

JCR YEAR

2021

INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER

ISSN

0017-9310

EISSN

1879-2189

JCR ABBREVIATION

INT J HEAT MASS TRAN

ISO ABBREVIATION

Int. J. Heat Mass Transf.

Journal information

EDITION

Science Citation Index Expanded (SCIE)

CATEGORY

ENGINEERING, MECHANICAL - SCIE

THERMODYNAMICS - SCIE

MECHANICS - SCIE

LANGUAGES

Multi-Language

REGION

ENGLAND

1ST ELECTRONIC JCR YEAR

1997

Publisher information

PUBLISHER

PERGAMON-ELSEVIER SCIENCE LTD

ADDRESS

THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, ENGLAND

PUBLICATION FREQUENCY

13 issues/year

Journal's performance

Journal Impact Factor

The Journal Impact Factor (JIF) is a journal-level metric calculated from data indexed in the Web of Science Core Collection. It should be used with careful attention to the many factors that influence citation rates, such as the volume of publication and citations characteristics of the subject area and type of journal. The Journal Impact Factor can complement expert opinion and informed peer review. In the case of academic evaluation for tenure, it is inappropriate to use a journal-level metric as a proxy measure for individual researchers, institutions, or articles. [Learn more](#)

2021 JOURNAL IMPACT FACTOR

5.431

[View calculation](#)

JOURNAL IMPACT FACTOR WITHOUT SELF CITATIONS

4.699

[View calculation](#)

Journal Impact Factor contributing items

Export

Citable items (3,361)

Citing Sources (1,243)

TITLE

CITATION COUNT

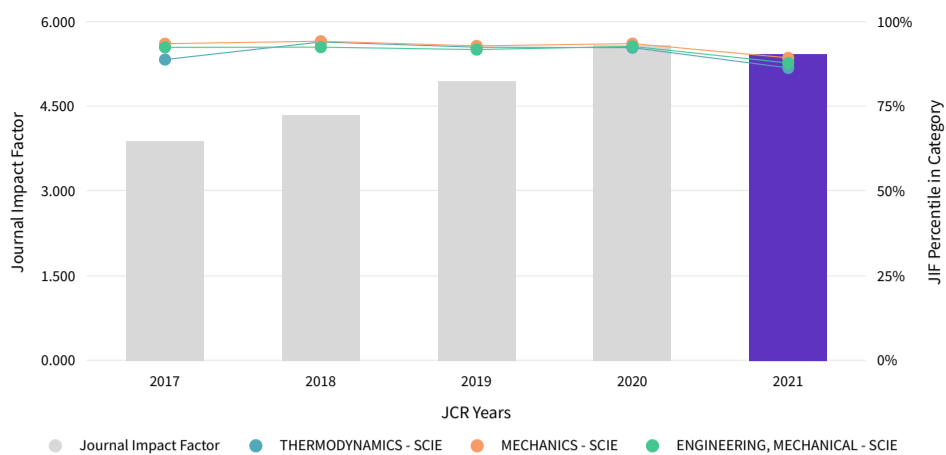
Recent developments in phase change materials for energy storage applications:...

180



Journal Impact Factor Trend 2021

Export



[View all years](#)

| | | |
|---|----|---|
| A critical review on heat transfer augmentation of phase change materials... | 71 | ▼ |
| Review of pool boiling enhancement by surface modification | 71 | ▼ |
| Numerical analysis of different fin structures in phase change material mod... | 66 | ▼ |
| Pool boiling heat transfer to CuO-H2O nanofluid on finned surfaces | 61 | ▼ |
| Unsteady flow and heat transfer past a stretching/shrinking sheet in a hybrid... | 55 | ▼ |
| Natural convective flow and heat transfer of Nano-Encapsulated Phase Change Materi... | 54 | ▼ |
| Hybrid heat transfer enhancement for latent-heat thermal energy storage syste... | 52 | ▼ |
| A fractal study for the effective electrolyte diffusion through charged porous media | 49 | ▼ |
| Thermal management of electronic devices using pin-fin based cascade... | 49 | ▼ |

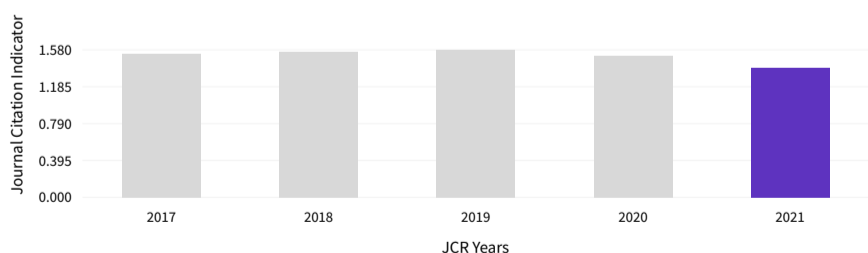
[View All in Web of Science](#)

Journal Citation Indicator (JCI)

Export

1.39

The Journal Citation Indicator (JCI) is the average Category Normalized Citation Impact (CNCI) of citable items (articles & reviews) published by a journal over a recent three year period. The average JCI in a category is 1. Journals with a JCI of 1.5 have 50% more citation impact than the average in that category. It may be used alongside other metrics to help you evaluate journals. [Learn more](#)

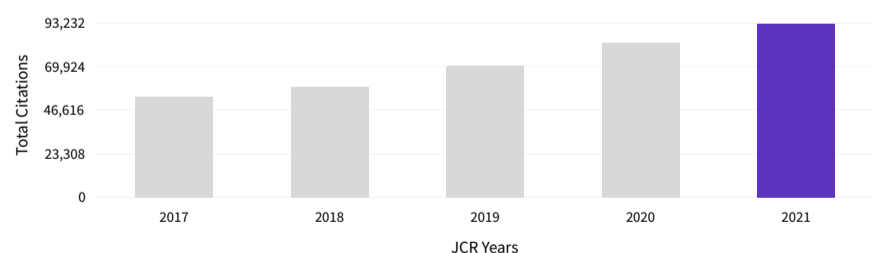


Total Citations

Export

93,232

The total number of times that a journal has been cited by all journals included in the database in the JCR year. Citations to journals listed in JCR are compiled annually from the JCR years combined database, regardless of which JCR edition lists the journal.



[View all years](#)

Citation distribution

Export

The Citation Distribution shows the frequency with which items published in the year or two years prior were cited in the JCR data year (i.e., the component of the calculation of the JIF). The graph has similar functionality as the JIF Trend graph, including hover-over data descriptions for each data point, and an interactive legend where each data element's legend can be used as a toggle. You can view [Articles](#), [Reviews](#), or [Non-Citable \(other\) items](#) to the JIF numerator. [Learn more](#)

ARTICLE CITATION
MEDIAN

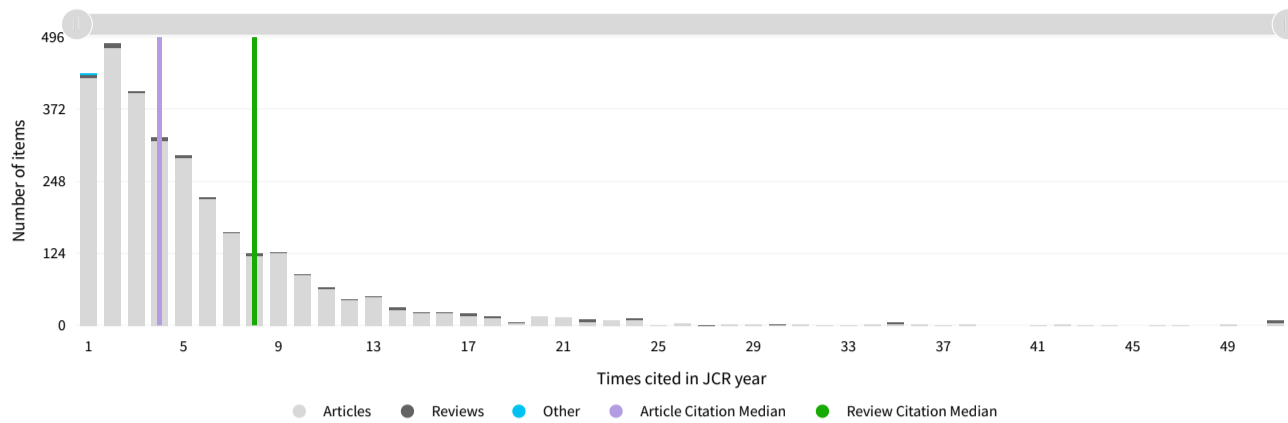
4

REVIEW CITATION
MEDIAN

8

UNLINKED CITATIONS

217



TIMES CITED

0

ARTICLES

307

REVIEWS

2

OTHER

27

Open Access (OA)

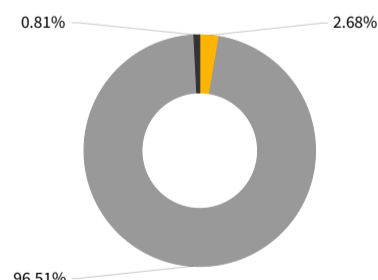
[Export](#)

The data included in this tile summarizes the items published in the journal in the JCR data year and in the previous two years. For example, in the 2020 JCR data, released in June 2021, the Open Access (OA) data show the publication model (Gold OA or subscription) of materials published in 2018, 2019 and 2020, and citations in 2020 to these items. This three-year set of published items is used to provide descriptive analysis of the content and community of the journal. [Learn more](#)

Items

TOTAL CITABLE 4,777
% OF CITABLE OA 2.70%

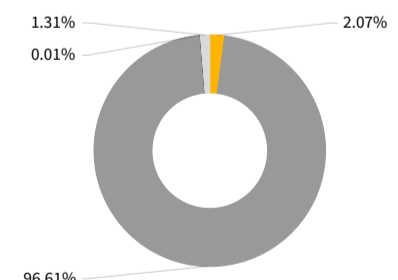
CITABLE
GOLD OPEN ACCESS
129 / 2.68%
SUBSCRIPTION AND FREE TO READ
4,648 / 96.51%
NON-CITABLE
OTHER (NON CITABLE ITEMS)
39 / 0.81%



Citations*

TOTAL CITABLE 19,853
% OF CITABLE OA 2.10%

CITABLE
GOLD OPEN ACCESS
417 / 2.07%
SUBSCRIPTION AND FREE TO READ
19,436 / 96.61%
NON-CITABLE
OTHER (NON CITABLE ITEMS)
3 / 0.01%



UNLINKED
CITATIONS

263 /

1.31%

*Citations in 2021 to items published in [2019 - 2021]

Rank by Journal Impact Factor

Journals within a category are sorted in descending order by Journal Impact Factor (JIF) resulting in the Category Ranking below. A separate rank is shown for each category in which the journal is listed in JCR. Data for the most recent year is presented at the top of the list, with other years shown in reverse chronological order. [Learn more](#)

EDITION

Science Citation Index Expanded (SCIE)

CATEGORY

ENGINEERING, MECHANICAL

17/137

| JCR YEAR | JIF RANK | JIF QUARTILE | JIF PERCENTILE | |
|----------|----------|--------------|----------------|----------------------|
| 2021 | 17/137 | Q1 | 87.96 | <input type="text"/> |
| 2020 | 10/133 | Q1 | 92.86 | <input type="text"/> |
| 2019 | 11/130 | Q1 | 91.92 | <input type="text"/> |
| 2018 | 10/129 | Q1 | 92.64 | <input type="text"/> |
| 2017 | 10/128 | Q1 | 92.58 | <input type="text"/> |

EDITION

Science Citation Index Expanded (SCIE)

CATEGORY

MECHANICS

15/138

| JCR YEAR | JIF RANK | JIF QUARTILE | JIF PERCENTILE | |
|----------|----------|--------------|----------------|----------------------|
| 2021 | 15/138 | Q1 | 89.49 | <input type="text"/> |
| 2020 | 9/135 | Q1 | 93.70 | <input type="text"/> |
| 2019 | 10/136 | Q1 | 93.01 | <input type="text"/> |
| 2018 | 8/134 | Q1 | 94.40 | <input type="text"/> |
| 2017 | 9/134 | Q1 | 93.66 | <input type="text"/> |



Rank by Journal Citation Indicator (JCI)

Journals within a category are sorted in descending order by Journal Citation Indicator (JCI) resulting in the Category Ranking below. A separate rank is shown for each category in which the journal is listed in JCR. Data for the most recent year is presented at the top of the list, with other years shown in reverse chronological order. [Learn more](#)

CATEGORY

ENGINEERING, MECHANICAL

10/177

| JCR YEAR | JCI RANK | JCI QUARTILE | JCI PERCENTILE | |
|----------|----------|--------------|----------------|----------------------|
| 2021 | 10/177 | Q1 | 94.63 | <input type="text"/> |
| 2020 | 10/166 | Q1 | 94.28 | <input type="text"/> |
| 2019 | 7/166 | Q1 | 96.08 | <input type="text"/> |
| 2018 | 7/163 | Q1 | 96.01 | <input type="text"/> |
| 2017 | 8/159 | Q1 | 95.28 | <input type="text"/> |

CATEGORY

MECHANICS

11/163

| JCR YEAR | JCI RANK | JCI QUARTILE | JCI PERCENTILE | |
|----------|----------|--------------|----------------|----------------------|
| 2021 | 11/163 | Q1 | 93.56 | <input type="text"/> |
| 2020 | 9/156 | Q1 | 94.55 | <input type="text"/> |
| 2019 | 7/156 | Q1 | 95.83 | <input type="text"/> |
| 2018 | 7/154 | Q1 | 95.78 | <input type="text"/> |
| 2017 | 8/154 | Q1 | 95.13 | <input type="text"/> |



Citation network

Cited Half-life

6.5 years

The Cited Half-Life is the median age of the items in this journal that were cited in the JCR year. Half of a journal's cited items were published more recently than the cited half-life.

TOTAL NUMBER OF CITES

93,232

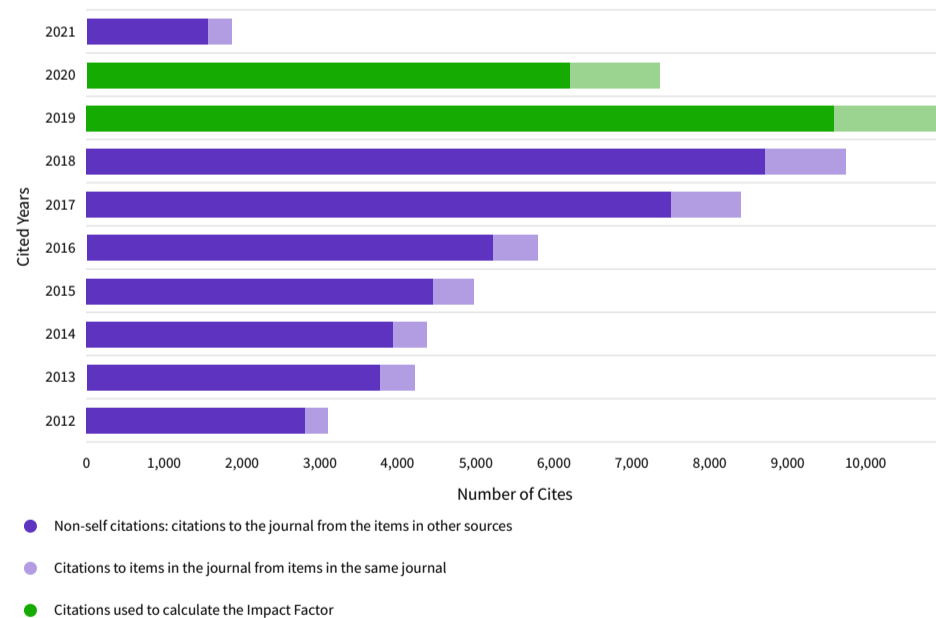
NON SELF-CITATIONS

82,863

SELF-CITATIONS

10,369

Cited Half-life Data



Citing Half-life

8.4 years

The Citing Half-Life is the median age of items in other publications cited by this journal in the JCR year.

TOTAL NUMBER OF CITES

65,071

NON SELF-CITATIONS

54,702

SELF-CITATIONS

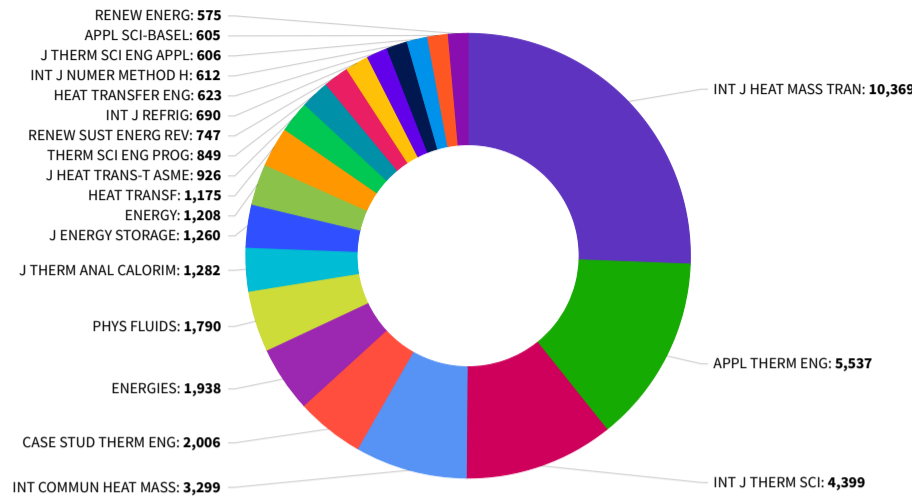
10,369

Citing Half-life Data

[Export](#)

| CITED YEAR | # OF CITES FROM 2021 | CUMULATIVE % | # OF CITING SOURCES |
|------------------|-------------------------|----------------|------------------------|
| All years | 93,232 citations | 100.00% | 2,335 sources > |
| 2021 | 1,864 citations | 2.00% | 385 sources > |
| 2020 | 7,353 citations | 9.89% | 829 sources > |
| 2019 | 10,902 citations | 21.58% | 999 sources > |
| 2018 | 9,738 citations | 32.02% | 979 sources > |
| 2017 | 8,395 citations | 41.03% | 983 sources > |
| 2016 | 5,786 citations | 47.23% | 799 sources > |
| 2015 | 4,963 citations | 52.56% | 751 sources > |
| 2014 | 4,369 citations | 57.24% | 691 sources > |
| 2013 | 4,212 citations | 61.76% | 664 sources > |
| 2012 | 3,087 citations | 65.07% | 600 sources > |
| Older | 32,563 citations | | |

Journal Citation Relationships



Content metrics

Source data

This tile shows the breakdown of document types published by the journal. Citable Items are Articles and Reviews. For the purposes of calculating JIF, a JCR year considers the publications of that journal in the two prior years. [Learn more](#)

1,416 total citable items

| | ARTICLES | REVIEWS | COMBINED(C) | OTHER DOCUMENT TYPES(O) | i PER |
|-----------------------------|----------|---------|-------------|-------------------------|--------------|
| NUMBER IN JCR YEAR 2021 (A) | 1,387 | 29 | 1,416 | 9 | 99% |
| NUMBER OF REFERENCES (B) | 60,908 | 4,152 | 65,060 | 11 | 100% |
| RATIO (B/A) | 43.9 | 143.2 | 45.9 | 1.2 | |

Average JIF Percentile

[Export](#)

The Average Journal Impact Factor Percentile takes the sum of the JIF Percentile rank for each category under consideration, then calculates the average of those values. [Learn more](#)

ALL CATEGORIES AVERAGE
87.99

EDITION Science Citation Index Expanded

ENGINEERING, MECHANICAL
87.96

THERMODYNAMICS
86.51

MECHANICS
89.49

Contributions by organizations

[Export](#)

Organizations that have contributed the most papers to the journal in the most recent three-year period. [Learn more](#)

Contributions by country/region

[Export](#)

Countries or Regions that have contributed the most papers to the journal in the most recent three-year period. [Learn more](#)

| RANK | ORGANIZATION | COUNT |
|------|---|-------|
| 1 | XI'AN JIAOTONG UNIVERSITY | 242 |
| 2 | SHANGHAI JIAO TONG UNIVERSITY | 162 |
| 3 | CHINESE ACADEMY OF SCIENCES | 143 |
| 4 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS) | 126 |
| 5 | INDIAN INSTITUTE OF TECHNOLOGY SYSTEM (IIT SYSTEM) | 123 |
| 6 | TSINGHUA | 120 |

| RANK | COUNTRY / REGION | COUNT |
|------|-----------------------|-------|
| 1 | CHINA MAINLAND | 2162 |
| 2 | USA | 875 |
| 3 | South Korea | 376 |
| 4 | Japan | 242 |
| 5 | India | 205 |
| 6 | England | 186 |
| 7 | France | 185 |
| - | Iran | 185 |
| 9 | GERMANY (FED REP GER) | 168 |

Additional metrics

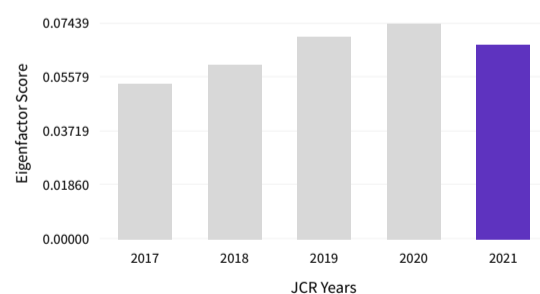
Eigenfactor Score



0.06702

The Eigenfactor Score is a reflection of the density of the network of citations around the journal using 5 years of cited content as cited by the Current Year. It considers both the number of citations and the source of those citations, so that highly cited sources will influence the network more than less cited sources. The Eigenfactor calculation does not include journal self-citations.

[Learn more](#)

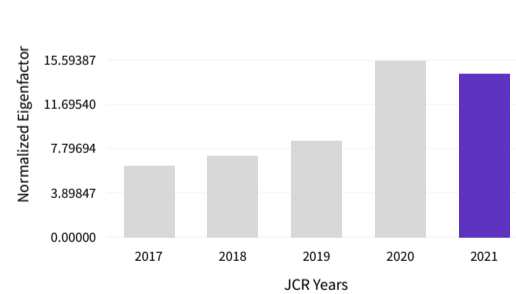


Normalized Eigenfactor



14.40825

The Normalized Eigenfactor Score is the Eigenfactor score normalized, by rescaling the total number of journals in the JCR each year, so that the average journal has a score of 1. Journals can then be compared and influence measured by their score relative to 1. [Learn more](#)

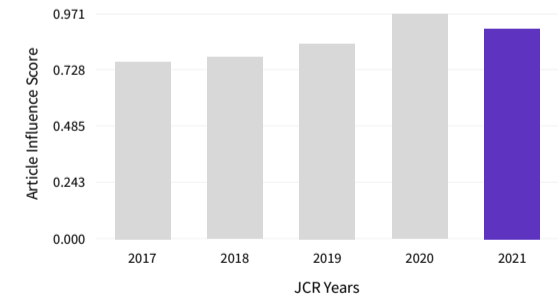


Article influence score



0.909

The Article Influence Score normalizes the Eigenfactor Score according to the cumulative size of the cited journal across the prior five years. The mean Article Influence Score for each article is 1.00. A score greater than 1.00 indicates that each article in the journal has above-average influence. [Learn more](#)



5 Year Impact Factor



5.428

[View Calculation](#)

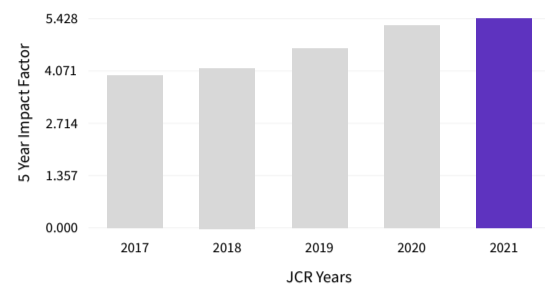
Immediacy Index



1.316

[View Calculation](#)

The 5-year Impact Factor is the average number of times articles from the journal published in the past five years have been cited in the JCR year. It is calculated by dividing the number of citations in the JCR year by the total number of articles published in the five previous years.



The Immediacy Index is the count of citations in the current year to the journal that reference content in this same year. Journals that have a consistently high Immediacy Index attract citations rapidly. [Learn more](#)

