 102 |
| Guru Nanak Dev Univ | 100 |
| Natl Inst Mental Hlth & Neurosci | 99 |
| Natl Phys Lab | 98 |
| Cent Leather Res Inst | 94 |
| Vikram Sarabhai Space Ctr | 90 |
| Inst Math Sci | 89 |
| Natl Geophys Res Inst | 84 |
| Shivaji Univ | 84 |
| Cent Electrochem Res Inst | 81 |
| Indian Inst Astrophys | 80 |
| Univ Poona | 78 |
| Bose Inst | 78 |
| Indian Inst Chem Biol | 75 |
| Haryana Agr Univ | 75 |
| Natl Inst Oceanog | 74 |
| Sree Chitra Tirunal Inst Med Sci & Technol | 73 |
| Bharathidasan Univ | 72 |
| Govind Ballabh Pant Univ Agr & Technol | 69 |
| Cent Inst Med & Aromat Plants | 68 |
| Ctr Adv Technol | 67 |
| Ctr Cellular & Mol Biol | 67 |
| Univ Kerala | 67 |
| Karnatak Univ | 67 |
| Maharaja Sayajirao Univ Baroda | 67 |
| Ind Toxicol Res Ctr | 67 |
| Univ Mumbai | 66 |
| Geol Survey India | 66 |
| Annamalai Univ | 65 |

| Institutional Productivity 2001 | |
|-----------------------------------|------------------|
| Name of the Institutions | Number of papers |
| Punjab Univ | 65 |
| Reg Res Lab, Bhubaneswar | 65 |
| Mangalore Univ | 64 |
| Raman Res Inst | 63 |
| Bangalore Univ | 63 |
| Bharathiar Univ | 63 |
| Int Crops Res Inst Semi Arid Trop | 63 |
| Inst Phys | 63 |
| Pondicherry Univ | 63 |
| Indian Council Med Res | 62 |
| Natl Inst Immunol | 60 |
| Univ Allahabad | 59 |
| Tata Mem Hosp | 58 |
| SN Bose Natl Ctr Basic Sci | 57 |
| Ctr Nucl Sci | 57 |
| Mahatma Gandhi Univ | 57 |
| CCS Haryana Agr Univ | 53 |
| NE Hill Univ | 53 |
| GB Pant Hosp | 53 |
| LV Prasad Eye Inst | 52 |
| Assam Agr Univ | 51 |
| Inst Plasma Res | 51 |
| Sardar Patel Univ | 51 |
| Cent Glass & Ceram Res Inst | 50 |
| Utkal Univ | 49 |

| Institutional Productivity 2000 | | |
|---------------------------------|--------------------------------|------------------|
| No | Institution Name | Number of Papers |
| 1 | Indian Inst Sci | 927 |
| 2 | Bhabha Atom Res Ctr | 564 |
| 3 | All India Inst Med Sci | 467 |
| 4 | Indian Inst Technol, Kharagpur | 414 |
| 5 | Banaras Hindu Univ | 403 |
| 6 | Tata Inst Fundamental Res | 383 |
| 7 | Indian Inst Technol, Madras | 336 |
| 8 | Indian Inst Technol, Bombay | 322 |
| 9 | Indian Inst Technol, Delhi | 320 |
| 10 | Indian Inst Technol, Kanpur | 319 |
| 11 | Univ Delhi | 304 |

| Institutional Productivity 2000 | | |
|---------------------------------|----------------------------------------|------------------|
| No | Institution Name | Number of Papers |
| 12 | Postgrad Inst Med Educ & Res | 297 |
| 13 | Natl Chem Lab | 292 |
| 14 | Indian Inst Chem Technol | 271 |
| 15 | Jadavpur Univ | 247 |
| 16 | Indian Assoc Cultivat Sci | 230 |
| 17 | Univ Madras | 216 |
| 18 | Indira Gandhi Ctr Atom Res | 187 |
| 19 | Indian Vet Res Inst | 182 |
| 20 | Anna Univ | 178 |
| 21 | Univ Calcutta | 175 |
| 22 | Univ Hyderabad | 171 |
| 23 | Cent Food Technol Res Inst | 164 |
| 24 | Indian Stat Inst | 161 |
| 25 | Jawaharlal Nehru Ctr Adv Sci Res | 148 |
| 26 | Saha Inst Nucl Phys | 146 |
| 27 | Phys Res Lab | 143 |
| 29 | Univ Roorkee | 138 |
| 28 | Aligarh Muslim Univ | 138 |
| 30 | Sanjay Gandhi Postgrad Inst Med Sci | 137 |
| 31 | Indian Agr Res Inst | 133 |
| 32 | Osmania Univ | 132 |
| 33 | Punjab Agr Univ | 130 |
| 34 | Jawaharlal Nehru Univ | 127 |
| 35 | Cent Drug Res Inst | 112 |
| 36 | Univ Rajasthan | 111 |
| 37 | Natl Inst Mental Hlth & Neurosci | 110 |
| 38 | Others | 108 |
| 39 | Sri Venkateswara Univ | 105 |
| 40 | Cent Electrochem Res Inst | 101 |
| 41 | Andhra Univ | 98 |
| 42 | Guru Nanak Dev Univ | 96 |
| 43 | Natl Phys Lab | 95 |
| 45 | Panjab Univ | 94 |
| 44 | Christian Med Coll & Hosp | 94 |
| 46 | Cochin Univ Sci & Technol | 90 |
| 47 | Cent Leather Res Inst | 90 |
| 48 | Natl Geophys Res Inst | 89 |
| 49 | Reg Res Lab, Trivandrum | 85 |
| 50 | Inst Math Sci | 84 |
| 52 | Punjab Univ | 83 |
| 51 | Govind Ballabh Pant Univ Agr & Technol | 83 |
| 53 | Indian Inst Chem Biol | 82 |

| Institutional Productivity 2000 | | |
|---------------------------------|--------------------------------------------|------------------|
| No | Institution Name | Number of Papers |
| 54 | Bose Inst | 81 |
| 55 | Univ Mysore | 80 |
| 56 | Madurai Kamaraj Univ | 79 |
| 57 | Natl Inst Oceanog | 78 |
| 58 | Univ Mumbai | 75 |
| 59 | Vikram Sarabhai Space Ctr | 75 |
| 60 | Haryana Agr Univ | 72 |
| 63 | Univ Bombay | 71 |
| 61 | Maharaja Sayajirao Univ Baroda | 71 |
| 62 | Shivaji Univ | 71 |
| 64 | Indian Inst Astrophys | 70 |
| 65 | Ist Nazi Fis Nucl | 69 |
| 66 | Reg Res Lab, Bhubaneswar | 68 |
| 67 | Bangalore Univ | 68 |
| 68 | Mangalore Univ | 65 |
| 69 | Karnatak Univ | 65 |
| 70 | Annamalai Univ | 63 |
| 71 | Ctr Cellular & Mol Biol | 62 |
| 72 | Bharathiar Univ | 62 |
| 73 | Indian Inst Technol, Roorke | 61 |
| 75 | Mahatma Gandhi Univ | 61 |
| 76 | Ind Toxicol Res Ctr | 60 |
| 77 | Univ Poona | 58 |
| 78 | Sree Chitra Tirunal Inst Med Sci & Technol | 58 |
| 80 | Reg Res Lab, Jorhat | 57 |
| 81 | Univ Lucknow | 56 |
| 82 | Sardar Patel Univ | 56 |
| 83 | Inst Phys | 56 |
| 84 | Natl Inst Immunol | 55 |
| 85 | Ctr Adv Technol | 54 |
| 87 | NE Hill Univ | 53 |
| 86 | Univ Agr Sci Bangalore | 53 |
| 88 | Bharathidasan Univ | 53 |
| 89 | LV Prasad Eye Inst | 52 |
| 90 | Raman Res Inst | 51 |
| 91 | Cent Inst Med & Aromat Plants | 51 |
| 92 | Univ Burdwan | 51 |
| 93 | Geol Survey India | 49 |
| 96 | SN Bose Natl Ctr Basic Sci | 48 |
| 94 | Utkal Univ | 48 |
| 95 | Kurukshetra Univ | 48 |
| 98 | Int Crops Res Inst Semi Arid Trop | 46 |

Institutional Productivity 2000

| No | Institution Name | Number of Papers |
|-----|------------------------|------------------|
| 99 | Tata Mem Hosp | 46 |
| 97 | Kasturba Med Coll | 46 |
| 98 | Inst Microbial Technol | 45 |
| 99 | Indian Council Med Res | 44 |
| 100 | CCS Haryana Agr Univ | 43 |

Appendix 2

Top 100 journals preferred by Indian Scientists for the period 2000 -2003
The complete list of journals is available in electronic form

| 2003 | | | | |
|-------------------------------------------------------------------------|------------------|---------------|----------------------------|-------------------------|
| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
| CURRENT SCIENCE | 618 | 0.694 | MULTIDISCIPLINARY SCIENCES | 3.2271 |
| INDIAN JOURNAL OF ANIMAL SCIENCES | 463 | 0.061 | AGRICULTURE SCIENCE | 1.035109 |
| INDIAN JOURNAL OF CHEMISTRY SECTION B-ORGANIC CHEMISTRY INCLUDING | 224 | 0.492 | CHEMISTRY | 2.535276 |
| TETRAHEDRON LETTERS | 218 | 2.641 | CHEMISTRY | 13.609073 |
| INDIAN VETERINARY JOURNAL | 217 | 0.037 | VETERINARY SCIENCES | 0.557553 |
| INDIAN JOURNAL OF CHEMISTRY SECTION A-INORGANIC BIO-INORGANIC PHYSICAL | 205 | 0.489 | CHEMISTRY | 2.519817 |
| JOURNAL OF APPLIED POLYMER SCIENCE | 204 | 1.017 | POLYMER SCIENCE | 9.169272 |
| JOURNAL OF THE GEOLOGICAL SOCIETY OF INDIA | 171 | 0.299 | GEOSCIENCES | 2.677545 |
| PRAMANA-JOURNAL OF PHYSICS | 156 | 0.333 | PHYSICS | 1.940724 |
| ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE | 156 | 0.453 | CRYSTALLOGRAPHY | 3.408825 |
| JOURNAL OF THE INDIAN CHEMICAL SOCIETY | 146 | 0.275 | CHEMISTRY | 1.417075 |
| BULLETIN OF MATERIALS SCIENCE | 141 | 0.529 | MATERIALS SCIENCE | 5.389981 |
| INDIAN JOURNAL OF AGRICULTURAL SCIENCES | 139 | | AGRICULTURE SCIENCE | |
| INDIAN JOURNAL OF PURE & APPLIED PHYSICS | 137 | 0.366 | PHYSICS | 2.133048 |
| NEUROLOGY INDIA | 135 | 0.246 | NEUROSCIENCES | 0.836154 |
| INDIAN JOURNAL OF PHYSICS AND PROCEEDINGS OF THE INDIAN ASSOCIATION FOR | 134 | | PHYSICS | |
| INDIAN JOURNAL OF AGRONOMY | 134 | 0.041 | AGRONOMY | 0.61008 |
| JOURNAL OF FOOD SCIENCE AND TECHNOLOGY-MYSORE | 129 | 0.125 | FOOD SCIENCE & TECHNOLOGY | 1.56125 |
| SYNTHETIC COMMUNICATIONS | 116 | 0.853 | CHEMISTRY | 4.395509 |
| PHYSICAL REVIEW B | 115 | 2.962 | PHYSICS | 17.262536 |
| INDIAN JOURNAL OF HETEROCYCLIC CHEMISTRY | 114 | 0.247 | CHEMISTRY | 1.272791 |

2003

| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
|------------------------------------------------------------------|------------------|---------------|----------------------------------------|-------------------------|
| MATERIALS LETTERS | 108 | 0.774 | MATERIALS SCIENCE | 7.886286 |
| TRANSACTIONS OF THE INDIAN INSTITUTE OF METALS | 102 | 0.065 | METALLURGY & METALLURGICAL ENGINEERING | 1.234545 |
| ASIAN JOURNAL OF CHEMISTRY | 101 | 0.211 | CHEMISTRY | 1.087283 |
| JOURNAL OF SCIENTIFIC & INDUSTRIAL RESEARCH | 94 | 0.192 | ENGINEERING | 2.696064 |
| PROCEEDINGS OF THE INDIAN ACADEMY OF SCIENCES- CHEMICAL SCIENCES | 92 | 0.649 | CHEMISTRY | 3.344297 |
| CHEMICAL PHYSICS LETTERS | 90 | 2.438 | PHYSICS | 14.208664 |
| INDIAN JOURNAL OF CHEMICAL TECHNOLOGY | 87 | 0.197 | CHEMISTRY | 1.015141 |
| PHYSICAL REVIEW LETTERS | 84 | 7.035 | PHYSICS | 40.99998 |
| PHYSICAL REVIEW D | 83 | 4.599 | PHYSICS | 26.802972 |
| NATIONAL MEDICAL JOURNAL OF INDIA | 79 | 0.644 | MEDICINE | 2.796892 |
| RADIATION MEASUREMENTS | 77 | 0.948 | NUCLEAR SCIENCE & TECHNOLOGY | 12.634944 |
| INDIAN JOURNAL OF MEDICAL RESEARCH | 77 | 0.452 | MEDICINE | 1.963036 |
| TETRAHEDRON | 75 | 2.641 | CHEMISTRY | 13.609073 |
| NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM | 75 | 1.041 | PHYSICS | 6.066948 |
| JOURNAL OF APPLIED PHYSICS | 74 | 2.171 | PHYSICS | 12.652588 |
| JOURNAL OF CHEMICAL PHYSICS | 73 | 2.950 | PHYSICS | 17.1926 |
| PHYSICAL REVIEW E | 71 | 2.202 | PHYSICS | 12.833256 |
| NATIONAL ACADEMY SCIENCE LETTERS-INDIA | 66 | 0.068 | MULTIDISCIPLINARY SCIENCES | 0.3162 |
| INDIAN JOURNAL OF ENGINEERING AND MATERIALS SCIENCES | 66 | 0.226 | ENGINEERING | 3.173492 |
| INDIAN JOURNAL OF PURE & APPLIED MATHEMATICS | 65 | 0.129 | MATHEMATICS | 1.872822 |
| MOLECULAR AND CELLULAR BIOCHEMISTRY | 63 | 1.763 | CELL BIOLOGY | 4.26646 |
| JOURNAL OF POLYMER MATERIALS | 63 | 0.381 | POLYMER SCIENCE | 3.435096 |
| INORGANIC CHEMISTRY | 62 | 3.389 | CHEMISTRY | 17.463517 |
| INDIAN JOURNAL OF BIOCHEMISTRY & BIOPHYSICS | 61 | 0.252 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 0.761544 |
| BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS | 61 | 2.836 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 8.570392 |

2003

| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
|---------------------------------------------------------------------|------------------|---------------|----------------------------------|-------------------------|
| PHYSICS LETTERS B | 60 | 4.066 | PHYSICS | 23.696648 |
| JOURNAL OF ORGANIC CHEMISTRY | 60 | 3.297 | CHEMISTRY | 16.989441 |
| JOURNAL OF ETHNOPHARMACOLOGY | 57 | 1.269 | CHEMISTRY | 6.539157 |
| JOURNAL OF MATERIALS PROCESSING TECHNOLOGY | 56 | 0.450 | ENGINEERING | 6.3189 |
| MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES | 55 | 1.365 | MATERIALS SCIENCE | 13.907985 |
| JOURNAL OF ENVIRONMENTAL BIOLOGY | 55 | 0.157 | ENVIRONMENTAL SCIENCES | 1.342507 |
| JOURNAL OF BIOLOGICAL CHEMISTRY | 54 | 6.482 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 19.588604 |
| PROCEEDINGS OF THE INDIAN ACADEMY OF SCIENCES-EARTH AND PLANETARY | 53 | 0.312 | MULTIDISCIPLINARY SCIENCES | |
| BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY | 53 | 0.599 | ENVIRONMENTAL SCIENCES | 5.122049 |
| ASIAN-AUSTRALASIAN JOURNAL OF ANIMAL SCIENCES | 53 | 0.445 | AGRICULTURE SCIENCE | 7.551205 |
| JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS | 52 | 1.026 | CHEMISTRY | 5.286978 |
| JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS | 51 | 0.910 | MATERIALS SCIENCE | 9.27199 |
| JOURNAL OF BIOSCIENCES | 51 | 0.720 | BIOLOGY | 5.04144 |
| SADHANA-ACADEMY PROCEEDINGS IN ENGINEERING SCIENCES | 50 | 0.064 | ENGINEERING | 0.898688 |
| PHYSICAL REVIEW A | 50 | 2.589 | PHYSICS | 15.088692 |
| OXIDATION COMMUNICATIONS | 50 | 0.228 | CHEMISTRY | 1.174884 |
| JOURNAL OF PHYSICAL CHEMISTRY B | 50 | 3.679 | CHEMISTRY | 18.957887 |
| INDIAN JOURNAL OF FIBRE & TEXTILE RESEARCH | 50 | 0.139 | MATERIALS SCIENCE | 1.416271 |
| FORENSIC SCIENCE INTERNATIONAL | 50 | 1.616 | MEDICINE | 7.018288 |
| SYNTHESIS-STUTTGART | 49 | 2.074 | CHEMISTRY | 10.687322 |
| SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY | 49 | 1.315 | SPECTROSCOPY | 7.607275 |
| PHYTOTHERAPY RESEARCH | 49 | 0.803 | CHEMISTRY | 4.137859 |
| JOURNAL OF SOUND AND VIBRATION | 49 | 0.724 | ENGINEERING | 10.166408 |

| 2003 | | | | |
|-------------------------------------------------------------------|------------------|---------------|------------------------------|-------------------------|
| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
| ASTRONOMY & ASTROPHYSICS | 49 | 3.843 | ASTRONOMY & ASTROPHYSICS | 16.686306 |
| THIN SOLID FILMS | 48 | 1.598 | MATERIALS SCIENCE | 16.282022 |
| SYNTHESIS AND REACTIVITY IN INORGANIC AND METAL-ORGANIC CHEMISTRY | 48 | 0.472 | CHEMISTRY | 2.432216 |
| PHARMAZIE | 48 | 0.696 | CHEMISTRY | 3.586488 |
| BULLETIN OF ELECTROCHEMISTRY | 48 | 0.241 | ELECTROCHEMISTRY | 1.616869 |
| PHYSICA B-CONDENSED MATTER | 47 | 0.908 | PHYSICS | 5.291824 |
| INTERNATIONAL JOURNAL OF NEUROSCIENCE | 47 | 0.579 | NEUROSCIENCES | 1.968021 |
| ANNALS OF ARID ZONE | 47 | 0.010 | AGRICULTURE SCIENCE | 0.16969 |
| JOURNAL OF CHEMICAL RESEARCH-S | 46 | 0.382 | CHEMISTRY | 1.968446 |
| BIOORGANIC & MEDICINAL CHEMISTRY | 46 | 2.185 | CHEMISTRY | 11.259305 |
| LANGMUIR | 45 | 3.098 | CHEMISTRY | 15.963994 |
| SOLID STATE COMMUNICATIONS | 44 | 1.602 | PHYSICS | 9.336456 |
| SYNLETT | 43 | 2.741 | CHEMISTRY | 14.124373 |
| JOURNAL OF MOLECULAR CATALYSIS A-CHEMICAL | 43 | 2.264 | CHEMISTRY | 11.666392 |
| INDIAN JOURNAL OF MARINE SCIENCES | 43 | 0.124 | OCEANOGRAPHY | 1.121952 |
| MATERIALS CHEMISTRY AND PHYSICS | 42 | 1.183 | MATERIALS SCIENCE | 12.053587 |
| DEFENCE SCIENCE JOURNAL | 42 | 0.084 | MULTIDISCIPLINARY SCIENCES | 0.3906 |
| MODERN PHYSICS LETTERS A | 41 | 1.589 | PHYSICS | 9.260692 |
| LANCET | 41 | 18.316 | MEDICINE | 79.546388 |
| JOURNAL OF MATERIALS SCIENCE LETTERS | 41 | 0.470 | MATERIALS SCIENCE | 4.78883 |
| JOURNAL OF MATERIALS SCIENCE | 41 | 0.826 | MATERIALS SCIENCE | 8.416114 |
| JOURNAL OF COLLOID AND INTERFACE SCIENCE | 41 | 1.582 | CHEMISTRY | 8.152046 |
| CONTRIBUTIONS TO INDIAN SOCIOLOGY | 41 | | SOCIOLOGY | |
| APPLIED PHYSICS LETTERS | 41 | 4.049 | PHYSICS | 23.597572 |
| MICROWAVE AND OPTICAL TECHNOLOGY LETTERS | 40 | 0.500 | ENGINEERING | 7.021 |
| JOURNAL OF CRYSTAL GROWTH | 40 | 1.414 | CRYSTALLOGRAPHY | 10.64035 |
| WORLD JOURNAL OF MICROBIOLOGY & BIOTECHNOLOGY | 39 | 0.516 | BIOTECHNOLOGY & MICROBIOLOGY | 2.56452 |

| 2003 | | | | |
|------------------------------------|------------------|---------------|-----------------------------------------------------|-------------------------|
| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
| JOURNAL OF ALLOYS AND COMPOUNDS | 39 | 1.080 | CHEMISTRY | 5.56524 |
| CHEST | 39 | 3.264 | CARDIAC & CARDIOVASCULAR SYSTEM; RESPIRATORY SYSTEM | 15.97728 |
| APPLIED CATALYSIS A-GENERAL | 39 | 2.825 | CHEMISTRY | 14.557225 |
| AMERICAN JOURNAL OF HUMAN GENETICS | 39 | 11.602 | GENETICS & HEREDITY | 32.207152 |

| 2002 | | | | |
|-----------------------------------------------------------------------------------------------------------|------------------|---------------|---------------------------|-------------------------|
| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
| CURRENT SCIENCE | 501 | 0.533 | MULTIDISCIPLINARY SCIENCE | 2.618629 |
| ASIAN JOURNAL OF CHEMISTRY | 425 | 0.207 | CHEMISTRY | 1.2841038 |
| INDIAN VETERINARY JOURNAL | 345 | 0.061 | VETERINARY SCIENCES | 0.9074665 |
| INDIAN JOURNAL OF ANIMAL SCIENCES | 332 | | VETERINARY SCIENC | |
| JOURNAL OF THE INDIAN CHEMICAL SOCIETY | 254 | 0.437 | CHEMISTRY | 2.7108858 |
| INTERNATIONAL JOURNAL OF CANCER | 232 | 4.056 | ONCOLOGY | 13.7109024 |
| TETRAHEDRON LETTERS | 206 | 2.357 | CHEMISTRY | 14.6214138 |
| INDIAN JOURNAL OF CHEMISTRY SECTION B-ORGANIC CHEMISTRY INCLUDING MEDICINAL CHEMISTRY | 201 | 0.401 | CHEMISTRY | 2.4875634 |
| PRAMANA-JOURNAL OF PHYSICS | 196 | 0.324 | PHYSICS | 1.8396396 |
| IETE TECHNICAL REVIEW | 183 | 0.019 | ENGINEERING | 0.2934816 |
| INDIAN JOURNAL OF CHEMISTRY SECTION A-INORGANIC BIO-INORGANIC PHYSICAL THEORETICAL & ANALYTICAL CHEMISTRY | 164 | 0.504 | CHEMISTRY | 3.1265136 |
| JOURNAL OF APPLIED POLYMER SCIENCE | 147 | 0.927 | POLYMER SCIENCE | 9.0712512 |
| PHYSICAL REVIEW B | 123 | 3.327 | PHYSICS | 18.8903733 |
| NEUROLOGY INDIA | 118 | 0.257 | NEUROSCIENCE | 0.9185951 |
| INDIAN JOURNAL OF PURE & APPLIED PHYSICS | 113 | 0.271 | PHYSICS | 1.5387109 |
| MATERIALS LETTERS | 111 | 0.892 | MATERIALS SCIENCE | 10.28476 |
| SYNTHETIC COMMUNICATIONS | 110 | 0.802 | CHEMISTRY | 4.9751268 |
| JOURNAL OF THE GEOLOGICAL | 110 | 0.424 | GEOSCIENCES | 4.1097048 |

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| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
|-----------------------------------------------------------|------------------|---------------|----------------------------------|-------------------------|
| SOCIETY OF INDIA | | | | |
| INDIAN JOURNAL OF AGRONOMY | 106 | 0.011 | AGRONOMY | 0.1582042 |
| PHYSICAL REVIEW E | 102 | 2.397 | PHYSICS | 13.6099263 |
| JOURNAL OF APPLIED PHYSICS | 94 | 2.281 | PHYSICS | 12.9512899 |
| INDIAN JOURNAL OF AGRICULTURAL SCIENCES | 88 | 0.028 | AGRICULTURE SCIENCE | 0.4092368 |
| ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE | 85 | | CRYSTALLOGRAPHY | |
| PHYSICAL REVIEW D | 81 | 4.358 | PHYSICS | 24.7442882 |
| JOURNAL OF FOOD SCIENCE AND TECHNOLOGY-MYSORE | 78 | 0.176 | FOOD SCIENCE & TECHNOLOGY | 2.2454608 |
| INDIAN JOURNAL OF MEDICAL RESEARCH | 76 | 0.445 | MEDICINE | 2.1558915 |
| PHYSICAL REVIEW LETTERS | 76 | 7.323 | PHYSICS | 41.5792617 |
| PHYSICS LETTERS B | 75 | 4.298 | PHYSICS | 24.4036142 |
| TETRAHEDRON | 71 | 2.420 | CHEMISTRY | 15.012228 |
| INDIAN JOURNAL OF PURE & APPLIED MATHEMATICS | 71 | 0.108 | MATHEMATICS | 1.7410896 |
| JOURNAL OF CHEMICAL PHYSICS | 70 | 2.998 | PHYSICS | 17.0223442 |
| PEDIATRIC SURGERY INTERNATIONAL | 70 | 0.571 | PEDIATRICS; SURGERY | 4.7162316 |
| ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY | 69 | | CHEMISTRY | |
| IETE JOURNAL OF RESEARCH | 68 | 0.038 | ENGINEERING | 0.5869632 |
| JOURNAL OF PHYSICS-CONDENSED MATTER | 67 | 1.775 | PHYSICS | 10.0782725 |
| JOURNAL OF SCIENTIFIC & INDUSTRIAL RESEARCH | 67 | 0.182 | ENGINEERING | 2.8112448 |
| NATIONAL MEDICAL JOURNAL OF INDIA | 67 | 0.554 | MEDICINE | 2.6839638 |
| CHEMICAL PHYSICS LETTERS | 66 | 2.526 | PHYSICS | 14.3423754 |
| JOURNAL OF BIOSCIENCES | 66 | 0.606 | BIOLOGY | 4.1537664 |
| TRANSITION METAL CHEMISTRY | 65 | 0.949 | CHEMISTRY | 5.8870266 |
| MATERIALS CHEMISTRY AND PHYSICS | 64 | 0.778 | MATERIALS SCIENCE | 8.97034 |
| INDIAN JOURNAL OF HETEROCYCLIC CHEMISTRY | 63 | 0.244 | CHEMISTRY | 1.5136296 |
| BULLETIN OF ELECTROCHEMISTRY | 62 | 0.206 | ELECTROCHEMISTRY | 1.4845596 |
| INDIAN JOURNAL OF CHEMICAL TECHNOLOGY | 60 | 0.208 | ENGINEERING | 3.2128512 |
| JOURNAL OF RADIOANALYTICAL AND NUCLEAR CHEMISTRY | 59 | 0.502 | NUCLEAR SCIENCE & TECHNOLOGY | 7.1888408 |
| PHYSICS LETTERS A | 58 | 1.483 | PHYSICS | 8.4203257 |
| INDIAN JOURNAL OF BIOCHEMISTRY & BIOPHYSICS | 57 | 0.374 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 1.1658702 |
| JOURNAL OF MATERIALS SCIENCE | 56 | 0.798 | MATERIALS SCIENCE | 9.20094 |

2002

| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
|--------------------------------------------------------------------|------------------|---------------|----------------------------------|-------------------------|
| APPLIED BIOCHEMISTRY AND BIOTECHNOLOGY | 56 | 0.89 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.774397 |
| SYNLETT | 55 | 2.695 | CHEMISTRY | 16.718163 |
| JOURNAL OF CRYSTAL GROWTH | 54 | 1.529 | CRYSTALLOGRAPHY | 13.1946584 |
| JOURNAL OF MOLECULAR CATALYSIS A-CHEMICAL | 54 | | BIOCHEMISTRY & MOLECULAR BIOLOGY | |
| JOURNAL OF PHYSICAL CHEMISTRY A | 53 | 2.765 | CHEMISTRY | 17.152401 |
| JOURNAL OF DERMATOLOGY | 53 | 1.279 | DERMATOLOGY | 10.0962981 |
| INDIAN JOURNAL OF FIBRE & TEXTILE RESEARCH | 53 | 0.080 | MATERIALS SCIENCE | 0.9224 |
| BULLETIN OF MATERIALS SCIENCE | 52 | 0.340 | MATERIALS SCIENCE | 3.9202 |
| CHEMICAL COMMUNICATIONS | 51 | 4.038 | CHEMISTRY | 25.0493292 |
| INDIAN JOURNAL OF ENGINEERING AND MATERIALS SCIENCES | 51 | 0.190 | ENGINEERING | 2.934816 |
| PHYSICAL REVIEW C | 50 | 2.848 | PHYSICS | 16.1706592 |
| ASIAN-AUSTRALASIAN JOURNAL OF ANIMAL SCIENCES | 48 | 0.247 | AGRICULTURE SCIENCE | 3.6100532 |
| MATERIALS RESEARCH BULLETIN | 48 | 0.892 | MATERIALS SCIENCE | 10.28476 |
| SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY | 48 | 1.046 | SPECTROSCOPY | 6.0409638 |
| MODERN PHYSICS LETTERS A | 48 | 1.401 | PHYSICS | 7.9547379 |
| WORLD JOURNAL OF MICROBIOLOGY & BIOTECHNOLOGY | 47 | 0.498 | BIOTECHNOLOGY | 2.8247058 |
| JOURNAL OF PHYSICAL CHEMISTRY B | 47 | 3.611 | CHEMISTRY | 22.4004774 |
| ASTRONOMY & ASTROPHYSICS | 45 | 3.781 | ASTRONOMY & ASTROPHYSICS | 18.0372605 |
| PHYSICA B-CONDENSED MATTER | 45 | 0.609 | PHYSICS | 3.4578411 |
| JOURNAL OF GASTROENTEROLOGY AND HEPATOLOGY | 45 | 1.521 | GASTROENTEROLOGY & HEPATOLOGY | 6.3156483 |
| CONTRIBUTIONS TO INDIAN SOCIOLOGY | 44 | | SOCIOLOGY | |
| JOURNAL OF ENVIRONMENTAL BIOLOGY | 44 | 0.173 | ENVIRONMENTAL SCIENCES | 1.6043674 |
| TROPICAL DOCTOR | 44 | 0.330 | TROPICAL MEDICINE | 3.323232 |
| JOURNAL OF PHARMACEUTICAL AND BIOMEDICAL ANALYSIS | 44 | 1.360 | CHEMISTRY | 8.436624 |
| ANNALS OF ARID ZONE | 43 | | GEOGRAPHY | |
| JOURNAL OF ASTROPHYSICS AND ASTRONOMY | 42 | 0.277 | ASTRONOMY & ASTROPHYSICS | 1.3214285 |
| INTERNATIONAL JOURNAL OF MODERN PHYSICS B | 41 | 0.604 | PHYSICS | 3.4294516 |
| JOURNAL OF ALLOYS AND COMPOUNDS | 40 | 1.014 | CHEMISTRY | 6.2902476 |

| 2002 | | | | |
|--------------------------------------------------------------------------------------------------------|------------------|---------------|------------------------------------|-------------------------|
| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
| BIORESOURCE TECHNOLOGY | 40 | 1.289 | BIOTECHNOLOGY | 7.3113369 |
| INDIAN JOURNAL OF MARINE SCIENCES | 40 | 0.143 | OCEANOGRAPHY | 1.1689678 |
| SYNTHESIS AND REACTIVITY IN INORGANIC AND METAL-ORGANIC CHEMISTRY | 40 | 0.571 | CHEMISTRY | 3.5421414 |
| BIOLOGIA PLANTARUM | 40 | 0.583 | PLANT SCIENCE | 4.0076586 |
| NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS | 40 | 1.158 | PHYSICS | 6.5750082 |
| CORNEA | 39 | 1.381 | OPHTHALMOLOGY | 10.3151033 |
| JOURNAL OF MATERIALS SCIENCE LETTERS | 39 | 0.504 | MATERIALS SCIENCE | 5.81112 |
| SOLID STATE COMMUNICATIONS | 38 | 1.671 | PHYSICS | 9.4877709 |
| JOURNAL OF ETHNOPHARMACOLOGY | 38 | 1.188 | CHEMISTRY | 7.3696392 |
| BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS | 38 | 2.935 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 9.1492755 |
| MICROWAVE AND OPTICAL TECHNOLOGY LETTERS | 38 | 0.447 | ENGINEERING | 6.9045408 |
| DEFENCE SCIENCE JOURNAL | 38 | 0.065 | MULTIDISCIPLINARY SCIENCE | 0.319345 |
| JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS | 38 | 1.046 | MATERIALS SCIENCE | 12.06038 |
| INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH | 37 | 1.247 | ENGINEERING | 19.2616608 |
| POLYHEDRON | 37 | 1.414 | CHEMISTRY | 8.7716076 |
| CRYSTAL RESEARCH AND TECHNOLOGY | 37 | 0.505 | CRYSTALLOGRAPHY | 4.357948 |
| JOURNAL OF ORGANIC CHEMISTRY | 36 | 3.217 | CHEMISTRY | 19.9563378 |
| JPC-JOURNAL OF PLANAR CHROMATOGRAPHY-MODERN TLC | 36 | 1.047 | CHEMISTRY | 6.4949598 |
| ASTROPHYSICS AND SPACE SCIENCE | 36 | 0.383 | ASTRONOMY & ASTROPHYSICS | 1.8271015 |
| BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY | 36 | 0.556 | ENVIRONMENTAL SCIENCES; TOXICOLOGY | 4.0708652 |
| JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL | 36 | 1.406 | PHYSICS | 7.9831274 |
| JOURNAL OF SOUND AND VIBRATION | 35 | 0.829 | ENGINEERING | 12.8050656 |
| JOURNAL OF BIOLOGICAL CHEMISTRY | 35 | 6.696 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 20.8734408 |
| INORGANIC CHEMISTRY | 35 | 2.950 | CHEMISTRY | 18.30003 |

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| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
|-----------------------------------------------------------------------------------------------------------|------------------|---------------|----------------------------|-------------------------|
| CURRENT SCIENCE | 617 | 0.600 | MULTIDISCIPLINARY SCIENCES | 3.09624 |
| INDIAN VETERINARY JOURNAL | 453 | 0.043 | VETERINARY SCIENCES | 0.7022674 |
| ASIAN JOURNAL OF CHEMISTRY | 345 | 0.201 | CHEMISTRY | 1.1825433 |
| INDIAN JOURNAL OF CHEMISTRY SECTION A-INORGANIC BIO-INORGANIC PHYSICAL THEORETICAL & ANALYTICAL CHEMISTRY | 262 | 0.407 | CHEMISTRY | 2.3945031 |
| INDIAN JOURNAL OF CHEMISTRY SECTION B-ORGANIC CHEMISTRY INCLUDING MEDICINAL CHEMISTRY | 236 | 0.398 | CHEMISTRY | 2.3415534 |
| INDIAN JOURNAL OF AGRONOMY | 199 | 0.032 | AGRONOMY | 0.4668096 |
| INDIAN JOURNAL OF ANIMAL SCIENCES | 182 | 0.057 | AGRICULTURE SCIENCE | 0.8800344 |
| INDIAN JOURNAL OF AGRICULTURAL SCIENCES | 178 | 0.042 | AGRICULTURE SCIENCE | 0.6484464 |
| JOURNAL OF THE GEOLOGICAL SOCIETY OF INDIA | 151 | 0.456 | GEOSCIENCES | 4.4181384 |
| PRAMANA-JOURNAL OF PHYSICS | 149 | 0.283 | PHYSICS | 1.8574422 |
| TETRAHEDRON LETTERS | 136 | 2.280 | CHEMISTRY | 13.413924 |
| INDIAN JOURNAL OF PURE & APPLIED PHYSICS | 135 | 0.213 | PHYSICS | 1.3980042 |
| JOURNAL OF FOOD SCIENCE AND TECHNOLOGY-MYSORE | 130 | 0.145 | FOOD SCIENCE & TECHNOLOGY | 1.852549 |
| JOURNAL OF APPLIED POLYMER SCIENCE | 124 | 0.992 | POLYMER SCIENCE | 10.8166688 |
| NEUROLOGY INDIA | 122 | 0.173 | NEUROSCIENCES | 0.618821 |
| JOURNAL OF SCIENTIFIC & INDUSTRIAL RESEARCH | 114 | 0.176 | ENGINEERING | 2.9456064 |
| PHYSICAL REVIEW D | 111 | 4.363 | PHYSICS | 28.6361142 |
| BULLETIN OF MATERIALS SCIENCE | 110 | 0.465 | MATERIALS SCIENCE | 6.0831765 |
| PHYSICAL REVIEW B | 110 | 3.070 | PHYSICS | 20.149638 |
| INDIAN JOURNAL OF ENGINEERING AND MATERIALS SCIENCES | 104 | 0.103 | ENGINEERING | 1.7238492 |
| JOURNAL OF THE INDIAN CHEMICAL SOCIETY | 104 | 0.413 | CHEMISTRY | 2.4298029 |
| PHYSICAL REVIEW E | 102 | 2.235 | PHYSICS | 14.669199 |
| NATIONAL MEDICAL JOURNAL OF INDIA | 95 | 0.617 | MEDICINE | 3.1751437 |

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| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
|---------------------------------------------------------------------------------------------------|------------------|---------------|------------------------------|-------------------------|
| INDIAN JOURNAL OF CHEMICAL TECHNOLOGY | 90 | 0.197 | CHEMISTRY | 1.1590101 |
| INDIAN JOURNAL OF PURE & APPLIED MATHEMATICS | 84 | 0.085 | MATHEMATICS | 1.4785155 |
| PHYSICS LETTERS B | 84 | 4.377 | PHYSICS | 28.7280018 |
| SYNTHETIC COMMUNICATIONS | 84 | 0.912 | CHEMISTRY | 5.3655696 |
| MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING | 79 | 0.978 | MATERIALS SCIENCE | 12.7942938 |
| PHYSICAL REVIEW LETTERS | 78 | 6.668 | PHYSICS | 43.7647512 |
| MATERIALS CHEMISTRY AND PHYSICS | 75 | 0.757 | MATERIALS SCIENCE | 9.9031497 |
| ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE | 73 | | CRYSTALLOGRAPHY | |
| APPLIED SURFACE SCIENCE | 72 | 1.068 | CHEMISTRY | 6.2833644 |
| ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY | 70 | | CHEMISTRY | |
| INDIAN JOURNAL OF HETEROCYCLIC CHEMISTRY | 70 | 0.168 | CHEMISTRY | 0.9883944 |
| PHYSICAL REVIEW A | 69 | 2.810 | PHYSICS | 18.443154 |
| PROCEEDINGS OF THE INDIAN ACADEMY OF SCIENCES-CHEMICAL SCIENCES | 68 | 0.317 | CHEMISTRY | 1.8650061 |
| JOURNAL OF APPLIED PHYSICS | 65 | 2.128 | PHYSICS | 13.9669152 |
| PHYSICAL REVIEW C | 65 | 2.695 | PHYSICS | 17.688363 |
| JOURNAL OF CHEMICAL PHYSICS | 63 | 3.147 | PHYSICS | 20.6550198 |
| JOURNAL OF ALLOYS AND COMPOUNDS | 62 | 0.953 | CHEMISTRY | 5.6067849 |
| INDIAN JOURNAL OF MEDICAL RESEARCH | 62 | 0.340 | MEDICINE | 1.749674 |
| CHEMICAL PHYSICS LETTERS | 62 | | CHEMISTRY | |
| TETRAHEDRON | 60 | 2.276 | CHEMISTRY | 13.3903908 |
| BULLETIN OF ELECTROCHEMISTRY | 59 | 0.230 | ELECTROCHEMISTRY | 1.752232 |
| ASIAN-AUSTRALASIAN JOURNAL OF ANIMAL SCIENCES | 57 | 0.268 | AGRICULTURE SCIENCE | 4.1377056 |
| SYNLETT | 56 | 2.465 | CHEMISTRY | 14.5023345 |
| WORLD JOURNAL OF MICROBIOLOGY & BIOTECHNOLOGY | 54 | 0.445 | BIOTECHNOLOGY ; MICROBIOLOGY | 2.2093805 |
| INDIAN JOURNAL OF FIBRE & TEXTILE RESEARCH | 52 | 0.231 | MATERIALS SCIENCE | 3.0219651 |
| INDIAN JOURNAL OF BIOCHEMISTRY | 52 | 0.294 | BIOCHEMISTRY & | 0.907284 |

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| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
|--------------------------------------------------------------------------------------------------------|------------------|---------------|----------------------------------|-------------------------|
| & BIOPHYSICS | | | MOLECULAR BIOLOGY | |
| CHEMICAL COMMUNICATIONS | 52 | 3.902 | CHEMISTRY | 22.9566366 |
| SYNTHESIS AND REACTIVITY IN INORGANIC AND METAL-ORGANIC CHEMISTRY | 51 | 0.446 | CHEMISTRY | 2.6239518 |
| ASTRONOMY & ASTROPHYSICS | 73 | 2.281 | ASTRONOMY & ASTROPHYSICS | 11.5172252 |
| ACTA CRYSTALLOGRAPHICA SECTION C-CRYSTAL STRUCTURE COMMUNICATIONS | 50 | 0.570 | CRYSTALLOGRAPHY | 5.248617 |
| BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS | 50 | 2.946 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 9.091356 |
| JOURNAL OF ENVIRONMENTAL BIOLOGY | 50 | 0.153 | ENVIRONMENTAL SCIENCES | 1.4676219 |
| MATERIALS LETTERS | 49 | 0.670 | MATERIALS SCIENCE | 8.765007 |
| MICROWAVE AND OPTICAL TECHNOLOGY LETTERS | 48 | 0.423 | ENGINEERING | 7.0794972 |
| FITOTERAPIA | 47 | 0.486 | CHEMISTRY | 2.8592838 |
| JOURNAL OF BIOSCIENCES | 47 | 0.657 | BIOLOGY | 3.7086993 |
| JOURNAL OF PHYSICAL CHEMISTRY B | 47 | 3.379 | CHEMISTRY | 19.8796707 |
| OXIDATION COMMUNICATIONS | 47 | | CHEMISTRY | |
| JOURNAL OF MATERIALS SCIENCE | 47 | 0.728 | MATERIALS SCIENCE | 9.5237688 |
| JOURNAL OF ORGANIC CHEMISTRY | 46 | 3.280 | CHEMISTRY | 19.297224 |
| JOURNAL OF ASTROPHYSICS AND ASTRONOMY | 46 | 0.175 | ASTRONOMY & ASTROPHYSICS | 0.88361 |
| JOURNAL OF POLYMER MATERIALS | 45 | 0.229 | POLYMER SCIENCE | 2.4969931 |
| MATERIALS RESEARCH BULLETIN | 45 | 0.715 | MATERIALS SCIENCE | 9.3537015 |
| PHYSICS LETTERS A | 45 | 1.220 | PHYSICS | 8.007348 |
| JOURNAL OF PHYSICAL CHEMISTRY A | 44 | 2.630 | CHEMISTRY | 15.473079 |
| BIORESOURCE TECHNOLOGY | 43 | 0.890 | BIOTECHNOLOGY | 5.176507 |
| JOURNAL OF ETHNOPHARMACOLOGY | 43 | 0.780 | CHEMISTRY | 4.588974 |
| PHYSICS OF PLASMAS | 43 | 2.223 | PHYSICS | 14.5904382 |
| NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS | 28 | 1.041 | PHYSICS | 6.8324994 |
| WATER AIR AND SOIL POLLUTION | 27 | 0.772 | ENVIRONMENTAL SCIENCES | 7.4052556 |
| MATERIALS SCIENCE AND ENGINEERING B-SOLID STATE MATERIALS FOR ADVANCED TECHNOLOGY | 27 | 1.022 | MATERIALS SCIENCE | 13.3699062 |
| HEPATOLOGY | 27 | | NA | |

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| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
|---------------------------------------------------------------------|------------------|---------------|-----------------------------------------------|-------------------------|
| SYNTHESIS-STUTTGART | 26 | 1.985 | CHEMISTRY | 11.6783505 |
| JOURNAL OF COLLOID AND INTERFACE SCIENCE | 26 | 1.530 | CHEMISTRY | 9.001449 |
| THIN SOLID FILMS | 26 | 1.266 | MATERIALS SCIENCE | 16.5619386 |
| CERAMICS INTERNATIONAL | 26 | 0.593 | MATERIALS SCIENCE | 7.7576853 |
| TROPICAL DOCTOR | 25 | 0.302 | TROPICAL MEDICINE | 3.3675114 |
| JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS | 25 | 1.020 | CHEMISTRY | 6.000966 |
| JOURNAL OF THE CHEMICAL SOCIETY-PERKIN TRANSACTIONS 1 | 25 | 2.208 | CHEMISTRY | 12.9903264 |
| POLYMER INTERNATIONAL | 25 | 0.882 | POLYMER SCIENCE | 9.6172398 |
| BIOORGANIC & MEDICINAL CHEMISTRY | 24 | 1.798 | CHEMISTRY | 10.5781734 |
| MOLECULAR CRYSTALS AND LIQUID CRYSTALS | 24 | 0.457 | CRYSTALLOGRAPHY | 4.2081017 |
| JOURNAL OF PHARMACEUTICAL AND BIOMEDICAL ANALYSIS | 24 | 1.177 | CHEMISTRY | 6.9246441 |
| JOURNAL OF NUCLEAR MATERIALS | 24 | 1.366 | MATERIALS SCIENCE | 17.8701486 |
| JOURNAL OF MOLECULAR AND CELLULAR CARDIOLOGY | 24 | 3.396 | CARDIAC & CARDIOVASCULAR SYSTEM; CELL BIOLOGY | 10.4739432 |
| JOURNAL OF MATERIALS CHEMISTRY | 24 | 2.736 | CHEMISTRY | 16.0967088 |
| PROCEEDINGS OF THE INDIAN ACADEMY OF SCIENCES-MATHEMATICAL SCIENCES | 24 | 0.097 | MATHEMATICS | 1.6872471 |
| TRANSACTIONS OF THE INDIAN INSTITUTE OF METALS | 24 | 0.098 | METALLURGY & METALLURGICAL ENGINEERING | 2.0185354 |
| CHAOS SOLITONS & FRACTALS | 23 | 0.839 | MATHEMATICS | 14.5938177 |
| JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL | 23 | 1.542 | PHYSICS | 10.1207628 |
| MODERN PHYSICS LETTERS B | 23 | 0.438 | PHYSICS | 2.8747692 |
| SEPARATION SCIENCE AND TECHNOLOGY | 23 | 0.862 | CHEMISTRY | 5.0714046 |
| HETEROCYCLIC COMMUNICATIONS | 23 | 0.352 | CHEMISTRY | 2.0709216 |
| RESEARCH ON CHEMICAL INTERMEDIATES | 23 | 0.556 | CHEMISTRY | 3.2711148 |
| HYDROMETALLURGY | 23 | 0.654 | METALLURGY & METALLURGICAL ENGINEERING | 13.4706342 |
| JOURNAL OF PLANT BIOCHEMISTRY AND BIOTECHNOLOGY | 22 | 0.388 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 1.197368 |
| NEW JOURNAL OF CHEMISTRY | 22 | 2.440 | CHEMISTRY | 14.355252 |

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| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
|-----------------------------------------------------------------------------------------------------------|------------------|---------------|----------------------------|-------------------------|
| CURRENT SCIENCE | 565 | 0.512 | MULTIDISCIPLINARY SCIENCES | 2.9421568 |
| INDIAN JOURNAL OF ANIMAL SCIENCES | 373 | 0.084 | AGRICULTURE SCIENCE | 1.4122332 |
| INDIAN VETERINARY JOURNAL | 289 | 0.044 | VETERINARY SCIENCES | 0.7377568 |
| INDIAN JOURNAL OF CHEMISTRY SECTION B-ORGANIC CHEMISTRY INCLUDING MEDICINAL CHEMISTRY | 206 | 0.421 | CHEMISTRY | 2.5191377 |
| INDIAN JOURNAL OF CHEMISTRY SECTION A-INORGANIC BIO-INORGANIC PHYSICAL THEORETICAL & ANALYTICAL CHEMISTRY | 200 | 0.313 | CHEMISTRY | 1.8728981 |
| INDIAN JOURNAL OF AGRICULTURAL SCIENCES | 198 | 0.050 | AGRICULTURE SCIENCE | 0.840615 |
| JOURNAL OF THE INDIAN CHEMICAL SOCIETY | 153 | 0.248 | CHEMISTRY | 1.4839576 |
| JOURNAL OF THE GEOLOGICAL SOCIETY OF INDIA | 151 | 0.390 | GEOSCIENCES | 4.039347 |
| INDIAN JOURNAL OF AGRONOMY | 143 | 0.026 | AGRONOMY | 0.3926884 |
| INDIAN JOURNAL OF PURE & APPLIED PHYSICS | 141 | 0.214 | PHYSICS | 1.5070308 |
| PRAMANA-JOURNAL OF PHYSICS | 137 | 0.314 | PHYSICS | 2.2112508 |
| PHYSICAL REVIEW B | 109 | | PHYSICS | |
| JOURNAL OF APPLIED POLYMER SCIENCE | 107 | 0.881 | POLYMER SCIENCE | 10.2073541 |
| NEUROLOGY INDIA | 106 | 0.092 | NEUROSCIENCES | 0.3556904 |
| ASIAN JOURNAL OF CHEMISTRY | 103 | 0.219 | CHEMISTRY | 1.3104303 |
| BULLETIN OF ELECTROCHEMISTRY | 100 | 0.098 | ELECTROCHEMISTRY | 0.6728386 |
| JOURNAL OF FOOD SCIENCE AND TECHNOLOGY-MYSORE | 99 | 0.151 | FOOD SCIENCE & TECHNOLOGY | 2.0127847 |
| SYNTHETIC COMMUNICATIONS | 90 | 0.828 | CHEMISTRY | 4.9545036 |
| PHYSICS LETTERS B | 90 | 4.213 | PHYSICS | 29.6687886 |
| BULLETIN OF MATERIALS SCIENCE | 85 | 0.393 | MATERIALS SCIENCE | 5.7263244 |
| INDIAN JOURNAL OF MARINE SCIENCES | 81 | 0.127 | OCEANOGRAPHY | 1.3134721 |
| PHYSICAL REVIEW D | 78 | 3.838 | PHYSICS | 27.0279636 |
| NATIONAL MEDICAL JOURNAL OF INDIA | 77 | 0.333 | MEDICINE | 1.8030951 |
| INDIAN JOURNAL OF HETEROCYCLIC CHEMISTRY | 75 | 0.185 | CHEMISTRY | 1.1069845 |

| 2000 | | | | |
|-------------------------------------------------------------------|------------------|---------------|----------------------------------------|-------------------------|
| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
| INDIAN JOURNAL OF BIOCHEMISTRY & BIOPHYSICS | 73 | 0.256 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 0.8284928 |
| TETRAHEDRON LETTERS | 73 | 2.558 | CHEMISTRY | 15.3063046 |
| INDIAN JOURNAL OF MEDICAL RESEARCH | 72 | 0.383 | MEDICINE | 2.0738301 |
| JOURNAL OF SCIENTIFIC & INDUSTRIAL RESEARCH | 72 | 0.208 | ENGINEERING | 3.7969984 |
| PHYSICAL REVIEW E | 69 | 2.142 | PHYSICS | 15.0843924 |
| IETE JOURNAL OF RESEARCH | 66 | 0.023 | ENGINEERING | 0.4198604 |
| TRANSACTIONS OF THE INDIAN INSTITUTE OF METALS | 66 | 0.049 | METALLURGY & METALLURGICAL ENGINEERING | 1.0376926 |
| INDIAN JOURNAL OF FIBRE & TEXTILE RESEARCH | 64 | 0.157 | MATERIALS SCIENCE | 2.2876156 |
| PHYSICAL REVIEW LETTERS | 63 | 6.462 | PHYSICS | 45.5066964 |
| JOURNAL OF ENVIRONMENTAL BIOLOGY | 63 | 0.103 | ENVIRONMENTAL SCIENCES | 1.0439874 |
| JOURNAL OF APPLIED PHYSICS | 61 | 2.180 | PHYSICS | 15.351996 |
| CHEMICAL PHYSICS LETTERS | 60 | | CHEMISTRY | |
| INDIAN JOURNAL OF PURE & APPLIED MATHEMATICS | 59 | 0.062 | MATHEMATICS | 1.0309236 |
| INDIAN JOURNAL OF CHEMICAL TECHNOLOGY | 57 | 0.296 | CHEMISTRY | 1.7711752 |
| MATERIALS LETTERS | 57 | 0.632 | MATERIALS SCIENCE | 9.2087456 |
| ACTA CRYSTALLOGRAPHICA SECTION C-CRYSTAL STRUCTURE COMMUNICATIONS | 54 | 0.543 | CRYSTALLOGRAPHY | 4.6330932 |
| JOURNAL OF MOLECULAR CATALYSIS A-CHEMICAL | 51 | 1.659 | CHEMISTRY | 9.9269583 |
| TETRAHEDRON | 49 | 2.356 | CHEMISTRY | 14.0975972 |
| TRANSITION METAL CHEMISTRY | 49 | 0.561 | CHEMISTRY | 3.3568557 |
| JOURNAL OF CHEMICAL RESEARCH-S | 48 | 0.522 | CHEMISTRY | 3.1234914 |
| MATERIALS CHEMISTRY AND PHYSICS | 48 | 0.614 | MATERIALS SCIENCE | 8.9464712 |
| EUROPEAN POLYMER JOURNAL | 47 | 0.745 | POLYMER SCIENCE | 8.6316445 |
| SYNTHESIS AND REACTIVITY IN INORGANIC AND METAL-ORGANIC CHEMISTRY | 46 | 0.432 | CHEMISTRY | 2.5849584 |
| INDIAN JOURNAL OF ENGINEERING AND MATERIALS SCIENCES | 46 | 0.116 | ENGINEERING | 2.1175568 |
| SYNLETT | 45 | 2.763 | CHEMISTRY | 16.5329631 |
| ANNALS OF ARID ZONE | 45 | 0.200 | AGRICULTURE SCIENCE | 3.36246 |
| BIOPROCESS ENGINEERING | 44 | 0.673 | ENGINEERING | 12.2854804 |
| PHYSICAL REVIEW C | 44 | 2.384 | PHYSICS | 16.7886048 |

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| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
|---------------------------------------------------------------------------------------------------|------------------|---------------|----------------------------------|-------------------------|
| JOURNAL OF CHEMICAL PHYSICS | 44 | 3.301 | PHYSICS | 23.2463022 |
| BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS | 43 | 3.055 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 9.8868965 |
| MATERIALS RESEARCH BULLETIN | 43 | 0.703 | MATERIALS SCIENCE | 10.2432724 |
| ASTROPHYSICAL JOURNAL | 43 | 2.822 | ASTRONOMY & ASTROPHYSICS | 13.3712004 |
| DEFENCE SCIENCE JOURNAL | 43 | 0.060 | MULTIDISCIPLINARY SCIENCES | 0.344784 |
| JOURNAL OF ETHNOPHARMACOLOGY | 43 | 0.575 | CHEMISTRY | 3.4406275 |
| OXIDATION COMMUNICATIONS | 42 | 0.124 | CHEMISTRY | 0.7419788 |
| LANGMUIR | 42 | 3.045 | CHEMISTRY | 18.2203665 |
| JOURNAL OF PHYSICS-CONDENSED MATTER | 41 | | PHYSICS | |
| PROCEEDINGS OF THE INDIAN ACADEMY OF SCIENCES-EARTH AND PLANETARY SCIENCES | 40 | | MULTIDISCIPLINARY | |
| SOLID STATE COMMUNICATIONS | 40 | | PHYSICS | |
| JOURNAL OF MATERIALS SCIENCE LETTERS | 39 | 0.496 | MATERIALS SCIENCE | 7.2271168 |
| PROCEEDINGS OF THE INDIAN ACADEMY OF SCIENCES-CHEMICAL SCIENCES | 39 | 0.254 | CHEMISTRY | 1.5198598 |
| PHYSICAL REVIEW A | 39 | 2.831 | PHYSICS | 19.9364682 |
| JOURNAL OF MATERIALS SCIENCE | 39 | 0.701 | MATERIALS SCIENCE | 10.2141308 |
| NATIONAL ACADEMY SCIENCE LETTERS-INDIA | 38 | 0.059 | MULTIDISCIPLINARY SCIENCES | 0.3390376 |
| SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY | 38 | 1.023 | SPECTROSCOPY | 5.8584141 |
| JOURNAL OF POLYMER MATERIALS | 38 | 0.495 | POLYMER SCIENCE | 5.7351195 |
| INTERNATIONAL JOURNAL OF REMOTE SENSING | 37 | 0.827 | REMOTE SENSING | 9.8031753 |
| PHYSICS OF PLASMAS | 36 | 2.069 | PHYSICS | 14.5703118 |
| POSTGRADUATE MEDICAL JOURNAL | 36 | 0.339 | MEDICINE | 1.8355833 |
| PHYSICA B-CONDENSED MATTER | 36 | | PHYSICS | |
| MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING | 35 | 0.897 | MATERIALS SCIENCE | 13.0700076 |
| PHYSICS LETTERS A | 35 | 1.122 | PHYSICS | 7.9013484 |
| JOURNAL OF PHYSICS A-MATHEMATICAL AND GENERAL | 34 | 1.365 | PHYSICS | 9.612603 |
| MODERN PHYSICS LETTERS A | 34 | 1.022 | PHYSICS | 7.1971284 |
| NUCLEAR INSTRUMENTS & METHODS | 34 | 0.955 | PHYSICS | 6.725301 |

| 2000 | | | | |
|--------------------------------------------------------------------------|------------------|---------------|------------------------------|-------------------------|
| Journal Name | Number of Papers | Impact Factor | Subject Category | Sub Field Impact Factor |
| IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS | | | | |
| APPLIED PHYSICS LETTERS | 33 | 3.906 | PHYSICS | 27.5068332 |
| FITOTERAPIA | 32 | 0.278 | CHEMISTRY | 1.6634686 |
| JOURNAL OF THE CHEMICAL SOCIETY-PERKIN TRANSACTIONS 1 | 31 | 2.182 | CHEMISTRY | 13.0564334 |
| BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY | 31 | 0.513 | TOXICOLOGY | 3.1325832 |
| INTERNATIONAL JOURNAL OF MODERN PHYSICS B | 31 | 0.598 | PHYSICS | 4.2112356 |
| ASTRONOMY AND ASTROPHYSICS | 31 | 2.790 | ASTRONOMY & ASTROPHYSICS | 13.219578 |
| PEDIATRIC SURGERY INTERNATIONAL | 31 | 0.491 | PEDIATRICS | 4.7261205 |
| MICROWAVE AND OPTICAL TECHNOLOGY LETTERS | 30 | 0.393 | ENGINEERING | 7.1741364 |
| JOURNAL OF ORGANIC CHEMISTRY | 30 | 3.689 | CHEMISTRY | 22.0738693 |
| JOURNAL OF BIOSCIENCES | 30 | 0.404 | BIOLOGY | 2.2725808 |
| JOURNAL OF PHYSICAL CHEMISTRY A | 30 | 2.754 | CHEMISTRY | 16.4791098 |
| WORLD JOURNAL OF MICROBIOLOGY & BIOTECHNOLOGY | 30 | | MICROBIOLOGY; BIOTECHNOLOGY | |
| PHYTOCHEMISTRY | 30 | | CHEMISTRY | |
| BIOLOGIA PLANTARUM | 30 | 0.424 | PLANT SCIENCE | 3.1166968 |
| POLYMER INTERNATIONAL | 30 | 0.920 | POLYMER SCIENCE | 10.659212 |
| JOURNAL OF RADIOANALYTICAL AND NUCLEAR CHEMISTRY | 29 | 0.488 | NUCLEAR SCIENCE & TECHNOLOGY | 6.873236 |
| JOURNAL OF THE CHEMICAL SOCIETY-DALTON TRANSACTIONS | 28 | 2.502 | CHEMISTRY | 14.9712174 |
| BIORESOURCE TECHNOLOGY | 28 | 0.700 | BIOTECHNOLOGY | 4.45711 |
| POLYHEDRON | 28 | 1.036 | CHEMISTRY | 6.1991132 |
| JOURNAL OF CRYSTAL GROWTH | 28 | 1.375 | CRYSTALLOGRAPHY | 11.73205 |
| SEED SCIENCE AND TECHNOLOGY | 28 | 0.264 | AGRONOMY | 3.9872976 |

Appendix 3

Subfield Corrected Impact Factor (SFCIF)

The mean impact factor of a subject is the ratio between the sum of all impact factors of all the journals in the subject and the total number of journals in the subject.

The mean impact factor of a discipline divides a constant factor 10, which yields the multiplier value of that discipline.

When the multiplier value of a subject is multiplied by the impact factor of a journal the subfield corrected impact factor value of a journal will be arrived. This Subfield Corrected Impact Factor (SFCIF) will enable to compare the journals of science and technology irrespective of their subject orientation.

For example in the field X, the journal A has an impact factor 3, and another journal B in the field Y has an impact factor 2.5, they are not comparable. To arrive at the subfield impact factor, the total impact factor values of all journals in a particular field is calculated and then the value is divided by the total number of journals in that field which will produce the mean impact factor. The mean impact factor divides the constant, 10 and the division provides the multiplier. This multiplier value is multiplied by the impact factor of a journal which finally provides the subfield impact factor.

Appendix 4

List of Indian papers in high impact journals (2004)

| top papers 2004 | | | | | | | |
|---------------------------------------------------|--------------|---------------|---------------------------|------------|-------------------------|-------------------------------|--|
| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor | |
| NEW ENGLAND JOURNAL OF MEDICINE | 11 | 38.57 | MEDICINE | 4.15 | 159.961361 | 1759.574971 | |
| NATURE | 13 | 32.182 | MULTIDISCIPLINARY SCIENCE | 4.50 | 144.6870538 | 1880.931699 | |
| SCIENCE | 10 | 31.853 | MULTIDISCIPLINARY SCIENCE | 4.50 | 143.2079027 | 1432.079027 | |
| NATURE MEDICINE | 2 | 31.223 | MEDICINE | 4.15 | 129.4911479 | 258.9822958 | |
| NATURE MATERIALS | 3 | 13.531 | MATERIALS SCIENCE | 9.19 | 124.3079439 | 372.9238317 | |
| CHEMICAL REVIEWS | 2 | 20.233 | CHEMISTRY | 5.37 | 108.732142 | 217.464284 | |
| NATURE BIOTECHNOLOGY | 2 | 22.355 | BIOTECHNOLOGY | 4.67 | 104.4313825 | 208.862765 | |
| NATURE REVIEWS MOLECULAR CELL BIOLOGY | 1 | 33.17 | CELL BIOLOGY | 2.81 | 93.071703 | 93.071703 | |
| LANCET | 43 | 21.713 | MEDICINE | 4.15 | 90.0503249 | 3872.163971 | |
| PHYSICS REPORTS-REVIEW SECTION OF PHYSICS LETTERS | 4 | 14.742 | PHYSICS | 5.59 | 82.3473378 | 329.3893512 | |
| PLOS BIOLOGY | 1 | 13.868 | BIOLOGY | 5.82 | 80.7686188 | 80.7686188 | |
| CELL | 3 | 28.389 | CELL BIOLOGY | 2.81 | 79.6566951 | 238.9700853 | |
| ADVANCED MATERIALS | 10 | 8.079 | MATERIALS SCIENCE | 9.19 | 74.2209651 | 742.209651 | |
| TRENDS IN PLANT SCIENCE | 1 | 11.833 | PLANT SCIENCE | 6.25 | 73.9136512 | 73.9136512 | |
| ANNUAL REVIEW OF FLUID MECHANICS | 1 | 6.694 | MECHANICS | 10.99 | 73.5523332 | 73.5523332 | |
| ACCOUNTS OF CHEMICAL RESEARCH | 5 | 13.154 | CHEMISTRY | 5.37 | 70.689596 | 353.44798 | |
| PLANT CELL | 1 | 11.295 | PLANT SCIENCE | 6.25 | 70.553088 | 70.553088 | |
| PROGRESS IN POLYMER SCIENCE | 4 | 8.482 | POLYMER SCIENCE | 8.26 | 70.0469006 | 280.1876024 | |
| MICROBIOLOGY AND MOLECULAR BIOLOGY REVIEWS | 1 | 17.037 | MICROBIOLOGY | 3.63 | 61.9209765 | 61.9209765 | |

top papers 2004

| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|---------------------------------------------------------------------------------|--------------|---------------|-------------------------------|------------|-------------------------|-------------------------------|
| ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES | 2 | 15.231 | ASTRONOMY & ASTROPHYSICS | 3.83 | 58.319499 | 116.638998 |
| IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE | 2 | 4.352 | ENGINEERING | 13.21 | 57.4820864 | 114.9641728 |
| ANNALS OF INTERNAL MEDICINE | 1 | 13.114 | MEDICINE | 4.15 | 54.3876922 | 54.3876922 |
| APPLIED CATALYSIS B-ENVIRONMENTAL | 8 | 4.042 | ENGINEERING | 13.21 | 53.3875444 | 427.1003552 |
| GASTROENTEROLOGY | 3 | 13.092 | GASTROENTEROLOGY & HEPATOLOGY | 4.02 | 52.6049652 | 157.8148956 |
| ADVANCED FUNCTIONAL MATERIALS | 3 | 5.679 | MATERIALS SCIENCE | 9.19 | 52.1724051 | 156.5172153 |
| BIOMATERIALS | 9 | 3.799 | ENGINEERING | 13.21 | 50.1779518 | 451.6015662 |
| IEEE SIGNAL PROCESSING MAGAZINE | 2 | 3.707 | ENGINEERING | 13.21 | 48.9627974 | 97.9255948 |
| NEURON | 2 | 14.439 | NEUROSCIENCES | 3.39 | 48.9279954 | 97.8559908 |
| IEEE JOURNAL OF QUANTUM ELECTRONICS | 1 | 3.675 | ENGINEERING | 13.21 | 48.540135 | 48.540135 |
| CIRCULATION | 6 | 12.563 | PERIPHERAL VASCULAR DISEASE | 3.83 | 48.1627731 | 288.9766386 |
| MOLECULES AND CELLS | 2 | 16.811 | CELL BIOLOGY | 2.81 | 47.1699849 | 94.3399698 |
| PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA | 5 | 10.452 | MULTIDISCIPLINARY SCIENCE | 4.50 | 46.9911468 | 234.955734 |
| ANNUAL REVIEW OF BIOPHYSICS AND BIOMOLECULAR STRUCTURE | 1 | 13.462 | BIOPHYSICS | 3.42 | 46.006385 | 46.006385 |
| ANNALS OF SURGERY | 2 | 5.907 | SURGERY | 7.50 | 44.2900953 | 88.5801906 |
| NANOTECHNOLOGY | 8 | 3.322 | ENGINEERING | 13.21 | 43.8776404 | 351.0211232 |
| JOURNAL OF THE | 9 | 9.133 | CARDIAC & | 4.69 | 42.7926715 | 385.1340435 |

top papers 2004

| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|-----------------------------------------------------------|--------------|---------------|-------------------------------|------------|-------------------------|-------------------------------|
| AMERICAN COLLEGE OF CARDIOLOGY | | | CARDIOVASCULAR SYSTEM | | | |
| NATURAL PRODUCT REPORTS | 1 | 7.89 | CHEMISTRY | 5.37 | 42.40086 | 42.40086 |
| LANCET NEUROLOGY | 1 | 8.34 | CLINICAL NEUROLOGY | 5.08 | 42.345516 | 42.345516 |
| IEEE TRANSACTIONS ON NANOTECHNOLOGY | 2 | 3.176 | ENGINEERING | 13.21 | 41.9492432 | 83.8984864 |
| HEPATOLOGY | 5 | 10.416 | GASTROENTEROLOGY & HEPATOLOGY | 4.02 | 41.8525296 | 209.262648 |
| LANCET INFECTIOUS DISEASES | 6 | 10.788 | INFECTIOUS DISEASES | 3.77 | 40.6416324 | 243.8497944 |
| PHYSICAL REVIEW LETTERS | 92 | 7.218 | PHYSICS | 5.59 | 40.3190262 | 3709.35041 |
| ADVANCES IN ATOMIC MOLECULAR, AND OPTICAL PHYSICS, VOL 49 | 1 | 7.214 | PHYSICS | 5.59 | 40.2966826 | 40.2966826 |
| TRENDS IN BIOTECHNOLOGY | 4 | 8.606 | BIOTECHNOLOGY | 4.67 | 40.202929 | 160.811716 |
| PLANT JOURNAL | 2 | 6.367 | PLANT SCIENCE | 6.25 | 39.7708288 | 79.5416576 |
| CLINICAL CHEMISTRY | 5 | 6.501 | MEDICAL LABORATORY TECHNOLOGY | 5.96 | 38.7628626 | 193.814313 |
| JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY | 2 | 7.205 | ALLERGY & ASTHMA | 5.35 | 38.5287375 | 77.057475 |
| JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY | 11 | 6.644 | UROLOGY & NEPHROLOGY | 5.75 | 38.1943628 | 420.1379908 |
| JOURNAL OF THE NATIONAL CANCER INSTITUTE | 1 | 13.856 | ONCOLOGY | 2.70 | 37.4430688 | 37.4430688 |
| JOURNAL OF THE AMERICAN CHEMICAL SOCIETY | 17 | 6.903 | CHEMISTRY | 5.37 | 37.096722 | 630.644274 |
| PLANT PHYSIOLOGY | 4 | 5.881 | PLANT SCIENCE | 6.25 | 36.7350784 | 146.9403136 |
| JOURNAL OF HIGH ENERGY PHYSICS | 24 | 6.503 | PHYSICS | 5.59 | 36.3251077 | 871.8025848 |

top papers 2004

| Journal Name | No. of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|--------------------------------------------------|---------------|---------------|------------------------------|------------|-------------------------|-------------------------------|
| ADVANCES IN AGRONOMY, | 2 | 3.212 | AGRONOMY | 11.25 | 36.1263276 | 72.2526552 |
| BLOOD | 26 | 9.782 | HEMATOLOGY | 3.69 | 36.1180786 | 939.0700436 |
| AMERICAN JOURNAL OF HUMAN GENETICS | 2 | 12.34 | GENETICS & HEREDITY | 2.89 | 35.710726 | 71.421452 |
| TRENDS IN PARASITOLOGY | 3 | 5.497 | PARASITOLOGY | 6.49 | 35.6969683 | 107.0909049 |
| ARTHRITIS & RHEUMATISM-ARTHRITIS CARE & RESEARCH | 1 | 7.414 | RHEUMATOLOGY | 4.72 | 34.9896316 | 34.9896316 |
| IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS | 3 | 2.64 | ENGINEERING | 13.21 | 34.869648 | 104.608944 |
| COORDINATION CHEMISTRY REVIEWS | 4 | 6.446 | CHEMISTRY | 5.37 | 34.640804 | 138.563216 |
| AMERICAN JOURNAL OF PSYCHIATRY | 1 | 7.614 | PSYCHIATRY | 4.54 | 34.5728898 | 34.5728898 |
| IEEE TRANSACTIONS ON EVOLUTIONARY COMPUTATION | 3 | 3.688 | COMPUTER SCIENCE | 9.36 | 34.525212 | 103.575636 |
| GENOME RESEARCH | 1 | 10.382 | BIOTECHNOLOGY ; BIOCHEMISTRY | 3.30 | 34.2699438 | 34.2699438 |
| INTERNATIONAL MATERIALS REVIEWS | 1 | 3.68 | MATERIALS SCIENCE | 9.19 | 33.807792 | 33.807792 |
| IEEE PHOTONICS TECHNOLOGY LETTERS | 4 | 2.552 | ENGINEERING | 13.21 | 33.7073264 | 134.8293056 |
| NATURE STRUCTURAL & MOLECULAR BIOLOGY | 1 | 12 | CELL BIOLOGY | 2.81 | 33.6708 | 33.6708 |
| JOURNAL OF INVESTIGATIVE DERMATOLOGY | 1 | 4.238 | DERMATOLOGY | 7.93 | 33.6026782 | 33.6026782 |
| IEEE ELECTRON DEVICE LETTERS | 2 | 2.538 | ENGINEERING | 13.21 | 33.5224116 | 67.0448232 |
| CURRENT OPINION IN GENETICS & DEVELOPMENT | 1 | 11.58 | GENETICS & HEREDITY | 2.89 | 33.511362 | 33.511362 |
| ARTIFICIAL INTELLIGENCE: | 1 | 3.57 | COMPUTER SCIENCE | 9.36 | 33.420555 | 33.420555 |

top papers 2004

| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|-----------------------------------------------------|--------------|---------------|----------------------------------------|------------|-------------------------|-------------------------------|
| METHODOLOGY, SYSTEMS, AND APPLICATIONS, PROCEEDINGS | | | | | | |
| JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY | 15 | 2.327 | AGRICULTURE SCIENCE | 14.04 | 32.6613066 | 489.919599 |
| JOURNAL OF CELL BIOLOGY | 1 | 11.602 | CELL BIOLOGY | 2.81 | 32.5540518 | 32.5540518 |
| NUCLEAR PHYSICS B | 7 | 5.819 | PHYSICS | 5.59 | 32.5043521 | 227.5304647 |
| MACROMOLECULES | 11 | 3.898 | POLYMER SCIENCE | 8.26 | 32.1908534 | 354.0993874 |
| ACTA MATERIALIA | 18 | 3.49 | MATERIALS SCIENCE | 9.19 | 32.062281 | 577.121058 |
| PROGRESS IN SOLID STATE CHEMISTRY | 1 | 5.857 | CHEMISTRY | 5.37 | 31.475518 | 31.475518 |
| PEDIATRICS. | 1 | 3.903 | PEDIATRICS | 7.93 | 30.9636699 | 30.9636699 |
| WATER RESEARCH | 14 | 2.304 | ENGINEERING | 13.21 | 30.4316928 | 426.0436992 |
| JOURNAL OF SUPERCRITICAL FLUIDS | 7 | 2.275 | ENGINEERING | 13.21 | 30.048655 | 210.340585 |
| DIABETES | 1 | 8.848 | ENDOCRINOLOGY & METABOLISM | 3.37 | 29.8292624 | 29.8292624 |
| CURRENT OPINION IN MICROBIOLOGY | 1 | 8.182 | MICROBIOLOGY | 3.63 | 29.737479 | 29.737479 |
| AGRICULTURAL AND FOREST METEOROLOGY | 1 | 2.811 | FORESTRY SCIENCE | 10.55 | 29.6518335 | 29.6518335 |
| INTERMETALLICS | 7 | 1.77 | METALLURGY & METALLURGICAL ENGINEERING | 16.62 | 29.421471 | 205.950297 |
| TRENDS IN FOOD SCIENCE & TECHNOLOGY | 1 | 2.534 | FOOD SCIENCE & TECHNOLOGY | 11.60 | 29.3999748 | 29.3999748 |
| AMERICAN JOURNAL OF CLINICAL NUTRITION | 9 | 5.433 | NUTRITION & DIETETICS | 5.40 | 29.3229876 | 263.9068884 |
| ANALYTICAL CHEMISTRY | 4 | 5.45 | CHEMISTRY | 5.37 | 29.2883 | 117.1532 |
| CMES-COMPUTER MODELING IN ENGINEERING & SCIENCES | 2 | 2.21 | ENGINEERING | 13.21 | 29.190122 | 58.380244 |
| BRITISH MEDICAL | 53 | 7.038 | MEDICINE | 4.15 | 29.1886974 | 1547.000962 |

top papers 2004

| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|--------------------------------------------------|--------------|---------------|------------------------|------------|-------------------------|-------------------------------|
| JOURNAL | | | | | | |
| IEEE TRANSACTIONS ON ROBOTICS AND AUTOMATION | 1 | 2.126 | ROBOTICS | 13.66 | 29.047538 | 29.047538 |
| QUATERNARY SCIENCE REVIEWS | 2 | 3.323 | GEOSCIENCES | 8.74 | 29.0293957 | 58.0587914 |
| INSECT MOLECULAR BIOLOGY | 1 | 2.688 | ENTOMOLOGY | 10.77 | 28.9373952 | 28.9373952 |
| IEEE WIRELESS COMMUNICATIONS | 2 | 2.189 | ENGINEERING | 13.21 | 28.9127498 | 57.8254996 |
| PHYSICAL REVIEW D | 78 | 5.156 | PHYSICS | 5.59 | 28.8009004 | 2246.470231 |
| JOURNAL OF NUCLEAR MEDICINE | 2 | 5.362 | RADIOLOGY | 5.30 | 28.434686 | 56.869372 |
| CHAOS SOLITONS & FRACTALS | 9 | 1.942 | MATHEMATICS | 14.62 | 28.3834952 | 255.4514568 |
| ENVIRONMENTAL SCIENCE & TECHNOLOGY | 8 | 3.557 | ENVIRONMENTAL SCIENCES | 7.95 | 28.2927337 | 226.3418696 |
| BIOLOGICAL PSYCHIATRY | 1 | 6.159 | PSYCHIATRY | 4.54 | 27.9661713 | 27.9661713 |
| JOURNAL OF MEMBRANE SCIENCE | 14 | 2.108 | ENGINEERING | 13.21 | 27.8428856 | 389.8003984 |
| MACROMOLECULAR RAPID COMMUNICATIONS | 1 | 3.366 | POLYMER SCIENCE | 8.26 | 27.7974378 | 27.7974378 |
| ARTERIOSCLEROSIS THROMBOSIS AND VASCULAR BIOLOGY | 3 | 7.432 | HEMATOLOGY | 3.69 | 27.4411736 | 82.3235208 |
| ANNALS OF NEUROLOGY | 1 | 8.097 | NEUROSCIENCES | 3.39 | 27.4374942 | 27.4374942 |

top papers 2004

| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|---------------------------------------------------------------------------------------------------|--------------|---------------|----------------------------------|------------|-------------------------|-------------------------------|
| LANCET | 43 | 21.713 | MEDICINE | 4.15 | 90.0503249 | 3872.163971 |
| PHYSICAL REVIEW LETTERS | 92 | 7.218 | PHYSICS | 5.59 | 40.3190262 | 3709.35041 |
| TETRAHEDRON LETTERS | 222 | 2.484 | CHEMISTRY | 5.37 | 13.349016 | 2963.481552 |
| PHYSICAL REVIEW D | 78 | 5.156 | PHYSICS | 5.59 | 28.8009004 | 2246.470231 |
| PHYSICAL REVIEW B | 115 | 3.075 | PHYSICS | 5.59 | 17.1766425 | 1975.313888 |
| NATURE | 13 | 32.182 | MULTIDISCIPLINARY SCIENCE | 4.50 | 144.6870538 | 1880.931699 |
| PHYSICS LETTERS B | 72 | 4.619 | PHYSICS | 5.59 | 25.8012721 | 1857.691591 |
| NEW ENGLAND JOURNAL OF MEDICINE | 11 | 38.57 | MEDICINE | 4.15 | 159.961361 | 1759.574971 |
| JOURNAL OF PHYSICAL CHEMISTRY B | 76 | 3.834 | CHEMISTRY | 5.37 | 20.603916 | 1565.897616 |
| BRITISH MEDICAL JOURNAL | 53 | 7.038 | MEDICINE | 4.15 | 29.1886974 | 1547.000962 |
| JOURNAL OF MOLECULAR CATALYSIS A-CHEMICAL SCIENCE | 124 | 2.316 | CHEMISTRY | 5.37 | 12.446184 | 1543.326816 |
| JOURNAL OF NEUROCHEMISTRY | 84 | 4.824 | NEUROSCIENCES | 3.39 | 16.3466064 | 1373.114938 |
| PHYSICAL REVIEW C | 75 | 3.125 | PHYSICS | 5.59 | 17.4559375 | 1309.195313 |
| JOURNAL OF CHEMICAL PHYSICS | 69 | 3.105 | PHYSICS | 5.59 | 17.3442195 | 1196.751146 |
| TETRAHEDRON | 77 | 2.643 | CHEMISTRY | 5.37 | 14.203482 | 1093.668114 |
| APPLIED PHYSICS LETTERS | 45 | 4.308 | PHYSICS | 5.59 | 24.0640572 | 1082.882574 |
| MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING | 80 | 1.445 | MATERIALS SCIENCE | 9.19 | 13.2750705 | 1062.00564 |
| ASTROPHYSICAL JOURNAL | 44 | 6.237 | ASTRONOMY & ASTROPHYSICS | 3.83 | 23.881473 | 1050.784812 |
| MATERIALS LETTERS | 95 | 1.186 | MATERIALS SCIENCE | 9.19 | 10.8956634 | 1035.088023 |
| JOURNAL OF BIOLOGICAL CHEMISTRY | 55 | 6.355 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 18.2305885 | 1002.682368 |
| GEOPHYSICAL RESEARCH LETTERS | 48 | 2.378 | GEOSCIENCES | 8.74 | 20.7739702 | 997.1505696 |
| SYNLETT | 67 | 2.738 | CHEMISTRY | 5.37 | 14.714012 | 985.838804 |

top papers 2004

| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|---------------------------------------------------|--------------|---------------|----------------------------------|------------|-------------------------|-------------------------------|
| BLOOD | 26 | 9.782 | HEMATOLOGY | 3.69 | 36.1180786 | 939.0700436 |
| BIOORGANIC & MEDICINAL CHEMISTRY LETTERS | 73 | 2.333 | CHEMISTRY | 5.37 | 12.537542 | 915.240566 |
| FASEB JOURNAL | 45 | 6.82 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 19.564534 | 880.40403 |
| MATERIALS CHEMISTRY AND PHYSICS | 86 | 1.113 | MATERIALS SCIENCE | 9.19 | 10.2250197 | 879.3516942 |
| JOURNAL OF HIGH ENERGY PHYSICS | 24 | 6.503 | PHYSICS | 5.59 | 36.3251077 | 871.8025848 |
| LANGMUIR | 49 | 3.295 | CHEMISTRY | 5.37 | 17.70733 | 867.65917 |
| JOURNAL OF ORGANIC CHEMISTRY | 45 | 3.462 | CHEMISTRY | 5.37 | 18.604788 | 837.21546 |
| PHYSICAL REVIEW E | 63 | 2.352 | PHYSICS | 5.59 | 13.1380368 | 827.6963184 |
| INORGANIC CHEMISTRY | 44 | 3.454 | CHEMISTRY | 5.37 | 18.561796 | 816.719024 |
| STROKE | 37 | 5.748 | PERIPHERAL VASCULAR DISEASE | 3.83 | 22.0361076 | 815.3359812 |
| EPILEPSIA | 48 | 3.329 | CLINICAL NEUROLOGY | 5.08 | 16.9026646 | 811.3279008 |
| JOURNAL OF APPLIED PHYSICS | 64 | 2.255 | PHYSICS | 5.59 | 12.5962045 | 806.157088 |
| ADVANCED MATERIALS | 10 | 8.079 | MATERIALS SCIENCE | 9.19 | 74.2209651 | 742.209651 |
| BIOORGANIC & MEDICINAL CHEMISTRY | 67 | 2.018 | CHEMISTRY | 5.37 | 10.844732 | 726.597044 |
| MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY | 36 | 5.238 | ASTRONOMY & ASTROPHYSICS | 3.83 | 20.056302 | 722.026872 |
| CHEMICAL COMMUNICATIONS | 31 | 3.997 | CHEMISTRY | 5.37 | 21.479878 | 665.876218 |
| JOURNAL OF THE AMERICAN CHEMICAL SOCIETY | 17 | 6.903 | CHEMISTRY | 5.37 | 37.096722 | 630.644274 |
| NUCLEIC ACIDS RESEARCH | 30 | 7.26 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 20.826762 | 624.80286 |
| JOURNAL OF CRYSTAL GROWTH | 53 | 1.707 | CRYSTALLOGRAPHY | 6.86 | 11.7037041 | 620.2963173 |
| JOURNAL OF PHYSICAL CHEMISTRY A | 42 | 2.639 | CHEMISTRY | 5.37 | 14.181986 | 595.643412 |
| ORGANIC LETTERS | 26 | 4.195 | CHEMISTRY | 5.37 | 22.54393 | 586.14218 |

top papers 2004

| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|-----------------------------------------------------|--------------|---------------|------------------------------|------------|-------------------------|-------------------------------|
| ACTA MATERIALIA | 18 | 3.49 | MATERIALS SCIENCE | 9.19 | 32.062281 | 577.121058 |
| SYNTHESIS-STUTT GART | 48 | 2.203 | CHEMISTRY | 5.37 | 11.838922 | 568.268256 |
| JOURNAL OF PHYSICS-CONDENSED MATTER | 47 | 2.049 | PHYSICS | 5.59 | 11.4455091 | 537.9389277 |
| APPLIED CATALYSIS A-GENERAL | 42 | 2.378 | CHEMISTRY | 5.37 | 12.779372 | 536.733624 |
| PHYSICAL REVIEW A | 33 | 2.902 | PHYSICS | 5.59 | 16.2102818 | 534.9392994 |
| JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY | 23 | 2.773 | POLYMER SCIENCE | 8.26 | 22.9002659 | 526.7061157 |
| CHEMICAL ENGINEERING SCIENCE | 24 | 1.655 | ENGINEERING | 13.21 | 21.859571 | 524.629704 |
| ASTRONOMY & ASTROPHYSICS | 37 | 3.694 | ASTRONOMY & ASTROPHYSICS | 3.83 | 14.144326 | 523.340062 |
| JOURNAL OF NON-CRYSTALLINE SOLIDS | 38 | 1.433 | MATERIALS SCIENCE | 9.19 | 13.1648277 | 500.2634526 |
| JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY | 15 | 2.327 | AGRICULTURE SCIENCE | 14.04 | 32.6613066 | 489.919599 |
| JOURNAL OF MATERIALS CHEMISTRY | 33 | 2.721 | CHEMISTRY | 5.37 | 14.622654 | 482.547582 |
| GEOCHIMICA ET COSMOCHIMICA ACTA | 20 | 3.811 | GEOCHEMISTRY & GEOPHYSICS | 6.31 | 24.0363581 | 480.727162 |
| BIOPHYSICAL JOURNAL | 30 | 4.585 | BIOPHYSICS | 3.42 | 15.6692375 | 470.077125 |
| PHYSICS OF PLASMAS | 44 | 1.894 | PHYSICS | 5.59 | 10.5796946 | 465.5065624 |
| BIOMATERIALS | 9 | 3.799 | ENGINEERING | 13.21 | 50.1779518 | 451.6015662 |
| CHEMOSPHERE | 24 | 2.359 | ENVIRONMENTAL SCIENCES | 7.95 | 18.7637219 | 450.3293256 |
| CHEMISTRY OF MATERIALS | 20 | 4.103 | CHEMISTRY | 5.37 | 22.049522 | 440.99044 |
| JOURNAL OF MATERIALS RESEARCH | 25 | 1.912 | MATERIALS SCIENCE | 9.19 | 17.5653528 | 439.13382 |
| APPLIED CATALYSIS B-ENVIRONMENTAL | 8 | 4.042 | ENGINEERING | 13.21 | 53.3875444 | 427.1003552 |
| WATER RESEARCH | 14 | 2.304 | ENGINEERING | 13.21 | 30.4316928 | 426.0436992 |
| AQUACULTURE | 31 | 1.627 | MARINE & FRESH WATER BIOLOGY | 8.38 | 13.6412561 | 422.8789391 |
| JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY | 11 | 6.644 | UROLOGY & NEPHROLOGY | 5.75 | 38.1943628 | 420.1379908 |
| SCRIPTA MATERIALIA | 21 | 2.112 | MATERIALS SCIENCE | 9.19 | 19.4027328 | 407.4573888 |

top papers 2004

| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|------------------------------------------------------------|--------------|---------------|----------------------------------------|------------|-------------------------|-------------------------------|
| ISI INTERNATIONAL | 30 | 0.801 | METALLURGY & METALLURGICAL ENGINEERING | 16.62 | 13.3144623 | 399.433869 |
| JOURNAL OF HAZARDOUS MATERIALS | 21 | 1.433 | ENGINEERING | 13.21 | 18.9273506 | 397.4743626 |
| JOURNAL OF MEMBRANE SCIENCE | 14 | 2.108 | ENGINEERING | 13.21 | 27.8428856 | 389.8003984 |
| ADVANCED SYNTHESIS & CATALYSIS | 16 | 4.482 | CHEMISTRY | 5.37 | 24.086268 | 385.380288 |
| JOURNAL OF THE AMERICAN COLLEGE OF CARDIOLOGY | 9 | 9.133 | CARDIAC & CARDIOVASCULAR SYSTEM | 4.69 | 42.7926715 | 385.1340435 |
| JOURNAL OF SOUND AND VIBRATION | 35 | 0.828 | ENGINEERING | 13.21 | 10.9363896 | 382.773636 |
| IEEE TRANSACTIONS ON ELECTRON DEVICES | 14 | 2.036 | ENGINEERING | 13.21 | 26.8918952 | 376.4865328 |
| JOURNAL OF CLINICAL MICROBIOLOGY | 30 | 3.439 | MICROBIOLOGY | 3.63 | 12.4990455 | 374.971365 |
| NATURE MATERIALS | 3 | 13.531 | MATERIALS SCIENCE | 9.19 | 124.3079439 | 372.9238317 |
| JOURNAL OF CATALYSIS | 17 | 4.063 | CHEMISTRY | 5.37 | 21.834562 | 371.187554 |
| JOURNAL OF MOLECULAR BIOLOGY | 23 | 5.542 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 15.8983354 | 365.6617142 |
| POLYMER | 18 | 2.433 | POLYMER SCIENCE | 8.26 | 20.0924439 | 361.6639902 |
| MATERIALS RESEARCH BULLETIN | 30 | 1.31 | MATERIALS SCIENCE | 9.19 | 12.034839 | 361.04517 |
| JOURNAL OF CHROMATOGRAPHY A | 20 | 3.359 | CHEMISTRY | 5.37 | 18.051266 | 361.02532 |
| EUROPHYSICS LETTERS | 30 | 2.12 | PHYSICS | 5.59 | 11.842108 | 355.26324 |
| SOLAR ENERGY MATERIALS AND SOLAR CELLS | 27 | 1.432 | MATERIALS SCIENCE | 9.19 | 13.1556408 | 355.2023016 |
| MACROMOLECULES | 11 | 3.898 | POLYMER SCIENCE | 8.26 | 32.1908534 | 354.0993874 |
| ACCOUNTS OF CHEMICAL RESEARCH | 5 | 13.154 | CHEMISTRY | 5.37 | 70.689596 | 353.44798 |
| NANOTECHNOLOGY | 8 | 3.322 | ENGINEERING | 13.21 | 43.8776404 | 351.0211232 |
| EUROPEAN JOURNAL OF NUCLEAR MEDICINE AND MOLECULAR IMAGING | 16 | 3.935 | RADIOLOGY | 5.30 | 20.867305 | 333.87688 |
| PHYSICS REPORTS-REVIEW SECTION OF PHYSICS LETTERS | 4 | 14.742 | PHYSICS | 5.59 | 82.3473378 | 329.3893512 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|--------------------------------------------------------------------------------------|--------------|---------------|------------------------------------------------------------|------------|-------------------------|-------------------------------|
| SEPARATION AND PURIFICATION TECHNOLOGY | 20 | 1.227 | ENGINEERING | 13.21 | 16.2064614 | 324.129228 |
| ANESTHESIA AND ANALGESIA | 23 | 2.18 | ANESTHESIOLOGY | 6.41 | 13.967914 | 321.262022 |
| JOURNAL OF FOOD ENGINEERING | 20 | 1.209 | ENGINEERING | 13.21 | 15.9687138 | 319.374276 |
| TETRAHEDRON-ASYMMETRY | 24 | 2.386 | CHEMISTRY | 5.37 | 12.822364 | 307.736736 |
| JOURNAL OF ORGANOMETALLIC CHEMISTRY | 30 | 1.905 | CHEMISTRY | 5.37 | 10.23747 | 307.1241 |
| AICHE JOURNAL | 13 | 1.761 | ENGINEERING | 13.21 | 23.2596402 | 302.3753226 |
| FIELD CROPS RESEARCH | 21 | 1.243 | AGRONOMY | 11.25 | 13.9803939 | 293.5882719 |
| ORGANOMETALLICS | 17 | 3.196 | CHEMISTRY | 5.37 | 17.175304 | 291.980168 |
| ATMOSPHERIC ENVIRONMENT | 15 | 2.562 | ENVIRONMENTAL SCIENCES; METEOROLOGY & ATMOSPHERIC SCIENCES | 7.58 | 19.4325138 | 291.487707 |
| BRITISH JOURNAL OF DERMATOLOGY | 15 | 2.445 | DERMATOLOGY | 7.93 | 19.3861605 | 290.7924075 |
| CIRCULATION | 6 | 12.563 | PERIPHERAL VASCULAR DISEASE | 3.83 | 48.1627731 | 288.9766386 |
| METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE | 24 | 1.308 | MATERIALS SCIENCE | 9.19 | 12.0164652 | 288.3951648 |
| RADIATION PHYSICS AND CHEMISTRY | 28 | 0.89 | NUCLEAR SCIENCE & TECHNOLOGY | 11.56 | 10.284217 | 287.958076 |
| ANNALS OF TROPICAL MEDICINE AND PARASITOLOGY | 16 | 2.013 | TROPICAL MEDICINE | 8.90 | 17.9106675 | 286.57068 |
| EUROPEAN POLYMER JOURNAL | 24 | 1.419 | POLYMER SCIENCE | 8.26 | 11.7185277 | 281.2446648 |
| PROGRESS IN POLYMER SCIENCE | 4 | 8.482 | POLYMER SCIENCE | 8.26 | 70.0469006 | 280.1876024 |
| CLASSICAL AND QUANTUM GRAVITY | 17 | 2.941 | PHYSICS | 5.59 | 16.4281319 | 279.2782423 |
| INTERNATIONAL JOURNAL OF HYDROGEN ENERGY | 11 | 1.848 | ENERGY & FUELS | 13.74 | 25.3880088 | 279.2680968 |
| INTERNATIONAL JOURNAL | 16 | 0.799 | MINING | 21.82 | 17.4339403 | 278.9430448 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
| OF ROCK MECHANICS AND MINING SCIENCES | | | | | | |
| CATALYSIS LETTERS | 27 | 1.904 | CHEMISTRY | 5.37 | 10.232096 | 276.266592 |
| CATALYSIS COMMUNICATIONS | 27 | 1.89 | CHEMISTRY | 5.37 | 10.15686 | 274.23522 |
| CHEMICAL ENGINEERING JOURNAL | 15 | 1.383 | ENGINEERING | 13.21 | 18.2669406 | 274.004109 |
| SEPARATION SCIENCE AND TECHNOLOGY | 23 | 0.896 | ENGINEERING | 13.21 | 11.8345472 | 272.1945856 |
| ACSA CRYSTALLOGRAPHICA SECTION D-BIOLOGICAL CRYSTALLOGRAPHY | 23 | 1.693 | CRYSTALLOGRAPHY | 6.86 | 11.6077159 | 266.9774657 |
| TOXICOLOGY AND APPLIED PHARMACOLOGY | 20 | 2.618 | TOXICOLOGY | 5.06 | 13.2342518 | 264.685036 |
| FEBS LETTERS | 24 | 3.843 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 11.0244141 | 264.5859384 |
| AMERICAN JOURNAL OF CLINICAL NUTRITION | 9 | 5.433 | NUTRITION & DIETETICS | 5.40 | 29.3229876 | 263.9068884 |
| EUROPEAN JOURNAL OF INORGANIC CHEMISTRY | 21 | 2.336 | CHEMISTRY | 5.37 | 12.553664 | 263.626944 |
| JOURNAL OF HYPERTENSION | 14 | 4.871 | PERIPHERAL VASCULAR DISEASE | 3.83 | 18.6739527 | 261.4353378 |
| CRYSTAL GROWTH & DESIGN | 17 | 2.856 | CHEMISTRY | 5.37 | 15.348144 | 260.918448 |
| NATURE MEDICINE | 2 | 31.223 | MEDICINE | 4.15 | 129.4911479 | 258.9822958 |
| CHAOS SOLITONS & FRACTALS | 9 | 1.942 | MATHEMATICS | 14.62 | 28.3834952 | 255.4514568 |
| SPINE | 11 | 2.299 | ORTHOPAEDICS | 9.98 | 22.953216 | 252.485376 |
| INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE | 10 | 3.577 | OPHTHALMOLOGY | 7.01 | 25.0804932 | 250.804932 |
| TRANSACTIONS OF THE ROYAL SOCIETY OF TROPICAL MEDICINE AND HYGIENE | 16 | 1.746 | TROPICAL MEDICINE | 8.90 | 15.535035 | 248.56056 |
| LANCET INFECTIOUS DISEASES | 6 | 10.788 | INFECTIOUS DISEASES | 3.77 | 40.6416324 | 243.8497944 |
| OPTICS COMMUNICATIONS | 23 | 1.581 | OPTICS | 6.70 | 10.5865341 | 243.4902843 |
| INTERNATIONAL JOURNAL | 15 | 1.22 | ENGINEERING | 13.21 | 16.114004 | 241.71006 |

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| OF HEAT AND MASS TRANSFER | | | | | | |
| JOURNAL OF NUCLEAR MATERIALS | 18 | 1.448 | MATERIALS SCIENCE | 9.19 | 13.3026312 | 239.4473616 |
| CELL | 3 | 28.389 | CELL BIOLOGY | 2.81 | 79.6566951 | 238.9700853 |
| BRITISH JOURNAL OF OPHTHALMOLOGY | 17 | 2 | OPHTHALMOLOGY | 7.01 | 14.0232 | 238.3944 |
| PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA | 5 | 10.452 | MULTIDISCIPLINARY SCIENCE | 4.50 | 46.9911468 | 234.955734 |
| JOURNAL OF UROLOGY | 11 | 3.713 | UROLOGY & NEPHROLOGY | 5.75 | 21.3449231 | 234.7941541 |
| CLINICA CHIMICA ACTA | 20 | 1.961 | MEDICAL LABORATORY TECHNOLOGY | 5.96 | 11.6926586 | 233.853172 |
| JOURNAL OF CATARACT AND REFRACTIVE SURGERY | 16 | 1.937 | OPHTHALMOLOGY; SURGERY | 7.38 | 14.2929293 | 228.6868688 |
| WEAR | 16 | 1.082 | ENGINEERING | 13.21 | 14.2912724 | 228.6603584 |
| NUCLEAR PHYSICS B | 7 | 5.819 | PHYSICS | 5.59 | 32.5043521 | 227.5304647 |
| ENVIRONMENTAL SCIENCE & TECHNOLOGY | 8 | 3.557 | ENVIRONMENTAL SCIENCES | 7.95 | 28.2927337 | 226.3418696 |
| NUCLEAR PHYSICS A | 19 | 2.108 | PHYSICS | 5.59 | 11.7750772 | 223.7264668 |
| JOURNAL OF INFECTIOUS DISEASES | 12 | 4.943 | INFECTIOUS DISEASES | 3.77 | 18.6217639 | 223.4611668 |
| JOURNAL OF POWER SOURCES | 15 | 2.513 | ELECTROCHEMISTRY | 5.78 | 14.5208679 | 217.8130185 |
| TALANTA | 16 | 2.532 | CHEMISTRY | 5.37 | 13.606968 | 217.711488 |
| CHEMICAL REVIEWS | 2 | 20.233 | CHEMISTRY | 5.37 | 108.732142 | 217.464284 |
| BIOCHEMICAL ENGINEERING JOURNAL | 10 | 1.617 | ENGINEERING | 13.21 | 21.3576594 | 213.576594 |
| INTERNATIONAL JOURNAL OF ENGINEERING SCIENCE | 15 | 1.065 | ENGINEERING | 13.21 | 14.066733 | 211.000995 |
| VACCINE | 18 | 2.824 | MEDICINE | 4.15 | 11.7119752 | 210.8155536 |
| JOURNAL OF SUPERCRITICAL FLUIDS | 7 | 2.275 | ENGINEERING | 13.21 | 30.048655 | 210.340585 |
| HEPATOLOGY | 5 | 10.416 | GASTROENTEROLOGY & HEPATOLOGY | 4.02 | 41.8525296 | 209.262648 |
| NATURE BIOTECHNOLOGY | 2 | 22.355 | BIOTECHNOLOGY | 4.67 | 104.4313825 | 208.862765 |
| INTERMETALLICS | 7 | 1.77 | METALLURGY & METALLURGICAL | 16.62 | 29.421471 | 205.950297 |

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|------------------------------------------|--------------|---------------|----------------------------------------|------------|-------------------------|-------------------------------|
| | | | ENGINEERING | | | |
| NEW JOURNAL OF CHEMISTRY | 14 | 2.735 | CHEMISTRY | 5.37 | 14.69789 | 205.77046 |
| BJU INTERNATIONAL | 17 | 2.089 | UROLOGY & NEPHROLOGY | 5.75 | 12.0090343 | 204.1535831 |
| ELECTROCHIMICA ACTA | 15 | 2.341 | ELECTROCHEMISTRY | 5.78 | 13.5270003 | 202.9050045 |
| BIOLOGY OF REPRODUCTION | 11 | 3.55 | REPRODUCTIVE BIOLOGY | 5.19 | 18.435505 | 202.790555 |
| BIOINFORMATICS | 9 | 5.742 | BIOCHEMICAL RESEARCH METHODS | 3.91 | 22.4506458 | 202.0558122 |
| ANNALS OF THORACIC SURGERY | 12 | 2.244 | SURGERY | 7.50 | 16.8252876 | 201.9034512 |
| PLANT BREEDING | 19 | 0.941 | AGRONOMY | 11.25 | 10.5837093 | 201.0904767 |
| EUROPEAN JOURNAL OF OPERATIONAL RESEARCH | 15 | 0.828 | OPERATIONAL RESEARCH | 16.13 | 13.3591176 | 200.386764 |
| SYNTHETIC METALS | 17 | 1.278 | MATERIALS SCIENCE | 9.19 | 11.7408582 | 199.5945894 |
| COMPUTERS & CHEMICAL ENGINEERING | 9 | 1.678 | ENGINEERING | 13.21 | 22.1633596 | 199.4702364 |
| HYDROMETALLURGY | 11 | 1.088 | METALLURGY & METALLURGICAL ENGINEERING | 16.62 | 18.0850624 | 198.9356864 |
| FLUID PHASE EQUILIBRIA | 11 | 1.356 | THERMODYNAMICS | 13.30 | 18.0390036 | 198.4290396 |
| CARBON | 11 | 3.331 | CHEMISTRY | 5.37 | 17.900794 | 196.908734 |
| ZEITSCHRIFT FUR METALLKUNDE | 13 | 0.907 | METALLURGY & METALLURGICAL ENGINEERING | 16.62 | 15.0764261 | 195.9935393 |
| EUROPEAN JOURNAL OF ORGANIC CHEMISTRY | 15 | 2.426 | CHEMISTRY | 5.37 | 13.037324 | 195.55986 |
| CLINICAL CHEMISTRY | 5 | 6.501 | MEDICAL LABORATORY TECHNOLOGY | 5.96 | 38.7628626 | 193.814313 |
| APPLIED OPTICS | 16 | 1.799 | OPTICS | 6.70 | 12.0462839 | 192.7405424 |
| TROPICAL MEDICINE & INTERNATIONAL HEALTH | 11 | 1.969 | TROPICAL MEDICINE | 8.90 | 17.5191775 | 192.7109525 |
| FOOD AND CHEMICAL TOXICOLOGY | 11 | 2.341 | FOOD SCIENCE & TECHNOLOGY; TOXICOLOGY | 7.39 | 17.304672 | 190.351392 |
| JOURNAL OF | 16 | 2.176 | CHEMISTRY | 5.37 | 11.693824 | 187.101184 |

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| CHROMATOGRAPHY B-ANALYTICAL TECHNOLOGIES IN THE BIOMEDICAL AND LIFE SCIENCES | | | | | | |
| IEEE TRANSACTIONS ON IMAGE PROCESSING | 7 | 2.011 | ENGINEERING | 13.21 | 26.5616902 | 185.9318314 |
| OPTICAL MATERIALS | 15 | 1.339 | MATERIALS SCIENCE | 9.19 | 12.3012591 | 184.5188865 |
| DIAMOND AND RELATED MATERIALS | 12 | 1.67 | MATERIALS SCIENCE | 9.19 | 15.342123 | 184.105476 |
| JOURNAL OF VIROLOGY | 10 | 5.398 | VIROLOGY | 3.41 | 18.409879 | 184.09879 |
| PLASTIC AND RECONSTRUCTIVE SURGERY | 13 | 1.872 | SURGERY | 7.50 | 14.0360688 | 182.4688944 |
| SMART MATERIALS & STRUCTURES | 13 | 1.522 | MATERIALS SCIENCE | 9.19 | 13.9824618 | 181.7720034 |
| DESALINATION | 13 | 1.057 | ENGINEERING | 13.21 | 13.9610674 | 181.4938762 |
| FISH & SHELLFISH IMMUNOLOGY | 10 | 2.149 | MARINE & FRESH WATER BIOLOGY | 8.38 | 18.0178607 | 180.178607 |
| AMERICAN JOURNAL OF OPHTHALMOLOGY | 11 | 2.332 | OPHTHALMOLOGY | 7.01 | 16.3510512 | 179.8615632 |
| PHYSICAL CHEMISTRY CHEMICAL PHYSICS | 10 | 3.295 | CHEMISTRY | 5.37 | 17.70733 | 177.0733 |
| ANTIMICROBIAL AGENTS AND CHEMOTHERAPY | 11 | 4.216 | MICROBIOLOGY; PHARMACOLOGY & PHARMACY | 3.81 | 16.0528416 | 176.5812576 |
| JOURNAL OF STRUCTURAL GEOLOGY | 12 | 1.677 | GEOSCIENCES | 8.74 | 14.6501043 | 175.8012516 |
| TRANSPLANTATION | 11 | 3.568 | TRANSPLANTATION | 4.42 | 15.7719872 | 173.4918592 |
| MICROPOROUS AND MESOPOROUS MATERIALS | 15 | 2.093 | CHEMISTRY | 5.37 | 11.247782 | 168.71673 |
| JOURNAL OF ELECTROANALYTICAL CHEMISTRY | 14 | 2.228 | CHEMISTRY | 5.37 | 11.973272 | 167.625808 |
| ENVIRONMENTAL HEALTH PERSPECTIVES | 7 | 3.929 | PHARMACOLOGY & PHARMACY | 6.08 | 23.8871413 | 167.2099891 |
| REACTIVE & FUNCTIONAL POLYMERS | 8 | 1.582 | ENGINEERING | 13.21 | 20.8953724 | 167.1629792 |
| JOURNAL OF HYDRAULIC ENGINEERING-ASCE | 10 | 1.241 | ENGINEERING | 13.21 | 16.3913762 | 163.913762 |
| JOURNAL OF MEDICINAL | 6 | 5.076 | CHEMISTRY | 5.37 | 27.278424 | 163.670544 |

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| CHEMISTRY | | | | | | |
| JOURNAL OF NEUROLOGY NEUROSURGERY AND PSYCHIATRY | 7 | 3.11 | SURGERY | 7.50 | 23.318469 | 163.229283 |
| MOLECULAR VISION | 8 | 2.9 | OPHTHALMOLOG Y | 7.01 | 20.33364 | 162.66912 |
| HYDROLOGICAL PROCESSES | 9 | 1.457 | WATER RESOURCES | 12.39 | 18.0589322 | 162.5303898 |
| AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE | 9 | 2.013 | TROPICAL MEDICINE | 8.90 | 17.9106675 | 161.1960075 |
| BRITISH JOURNAL OF SURGERY | 6 | 3.58 | SURGERY | 7.50 | 26.842482 | 161.054892 |
| TRENDS IN BIOTECHNOLOGY | 4 | 8.606 | BIOTECHNOLOGY | 4.67 | 40.202929 | 160.811716 |
| BIOCHEMICAL JOURNAL | 13 | 4.278 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 12.2722986 | 159.5398818 |
| INTERNATIONAL JOURNAL OF EPIDEMIOLOGY | 7 | 3.735 | PUBLIC ENVIRONMENT & OCCUPATION HEALTH | 6.08 | 22.7076795 | 158.9537565 |
| JOURNAL OF THE SCIENCE OF FOOD AND AGRICULTURE | 13 | 0.871 | AGRICULTURE SCIENCE | 14.04 | 12.2251818 | 158.9273634 |
| GASTROENTEROLOGY | 3 | 13.092 | GASTROENTEROL OGY & HEPATOLOGY | 4.02 | 52.6049652 | 157.8148956 |
| OPHTHALMOLOGY | 7 | 3.21 | OPHTHALMOLOG Y | 7.01 | 22.507236 | 157.550652 |
| ADVANCED FUNCTIONAL MATERIALS | 3 | 5.679 | MATERIALS SCIENCE | 9.19 | 52.1724051 | 156.5172153 |
| EUROPEAN PHYSICAL JOURNAL C | 8 | 3.486 | PHYSICS | 5.59 | 19.4724474 | 155.7795792 |
| JOURNAL OF CHEMICAL TECHNOLOGY AND BIOTECHNOLOGY | 13 | 0.899 | ENGINEERING | 13.21 | 11.8741718 | 154.3642334 |
| INTERNATIONAL JOURNAL OF SOLIDS AND STRUCTURES | 10 | 1.378 | MECHANICS | 10.99 | 15.1411884 | 151.411884 |
| JOURNAL OF THE EUROPEAN CERAMIC SOCIETY | 11 | 1.483 | MATERIALS SCIENCE | 9.19 | 13.6241727 | 149.8658997 |

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| ENVIRONMENT INTERNATIONAL | 8 | 2.335 | ENVIRONMENTAL SCIENCES | 7.95 | 18.5728235 | 148.582588 |
| NUTRITION | 14 | 1.958 | NUTRITION & DIETETICS | 5.40 | 10.5677176 | 147.9480464 |
| JOURNAL OF HYDROLOGY | 9 | 1.241 | ENGINEERING | 13.21 | 16.3913762 | 147.5223858 |
| COMPOSITES SCIENCE AND TECHNOLOGY | 9 | 1.783 | MATERIALS SCIENCE | 9.19 | 16.3802427 | 147.4221843 |
| PLANT PHYSIOLOGY | 4 | 5.881 | PLANT SCIENCE | 6.25 | 36.7350784 | 146.9403136 |
| JOURNAL OF THE EUROPEAN ACADEMY OF DERMATOLOGY AND VENEREOLOGY | 13 | 1.401 | DERMATOLOGY | 7.93 | 11.1083889 | 144.4090557 |
| PHYTOCHEMISTRY | 11 | 2.101 | PLANT SCIENCE | 6.25 | 13.1236864 | 144.3605504 |
| IEEE TRANSACTIONS ON POWER SYSTEMS | 13 | 0.821 | ENGINEERING | 13.21 | 10.8439322 | 140.9711186 |
| HUMAN REPRODUCTION | 6 | 3.365 | OBSTETRICS & GYNECOLOGY; REPRODUCTIVE BIOLOGY | 6.97 | 23.4624625 | 140.774775 |
| COORDINATION CHEMISTRY REVIEWS | 4 | 6.446 | CHEMISTRY | 5.37 | 34.640804 | 138.563216 |
| AIAA JOURNAL | 12 | 0.87 | ENGINEERING | 13.21 | 11.491134 | 137.893608 |
| PEDIATRIC RESEARCH | 6 | 2.875 | PEDIATRICS | 7.93 | 22.8082375 | 136.849425 |
| ORAL ONCOLOGY | 9 | 2 | DENTISTRY | 7.60 | 15.201 | 136.809 |
| TOXICOLOGY | 10 | 2.691 | TOXICOLOGY | 5.06 | 13.6032741 | 136.032741 |
| JOURNAL OF CELL SCIENCE | 7 | 6.91 | CELL BIOLOGY | 2.81 | 19.388769 | 135.721383 |
| IEEE PHOTONICS TECHNOLOGY LETTERS | 4 | 2.552 | ENGINEERING | 13.21 | 33.7073264 | 134.8293056 |
| UROLOGY | 9 | 2.585 | UROLOGY & NEPHROLOGY | 5.75 | 14.8603895 | 133.7435055 |
| IEEE TRANSACTIONS ON INFORMATION THEORY | 7 | 2.029 | COMPUTER SCIENCE | 9.36 | 18.9944835 | 132.9613845 |
| BRITISH JOURNAL OF PSYCHIATRY | 7 | 4.175 | PSYCHIATRY | 4.54 | 18.9574225 | 132.7019575 |
| DIABETOLOGIA | 7 | 5.583 | ENDOCRINOLOGY & METABOLISM | 3.37 | 18.8219679 | 131.7537753 |
| JOURNAL OF CHEMICAL INFORMATION AND COMPUTER SCIENCES | 5 | 2.81 | COMPUTER SCIENCE | 9.36 | 26.305815 | 131.529075 |
| IEEE TRANSACTIONS ON KNOWLEDGE AND DATA ENGINEERING | 8 | 1.243 | ENGINEERING | 13.21 | 16.4177926 | 131.3423408 |

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| IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS | 6 | 1.649 | ENGINEERING | 13.21 | 21.7803218 | 130.6819308 |
| JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY | 12 | 2.017 | CHEMISTRY | 5.37 | 10.839358 | 130.072296 |
| VETERINARY RECORD | 8 | 1.147 | VETERINARY SCIENCES | 14.13 | 16.2096334 | 129.6770672 |
| BMC BIOINFORMATICS | 5 | 5.423 | BIOTECHNOLOGY | 4.67 | 25.3335445 | 126.6677225 |
| CORROSION SCIENCE | 8 | 1.714 | MATERIALS SCIENCE | 9.19 | 15.7463466 | 125.9707728 |
| ACTA TROPICA | 9 | 1.952 | PARASITOLOGY; TROPICAL MEDICINE | 7.16 | 13.9737824 | 125.7640416 |
| JOURNAL OF THE AMERICAN CERAMIC SOCIETY | 8 | 1.71 | MATERIALS SCIENCE | 9.19 | 15.709599 | 125.676792 |
| BIOLOGY AND FERTILITY OF SOILS | 7 | 1.276 | AGRICULTURE SCIENCE | 14.04 | 17.9096808 | 125.3677656 |
| CRYSTENGCOMM | 7 | 2.596 | CRYSTALLOGRAPHY | 6.86 | 17.7989548 | 124.5926836 |
| ARCHIVES OF OPHTHALMOLOGY | 6 | 2.926 | OPHTHALMOLOGY | 7.01 | 20.5159416 | 123.0956496 |
| JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY | 5 | 3.263 | SURGERY | 7.50 | 24.4656477 | 122.3282385 |
| BULLETIN OF THE WORLD HEALTH ORGANIZATION | 7 | 2.87 | PUBLIC ENVIRONMENT & OCCUPATION HEALTH | 6.08 | 17.448739 | 122.141173 |
| CLINICAL CANCER RESEARCH | 8 | 5.623 | ONCOLOGY | 2.70 | 15.1950329 | 121.5602632 |
| AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE | 5 | 8.123 | RESPIRATORY SYSTEM; CELL BIOLOGY | 2.95 | 23.9587885 | 119.7939425 |
| JOURNAL OF INORGANIC BIOCHEMISTRY | 10 | 2.225 | CHEMISTRY | 5.37 | 11.95715 | 119.5715 |
| INTERNATIONAL JOURNAL OF BIFURCATION AND CHAOS | 8 | 1.019 | MATHEMATICS | 14.62 | 14.8932964 | 119.1463712 |
| PROTEIN SCIENCE | 10 | 4.116 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 11.8075692 | 118.075692 |

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| CURRENT MEDICINAL CHEMISTRY | 5 | 4.382 | CHEMISTRY | 5.37 | 23.548868 | 117.74434 |
| SURGICAL ENDOSCOPY AND INTERVENTIONAL OTHER TECHNIQUES | 8 | 1.962 | SURGERY | 7.50 | 14.7108798 | 117.6870384 |
| AMERICAN JOURNAL OF TRANSPLANTATION | 5 | 5.306 | TRANSPLANTATION | 4.42 | 23.4546424 | 117.273212 |
| ANALYTICAL CHEMISTRY | 4 | 5.45 | CHEMISTRY | 5.37 | 29.2883 | 117.1532 |
| TOXICOLOGY LETTERS | 9 | 2.571 | TOXICOLOGY | 5.06 | 12.9966621 | 116.9699589 |
| CATALYSIS TODAY | 7 | 3.108 | CHEMISTRY | 5.37 | 16.702392 | 116.916744 |
| EPIDEMIOLOGY | 5 | 3.84 | PUBLIC ENVIRONMENT & OCCUPATION HEALTH | 6.08 | 23.346048 | 116.73024 |
| ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES | 2 | 15.231 | ASTRONOMY & ASTROPHYSICS | 3.83 | 58.319499 | 116.638998 |
| IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE | 2 | 4.352 | ENGINEERING | 13.21 | 57.4820864 | 114.9641728 |
| JOURNAL OF POLYMER SCIENCE PART B-POLYMER PHYSICS | 10 | 1.391 | POLYMER SCIENCE | 8.26 | 11.4872953 | 114.872953 |
| JOURNAL OF CLINICAL PATHOLOGY | 8 | 2.619 | PATHOLOGY | 5.48 | 14.3434773 | 114.7478184 |
| GEOPHYSICAL JOURNAL INTERNATIONAL | 9 | 2.014 | GEOCHEMISTRY & GEOPHYSICS | 6.31 | 12.7024994 | 114.3224946 |
| GENETIC RESOURCES AND CROP EVOLUTION | 11 | 1.461 | AGRONOMY; PLANT SCIENCE | 7.09 | 10.3571751 | 113.9289261 |
| CHEMICO-BIOLOGICAL INTERACTIONS | 8 | 2.789 | TOXICOLOGY | 5.06 | 14.0986739 | 112.7893912 |
| IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS I-REGULAR PAPERS | 9 | 0.933 | ENGINEERING | 13.21 | 12.3232506 | 110.9092554 |
| ENERGY & FUELS | 6 | 1.344 | ENERGY & FUELS | 13.74 | 18.4640064 | 110.7840384 |
| SOLID STATE IONICS | 11 | 1.862 | CHEMISTRY | 5.37 | 10.006388 | 110.070268 |
| IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION | 9 | 0.921 | ENGINEERING | 13.21 | 12.1647522 | 109.4827698 |
| JAIDS-JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES | 7 | 4.1 | INFECTIOUS DISEASES | 3.77 | 15.44593 | 108.12151 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|------------------------------------------------------|--------------|---------------|---------------------------|------------|-------------------------|-------------------------------|
| PLASMA SCIENCE & TECHNOLOGY | 10 | 1.931 | PHYSICS | 5.59 | 10.7863729 | 107.863729 |
| TRENDS IN PARASITOLOGY | 3 | 5.497 | PARASITOLOGY | 6.49 | 35.6969683 | 107.0909049 |
| PERITONEAL DIALYSIS INTERNATIONAL | 5 | 3.713 | UROLOGY & NEPHROLOGY | 5.75 | 21.3449231 | 106.7246155 |
| FUEL PROCESSING TECHNOLOGY | 7 | 1.149 | ENGINEERING | 13.21 | 15.1762218 | 106.2335526 |
| JOURNAL OF BACTERIOLOGY | 7 | 4.146 | MICROBIOLOGY | 3.63 | 15.068637 | 105.480459 |
| IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS | 3 | 2.64 | ENGINEERING | 13.21 | 34.869648 | 104.608944 |
| OPTICS LETTERS | 4 | 3.882 | OPTICS | 6.70 | 25.9942602 | 103.9770408 |
| APPLIED PHYSICS B-LASERS AND OPTICS | 7 | 2.215 | OPTICS | 6.70 | 14.8318615 | 103.8230305 |
| IEEE TRANSACTIONS ON EVOLUTIONARY COMPUTATION | 3 | 3.688 | COMPUTER SCIENCE | 9.36 | 34.525212 | 103.575636 |
| PALAEOGEOGRAPHY PALAEOCLIMATOLOGY PALAEOECOLOGY | 6 | 1.974 | GEOSCIENCES | 8.74 | 17.2446666 | 103.4679996 |
| STEM CELLS AND DEVELOPMENT | 4 | 5.5 | BIOTECHNOLOGY | 4.67 | 25.69325 | 102.773 |
| ADVANCES IN POLYMER TECHNOLOGY | 9 | 0.862 | ENGINEERING | 13.21 | 11.3854684 | 102.4692156 |
| VETERINARY PARASITOLOGY | 5 | 1.445 | VETERINARY SCIENCES | 14.13 | 20.421029 | 102.105145 |
| ANALYTICAL BIOCHEMISTRY | 8 | 2.37 | CHEMISTRY | 5.37 | 12.73638 | 101.89104 |
| ULTRASONICS SONOCHEMISTRY | 9 | 2.105 | CHEMISTRY | 5.37 | 11.31227 | 101.81043 |
| OPTICS EXPRESS | 4 | 3.797 | OPTICS | 6.70 | 25.4250917 | 101.7003668 |
| JOURNAL OF LUMINESCENCE | 9 | 1.684 | OPTICS | 6.70 | 11.2762324 | 101.4860916 |
| ELECTROCHEMISTRY COMMUNICATIONS | 6 | 2.926 | ELECTROCHEMISTRY | 5.78 | 16.9073058 | 101.4438348 |
| INTERNATIONAL JOURNAL OF FOOD SCIENCE AND TECHNOLOGY | 9 | 0.97 | FOOD SCIENCE & TECHNOLOGY | 11.60 | 11.254134 | 101.287206 |
| ANNALS OF PHYSICS | 6 | 3.006 | PHYSICS | 5.59 | 16.7912154 | 100.7472924 |
| JOURNAL OF ADHESION AND SCIENCE | 8 | 0.937 | ENGINEERING | 13.21 | 12.3760834 | 99.0086672 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|------------------------------------------------------|--------------|---------------|-------------------------------------------|------------|-------------------------|-------------------------------|
| TECHNOLOGY | | | | | | |
| GASTROINTESTINAL ENDOSCOPY | 7 | 3.483 | GASTROENTEROLOGY & HEPATOLOGY | 4.02 | 13.9950423 | 97.9652961 |
| IEEE SIGNAL PROCESSING MAGAZINE | 2 | 3.707 | ENGINEERING | 13.21 | 48.9627974 | 97.9255948 |
| NEURON | 2 | 14.439 | NEUROSCIENCES | 3.39 | 48.9279954 | 97.8559908 |
| POLYMER DEGRADATION AND STABILITY | 7 | 1.685 | POLYMER SCIENCE | 8.26 | 13.9152355 | 97.4066485 |
| FREE RADICAL BIOLOGY AND MEDICINE | 6 | 5.625 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 16.1364375 | 96.818625 |
| APPLIED ENVIRONMENTAL MICROBIOLOGY | 6 | 3.81 | BIOTECHNOLOGY; MICROBIOLOGY | 4.21 | 16.027908 | 96.167448 |
| DERMATOLOGIC SURGERY | 6 | 2.137 | SURGERY | 7.50 | 16.0230123 | 96.1380738 |
| GENETICS | 8 | 4.138 | GENETICS & HEREDITY | 2.89 | 11.9749582 | 95.7996656 |
| INTERNATIONAL JOURNAL OF CANCER | 8 | 4.416 | ONCOLOGY | 2.70 | 11.9333568 | 95.4668544 |
| MARINE POLLUTION BULLETIN | 7 | 1.619 | MARINE & FRESHWATER BIOLOGY; OCEANOGRAPHY | 8.38 | 13.5741817 | 95.0192719 |
| EYE | 9 | 1.496 | OPHTHALMOLOGY | 7.01 | 10.4893536 | 94.4041824 |
| MOLECULES AND CELLS | 2 | 16.811 | CELL BIOLOGY | 2.81 | 47.1699849 | 94.3399698 |
| INTERNATIONAL JOURNAL OF MACHINE TOOLS & MANUFACTURE | 6 | 1.183 | ENGINEERING | 13.21 | 15.6253006 | 93.7518036 |
| JOURNAL OF THE AMERICAN ACADEMY OF DERMATOLOGY | 5 | 2.358 | DERMATOLOGY | 7.93 | 18.6963462 | 93.481731 |
| APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING | 7 | 1.452 | MATERIALS SCIENCE | 9.19 | 13.3393788 | 93.3756516 |
| NATURE REVIEWS MOLECULAR CELL BIOLOGY | 1 | 33.17 | CELL BIOLOGY | 2.81 | 93.071703 | 93.071703 |
| ARCHIVES OF DISEASE IN CHILDHOOD | 7 | 1.656 | PEDIATRICS | 7.93 | 13.1375448 | 91.9628136 |
| SCIENCE OF THE TOTAL ENVIRONMENT | 6 | 1.925 | ENVIRONMENTAL SCIENCES | 7.95 | 15.3116425 | 91.869855 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|-------------------------------------------------------------|--------------|---------------|------------------------------|------------|-------------------------|-------------------------------|
| JOURNAL OF NEUROSURGERY | 7 | 2.577 | CLINICAL NEUROLOGY | 5.08 | 13.0844598 | 91.5912186 |
| MACROMOLECULAR RESEARCH | 7 | 1.571 | POLYMER SCIENCE | 8.26 | 12.9737893 | 90.8165251 |
| BIOPHYSICAL CHEMISTRY | 8 | 2.102 | CHEMISTRY | 5.37 | 11.296148 | 90.369184 |
| FUEL | 5 | 1.368 | ENGINEERING | 13.21 | 18.0688176 | 90.344088 |
| IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS | 7 | 0.976 | ENGINEERING | 13.21 | 12.8912032 | 90.2384224 |
| JOURNAL OF THE OPTICAL SOCIETY OF AMERICA B-OPTICAL PHYSICS | 5 | 2.649 | OPTICS | 6.70 | 17.7379689 | 88.6898445 |
| ANNALS OF SURGERY | 2 | 5.907 | SURGERY | 7.50 | 44.2900953 | 88.5801906 |
| CRITICAL REVIEWS IN FOOD SCIENCE AND NUTRITION | 5 | 3.278 | NUTRITION & DIETETICS | 5.40 | 17.6920216 | 88.460108 |
| IEEE TRANSACTIONS ON MAGNETICS | 8 | 0.837 | ENGINEERING | 13.21 | 11.0552634 | 88.4421072 |
| BIOCONJUGATE CHEMISTRY | 6 | 3.766 | BIOCHEMICAL RESEARCH METHODS | 3.91 | 14.7246834 | 88.3481004 |
| INTERNATIONAL JOURNAL OF NON-LINEAR MECHANICS | 8 | 1.004 | MECHANICS | 10.99 | 11.0317512 | 88.2540096 |
| AMERICAN JOURNAL OF SURGERY | 5 | 2.349 | SURGERY | 7.50 | 17.6125671 | 88.0628355 |
| JOURNAL OF MEDICAL ENTOMOLOGY | 5 | 1.609 | ENTOMOLOGY | 10.77 | 17.3215286 | 86.607643 |
| MOLECULAR THERAPY | 4 | 5.204 | MEDICINE | 4.15 | 21.5825492 | 86.3301968 |
| CROP SCIENCE | 8 | 0.958 | AGRONOMY | 11.25 | 10.7749134 | 86.1993072 |
| JOURNAL OF HYDROLOGIC ENGINEERING | 8 | 0.809 | ENGINEERING | 13.21 | 10.6854338 | 85.4834704 |
| AGRICULTURE ECOSYSTEMS & ENVIRONMENT | 5 | 1.207 | AGRICULTURE SCIENCE | 14.04 | 16.9412106 | 84.706053 |
| ENERGY CONVERSION AND MANAGEMENT | 8 | 0.794 | THERMODYNAMICS | 13.30 | 10.5626614 | 84.5012912 |
| ATOMIC SPECTROSCOPY | 5 | 3.086 | SPECTROSCOPY | 5.44 | 16.7798164 | 83.899082 |
| IEEE TRANSACTIONS ON NANOTECHNOLOGY | 2 | 3.176 | ENGINEERING | 13.21 | 41.9492432 | 83.8984864 |
| GEOMORPHOLOGY | 6 | 1.591 | GEOSCIENCES | 8.74 | 13.8988169 | 83.3929014 |
| ANAESTHESIA | 6 | 2.163 | ANESTHESIOLOGY | 6.41 | 13.8589899 | 83.1539394 |
| ARTERIOSCLEROSIS THROMBOSIS AND VASCULAR BIOLOGY | 3 | 7.432 | HEMATOLOGY | 3.69 | 27.4411736 | 82.3235208 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|-----------------------------------------------------------------------------|--------------|---------------|-----------------------------|------------|-------------------------|-------------------------------|
| HYPERTENSION | 4 | 5.342 | PERIPHERAL VASCULAR DISEASE | 3.83 | 20.4796254 | 81.9185016 |
| VETERINARY MICROBIOLOGY | 3 | 1.93 | VETERINARY SCIENCES | 14.13 | 27.275146 | 81.825438 |
| IEEE TRANSACTIONS ON ULTRASONICS FERROELECTRICS AND FREQUENCY CONTROL | 4 | 1.545 | ENGINEERING | 13.21 | 20.406669 | 81.626676 |
| IEEE TRANSACTIONS ON AUTOMATIC CONTROL | 4 | 1.545 | ENGINEERING | 13.21 | 20.406669 | 81.626676 |
| IEEE TRANSACTIONS ON NEURAL NETWORKS | 4 | 2.178 | COMPUTER SCIENCE | 9.36 | 20.389347 | 81.557388 |
| SURFACE SCIENCE | 7 | 2.168 | CHEMISTRY | 5.37 | 11.650832 | 81.555824 |
| JOURNAL OF FLUID MECHANICS | 4 | 1.853 | MECHANICS | 10.99 | 20.3603934 | 81.4415736 |
| TECTONOPHYSICS | 7 | 1.838 | GEOCHEMISTRY & GEOPHYSICS | 6.31 | 11.5924498 | 81.1471486 |
| BJOG-AN INTERNATIONAL JOURNAL OF OBSTETRICS AND GYNAECOLOGY | 5 | 2.326 | OBSTETRICS & GYNECOLOGY | 6.97 | 16.218035 | 81.090175 |
| JOURNAL OF THE OPTICAL SOCIETY OF AMERICA A-OPTICS IMAGE SCIENCE AND VISION | 6 | 2.012 | OPTICS | 6.70 | 13.4725532 | 80.8353192 |
| PLOS BIOLOGY | 1 | 13.868 | BIOLOGY | 5.82 | 80.7686188 | 80.7686188 |
| JOURNAL OF FOOD SCIENCE | 7 | 0.99 | FOOD SCIENCE & TECHNOLOGY | 11.60 | 11.486178 | 80.403246 |
| IEEE-ACM TRANSACTIONS ON NETWORKING | 3 | 2.851 | COMPUTER SCIENCE | 9.36 | 26.6896365 | 80.0689095 |
| PLANT JOURNAL | 2 | 6.367 | PLANT SCIENCE | 6.25 | 39.7708288 | 79.5416576 |
| REPRODUCTION | 7 | 2.181 | REPRODUCTIVE BIOLOGY | 5.19 | 11.3261511 | 79.2830577 |
| DNA REPAIR | 4 | 3.92 | TOXICOLOGY | 5.06 | 19.815992 | 79.263968 |
| IEEE SIGNAL PROCESSING LETTERS | 6 | 0.995 | ENGINEERING | 13.21 | 13.142159 | 78.852954 |
| ANESTHESIOLOGY | 3 | 4.055 | ANESTHESIOLOGY | 6.41 | 25.9816015 | 77.9448045 |
| JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY | 2 | 7.205 | ALLERGY & ASTHMA | 5.35 | 38.5287375 | 77.057475 |
| IEEE TRANSACTIONS ON COMMUNICATIONS | 4 | 1.455 | ENGINEERING | 13.21 | 19.217931 | 76.871724 |
| PARASITOLOGY | 7 | 1.685 | PARASITOLOGY | 6.49 | 10.9422215 | 76.5955505 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|---------------------------------------------------|--------------|---------------|-------------------------------------------|------------|-------------------------|-------------------------------|
| PEST MANAGEMENT SCIENCE | 6 | 1.184 | ENTOMOLOGY | 10.77 | 12.7462336 | 76.4774016 |
| JOURNAL OF RAMAN SPECTROSCOPY | 7 | 1.996 | SPECTROSCOPY | 5.44 | 10.8530504 | 75.9713528 |
| ARCHIVES OF DERMATOLOGY | 3 | 3.187 | DERMATOLOGY | 7.93 | 25.2694043 | 75.8082129 |
| EUROPEAN FOOD RESEARCH AND TECHNOLOGY | 6 | 1.084 | FOOD SCIENCE & TECHNOLOGY | 11.60 | 12.5767848 | 75.4607088 |
| GREEN CHEMISTRY | 4 | 3.503 | CHEMISTRY | 5.37 | 18.825122 | 75.300488 |
| SLEEP | 3 | 4.94 | CLINICAL NEUROLOGY | 5.08 | 25.082356 | 75.247068 |
| INFECTION AND IMMUNITY | 7 | 4.033 | IMMUNOLOGY | 2.66 | 10.719714 | 75.037998 |
| INTERNATIONAL JOURNAL OF MASS SPECTROMETRY | 6 | 2.235 | PHYSICS | 5.59 | 12.4844865 | 74.906919 |
| JOURNAL OF THROMBOSIS AND HAEMOSTASIS | 4 | 4.831 | PERIPHERAL VASCULAR DISEASE | 3.83 | 18.5206047 | 74.0824188 |
| TRIBOLOGY LETTERS | 4 | 1.4 | ENGINEERING | 13.21 | 18.49148 | 73.96592 |
| TRENDS IN PLANT SCIENCE | 1 | 11.833 | PLANT SCIENCE | 6.25 | 73.9136512 | 73.9136512 |
| JOURNAL OF AEROSOL SCIENCE | 3 | 1.861 | ENGINEERING | 13.21 | 24.5804602 | 73.7413806 |
| ANNUAL REVIEW OF FLUID MECHANICS | 1 | 6.694 | MECHANICS | 10.99 | 73.5523332 | 73.5523332 |
| CONTRIBUTIONS TO MINERALOGY AND PETROLOGY | 3 | 2.721 | MINERALOGY | 8.95 | 24.3466917 | 73.0400751 |
| JOURNAL OF BONE AND JOINT SURGERY-AMERICAN VOLUME | 5 | 1.946 | SURGERY | 7.50 | 14.5909134 | 72.954567 |
| EUROPEAN JOURNAL OF CARDIO-THORACIC SURGERY | 6 | 1.616 | SURGERY | 7.50 | 12.1166064 | 72.6996384 |
| CONTRACEPTION | 7 | 1.488 | OBSTETRICS & GYNECOLOGY | 6.97 | 10.37508 | 72.62556 |
| THERIOGENOLOGY | 4 | 1.64 | REPRODUCTIVE BIOLOGY; VETERINARY SCIENCES | 11.03 | 18.093464 | 72.373856 |
| TRIBOLOGY INTERNATIONAL | 6 | 0.913 | ENGINEERING | 13.21 | 12.0590866 | 72.3545196 |
| ADVANCES IN AGRONOMY, | 2 | 3.212 | AGRONOMY | 11.25 | 36.1263276 | 72.2526552 |

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|-------------------------------------------------------|--------------|---------------|------------------------------------|------------|-------------------------|-------------------------------|
| MATERIALS TRANSACTIONS | 7 | 1.12 | MATERIALS SCIENCE | 9.19 | 10.289328 | 72.025296 |
| JOURNAL OF METAMORPHIC GEOLOGY | 3 | 2.746 | GEOSCIENCES | 8.74 | 23.9887814 | 71.9663442 |
| AMERICAN JOURNAL OF HUMAN GENETICS | 2 | 12.34 | GENETICS & HEREDITY | 2.89 | 35.710726 | 71.421452 |
| NEOPLASIA | 6 | 4.377 | ONCOLOGY | 2.70 | 11.8279671 | 70.9678026 |
| ORGANIC BIOMOLECULAR CHEMISTRY | 6 | 2.194 | CHEMISTRY | 5.37 | 11.790556 | 70.743336 |
| ANNALS OF APPLIED BIOLOGY | 5 | 1.006 | AGRICULTURE SCIENCE | 14.04 | 14.1200148 | 70.600074 |
| PLANT CELL | 1 | 11.295 | PLANT SCIENCE | 6.25 | 70.553088 | 70.553088 |
| JOURNAL OF IRRIGATION AND DRAINAGE ENGINEERING-ASCE | 6 | 0.879 | ENGINEERING | 13.21 | 11.6100078 | 69.6600468 |
| IEEE TRANSACTIONS ON SIGNAL PROCESSING | 3 | 1.755 | ENGINEERING | 13.21 | 23.180391 | 69.541173 |
| SOIL & TILLAGE RESEARCH | 4 | 1.237 | AGRICULTURE SCIENCE | 14.04 | 17.3622846 | 69.4491384 |
| LITHOS | 3 | 2.567 | MINEROLOGY | 8.95 | 22.9687459 | 68.9062377 |
| BIPOLAR DISORDERS | 5 | 4.065 | NEUROSCIENCES | 3.39 | 13.774659 | 68.873295 |
| CHEMICAL ENGINEERING AND PROCESSING | 5 | 1.033 | ENGINEERING | 13.21 | 13.6440706 | 68.220353 |
| THORAX | 3 | 5.04 | RESPIRATORY SYSTEM | 4.50 | 22.66992 | 68.00976 |
| GEOMICROBIOLOGY JOURNAL | 3 | 2.58 | GEOSCIENCES | 8.74 | 22.538622 | 67.615866 |
| IEEE ELECTRON DEVICE LETTERS | 2 | 2.538 | ENGINEERING | 13.21 | 33.5224116 | 67.0448232 |
| NUCLEAR FUSION | 5 | 2.398 | PHYSICS | 5.59 | 13.3949882 | 66.974941 |
| ANNALS OF AGRICULTURAL AND ENVIRONMENTAL MEDICINE | 3 | 1.59 | AGRICULTURE SCIENCE | 14.04 | 22.316922 | 66.950766 |
| RADIO SCIENCE | 5 | 1.007 | TELECOMMUNICATIONS; REMOTE SENSING | 13.29 | 13.3802104 | 66.901052 |
| COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING | 4 | 1.263 | ENGINEERING | 13.21 | 16.6819566 | 66.7278264 |
| JOURNAL OF APPLIED | 6 | 1.012 | MECHANICS | 10.99 | 11.1196536 | 66.7179216 |

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| MECHANICS-TRANSACTIONS OF THE ASME | | | | | | |
| HEAD AND NECK-JOURNAL FOR THE SCIENCES AND SPECIALTIES OF THE HEAD AND NECK | 4 | 2.22 | SURGERY | 7.50 | 16.645338 | 66.581352 |
| JOURNAL OF FISH DISEASES | 5 | 1.587 | MARINE & FRESH WATER BIOLOGY | 8.38 | 13.3058841 | 66.5294205 |
| FERTILITY AND STERILITY | 3 | 3.17 | OBSTETRICS & GYNECOLOGY; REPRODUCTIVE BIOLOGY | 6.97 | 22.102825 | 66.308475 |
| JOURNAL OF CLINICAL PSYCHIATRY | 3 | 4.806 | PSYCHIATRY | 4.54 | 21.8226042 | 65.4678126 |
| IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY | 5 | 0.984 | ENGINEERING | 13.21 | 12.9968688 | 64.984344 |
| ENDOSCOPY | 4 | 4.034 | GASTROENTEROLOGY & HEPATOLOGY | 4.02 | 16.2090154 | 64.8360616 |
| AIDS | 3 | 5.893 | INFECTIOUS DISEASES; VIROLOGY | 3.63 | 21.4186978 | 64.2560934 |
| FOREST ECOLOGY AND MANAGEMENT | 4 | 1.522 | FORESTRY SCIENCE | 10.55 | 16.054817 | 64.219268 |
| DERMATOLOGY | 5 | 1.619 | DERMATOLOGY | 7.93 | 12.8368891 | 64.1844455 |
| MYCOSES | 5 | 1.619 | DERMATOLOGY | 7.93 | 12.8368891 | 64.1844455 |
| MICROBES AND INFECTION | 5 | 3.753 | VIROLOGY | 3.41 | 12.7996065 | 63.9980325 |
| ELECTRONICS LETTERS | 5 | 0.968 | ENGINEERING | 13.21 | 12.7855376 | 63.927688 |
| ENVIRONMENTAL AND MOLECULAR MUTAGENESIS | 4 | 2 | ENVIRONMENTAL SCIENCES | 7.95 | 15.9082 | 63.6328 |
| IEEE TRANSACTIONS ON POWER ELECTRONICS | 4 | 1.202 | ENGINEERING | 13.21 | 15.8762564 | 63.5050256 |
| SCIENTOMETRICS | 6 | 1.12 | COMPUTER SCIENCE | 9.36 | 10.48488 | 62.90928 |
| NEPHROLOGY DIALYSIS TRANSPLANTATION | 5 | 2.84 | TRANSPLANTATION | 4.42 | 12.553936 | 62.76968 |
| BIOTECHNOLOGY AND BIOENGINEERING | 6 | 2.216 | BIOTECHNOLOGY | 4.67 | 10.352044 | 62.112264 |
| MICROBIOLOGY AND MOLECULAR BIOLOGY REVIEWS | 1 | 17.037 | MICROBIOLOGY | 3.63 | 61.9209765 | 61.9209765 |

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|------------------------------------------------------------|--------------|---------------|---------------------------------------------|------------|-------------------------|-------------------------------|
| ALCOHOLISM-CLINICAL AND EXPERIMENTAL RESEARCH | 5 | 2.508 | SUBSTANCE ABUSE | 4.92 | 12.3478872 | 61.739436 |
| IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES | 3 | 1.543 | ENGINEERING | 13.21 | 20.3802526 | 61.1407578 |
| LANCET ONCOLOGY | 3 | 7.47 | ONCOLOGY | 2.70 | 20.186181 | 60.558543 |
| ENERGY POLICY | 5 | 0.87 | ENERGY & FUELS | 13.74 | 11.952147 | 59.760735 |
| AMERICAN JOURNAL OF PUBLIC HEALTH | 3 | 3.241 | PUBLIC ENVIRONMENT & OCCUPATION HEALTH | 6.08 | 19.7043077 | 59.1129231 |
| MEASUREMENT SCIENCE & TECHNOLOGY | 4 | 1.118 | ENGINEERING | 13.21 | 14.7667676 | 59.0670704 |
| JOURNAL OF CLINICAL ENDOCRINOLOGY AND METABOLISM | 3 | 5.778 | ENDOCRINOLOGY & METABOLISM | 3.37 | 19.4793714 | 58.4381142 |
| CMES-COMPUTER MODELING IN ENGINEERING & SCIENCES | 2 | 2.21 | ENGINEERING | 13.21 | 29.190122 | 58.380244 |
| RHEUMATOLOGY | 3 | 4.102 | RHEUMATOLOGY | 4.72 | 19.3589788 | 58.0769364 |
| QUATERNARY SCIENCE REVIEWS | 2 | 3.323 | GEOSCIENCES | 8.74 | 29.0293957 | 58.0587914 |
| JOURNAL OF HEPATOLOGY | 3 | 4.816 | GASTROENTEROLOGY & HEPATOLOGY | 4.02 | 19.3511696 | 58.0535088 |
| CHEMPHYSICHEM | 3 | 3.596 | CHEMISTRY | 5.37 | 19.324904 | 57.974712 |
| IEEE WIRELESS COMMUNICATIONS | 2 | 2.189 | ENGINEERING | 13.21 | 28.9127498 | 57.8254996 |
| IEEE TRANSACTIONS ON DIELECTRICS AND ELECTRICAL INSULATION | 5 | 0.872 | ENGINEERING | 13.21 | 11.5175504 | 57.587752 |
| JOURNAL OF NUCLEAR MEDICINE | 2 | 5.362 | RADIOLOGY | 5.30 | 28.434686 | 56.869372 |
| MEDICAL & BIOLOGICAL ENGINEERING & COMPUTING | 4 | 1.07 | ENGINEERING | 13.21 | 14.132774 | 56.531096 |
| PLACENTA | 3 | 2.683 | OBSTETRICS & GYNECOLOGY; RESPIRATORY SYSTEM | 6.97 | 18.7072175 | 56.1216525 |
| NEUROBIOLOGY OF AGING | 3 | 5.516 | NEUROSCIENCES | 3.39 | 18.6915176 | 56.0745528 |
| NEUROPATHOLOGY AND APPLIED NEUROBIOLOGY | 3 | 3.402 | PATHOLOGY | 5.48 | 18.6317334 | 55.8952002 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|-----------------------------------------------------------------------|--------------|---------------|----------------------------------------|------------|-------------------------|-------------------------------|
| JOURNAL OF ENVIRONMENTAL ENGINEERING-ASCE | 5 | 0.845 | ENGINEERING | 13.21 | 11.160929 | 55.804645 |
| BIOSENSORS & BIOELECTRONICS | 5 | 3.251 | BIOPHYSICS | 3.42 | 11.1102925 | 55.5514625 |
| FUNGAL DIVERSITY | 3 | 1.889 | MYCOLOGY | 9.76 | 18.4453294 | 55.3359882 |
| JOURNAL OF ECONOMIC ENTOMOLOGY | 4 | 1.283 | ENTOMOLOGY | 10.77 | 13.8120082 | 55.2480328 |
| CANCER EPIDEMIOLOGY & BIOMARKERS PREVENTION | 2 | 4.5 | PUBLIC ENVIRONMENT & OCCUPATION HEALTH | 6.08 | 27.35865 | 54.7173 |
| ANNALS OF INTERNAL MEDICINE | 1 | 13.114 | MEDICINE | 4.15 | 54.3876922 | 54.3876922 |
| JOURNAL OF INVERTEBRATE PATHOLOGY | 5 | 1.06 | ZOOLOGY | 10.20 | 10.81518 | 54.0759 |
| TOPICS IN CATALYSIS | 4 | 2.493 | CHEMISTRY | 5.37 | 13.397382 | 53.589528 |
| JOURNAL OF NEUROSCIENCE | 2 | 7.907 | NEUROSCIENCES | 3.39 | 26.7936602 | 53.5873204 |
| JOURNAL OF EXPERIMENTAL MARINE BIOLOGY AND ECOLOGY | 4 | 1.588 | MARINE & FRESHWATER BIOLOGY | 8.38 | 13.3142684 | 53.2570736 |
| JOURNAL OF CLINICAL ONCOLOGY | 2 | 9.835 | ONCOLOGY | 2.70 | 26.5771205 | 53.154241 |
| IEEE TRANSACTIONS ON AEROSPACE AND ELECTRONIC SYSTEMS | 4 | 1.005 | ENGINEERING | 13.21 | 13.274241 | 53.096964 |
| DISEASES OF AQUATIC ORGANISMS | 4 | 1.583 | MARINE & FRESHWATER BIOLOGY | 8.38 | 13.2723469 | 53.0893876 |
| ELECTROCHEMICAL AND SOLID STATE LETTERS | 4 | 2.271 | ELECTROCHEMISTRY | 5.78 | 13.1225193 | 52.4900772 |
| COMPUTATIONAL MATERIALS SCIENCE | 4 | 1.424 | MATERIALS SCIENCE | 9.19 | 13.0821456 | 52.3285824 |
| MACROMOLECULAR THEORY AND SIMULATIONS | 4 | 1.565 | POLYMER SCIENCE | 8.26 | 12.9242395 | 51.696958 |
| JOURNAL OF ELECTROCERAMICS | 5 | 1.124 | MATERIALS SCIENCE | 9.19 | 10.3260756 | 51.630378 |
| MUTATION RESEARCH-FUNDAMENTAL AND MOLECULAR MECHANISMS OF MUTAGENESIS | 4 | 3.73 | GENETICS & HEREDITY; TOXICOLOGY | 3.45 | 12.876706 | 51.506824 |
| JOURNAL OF PHYSICAL CHEMISTRY | 2 | 4.788 | CHEMISTRY | 5.37 | 25.730712 | 51.461424 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
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| AND CHEMICAL REFERENCE DATA | | | | | | |
| REMOTE SENSING OF ENVIRONMENT | 2 | 3.185 | REMOTE SENSING | 8.04 | 25.615044 | 51.230088 |
| JOURNAL OF STRUCTURAL ENGINEERING-ASCE | 5 | 0.774 | ENGINEERING | 13.21 | 10.2231468 | 51.115734 |
| GEOLOGY | 2 | 2.925 | GEOSCIENCES | 8.74 | 25.5525075 | 51.105015 |
| IBM JOURNAL OF RESEARCH AND DEVELOPMENT | 5 | 2.266 | MULTIDISCIPLINARY SCIENCE | 4.50 | 10.1877094 | 50.938547 |
| MATERIALS SCIENCE & ENGINEERING C-BIOMIMETIC AND SUPRAMOLECULAR SYSTEMS | 4 | 1.383 | MATERIALS SCIENCE | 9.19 | 12.7054827 | 50.8219308 |
| JOURNAL OF ANDROLOGY | 3 | 2.394 | ANDROLOGY | 7.06 | 16.9114554 | 50.7343662 |
| AMERICAN JOURNAL OF ROENTGENOLOGY | 4 | 2.384 | RADIOLOGY | 5.30 | 12.642352 | 50.569408 |
| BRITISH JOURNAL OF CANCER | 5 | 3.742 | ONCOLOGY | 2.70 | 10.1120066 | 50.560033 |
| JOURNAL OF FISH BIOLOGY | 4 | 1.198 | FISHERIES | 10.54 | 12.6277586 | 50.5110344 |
| JOURNAL OF BIOMECHANICS | 2 | 1.911 | ENGINEERING | 13.21 | 25.2408702 | 50.4817404 |
| ADVANCES IN ENVIRONMENTAL RESEARCH | 3 | 1.27 | ENGINEERING | 13.21 | 16.774414 | 50.323242 |
| ACTA DERMATO- VENEREOLOGICA | 4 | 1.585 | DERMATOLOGY | 7.93 | 12.5673065 | 50.269226 |
| WATER RESOURCES MANAGEMENT | 5 | 0.76 | ENGINEERING | 13.21 | 10.038232 | 50.19116 |
| HYDROLOGICAL SCIENCES JOURNAL-JOURNAL DES SCIENCES HYDROLOGIQUES | 3 | 1.326 | WATER RESOURCES | 12.39 | 16.4352396 | 49.3057188 |
| CLINICAL AND EXPERIMENTAL ALLERGY | 3 | 3.069 | ALLERGY & ASTHMA | 5.35 | 16.4114775 | 49.2344325 |
| MODELLING AND SIMULATION IN MATERIALS SCIENCE AND ENGINEERING | 4 | 1.336 | MATERIALS SCIENCE | 9.19 | 12.2736984 | 49.0947936 |
| LIMNOLOGY AND OCEANOGRAPHY | 2 | 3.024 | OCEANOGRAPHY | 8.11 | 24.5376432 | 49.0752864 |
| TRANSACTIONS OF THE AMERICAN MATHEMATICAL SOCIETY | 4 | 0.839 | MATHEMATICS | 14.62 | 12.2624884 | 49.0499536 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|----------------------------------------------------------------|--------------|---------------|----------------------------------|------------|-------------------------|-------------------------------|
| VETERINARY JOURNAL | 3 | 1.156 | VETERINARY SCIENCES | 14.13 | 16.3368232 | 49.0104696 |
| RESEARCH IN VETERINARY SCIENCE | 3 | 1.153 | VETERINARY SCIENCES | 14.13 | 16.2944266 | 48.8832798 |
| JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART A | 3 | 1.229 | ENGINEERING | 13.21 | 16.2328778 | 48.6986334 |
| IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY | 2 | 1.842 | ENGINEERING | 13.21 | 24.3295044 | 48.6590088 |
| IEEE JOURNAL OF QUANTUM ELECTRONICS | 1 | 3.675 | ENGINEERING | 13.21 | 48.540135 | 48.540135 |
| MOLECULAR REPRODUCTION AND DEVELOPMENT | 4 | 2.331 | REPRODUCTION BIOLOGY | 5.19 | 12.1051161 | 48.4204644 |
| MICROSCOPY RESEARCH AND TECHNIQUE | 3 | 2.609 | ANATOMY | 6.14 | 16.0276088 | 48.0828264 |
| IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING | 2 | 1.815 | ENGINEERING | 13.21 | 23.972883 | 47.945766 |
| AMERICAN MINERALOGIST | 3 | 1.785 | MINERALOGY | 8.95 | 15.9716445 | 47.9149335 |
| DIABETES CARE | 2 | 7.071 | ENDOCRINOLOGY & METABOLISM | 3.37 | 23.8384623 | 47.6769246 |
| JOURNAL OF LEUKOCYTE BIOLOGY | 4 | 4.224 | CELL BIOLOGY | 2.81 | 11.8521216 | 47.4084864 |
| IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING | 4 | 1.467 | REMOTE SENSING | 8.04 | 11.7982008 | 47.1928032 |
| GLYCOBIOLOGY | 4 | 4.102 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 11.7674074 | 47.0696296 |
| JOURNAL OF MAGNETIC RESONANCE IMAGING | 3 | 2.935 | RADIOLOGY | 5.30 | 15.564305 | 46.692915 |
| CATENA | 4 | 0.929 | WATER RESOURCES | 12.39 | 11.5145834 | 46.0583336 |
| ANNUAL REVIEW OF BIOPHYSICS AND BIOMOLECULAR STRUCTURE | 1 | 13.462 | BIOPHYSICS | 3.42 | 46.006385 | 46.006385 |
| NUTRIENT CYCLING IN AGROECOSYSTEMS | 4 | 0.819 | AGRICULTURE SCIENCE | 14.04 | 11.4953202 | 45.9812808 |
| IEEE TRANSACTIONS ON NUCLEAR SCIENCE | 2 | 1.737 | ENGINEERING | 13.21 | 22.9426434 | 45.8852868 |
| INTERNATIONAL JOURNAL | 2 | 4.297 | RADIOLOGY | 5.30 | 22.786991 | 45.573982 |

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|------------------------------------------------------------|--------------|---------------|--------------------------------|------------|-------------------------|-------------------------------|
| OF RADIATION ONCOLOGY BIOLOGY PHYSICS | | | | | | |
| COMPOSITES PART A- APPLIED SCIENCE AND MANUFACTURING | 3 | 1.145 | ENGINEERING | 13.21 | 15.123389 | 45.370167 |
| ULTRASOUND IN OBSTETRICS & GYNECOLOGY | 3 | 2.167 | OBSTETRICS & GYNECOLOGY | 6.97 | 15.1094075 | 45.3282225 |
| INTERNATIONAL JOURNAL OF RADIATION BIOLOGY | 4 | 2.136 | RADIOLOGY | 5.30 | 11.327208 | 45.308832 |
| MOLECULAR BREEDING | 4 | 2.209 | HORTICULTURE; BIOTECHNOLOGY | 5.13 | 11.3235549 | 45.2942196 |
| IEEE TRANSACTIONS ON COMPUTERS | 2 | 2.419 | COMPUTER SCIENCE | 9.36 | 22.6454685 | 45.290937 |
| CRITICAL REVIEWS IN BIOTECHNOLOGY | 3 | 3.227 | BIOTECHNOLOGY | 4.67 | 15.0749305 | 45.2247915 |
| JOURNAL OF MICROMECHANICS AND MICROENGINEERING | 2 | 2.048 | MECHANICS | 10.99 | 22.5030144 | 45.0060288 |
| EXPERIMENTS IN FLUIDS | 4 | 0.851 | ENGINEERING | 13.21 | 11.2401782 | 44.9607128 |
| ASTRONOMICAL JOURNAL | 2 | 5.841 | ASTRONOMY & ASTROPHYSICS | 3.83 | 22.365189 | 44.730378 |
| RENEWABLE & SUSTAINABLE ENERGY REVIEWS | 2 | 1.614 | ENERGY & FUELS | 13.74 | 22.1732934 | 44.3465868 |
| INTERNATIONAL JOURNAL OF MINERAL PROCESSING | 4 | 0.839 | ENGINEERING | 13.21 | 11.0816798 | 44.3267192 |
| NEURAL COMPUTATION | 2 | 2.364 | COMPUTER SCIENCE | 9.36 | 22.130586 | 44.261172 |
| E-POLYMERS | 4 | 1.336 | POLYMER SCIENCE | 8.26 | 11.0330888 | 44.1323552 |
| CRITICAL REVIEWS IN PLANT SCIENCES | 2 | 3.525 | PLANT SCIENCE | 6.25 | 22.01856 | 44.03712 |
| JOURNAL OF GENERAL VIROLOGY | 4 | 3.221 | VIROLOGY | 3.41 | 10.9852205 | 43.940882 |
| ENVIRONMENTAL CONSERVATION | 3 | 1.841 | ENVIRONMENTAL SCIENCES | 7.95 | 14.6434981 | 43.9304943 |
| WORLD JOURNAL OF SURGERY | 3 | 1.952 | SURGERY | 7.50 | 14.6359008 | 43.9077024 |
| MOLECULAR AND CELLULAR BIOLOGY | 2 | 7.822 | CELL BIOLOGY | 2.81 | 21.9477498 | 43.8954996 |
| BRITISH JOURNAL OF NUTRITION | 3 | 2.71 | NUTRITION & DIETETICS | 5.40 | 14.626412 | 43.879236 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
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| JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART B-APPLIED BIOMATERIALS | 3 | 1.105 | ENGINEERING | 13.21 | 14.595061 | 43.785183 |
| GYNECOLOGIC ONCOLOGY | 3 | 2.083 | OBSTETRICS & GYNECOLOGY; ONCOLOGY | 6.97 | 14.5237175 | 43.5711525 |
| MOLECULAR MICROBIOLOGY | 2 | 5.959 | MICROBIOLOGY | 3.63 | 21.6579855 | 43.315971 |
| PLANT AND SOIL | 2 | 1.542 | AGRICULTURE SCIENCE | 14.04 | 21.6432036 | 43.2864072 |
| ENGINEERING FRACTURE MECHANICS | 3 | 1.299 | MECHANICS | 10.99 | 14.2731522 | 42.8194566 |
| JOURNAL OF STRUCTURAL BIOLOGY | 4 | 3.132 | BIOPHYSICS | 3.42 | 10.70361 | 42.81444 |
| ENGINEERING STRUCTURES | 4 | 0.809 | ENGINEERING | 13.21 | 10.6854338 | 42.7417352 |
| LAND DEGRADATION & DEVELOPMENT | 3 | 1.013 | AGRICULTURE SCIENCE | 14.04 | 14.2182654 | 42.6547962 |
| ARCHIVES OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY | 4 | 1.612 | ENVIRONMENTAL SCIENCES; TOXICOLOGY | 6.61 | 10.6562872 | 42.6251488 |
| REPRODUCTIVE TOXICOLOGY | 3 | 1.676 | REPRODUCTIVE BIOLOGY; TOXICOLOGY | 8.47 | 14.1937088 | 42.5811264 |
| EMERGING INFECTIOUS DISEASES | 2 | 5.643 | INFECTIOUS DISEASES | 3.77 | 21.2588739 | 42.5177478 |
| NATURAL PRODUCT REPORTS | 1 | 7.89 | CHEMISTRY | 5.37 | 42.40086 | 42.40086 |
| LANCET NEUROLOGY | 1 | 8.34 | CLINICAL NEUROLOGY | 5.08 | 42.345516 | 42.345516 |
| MOLECULAR BIOLOGY OF THE CELL | 2 | 7.517 | CELL BIOLOGY | 2.81 | 21.0919503 | 42.1839006 |
| JOURNAL OF FUNCTIONAL ANALYSIS | 3 | 0.962 | MATHEMATICS | 14.62 | 14.0602072 | 42.1806216 |
| SOIL SCIENCE SOCIETY OF AMERICA JOURNAL | 2 | 1.501 | AGRICULTURE SCIENCE | 14.04 | 21.0677358 | 42.1354716 |
| VIROLOGY | 4 | 3.071 | VIROLOGY | 3.41 | 10.4736455 | 41.894582 |
| MATHEMATICAL RESEARCH LETTERS | 4 | 0.716 | MATHEMATICS | 14.62 | 10.4647696 | 41.8590784 |
| CHEMICAL ENGINEERING & TECHNOLOGY | 4 | 0.791 | ENGINEERING | 13.21 | 10.4476862 | 41.7907448 |

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| JOURNAL OF MASS SPECTROMETRY | 4 | 3.056 | BIOPHYSICS | 3.42 | 10.44388 | 41.77552 |
| COLORATION TECHNOLOGY | 4 | 0.79 | ENGINEERING | 13.21 | 10.434478 | 41.737912 |
| JOURNAL OF NON-NEWTONIAN FLUID MECHANICS | 4 | 1.862 | PHYSICS | 5.59 | 10.4009458 | 41.6037832 |
| ACTA PSYCHIATRICA SCANDINAVICA | 4 | 2.288 | PSYCHIATRY | 4.54 | 10.3891216 | 41.5564864 |
| INTERNATIONAL JOURNAL OF BIOCHEMISTRY & CELL BIOLOGY | 4 | 3.578 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 10.2642086 | 41.0568344 |
| CURRENT APPLIED PHYSICS | 4 | 1.117 | MATERIALS SCIENCE | 9.19 | 10.2617673 | 41.0470692 |
| EUROPEAN PHYSICAL JOURNAL E | 4 | 1.903 | CHEMISTRY | 5.37 | 10.226722 | 40.906888 |
| MOLECULAR BIOLOGY AND EVOLUTION | 2 | 6.355 | EVOLUTIONARY BIOLOGY | 3.21 | 20.388111 | 40.776222 |
| WIRELESS ON-DEMAND NETWORK SYSTEMS, PROCEEDINGS | 2 | 1.35 | TELECOMUNICATI ON | 15.00 | 20.254995 | 40.50999 |
| POLYMER ENGINEERING AND SCIENCE | 4 | 1.224 | POLYMER SCIENCE | 8.26 | 10.1081592 | 40.4326368 |
| ADVANCES IN ATOMIC MOLECULAR, AND OPTICAL PHYSICS, VOL 49 | 1 | 7.214 | PHYSICS | 5.59 | 40.2966826 | 40.2966826 |
| BIOCHEMICAL PHARMACOLOGY | 3 | 3.436 | PHARMACOLOGY & PHARMACY | 3.89 | 13.3722248 | 40.1166744 |
| MACROMOLECULAR MATERIALS AND ENGINEERING | 3 | 1.452 | MATERIALS SCIENCE | 9.19 | 13.3393788 | 40.0181364 |
| CRITICAL CARE MEDICINE | 2 | 4.182 | CRITICAL CARE MEDICINE | 4.78 | 20.0075244 | 40.0150488 |
| EXPERIMENTAL EYE RESEARCH | 2 | 2.846 | OPHTHALMOLOG Y | 7.01 | 19.9550136 | 39.9100272 |
| BOUNDARY-LAYER METEOROLOGY | 3 | 1.988 | METEOROLOGY & ATMOSPHERIC SCIENCES | 6.67 | 13.2603576 | 39.7810728 |
| INDUSTRIAL MANAGEMENT & DATA SYSTEMS | 2 | 1.504 | ENGINEERING | 13.21 | 19.8651328 | 39.7302656 |
| REVUE SCIENTIFIQUE ET TECHNIQUE DE L OFFICE | 3 | 0.925 | VETERINARY SCIENCES | 14.13 | 13.072285 | 39.216855 |

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| INTERNATIONAL DES EPIZOOTIES | | | | | | |
| AVIAN PATHOLOGY | 2 | 1.387 | VETERINARY SCIENCES | 14.13 | 19.6013614 | 39.2027228 |
| POWDER TECHNOLOGY | 3 | 0.986 | ENGINEERING | 13.21 | 13.0232852 | 39.0698556 |
| PLANTA | 2 | 3.113 | PLANT SCIENCE | 6.25 | 19.4450432 | 38.8900864 |
| FUNCTIONAL PLANT BIOLOGY | 3 | 2.075 | PLANT SCIENCE | 6.25 | 12.96128 | 38.88384 |
| COMPUTERS IN BIOLOGY AND MEDICINE | 3 | 0.974 | ENGINEERING | 13.21 | 12.8647868 | 38.5943604 |
| BOTANICAL REVIEW | 3 | 2.025 | PLANT SCIENCE | 6.25 | 12.64896 | 37.94688 |
| JOURNAL OF NEUROSCIENCE RESEARCH | 3 | 3.727 | NEUROSCIENCES | 3.39 | 12.6293122 | 37.8879366 |
| APPLIED SOIL ECOLOGY | 2 | 1.349 | AGRICULTURE SCIENCE | 14.04 | 18.9342942 | 37.8685884 |
| SYSTEMS & CONTROL LETTERS | 3 | 0.782 | OPERATIONAL RESEARCH | 16.13 | 12.6169444 | 37.8508332 |
| JOURNAL OF THE NATIONAL CANCER INSTITUTE | 1 | 13.856 | ONCOLOGY | 2.70 | 37.4430688 | 37.4430688 |
| ALLERGY | 2 | 3.496 | ALLERGY & ASTHMA | 5.35 | 18.69486 | 37.38972 |
| INTERNATIONAL JOURNAL OF OBESITY | 2 | 3.459 | NUTRITION & DIETETICS | 5.40 | 18.6689148 | 37.3378296 |
| INTERNATIONAL JOURNAL OF REFRACTORY METALS & HARD MATERIALS | 3 | 0.743 | METALLURGY & METALLURGICAL ENGINEERING | 16.62 | 12.3503689 | 37.0511067 |
| JOURNAL OF APPLIED ECOLOGY | 2 | 3.266 | ECOLOGY | 5.67 | 18.5208328 | 37.0416656 |
| MAGNETIC RESONANCE IN MEDICINE | 2 | 3.468 | RADIOLOGY | 5.30 | 18.390804 | 36.781608 |
| SIAM JOURNAL ON COMPUTING | 3 | 1.306 | COMPUTER SCIENCE | 9.36 | 12.226119 | 36.678357 |
| AQUATIC TOXICOLOGY | 3 | 2.418 | TOXICOLOGY | 5.06 | 12.2232318 | 36.6696954 |
| PESTICIDE BIOCHEMISTRY AND PHYSIOLOGY | 3 | 1.133 | ENTOMOLOGY | 10.77 | 12.1971982 | 36.5915946 |
| IEEE TRANSACTIONS ON CONTROL SYSTEMS TECHNOLOGY | 3 | 0.923 | ENGINEERING | 13.21 | 12.1911686 | 36.5735058 |
| WATER RESOURCES RESEARCH | 3 | 1.53 | ENVIRONMENTAL SCIENCES | 7.95 | 12.169773 | 36.509319 |
| JOURNAL OF REFRACTIVE | 2 | 2.399 | SURGERY | 7.50 | 17.9874621 | 35.9749242 |

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|-------------------------------------------------------------------------------------------|--------------|---------------|------------------------------|------------|-------------------------|-------------------------------|
| SURGERY | | | | | | |
| JOURNAL OF WATER RESOURCES | 2 | 1.451 | WATER RESOURCES | 12.39 | 17.9845646 | 35.9691292 |
| STRUCTURE | 2 | 5.185 | BIOPHYSICS | 3.42 | 17.7197375 | 35.439475 |
| BRITISH JOURNAL OF HAEMATOLOGY | 3 | 3.195 | HEMATOLOGY | 3.69 | 11.7968985 | 35.3906955 |
| SEDIMENTARY GEOLOGY | 3 | 1.342 | GEOSCIENCES | 8.74 | 11.7235778 | 35.1707334 |
| ENVIRONMENTAL POLLUTION | 2 | 2.205 | ENVIRONMENTAL SCIENCES | 7.95 | 17.5387905 | 35.077581 |
| JOURNAL OF OPTICS B- QUANTUM AND SEMICLASSICAL OPTICS | 3 | 1.746 | OPTICS | 6.70 | 11.6913906 | 35.0741718 |
| JOURNAL OF NUTRITION | 2 | 3.245 | NUTRITION & DIETETICS | 5.40 | 17.513914 | 35.027828 |
| ARTHRITIS & RHEUMATISM- ARTHRITIS CARE & RESEARCH | 1 | 7.414 | RHEUMATOLOGY | 4.72 | 34.9896316 | 34.9896316 |
| COMMUNICATIONS OF THE ACM | 2 | 1.865 | COMPUTER SCIENCE | 9.36 | 17.4591975 | 34.918395 |
| AMERICAN JOURNAL OF PSYCHIATRY | 1 | 7.614 | PSYCHIATRY | 4.54 | 34.5728898 | 34.5728898 |
| EUROPEAN JOURNAL OF CLINICAL NUTRITION | 3 | 2.132 | NUTRITION & DIETETICS | 5.40 | 11.5068304 | 34.5204912 |
| JOURNAL OF IMMUNOLOGY | 2 | 6.486 | IMMUNOLOGY | 2.66 | 17.239788 | 34.479576 |
| COMPUTER NETWORKS-THE INTERNATIONAL JOURNAL OF COMPUTER AND TELECOMMUNICATIONS NETWORKING | 3 | 1.226 | COMPUTER SCIENCE | 9.36 | 11.477199 | 34.431597 |
| GENOME RESEARCH | 1 | 10.382 | BIOTECHNOLOGY ; BIOCHEMISTRY | 3.30 | 34.2699438 | 34.2699438 |
| PEDIATRIC ALLERGY AND IMMUNOLOGY | 2 | 2.151 | PEDIATRICS | 7.93 | 17.0645283 | 34.1290566 |
| MYCORRHIZA | 2 | 1.744 | MYCOLOGY | 9.76 | 17.0294624 | 34.0589248 |
| PLANT FOODS FOR HUMAN NUTRITION | 3 | 2.098 | NUTRITION & DIETETICS | 5.40 | 11.3233256 | 33.9699768 |
| COLD REGIONS SCIENCE AND TECHNOLOGY | 3 | 0.854 | ENGINEERING | 13.21 | 11.2798028 | 33.8394084 |
| INTERNATIONAL MATERIALS REVIEWS | 1 | 3.68 | MATERIALS SCIENCE | 9.19 | 33.807792 | 33.807792 |
| JOURNAL OF PHARMACOLOGY | 2 | 4.335 | PHARMACOLOGY | 3.89 | 16.870953 | 33.741906 |

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| PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS | | | & PHARMACY | | | |
| JOURNAL OF STORED PRODUCTS RESEARCH | 3 | 1.044 | ENTOMOLOGY | 10.77 | 11.2390776 | 33.7172328 |
| NATURE STRUCTURAL & MOLECULAR BIOLOGY | 1 | 12 | CELL BIOLOGY | 2.81 | 33.6708 | 33.6708 |
| GEOTECHNIQUE | 3 | 0.849 | ENGINEERING | 13.21 | 11.2137618 | 33.6412854 |
| JOURNAL OF INVESTIGATIVE DERMATOLOGY | 1 | 4.238 | DERMATOLOGY | 7.93 | 33.6026782 | 33.6026782 |
| JOURNAL OF ENDOCRINOLOGY | 3 | 3.319 | ENDOCRINOLOGY & METABOLISM | 3.37 | 11.1893447 | 33.5680341 |
| JOURNAL OF GLOBAL OPTIMIZATION | 3 | 0.693 | OPERATIONAL RESEARCH | 16.13 | 11.1810006 | 33.5430018 |
| CURRENT OPINION IN GENETICS & DEVELOPMENT | 1 | 11.58 | GENETICS & HEREDITY | 2.89 | 33.511362 | 33.511362 |
| ARTIFICIAL INTELLIGENCE: METHODOLOGY, SYSTEMS, AND APPLICATIONS, PROCEEDINGS | 1 | 3.57 | COMPUTER SCIENCE | 9.36 | 33.420555 | 33.420555 |
| INTERNATIONAL JOURNAL OF COAL GEOLOGY | 3 | 1.259 | GEOSCIENCES | 8.74 | 10.9984981 | 32.9954943 |
| ELECTROANALYSIS | 3 | 2.038 | CHEMISTRY | 5.37 | 10.952212 | 32.856636 |
| MECHANICAL SYSTEMS AND SIGNAL PROCESSING | 3 | 0.828 | ENGINEERING | 13.21 | 10.9363896 | 32.8091688 |
| PHOTOSYNTHESIS RESEARCH | 2 | 2.614 | PLANT SCIENCE | 6.25 | 16.3280896 | 32.6561792 |
| JOURNAL OF BIOTECHNOLOGY | 3 | 2.323 | BIOTECHNOLOGY | 4.67 | 10.8518945 | 32.5556835 |
| JOURNAL OF CELL BIOLOGY | 1 | 11.602 | CELL BIOLOGY | 2.81 | 32.5540518 | 32.5540518 |
| PUBLICATIONS OF THE ASTRONOMICAL SOCIETY OF JAPAN | 3 | 2.826 | ASTRONOMY & ASTROPHYSICS | 3.83 | 10.820754 | 32.462262 |
| KOREAN JOURNAL OF CHEMICAL ENGINEERING | 3 | 0.817 | ENGINEERING | 13.21 | 10.7910994 | 32.3732982 |
| SIAM JOURNAL ON NUMERICAL ANALYSIS | 2 | 1.106 | MATHEMATICS | 14.62 | 16.1648536 | 32.3297072 |
| JOURNAL OF THE AMERICAN ACADEMY OF CHILD AND ADOLESCENT PSYCHIATRY | 2 | 3.529 | PSYCHIATRY | 4.54 | 16.0241303 | 32.0482606 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|-------------------------------------------------------------|--------------|---------------|---------------------------------|------------|-------------------------|-------------------------------|
| MOLECULAR HUMAN REPRODUCTION | 2 | 3.072 | REPRODUCTIVE BIOLOGY | 5.19 | 15.9532032 | 31.9064064 |
| CRITICAL REVIEWS IN MICROBIOLOGY | 3 | 2.926 | MICROBIOLOGY | 3.63 | 10.634547 | 31.903641 |
| CEPHALALGIA | 3 | 3.133 | NEUROSCIENCES | 3.39 | 10.6164838 | 31.8494514 |
| MOLECULAR MEMBRANE BIOLOGY | 2 | 5.667 | CELL BIOLOGY | 2.81 | 15.9010353 | 31.8020706 |
| JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY | 3 | 1.15 | MATERIALS SCIENCE | 9.19 | 10.564935 | 31.694805 |
| BRITISH JOURNAL OF ANAESTHESIA | 2 | 2.469 | ANESTHESIOLOGY | 6.41 | 15.8196237 | 31.6392474 |
| ARTHROSCOPY-THE JOURNAL OF ARTHROSCOPIC AND RELATED SURGERY | 2 | 1.582 | ORTHOPAEDICS | 9.98 | 15.794688 | 31.589376 |
| PROGRESS IN SOLID STATE CHEMISTRY | 1 | 5.857 | CHEMISTRY | 5.37 | 31.475518 | 31.475518 |
| IEEE TRANSACTIONS ON PARALLEL AND DISTRIBUTED SYSTEMS | 2 | 1.19 | ENGINEERING | 13.21 | 15.717758 | 31.435516 |
| INTERNATIONAL JOURNAL OF FRACTURE | 3 | 0.95 | MECHANICS | 10.99 | 10.43841 | 31.31523 |
| DEVELOPMENTAL BRAIN RESEARCH | 2 | 4.617 | NEUROSCIENCES | 3.39 | 15.6451662 | 31.2903324 |
| PEDIATRICS | 1 | 3.903 | PEDIATRICS | 7.93 | 30.9636699 | 30.9636699 |
| NONLINEAR DYNAMICS | 3 | 0.774 | ENGINEERING | 13.21 | 10.2231468 | 30.6694404 |
| HEART | 2 | 3.271 | CARDIAC & CARDIOVASCULAR SYSTEM | 4.69 | 15.3262705 | 30.652541 |
| IEEE TRANSACTIONS ON MULTIMEDIA | 2 | 1.634 | COMPUTER SCIENCE | 9.36 | 15.296691 | 30.593382 |
| BEHAVIOURAL BRAIN RESEARCH | 3 | 2.992 | NEUROSCIENCES | 3.39 | 10.1386912 | 30.4160736 |
| WASTE MANAGEMENT | 2 | 1.151 | ENGINEERING | 13.21 | 15.2026382 | 30.4052764 |
| JOURNAL OF SPORT & EXERCISE PSYCHOLOGY | 2 | 1.411 | SPORTS SCIENCE | 10.76 | 15.1833477 | 30.3666954 |
| DIABETES | 1 | 8.848 | ENDOCRINOLOGY & METABOLISM | 3.37 | 29.8292624 | 29.8292624 |
| CURRENT ORGANIC CHEMISTRY | 2 | 2.775 | CHEMISTRY | 5.37 | 14.91285 | 29.8257 |
| JOURNAL OF MATERIALS | 2 | 1.128 | ENGINEERING | 13.21 | 14.8988496 | 29.7976992 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|----------------------------------------------|--------------|---------------|---------------------------------|------------|-------------------------|-------------------------------|
| SCIENCE-MATERIALS IN MEDICINE | | | | | | |
| WOUND REPAIR AND REGENERATION | 2 | 1.984 | SURGERY | 7.50 | 14.8758336 | 29.7516672 |
| AMERICAN JOURNAL OF CLINICAL PATHOLOGY | 2 | 2.716 | PATHOLOGY | 5.48 | 14.8747172 | 29.7494344 |
| CURRENT OPINION IN MICROBIOLOGY | 1 | 8.182 | MICROBIOLOGY | 3.63 | 29.737479 | 29.737479 |
| AGRICULTURAL AND FOREST METEOROLOGY | 1 | 2.811 | FORESTRY SCIENCE | 10.55 | 29.6518335 | 29.6518335 |
| AMERICAN JOURNAL OF CARDIOLOGY | 2 | 3.14 | CARDIAC & CARDIOVASCULAR SYSTEM | 4.69 | 14.71247 | 29.42494 |
| TRENDS IN FOOD SCIENCE & TECHNOLOGY | 1 | 2.534 | FOOD SCIENCE & TECHNOLOGY | 11.60 | 29.3999748 | 29.3999748 |
| ELECTROPHORESIS | 2 | 3.743 | BIOCHEMICAL RESEARCH METHODS | 3.91 | 14.6347557 | 29.2695114 |
| CHEST | 2 | 3.118 | CARDIAC & CARDIOVASCULAR SYSTEM | 4.69 | 14.609389 | 29.218778 |
| IEEE TRANSACTIONS ON ROBOTICS AND AUTOMATION | 1 | 2.126 | ROBOTICS | 13.66 | 29.047538 | 29.047538 |
| INTENSIVE CARE MEDICINE | 2 | 3.034 | CRITICAL CARE MEDICINE | 4.78 | 14.5152628 | 29.0305256 |
| INSECT MOLECULAR BIOLOGY | 1 | 2.688 | ENTOMOLOGY | 10.77 | 28.9373952 | 28.9373952 |
| MINERALIUM DEPOSITA | 2 | 1.602 | MINERALOGY | 8.95 | 14.3342154 | 28.6684308 |
| DRUG AND ALCOHOL DEPENDENCE | 2 | 2.906 | SUBSTANCE ABUSE | 4.92 | 14.3074004 | 28.6148008 |
| COMPUTER PHYSICS COMMUNICATIONS | 2 | 1.515 | COMPUTER SCIENCE | 9.36 | 14.1826725 | 28.365345 |
| MOLECULAR CANCER THERAPEUTICS | 2 | 5.242 | ONCOLOGY | 2.70 | 14.1654566 | 28.3309132 |
| MEDICAL MYCOLOGY | 2 | 1.448 | MYCOLOGY | 9.76 | 14.1391408 | 28.2782816 |
| CHEMICAL RESEARCH IN TOXICOLOGY | 2 | 2.797 | TOXICOLOGY | 5.06 | 14.1391147 | 28.2782294 |
| ANNALS OF BOTANY | 2 | 2.262 | PLANT SCIENCE | 6.25 | 14.1293568 | 28.2587136 |
| MYCOLOGIA | 2 | 1.433 | MYCOLOGY | 9.76 | 13.9926718 | 27.9853436 |
| BIOLOGICAL PSYCHIATRY | 1 | 6.159 | PSYCHIATRY | 4.54 | 27.9661713 | 27.9661713 |
| MACROMOLECULAR RAPID | 1 | 3.366 | POLYMER SCIENCE | 8.26 | 27.7974378 | 27.7974378 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|------------------------------------------------|--------------|---------------|---------------------------------------|------------|-------------------------|-------------------------------|
| COMMUNICATIONS | | | | | | |
| MECHANICS OF MATERIALS | 2 | 1.512 | MATERIALS SCIENCE | 9.19 | 13.8905928 | 27.7811856 |
| FOOD HYDROCOLLOIDS | 2 | 1.864 | FOOD SCIENCE & TECHNOLOGY; TOXICOLOGY | 7.39 | 13.778688 | 27.557376 |
| JOURNAL OF NATURAL PRODUCTS | 2 | 2.202 | PLANT SCIENCE | 6.25 | 13.7545728 | 27.5091456 |
| ANNALS OF NEUROLOGY | 1 | 8.097 | NEUROSCIENCES | 3.39 | 27.4374942 | 27.4374942 |
| TECTONICS | 2 | 2.162 | GEOCHEMISTRY & GEOPHYSICS | 6.31 | 13.6359502 | 27.2719004 |
| CRYOGENICS | 2 | 1.023 | THERMODYNAMICS | 13.30 | 13.6090713 | 27.2181426 |
| JOURNAL OF OCEANOGRAPHY | 2 | 1.669 | OCEANOGRAPHY | 8.11 | 13.5427667 | 27.0855334 |
| MOLECULAR PHYLOGENETICS AND EVOLUTION | 2 | 4.213 | EVOLUTIONARY BIOLOGY | 3.21 | 13.5161466 | 27.0322932 |
| COMBUSTION AND FLAME | 2 | 1.023 | ENGINEERING | 13.21 | 13.5119886 | 27.0239772 |
| RADIOLOGY | 1 | 5.076 | RADIOLOGY | 5.30 | 26.918028 | 26.918028 |
| CLINICAL BIOMECHANICS | 2 | 1.25 | SPORTS SCIENCE | 10.76 | 13.450875 | 26.90175 |
| EUROPEAN JOURNAL OF IMMUNOLOGY | 2 | 5.005 | IMMUNOLOGY | 2.66 | 13.30329 | 26.60658 |
| CLINICAL PHARMACOLOGY & THERAPEUTICS | 1 | 6.825 | PHARMACOLOGY & PHARMACY | 3.89 | 26.561535 | 26.561535 |
| GUT | 1 | 6.601 | GASTROENTEROLOGY & HEPATOLOGY | 4.02 | 26.5234781 | 26.5234781 |
| IEEE MICROWAVE AND WIRELESS COMPONENTS LETTERS | 2 | 1.003 | ENGINEERING | 13.21 | 13.2478246 | 26.4956492 |
| ENVIRONMENTAL AND EXPERIMENTAL BOTANY | 2 | 1.653 | ENVIRONMENTAL SCIENCES | 7.95 | 13.1481273 | 26.2962546 |
| DRYING TECHNOLOGY | 2 | 0.987 | ENGINEERING | 13.21 | 13.0364934 | 26.0729868 |
| JOURNAL OF MOLECULAR ENDOCRINOLOGY | 2 | 3.855 | ENDOCRINOLOGY & METABOLISM | 3.37 | 12.9963615 | 25.992723 |
| EUROPEAN JOURNAL OF NEUROSCIENCE | 2 | 3.82 | NEUROSCIENCES | 3.39 | 12.944452 | 25.888904 |
| BRITISH JOURNAL OF PHARMACOLOGY | 2 | 3.325 | PHARMACOLOGY & PHARMACY | 3.89 | 12.940235 | 25.88047 |
| JOURNAL OF MAMMALOLOGY | 2 | 1.266 | ZOOLOGY | 10.20 | 12.916998 | 25.833996 |
| JOURNAL OF OPTICS | 2 | 1.919 | OPTICS | 6.70 | 12.8498159 | 25.6996318 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|----------------------------------------------------------------------------------------|--------------|---------------|------------------------------------|------------|-------------------------|-------------------------------|
| SYNCHROTRON RADIATION | | | | | | |
| AMERICAN JOURNAL OF NEURORADIOLOGY | 2 | 2.406 | RADIOLOGY | 5.30 | 12.759018 | 25.518036 |
| VETERINARY IMMUNOLOGY AND IMMUNOPATHOLOGY | 1 | 1.799 | VETERINARY SCIENCES | 14.13 | 25.4238278 | 25.4238278 |
| PHOTOGRAMMETRIC ENGINEERING AND REMOTE SENSING | 2 | 1.574 | REMOTE SENSING | 8.04 | 12.6587376 | 25.3174752 |
| INTERNATIONAL JOURNAL OF ADHESION AND ADHESIVES | 2 | 0.955 | ENGINEERING | 13.21 | 12.613831 | 25.227662 |
| PHYSIOLOGIA PLANTARUM | 2 | 2.017 | PLANT SCIENCE | 6.25 | 12.5989888 | 25.1979776 |
| JOURNAL OF BIOMATERIALS APPLICATIONS | 2 | 0.951 | ENGINEERING | 13.21 | 12.5609982 | 25.1219964 |
| HUMAN GENETICS | 2 | 4.328 | GENETICS & HEREDITY | 2.89 | 12.5247992 | 25.0495984 |
| IEEE NETWORK | 1 | 2.667 | COMPUTER SCIENCE | 9.36 | 24.9671205 | 24.9671205 |
| JOURNAL OF ALGORITHMS | 2 | 0.849 | MATHEMATICS | 14.62 | 12.4086444 | 24.8172888 |
| MOLECULAR ECOLOGY | 1 | 4.375 | ECOLOGY | 5.67 | 24.80975 | 24.80975 |
| JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH | 1 | 2.839 | GEOSCIENCES | 8.74 | 24.8012201 | 24.8012201 |
| CANADIAN MEDICAL ASSOCIATION JOURNAL | 1 | 5.941 | MEDICINE | 4.15 | 24.6391093 | 24.6391093 |
| AMERICAN JOURNAL OF RESPIRATORY CELL AND MOLECULAR BIOLOGY | 2 | 4.175 | RESPIRATORY SYSTEM; CELL BIOLOGY | 2.95 | 12.3141625 | 24.628325 |
| QUARTERLY JOURNAL OF THE ROYAL METEOROLOGICAL SOCIETY | 2 | 1.844 | METEOROLOGY & ATMOSPHERIC SCIENCES | 6.67 | 12.2998488 | 24.5996976 |
| BIOLOGICAL CONSERVATION | 2 | 2.166 | ECOLOGY | 5.67 | 12.2829528 | 24.5659056 |
| ARCHIVES OF NEUROLOGY | 1 | 4.835 | CLINICAL NEUROLOGY | 5.08 | 24.549229 | 24.549229 |
| JOURNAL OF APPLIED CRYSTALLOGRAPHY | 1 | 3.534 | CRYSTALLOGRAPHY | 6.86 | 24.2301642 | 24.2301642 |
| PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY OF LONDON SERIES B-BIOLOGICAL SCIENCES | 1 | 4.128 | BIOLOGY | 5.82 | 24.0418848 | 24.0418848 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|---------------------------------------------------------|--------------|---------------|----------------------------------|------------|-------------------------|-------------------------------|
| CANCER | 2 | 4.434 | ONCOLOGY | 2.70 | 11.9819982 | 23.9639964 |
| IEEE INTERNET COMPUTING | 1 | 2.554 | COMPUTER SCIENCE | 9.36 | 23.909271 | 23.909271 |
| JOURNAL OF WATER RESOURCES PLANNING AND MANAGEMENT-ASCE | 2 | 0.894 | ENGINEERING | 13.21 | 11.8081308 | 23.6162616 |
| NUTRITION AND CANCER-AN INTERNATIONAL JOURNAL | 2 | 2.149 | NUTRITION & DIETETICS | 5.40 | 11.5985828 | 23.1971656 |
| IEEE JOURNAL OF SOLID-STATE CIRCUITS | 1 | 1.756 | ENGINEERING | 13.21 | 23.1935992 | 23.1935992 |
| JOURNAL OF BIOMEDICAL OPTICS | 1 | 3.455 | OPTICS | 6.70 | 23.1350255 | 23.1350255 |
| MATHEMATISCHE ANNALEN | 2 | 0.79 | MATHEMATICS | 14.62 | 11.546324 | 23.092648 |
| INTERNATIONAL JOURNAL OF FATIGUE | 2 | 0.874 | ENGINEERING | 13.21 | 11.5439668 | 23.0879336 |
| ARCHIVES OF SURGERY | 1 | 3.076 | SURGERY | 7.50 | 23.0635404 | 23.0635404 |
| BIOTECHNOLOGY ADVANCES | 2 | 2.468 | BIOTECHNOLOGY | 4.67 | 11.529262 | 23.058524 |
| APPLIED CLAY SCIENCE | 2 | 1.267 | MINERALOGY | 8.95 | 11.3367359 | 22.6734718 |
| ANALYTICAL AND BIOANALYTICAL CHEMISTRY | 2 | 2.098 | CHEMISTRY | 5.37 | 11.274652 | 22.549304 |
| JOURNAL OF GUIDANCE CONTROL AND DYNAMICS | 2 | 0.852 | ENGINEERING | 13.21 | 11.2533864 | 22.5067728 |
| EXPERIMENTAL CELL RESEARCH | 2 | 4.007 | CELL BIOLOGY | 2.81 | 11.2432413 | 22.4864826 |
| PRENATAL DIAGNOSIS | 2 | 1.612 | OBSTETRICS & GYNECOLOGY | 6.97 | 11.23967 | 22.47934 |
| COMPUTATIONAL STATISTICS & DATA ANALYSIS | 2 | 1.022 | STATISTICS & PROBABILITY | 10.99 | 11.228203 | 22.456406 |
| JOURNAL OF ATMOSPHERIC AND OCEANIC TECHNOLOGY | 1 | 1.7 | ENGINEERING | 13.21 | 22.45394 | 22.45394 |
| HUMAN MOLECULAR GENETICS | 1 | 7.801 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 22.3787287 | 22.3787287 |
| ANNALS OF BIOMEDICAL ENGINEERING | 1 | 1.684 | ENGINEERING | 13.21 | 22.2426088 | 22.2426088 |
| GEOTEXTILES AND | 2 | 0.837 | ENGINEERING | 13.21 | 11.0552634 | 22.1105268 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|-------------------------------------------------------------------------|--------------|---------------|----------------------------------|------------|-------------------------|-------------------------------|
| GEOMEMBRANES | | | | | | |
| LABORATORY INVESTIGATION | 1 | 3.702 | MEDICAL LABORATORY TECHNOLOGY | 5.96 | 22.0735452 | 22.0735452 |
| GENETICS IN MEDICINE | 2 | 3.805 | GENETICS & HEREDITY | 2.89 | 11.0112895 | 22.022579 |
| BIOCHIMIE | 2 | 3.814 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 10.9412218 | 21.8824436 |
| IEEE TRANSACTIONS ON RELIABILITY | 2 | 0.828 | ENGINEERING | 13.21 | 10.9363896 | 21.8727792 |
| NEUROCHEMISTRY INTERNATIONAL | 2 | 3.211 | NEUROSCIENCES | 3.39 | 10.8807946 | 21.7615892 |
| JOURNAL OF ENVIRONMENTAL MONITORING | 2 | 1.366 | ENVIRONMENTAL SCIENCES | 7.95 | 10.8653006 | 21.7306012 |
| EUROPEAN JOURNAL OF PEDIATRICS | 2 | 1.369 | PEDIATRICS | 7.93 | 10.8606877 | 21.7213754 |
| ADVANCES IN COLLOID AND INTERFACE SCIENCE | 1 | 4.033 | CHEMISTRY | 5.37 | 21.673342 | 21.673342 |
| JOURNAL OF THE AIR & WASTE MANAGEMENT ASSOCIATION | 2 | 1.357 | ENVIRONMENTAL SCIENCES | 7.95 | 10.7937137 | 21.5874274 |
| PLASMA SOURCES SCIENCE & TECHNOLOGY | 2 | 1.931 | PHYSICS | 5.59 | 10.7863729 | 21.5727458 |
| ARTHRITIS RESEARCH & THERAPY | 1 | 4.551 | RHEUMATOLOGY | 4.72 | 21.4779894 | 21.4779894 |
| EXPERIMENTAL THERMAL AND FLUID SCIENCE | 2 | 0.813 | ENGINEERING | 13.21 | 10.7382666 | 21.4765332 |
| JOURNAL OF ANALYTICAL ATOMIC SPECTROMETRY | 1 | 3.926 | SPECTROSCOPY | 5.44 | 21.3472324 | 21.3472324 |
| ANIMAL BEHAVIOUR | 1 | 2.092 | ZOOLOGY | 10.20 | 21.344676 | 21.344676 |
| QUATERNARY INTERNATIONAL | 2 | 1.22 | GEOSCIENCES | 8.74 | 10.657798 | 21.315596 |
| PROCEEDINGS OF THE ROYAL SOCIETY OF LONDON SERIES B-BIOLOGICAL SCIENCES | 1 | 3.653 | BIOLOGY | 5.82 | 21.2754373 | 21.2754373 |
| CRYOBIOLOGY | 2 | 1.821 | BIOLOGY | 5.82 | 10.6056861 | 21.2113722 |
| ANTONIE VAN LEEUWENHOEK INTERNATIONAL JOURNAL OF GENERAL AND | 2 | 2.915 | MICROBIOLOGY | 3.63 | 10.5945675 | 21.189135 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|-------------------------------------------------------------------------|--------------|---------------|----------------------------|------------|-------------------------|-------------------------------|
| MOLECULAR MICROBIOLOGY | | | | | | |
| EUROPEAN JOURNAL OF ENDOCRINOLOGY | 2 | 3.14 | ENDOCRINOLOGY & METABOLISM | 3.37 | 10.585882 | 21.171764 |
| JOURNAL OF ARTHROPLASTY | 2 | 1.058 | ORTHOPEDICS | 9.98 | 10.563072 | 21.126144 |
| JOURNAL OF BIOLOGICAL SYSTEMS | 2 | 0.72 | MATHEMATICS | 14.62 | 10.523232 | 21.046464 |
| JOURNAL OF EXPERIMENTAL BOTANY | 1 | 3.366 | PLANT SCIENCE | 6.25 | 21.0253824 | 21.0253824 |
| CURRENT PHARMACEUTICAL DESIGN | 1 | 5.385 | PHARMACOLOGY & PHARMACY | 3.89 | 20.957343 | 20.957343 |
| NEW PHYTOLOGIST | 1 | 3.355 | PLANT SCIENCE | 6.25 | 20.956672 | 20.956672 |
| IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS | 2 | 0.793 | ENGINEERING | 13.21 | 10.4741026 | 20.9482052 |
| TRAC-TRENDS IN ANALYTICAL CHEMISTRY | 1 | 3.888 | CHEMISTRY | 5.37 | 20.894112 | 20.894112 |
| WATER ENVIRONMENT RESEARCH | 2 | 0.789 | ENGINEERING | 13.21 | 10.4212698 | 20.8425396 |
| CONSERVATION BIOLOGY | 1 | 3.672 | ECOLOGY | 5.67 | 20.8231776 | 20.8231776 |
| GEOLOGICAL SOCIETY OF AMERICA BULLETIN | 1 | 2.381 | GEOSCIENCES | 8.74 | 20.8001779 | 20.8001779 |
| CANCER RESEARCH | 1 | 7.69 | ONCOLOGY | 2.70 | 20.780687 | 20.780687 |
| JOURNAL OF SEPARATION SCIENCE | 2 | 1.927 | CHEMISTRY | 5.37 | 10.355698 | 20.711396 |
| PSYCHO-ONCOLOGY | 2 | 2.079 | PSYCHOLOGY | 4.96 | 10.3211955 | 20.642391 |
| SOIL USE AND MANAGEMENT | 1 | 1.464 | AGRICULTURE SCIENCE | 14.04 | 20.5484112 | 20.5484112 |
| REGIONAL ANESTHESIA AND PAIN MEDICINE | 2 | 1.6 | ANESTHESIOLOGY | 6.41 | 10.25168 | 20.50336 |
| ADVANCES IN INORGANIC CHEMISTRY: INCLUDING BIOINORGANIC STUDIES, VOL 55 | 1 | 3.769 | CHEMISTRY | 5.37 | 20.254606 | 20.254606 |
| ASTROPARTICLE PHYSICS | 1 | 3.61 | PHYSICS | 5.59 | 20.165099 | 20.165099 |
| FEMS MICROBIOLOGY ECOLOGY | 2 | 2.769 | MICROBIOLOGY | 3.63 | 10.0639305 | 20.127861 |
| INTERNATIONAL JOURNAL FOR PARASITOLOGY | 1 | 3.092 | PARASITOLOGY | 6.49 | 20.0791388 | 20.0791388 |
| MOLECULAR | 1 | 5.872 | ENDOCRINOLOGY | 3.37 | 19.7962736 | 19.7962736 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
|-----------------------------------------------------------------------|--------------|---------------|----------------------------------|------------|-------------------------|-------------------------------|
| ENDOCRINOLOGY | | | & METABOLISM | | | |
| JOURNAL OF MICROENCAPSULATION | 1 | 1.492 | ENGINEERING | 13.21 | 19.7066344 | 19.7066344 |
| LASERS IN MEDICAL SCIENCE | 1 | 1.492 | ENGINEERING | 13.21 | 19.7066344 | 19.7066344 |
| ARCHIVE FOR RATIONAL MECHANICS AND ANALYSIS | 1 | 1.769 | MECHANICS | 10.99 | 19.4374182 | 19.4374182 |
| NEUROPSYCHOPHARMACOLOGY | 1 | 4.941 | PHARMACOLOGY & PHARMACY | 3.89 | 19.2293838 | 19.2293838 |
| AMERICAN JOURNAL OF GASTROENTEROLOGY | 1 | 4.716 | GASTROENTEROLOGY & HEPATOLOGY | 4.02 | 18.9493596 | 18.9493596 |
| AQUATIC MICROBIAL ECOLOGY | 1 | 2.255 | MARINE & FRESH WATER BIOLOGY | 8.38 | 18.9065965 | 18.9065965 |
| GEODERMA | 1 | 1.345 | AGRICULTURE SCIENCE | 14.04 | 18.878151 | 18.878151 |
| ACTA GEOLOGICA SINICA-ENGLISH EDITION | 1 | 2.15 | GEOSCIENCES | 8.74 | 18.782185 | 18.782185 |
| AUTOMATICA | 1 | 1.419 | ENGINEERING | 13.21 | 18.7424358 | 18.7424358 |
| AMBIO | 1 | 1.403 | ENGINEERING | 13.21 | 18.5311046 | 18.5311046 |
| JOURNAL OF GEOLOGY | 1 | 2.097 | GEOSCIENCES | 8.74 | 18.3191823 | 18.3191823 |
| AMERICAN JOURNAL OF PHYSIOLOGY-LUNG CELLULAR AND MOLECULAR PHYSIOLOGY | 1 | 4.051 | RESPIRATORY SYSTEM | 4.50 | 18.221398 | 18.221398 |
| IEEE TRANSACTIONS ON FUZZY SYSTEMS | 1 | 1.373 | ENGINEERING | 13.21 | 18.1348586 | 18.1348586 |
| ADVANCES IN WATER RESOURCES | 1 | 1.456 | WATER RESOURCES | 12.39 | 18.0465376 | 18.0465376 |
| ANNALS OF STATISTICS | 1 | 1.625 | STATISTICS & PROBABILITY | 10.99 | 17.8530625 | 17.8530625 |
| JOURNAL OF BIOLOGICAL INORGANIC CHEMISTRY | 1 | 3.3 | CHEMISTRY | 5.37 | 17.7342 | 17.7342 |
| BIOSCIENCE | 1 | 3.041 | BIOLOGY | 5.82 | 17.7110881 | 17.7110881 |
| LIVER TRANSPLANTATION | 1 | 3.984 | TRANSPLANTATION | 4.42 | 17.6108736 | 17.6108736 |
| CRITICAL REVIEWS IN BIOCHEMISTRY AND MOLECULAR BIOLOGY | 1 | 6.115 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 17.5421005 | 17.5421005 |
| ARCHIVES OF PHYSICAL MEDICINE AND | 1 | 1.656 | SPORTS SCIENCE; REHABILITATION | 10.57 | 17.4959712 | 17.4959712 |

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|------------------------------------------------------------------------------------------|--------------|---------------|----------------------------|------------|-------------------------|-------------------------------|
| REHABILITATION | | | | | | |
| EUROPEAN JOURNAL OF AGRONOMY | 1 | 1.547 | AGRONOMY | 11.25 | 17.3995731 | 17.3995731 |
| JOURNAL OF VETERINARY PHARMACOLOGY AND THERAPEUTICS | 1 | 1.23 | VETERINARY SCIENCES | 14.13 | 17.382606 | 17.382606 |
| ENDOCRINOLOGY | 1 | 5.151 | ENDOCRINOLOGY & METABOLISM | 3.37 | 17.3655663 | 17.3655663 |
| NEW JOURNAL OF PHYSICS | 1 | 3.095 | PHYSICS | 5.59 | 17.2883605 | 17.2883605 |
| LEUKEMIA | 1 | 5.81 | HEMATOLOGY; ONCOLOGY | 2.97 | 17.241175 | 17.241175 |
| QUATERNARY RESEARCH | 1 | 1.965 | GEOSCIENCES | 8.74 | 17.1660435 | 17.1660435 |
| TOXICOLOGICAL SCIENCES | 1 | 3.391 | TOXICOLOGY | 5.06 | 17.1418441 | 17.1418441 |
| ONCOGENE | 1 | 6.318 | ONCOLOGY | 2.70 | 17.0731314 | 17.0731314 |
| JOURNAL OF NEUROPATHOLOGY AND EXPERIMENTAL NEUROLOGY | 1 | 5.037 | NEUROSCIENCES | 3.39 | 17.0683782 | 17.0683782 |
| STATISTICA SINICA | 1 | 1.55 | STATISTICS & PROBABILITY | 10.99 | 17.029075 | 17.029075 |
| AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY | 1 | 2.437 | OBSTETRICS & GYNECOLOGY | 6.97 | 16.9919825 | 16.9919825 |
| VETERINARY PATHOLOGY | 1 | 1.194 | VETERINARY SCIENCES | 14.13 | 16.8738468 | 16.8738468 |
| SPECTROCHIMICA ACTA PART B-ATOMIC SPECTROSCOPY | 1 | 3.086 | SPECTROSCOPY | 5.44 | 16.7798164 | 16.7798164 |
| JOURNAL OF VETERINARY MEDICINE SERIES B-INFECTIOUS DISEASES AND VETERINARY PUBLIC HEALTH | 1 | 1.182 | VETERINARY SCIENCES | 14.13 | 16.7042604 | 16.7042604 |
| JOURNAL OF INSECT PHYSIOLOGY | 1 | 1.547 | ENTOMOLOGY | 10.77 | 16.6540738 | 16.6540738 |
| PHYSIOLOGICAL MEASUREMENT | 1 | 1.257 | ENGINEERING | 13.21 | 16.6027074 | 16.6027074 |
| JOURNAL OF BIOMATERIALS SCIENCE-POLYMER EDITION | 1 | 1.255 | ENGINEERING | 13.21 | 16.576291 | 16.576291 |
| INSECTES SOCIAUX | 1 | 1.535 | ENTOMOLOGY | 10.77 | 16.524889 | 16.524889 |
| JOURNAL OF THE | 1 | 1.89 | GEOSCIENCES | 8.74 | 16.510851 | 16.510851 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
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| GEOLOGICAL SOCIETY | | | | | | |
| DUKE MATHEMATICAL JOURNAL | 1 | 1.118 | MATHEMATICS | 14.62 | 16.3402408 | 16.3402408 |
| GEOCHEMISTRY GEOPHYSICS GEOSYSTEMS | 1 | 2.57 | GEOCHEMISTRY & GEOPHYSICS | 6.31 | 16.209247 | 16.209247 |
| HISTOPATHOLOGY | 1 | 2.955 | PATHOLOGY | 5.48 | 16.1836485 | 16.1836485 |
| ECOGRAPHY | 1 | 2.841 | ECOLOGY | 5.67 | 16.1107428 | 16.1107428 |
| DEEP-SEA RESEARCH PART I-OCEANOGRAPHIC RESEARCH PAPERS | 1 | 1.975 | OCEANOGRAPHY | 8.11 | 16.0257425 | 16.0257425 |
| AMERICAN JOURNAL OF GERIATRIC PSYCHIATRY | 1 | 3.469 | PSYCHIATRY | 4.54 | 15.7516883 | 15.7516883 |
| DRUG SAFETY | 1 | 3.114 | TOXICOLOGY | 5.06 | 15.7415814 | 15.7415814 |
| PROTEOMICS | 1 | 5.483 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 15.7290821 | 15.7290821 |
| BRAIN RESEARCH REVIEWS | 1 | 4.617 | NEUROSCIENCES | 3.39 | 15.6451662 | 15.6451662 |
| ADVANCES IN MATHEMATICS | 1 | 1.067 | MATHEMATICS | 14.62 | 15.5948452 | 15.5948452 |
| PROGRESS IN BIOPHYSICS & MOLECULAR BIOLOGY | 1 | 4.551 | BIOPHYSICS | 3.42 | 15.5530425 | 15.5530425 |
| MACROMOLECULAR CHEMISTRY AND PHYSICS | 1 | 1.88 | POLYMER SCIENCE | 8.26 | 15.525604 | 15.525604 |
| ALIMENTARY PHARMACOLOGY & THERAPEUTICS | 1 | 3.981 | PHARMACOLOGY & PHARMACY | 3.89 | 15.4932558 | 15.4932558 |
| HAEMATOLOGICA | 1 | 4.192 | HEMATOLOGY | 3.69 | 15.4781216 | 15.4781216 |
| FOOD RESEARCH INTERNATIONAL | 1 | 1.332 | FOOD SCIENCE & TECHNOLOGY | 11.60 | 15.4541304 | 15.4541304 |
| IBM SYSTEMS JOURNAL | 1 | 1.636 | COMPUTER SCIENCE | 9.36 | 15.315414 | 15.315414 |
| IEEE ANTENNAS AND PROPAGATION MAGAZINE | 1 | 1.154 | ENGINEERING | 13.21 | 15.2422628 | 15.2422628 |
| EUROPEAN UROLOGY | 1 | 2.651 | UROLOGY & NEPHROLOGY | 5.75 | 15.2398037 | 15.2398037 |
| AMERICAN JOURNAL OF BOTANY | 1 | 2.438 | PLANT SCIENCE | 6.25 | 15.2287232 | 15.2287232 |
| INTERNATIONAL JOURNAL OF MULTIPHASE FLOW | 1 | 1.383 | MECHANICS | 10.99 | 15.1961274 | 15.1961274 |
| BMC GENOMICS | 1 | 3.25 | BIOTECHNOLOGY | 4.67 | 15.182375 | 15.182375 |
| MEDICAL AND VETERINARY ENTOMOLOGY | 1 | 1.405 | ENTOMOLOGY | 10.77 | 15.125387 | 15.125387 |

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| Journal Name | No of papers | Impact Factor | SC | Multiplier | Sub Field Impact Factor | Total Sub Field Impact Factor |
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| JOURNAL OF THE AMERICAN COLLEGE OF NUTRITION | 1 | 2.802 | NUTRITION & DIETETICS | 5.40 | 15.1229544 | 15.1229544 |
| ANNALS OF APPLIED PROBABILITY | 1 | 1.37 | STATISTICS & PROBABILITY | 10.99 | 15.051505 | 15.051505 |
| JOURNAL OF INTERNAL MEDICINE | 1 | 3.59 | MEDICINE | 4.15 | 14.888807 | 14.888807 |
| NEUROBIOLOGY OF DISEASE | 1 | 4.389 | NEUROSCIENCES | 3.39 | 14.8725654 | 14.8725654 |
| MARINE BIOLOGY | 1 | 1.772 | MARINE & FRESHWATER BIOLOGY; OCEANOGRAPHY | 8.38 | 14.8569796 | 14.8569796 |
| MATHEMATICAL PROGRAMMING | 1 | 1.016 | MATHEMATICS | 14.62 | 14.8494496 | 14.8494496 |
| ANNALS OF FOREST SCIENCE | 1 | 1.407 | FORESTRY SCIENCE | 10.55 | 14.8417395 | 14.8417395 |
| BIOLOGICAL CONTROL | 1 | 1.376 | ENTOMOLOGY | 10.77 | 14.8131904 | 14.8131904 |
| ADDICTION | 1 | 3.006 | SUBSTANCE ABUSE | 4.92 | 14.7997404 | 14.7997404 |
| MARINE GEOLOGY | 1 | 1.818 | OCEANOGRAPHY | 8.11 | 14.7517974 | 14.7517974 |
| COMPOSITES PART B-ENGINEERING | 1 | 1.116 | ENGINEERING | 13.21 | 14.7403512 | 14.7403512 |
| RESEARCH IN ENGINEERING DESIGN | 1 | 1.114 | ENGINEERING | 13.21 | 14.7139348 | 14.7139348 |
| MEDICAL ENGINEERING & PHYSICS | 1 | 1.109 | ENGINEERING | 13.21 | 14.6478938 | 14.6478938 |
| CURRENT OPINION IN MOLECULAR THERAPEUTICS | 1 | 3.117 | BIOTECHNOLOGY | 4.67 | 14.5610655 | 14.5610655 |
| NEUROPHARMACOLOGY | 1 | 3.734 | PHARMACOLOGY & PHARMACY | 3.89 | 14.5319812 | 14.5319812 |
| ENVIRONMENTAL MICROBIOLOGY | 1 | 3.995 | MICROBIOLOGY | 3.63 | 14.5198275 | 14.5198275 |
| BIOLOGY OF BLOOD AND MARROW TRANSPLANTATION | 1 | 3.278 | TRANSPLANTATION | 4.42 | 14.4900712 | 14.4900712 |
| NUCLEAR MEDICINE AND BIOLOGY | 1 | 2.713 | RADIOLOGY | 5.30 | 14.387039 | 14.387039 |
| ENVIRONMENTAL RESEARCH | 1 | 1.793 | ENVIRONMENTAL SCIENCES | 7.95 | 14.2617013 | 14.2617013 |
| MICROBIAL ECOLOGY | 1 | 2.5 | ECOLOGY | 5.67 | 14.177 | 14.177 |
| CNS DRUGS | 1 | 4.18 | NEUROSCIENCES | 3.39 | 14.164348 | 14.164348 |

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| RANDOM STRUCTURES & ALGORITHMS | 1 | 0.966 | MATHEMATICS | 14.62 | 14.1186696 | 14.1186696 |
| INTERNATIONAL JOURNAL OF LIFE CYCLE ASSESSMENT | 1 | 1.068 | ENGINEERING | 13.21 | 14.1063576 | 14.1063576 |
| AGRONOMY JOURNAL | 1 | 1.254 | AGRONOMY | 11.25 | 14.1041142 | 14.1041142 |
| JOURNAL OF PEDIATRIC GASTROENTEROLOGY AND NUTRITION | 1 | 1.764 | PEDIATRICS | 7.93 | 13.9943412 | 13.9943412 |
| BULLETIN OF ENTOMOLOGICAL RESEARCH | 1 | 1.298 | ENTOMOLOGY | 10.77 | 13.9734892 | 13.9734892 |
| MOBILE NETWORKS & APPLICATIONS | 1 | 0.931 | TELECOMUNICATI ON | 15.00 | 13.9684447 | 13.9684447 |
| JOURNAL OF PERIODONTAL RESEARCH | 1 | 1.831 | DENTISTRY | 7.60 | 13.9165155 | 13.9165155 |
| PHYTOPATHOLOGY | 1 | 2.222 | PLANT SCIENCE | 6.25 | 13.8795008 | 13.8795008 |
| IEEE SOFTWARE | 1 | 1.481 | COMPUTER SCIENCE | 9.36 | 13.8643815 | 13.8643815 |
| CELLULAR AND MOLECULAR LIFE SCIENCES | 1 | 4.812 | BIOCHEMISTRY & MOLECULAR BIOLOGY | 2.87 | 13.8041844 | 13.8041844 |
| INTERNATIONAL JOURNAL OF ANDROLOGY | 1 | 1.941 | ANDROLOGY | 7.06 | 13.7114181 | 13.7114181 |
| DECISION SUPPORT SYSTEMS | 1 | 1.458 | COMPUTER SCIENCE | 9.36 | 13.649067 | 13.649067 |
| AMERICAN JOURNAL OF PHYSIOLOGY-HEART AND CIRCULATORY PHYSIOLOGY | 1 | 3.539 | PERIPHERAL VASCULAR DISEASE | 3.83 | 13.5674643 | 13.5674643 |
| BRITISH JOURNAL OF SPORTS MEDICINE | 1 | 1.259 | SPORTS SCIENCE | 10.76 | 13.5477213 | 13.5477213 |
| IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY | 1 | 0.611 | TRANSPORTATION SCIENCE | 22.14 | 13.5266235 | 13.5266235 |
| JOURNAL OF RHEUMATOLOGY | 1 | 2.86 | RHEUMATOLOGY | 4.72 | 13.497484 | 13.497484 |
| CLIMACTERIC | 1 | 1.932 | OBSTETRICS & GYNECOLOGY | 6.97 | 13.47087 | 13.47087 |
| JOURNAL OF GENE MEDICINE | 1 | 3.224 | MEDICINE | 4.15 | 13.3708952 | 13.3708952 |
| INTERNATIONAL MATHEMATICS RESEARCH NOTICES | 1 | 0.906 | MATHEMATICS | 14.62 | 13.2417336 | 13.2417336 |
| COMPOSITIO | 1 | 0.906 | MATHEMATICS | 14.62 | 13.2417336 | 13.2417336 |

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| MATHEMATICA | | | | | | |
| ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS | 1 | 1 | ENGINEERING | 13.21 | 13.2082 | 13.2082 |
| JOURNAL OF SEA RESEARCH | 1 | 1.566 | MARINE & FRESHWATER BIOLOGY | 8.38 | 13.1298138 | 13.1298138 |
| LUMINESCENCE | 1 | 2.914 | RESPIRATORY SYSTEM | 4.50 | 13.107172 | 13.107172 |
| ANNALS OF PROBABILITY | 1 | 1.189 | STATISTICS & PROBABILITY | 10.99 | 13.0629485 | 13.0629485 |
| AMERICAN JOURNAL OF HYPERTENSION | 1 | 3.382 | PERIPHERAL VASCULAR DISEASE | 3.83 | 12.9655734 | 12.9655734 |
| JOURNAL OF SURGICAL RESEARCH | 1 | 1.727 | SURGERY | 7.50 | 12.9488733 | 12.9488733 |
| PROTEINS-STRUCTURE FUNCTION AND GENETICS | 1 | 4.429 | GENETICS & HEREDITY | 2.89 | 12.8170831 | 12.8170831 |
| SURGICAL ONCOLOGY- OXFORD | 1 | 1.709 | SURGERY | 7.50 | 12.8139111 | 12.8139111 |
| JOURNAL OF VETERINARY MEDICAL EDUCATION | 1 | 0.904 | VETERINARY SCIENCES | 14.13 | 12.7755088 | 12.7755088 |
| ENVIRONMENTAL ENTOMOLOGY | 1 | 1.184 | ENTOMOLOGY | 10.77 | 12.7462336 | 12.7462336 |
| SARCOIDOSIS VASCULITIS AND DIFFUSE LUNG DISEASES | 1 | 2.82 | RESPIRATORY SYSTEM | 4.50 | 12.68436 | 12.68436 |
| REVISTA MEXICANA DE ASTRONOMIA Y ASTROFISICA | 1 | 3.296 | ASTRONOMY & ASTROPHYSICS | 3.83 | 12.620384 | 12.620384 |
| DIAGNOSTIC MOLECULAR PATHOLOGY | 1 | 2.292 | PATHOLOGY | 5.48 | 12.5525964 | 12.5525964 |
| FOOD ADDITIVES AND CONTAMINANTS | 1 | 1.698 | FOOD SCIENCE & TECHNOLOGY; TOXICOLOGY | 7.39 | 12.551616 | 12.551616 |
| BEHAVIORAL ECOLOGY AND SOCIOBIOLOGY | 1 | 2.18 | ECOLOGY | 5.67 | 12.362344 | 12.362344 |
| AGRICULTURAL SYSTEMS | 1 | 0.871 | AGRICULTURE SCIENCE | 14.04 | 12.2251818 | 12.2251818 |
| EARTH SURFACE PROCESSES AND LANDFORMS | 1 | 1.394 | GEOSCIENCES | 8.74 | 12.1778446 | 12.1778446 |
| CURRENT MEDICAL | 1 | 2.928 | MEDICINE | 4.15 | 12.1432944 | 12.1432944 |

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| RESEARCH AND OPINION | | | | | | |
| INFORMATION PROCESSING & MANAGEMENT | 1 | 1.295 | COMPUTER SCIENCE | 9.36 | 12.1231425 | 12.1231425 |
| BIOPROCESS AND BIOSYSTEMS ENGINEERING | 1 | 0.916 | ENGINEERING | 13.21 | 12.0987112 | 12.0987112 |
| JOURNAL OF MEDICAL SCREENING | 1 | 1.985 | PUBLIC ENVIRONMENT & OCCUPATION HEALTH | 6.08 | 12.0682045 | 12.0682045 |
| ORAL DISEASES | 1 | 1.585 | DENTISTRY | 7.60 | 12.0467925 | 12.0467925 |
| JOURNAL OF EXPOSURE ANALYSIS AND ENVIRONMENTAL EPIDEMIOLOGY | 1 | 1.511 | ENVIRONMENTAL SCIENCES | 7.95 | 12.0186451 | 12.0186451 |
| APPLIED GEOCHEMISTRY | 1 | 1.904 | GEOCHEMISTRY & GEOPHYSICS | 6.31 | 12.0087184 | 12.0087184 |
| COMMENTARII MATHEMATICI HELVETICI | 1 | 0.816 | MATHEMATICS | 14.62 | 11.9263296 | 11.9263296 |
| BONE | 1 | 3.53 | ENDOCRINOLOGY & METABOLISM | 3.37 | 11.900689 | 11.900689 |
| JOURNAL OF MEDICAL GENETICS | 1 | 4.112 | GENETICS & HEREDITY | 2.89 | 11.8997168 | 11.8997168 |
| RESUSCITATION | 1 | 1.376 | EMERGENCY MEDICINE | 8.64 | 11.892768 | 11.892768 |
| THEORETICAL CHEMISTRY ACCOUNTS | 1 | 2.209 | CHEMISTRY | 5.37 | 11.871166 | 11.871166 |
| APPLIED SPECTROSCOPY REVIEWS | 1 | 1.024 | INSTRUMENTS & INSTRUMENTATION; SPECTROSCOPY | 11.57 | 11.8511616 | 11.8511616 |
| AMERICAN JOURNAL OF PHYSICAL MEDICINE & REHABILITATION | 1 | 1.121 | SPORTS SCIENCE; REHABILITATION | 10.57 | 11.8435892 | 11.8435892 |
| AUSTRALIAN JOURNAL OF AGRICULTURAL RESEARCH | 1 | 0.841 | AGRICULTURE SCIENCE | 14.04 | 11.8041078 | 11.8041078 |
| ANNALS OF ONCOLOGY | 1 | 4.335 | ONCOLOGY | 2.70 | 11.7144705 | 11.7144705 |
| NEUROSCIENCE | 1 | 3.456 | NEUROSCIENCES | 3.39 | 11.7110016 | 11.7110016 |
| JOURNAL OF GENERAL INTERNAL MEDICINE | 1 | 2.821 | MEDICINE | 4.15 | 11.6995333 | 11.6995333 |
| NMR IN BIOMEDICINE | 1 | 3.414 | BIOPHYSICS | 3.42 | 11.667345 | 11.667345 |
| ANNALS OF THE ENTOMOLOGICAL SOCIETY OF AMERICA | 1 | 1.083 | ENTOMOLOGY | 10.77 | 11.6589282 | 11.6589282 |

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| OCCUPATIONAL AND ENVIRONMENTAL MEDICINE | 1 | 1.916 | PUBLIC ENVIRONMENT & OCCUPATION HEALTH | 6.08 | 11.6487052 | 11.6487052 |
| INTERNATIONAL JOURNAL OF PRODUCTION ECONOMICS | 1 | 0.879 | ENGINEERING | 13.21 | 11.6100078 | 11.6100078 |
| JOURNAL OF PLANT GROWTH REGULATION | 1 | 1.853 | PLANT SCIENCE | 6.25 | 11.5745792 | 11.5745792 |
| BRAIN PATHOLOGY | 1 | 3.958 | NEUROSCIENCES & PATHOLOGY | 2.91 | 11.5007606 | 11.5007606 |
| JOURNAL OF STUDIES ON ALCOHOL | 1 | 2.333 | SUBSTANCE ABUSE | 4.92 | 11.4862922 | 11.4862922 |
| INTERACTING COMPUTERS WITH | 1 | 1.225 | COMPUTER SCIENCE | 9.36 | 11.4678375 | 11.4678375 |
| PHARMACEUTICAL RESEARCH | 1 | 2.94 | PHARMACOLOGY & PHARMACY | 3.89 | 11.441892 | 11.441892 |
| EXPERIMENTAL NEUROLOGY | 1 | 3.369 | NEUROSCIENCES | 3.39 | 11.4161934 | 11.4161934 |
| JOURNAL OF VIRAL HEPATITIS | 1 | 2.841 | GASTROENTEROLOGY & HEPATOLOGY | 4.02 | 11.4154221 | 11.4154221 |
| MINERALOGICAL MAGAZINE | 1 | 1.268 | MINERALOGY | 8.95 | 11.3456836 | 11.3456836 |
| EUROPEAN JOURNAL OF NUTRITION | 1 | 2.098 | NUTRITION & DIETETICS | 5.40 | 11.3233256 | 11.3233256 |
| COMBUSTION THEORY AND MODELLING | 1 | 0.857 | ENGINEERING | 13.21 | 11.3194274 | 11.3194274 |
| BEHAVIOUR | 1 | 1.103 | ZOOLOGY | 10.20 | 11.253909 | 11.253909 |
| JOURNAL OF VOLCANOLOGY AND GEOTHERMAL RESEARCH | 1 | 1.265 | GEOSCIENCES | 8.74 | 11.0509135 | 11.0509135 |
| MYCOLOGICAL RESEARCH | 1 | 1.13 | MYCOLOGY | 9.76 | 11.033998 | 11.033998 |
| JOURNAL OF BURN CARE & REHABILITATION | 1 | 1.096 | REHABILITATION | 10.05 | 11.0183072 | 11.0183072 |
| ENVIRONMENTAL TOXICOLOGY | 1 | 1.373 | ENVIRONMENTAL SCIENCES | 7.95 | 10.9209793 | 10.9209793 |
| JOURNAL OF ENGINEERING MATERIALS AND TECHNOLOGY-TRANSACTIONS OF THE ASME | 1 | 0.819 | ENGINEERING | 13.21 | 10.8175158 | 10.8175158 |
| CANADIAN MINERALOGIST | 1 | 1.207 | MINERALOGY | 8.95 | 10.7998739 | 10.7998739 |

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| BEHAVIOURAL PROCESSES | 1 | 1.056 | ZOOLOGY | 10.20 | 10.774368 | 10.774368 |
| INTERNATIONAL JOURNAL OF GYNECOLOGICAL PATHOLOGY | 1 | 1.544 | OBSTETRICS & GYNECOLOGY | 6.97 | 10.76554 | 10.76554 |
| GENES AND IMMUNITY | 1 | 3.718 | GENETICS & HEREDITY | 2.89 | 10.7595202 | 10.7595202 |
| QJM-AN INTERNATIONAL JOURNAL OF MEDICINE | 1 | 2.58 | MEDICINE | 4.15 | 10.700034 | 10.700034 |
| TRANSPORTATION RESEARCH PART D- TRANSPORT AND ENVIRONMENT | 1 | 0.483 | TRANSPORTATION SCIENCE | 22.14 | 10.6928955 | 10.6928955 |
| NEUROEPIDEMIOLOGY | 1 | 1.758 | PUBLIC ENVIRONMENT & OCCUPATION HEALTH | 6.08 | 10.6881126 | 10.6881126 |
| INTERNATIONAL JOURNAL OF MEDICAL MICROBIOLOGY | 1 | 2.919 | MICROBIOLOGY | 3.63 | 10.6091055 | 10.6091055 |
| HISTOLOGY AND HISTOPATHOLOGY | 1 | 1.931 | PATHOLOGY | 5.48 | 10.5755077 | 10.5755077 |
| DIABETES-METABOLISM RESEARCH AND REVIEWS | 1 | 3.133 | ENDOCRINOLOGY & METABOLISM | 3.37 | 10.5622829 | 10.5622829 |
| INTERNATIONAL UROGYNECOLOGY JOURNAL | 1 | 1.51 | OBSTETRICS & GYNECOLOGY | 6.97 | 10.528475 | 10.528475 |
| MARINE BIOTECHNOLOGY | 1 | 1.237 | MARINE & FRESHWATER BIOLOGY; OCEANOGRAPHY | 8.38 | 10.3713791 | 10.3713791 |
| PSYCHIATRIC SERVICES | 1 | 2.279 | PSYCHIATRY | 4.54 | 10.3482553 | 10.3482553 |
| EUROPEAN JOURNAL OF MECHANICS B-FLUIDS | 1 | 0.93 | MECHANICS | 10.99 | 10.218654 | 10.218654 |
| CANCER GENE THERAPY | 1 | 3.653 | GENETICS & HEREDITY; ONCOLOGY | 2.79 | 10.2094044 | 10.2094044 |
| OPERATIVE DENTISTRY | 1 | 1.341 | DENTISTRY | 7.60 | 10.1922705 | 10.1922705 |
| CLINICAL ENDOCRINOLOGY | 1 | 3.023 | ENDOCRINOLOGY & METABOLISM | 3.37 | 10.1914399 | 10.1914399 |
| CURRENT OPINION IN CARDIOLOGY | 1 | 2.162 | CARDIAC & CARDIOVASCULAR SYSTEM | 4.69 | 10.130051 | 10.130051 |
| DISTRIBUTED COMPUTING, | 1 | 1.081 | COMPUTER | 9.36 | 10.1197815 | 10.1197815 |

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| PROCEEDINGS | | | SCIENCE | | | |
| JOURNAL OF ENDODONTICS | 1 | 1.323 | DENTISTRY | 7.60 | 10.0554615 | 10.0554615 |
| CLINICAL CHEMISTRY AND LABORATORY MEDICINE | 1 | 1.685 | MEDICAL LABORATORY TECHNOLOGY | 5.96 | 10.046981 | 10.046981 |

