Essential Science Indicators^{SM}

Powered by ISI Web of Knowledge^{SM}

Benefits

Available through the *ISI Web of Knowledge* platform, *Essential Science Indicators* is a Web-based research tool that enables researchers and research evaluators to measure scientific performance and to track trends in science.

This in-depth analytical tool surveys over 8,500 journals from around the world for article publication and citation count performance indicators. It ranks scientists, institutions (universities, corporations, government research labs), countries, and journals in 22 specific fields of research by the number of papers published, citations received, and citations made per paper. The data* covers a rolling 10-year period plus bimonthly updates during the current year.

Essential Science Indicators is the ideal resource for conducting complex analyses of scientific literature so you can easily discover the information you need to:

- Examine the research performance of nations, companies, institutions, authors, journals and papers.
- Identify significant trends in the sciences and social sciences.
- Evaluate potential employees, collaborators, reviewers and peers.

*Data in *Essential Science Indicators* is limited to Thomson Scientific indexed journal articles. Books, book chapters, or articles pubished in journal not indexed by Thomson Scientific are not taken into account, either in terms of publication counts or citation counts.

Coverage

From the *Essential Science Indicators* homepage you can access:

Citation Rankings (4 options):

View the total citation counts and citations-per-paper scores for the last 10 years ranked in each field by the most cited:
- Author (rankings include the top 1%)
- Institution (rankings include the top 1%)
- Country (rankings include the top 50%)
- Journal (rankings include the top 50%)

Most Cited Papers (2 options):

- Highly Cited Papers: Lists the top cited papers over the last 10 years in 22 scientific fields. Rankings are based on meeting a threshold of the top 1% by field and year based on total citations received.
- Hot Papers: Papers published in the past two years that receive more citations during the past two months relative to other papers in the same field.

Note: Click on any highlighted text to obtain rankings for that scientist, institution, country or journal.

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Search Field Rules

- Searches are not case sensitive

- Enter words and phrases without quotation marks

- Use Wildcard symbols to retrieve plurals or variant spellings

*	zero to many characters
?	1 character
$	0 or 1 character

- Separate two or more terms by using Boolean (logical) operators

AND	(intersection)
OR	(union)
NOT	(difference)
SAME	(proximity)

- Use parentheses to specify order of precedence; otherwise, operators will be applied in the following order: **SAME, NOT, AND, OR**
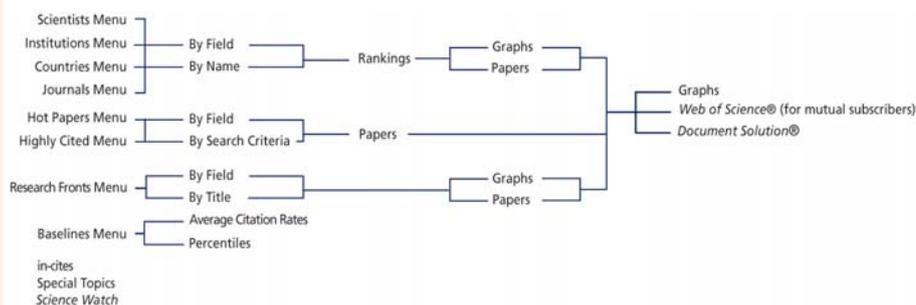
Citation Analysis (2 options):

- Research Fronts: A group of highly cited papers, referred to as core papers, in specialized topic defined by cluster analysis. Since the assignment of papers to a Research Front is not based on the journal categories used in *Essential Science Indicators*, Research Fronts offer an alternative classification scheme for highly cited papers.

- Baselines: A benchmark for measuring research performance. *Essential Science Indicators* includes three sets of baselines:

  Average Citation Rates: Average Citation Rates are calculated for each year of the 10-year period, based on a cumulation of citations from the year of publication to the most current bimonthly update. Averages are calculated by adding the citation counts of individual papers and dividing by the number of papers. An average for the full 10-year period is also given in All Years.

  Percentiles: The term percentile designates a citation threshold at or above which a fixed fraction of the papers fall. The term percentile is used to denote any fixed fraction of top papers ordered by citation count. The levels we have selected for listing by field and year are 0.01%, 0.1%, 1.0%, 10%, 20% and 50%.

  Field Rankings: The Field Rankings table displays total papers and total citation data on all fields. The fields are ranked and sorted based on the number of citations received, the default sort option. You can, however, sort data by papers, citations per paper, or field name.

Commentary (3 options):

Brief editorial material provides guidance about data analysis and interpretation of the rankings and tables, charts, and other datasets presented in *Essential Science Indicators*. These features are available from the home page.

- in-cites: Offers entry into the scientific community. Go behind the scenes with interviews and first-person essays featuring highly cited researchers, papers, institutions, journals, and countries in a variety of research fields.

- Special Topics: Features citation analyses and expert commentary for selected scientific research areas that have experienced notable recent advances or are of special current interest.

- *Science Watch*®: Offers editorial content from archived issues of the Thomson Scientific newsletter. Read monthly interviews with top researchers from past *Science Watch* issues.

Functionality Flow

Searching Options

- Search for the top ranked scientists, institutions, countries or journals by scientific field (for example, chemistry, engineering and physics)
- Search for a specific scientist, institution, country or journal to find out how it ranks against others in its field of research.
- Search for highly cited papers published during the past 10 years or for hot papers published during the last two years.

Scientist

Enter either a scientist's entire name (with or without initials) or a partial name with a wildcard (recommended). Do not enter spaces between initials.
Note: Remember that you can also use the alphabetical list to find a scientist.

Weinberg finds scientists with that last name
Weinberg* finds scientists whose last name is or begins with Weinberg
Weinberg RA finds scientists with that last name and exactly those initials
Weinberg R* finds scientists with that last name and with the first initial of R

Institution

Enter either an abbreviated institution name or a partial abbreviation with a wildcard.
Note: Remember that you can also use the alphabetical list to find an institution.

MIT finds only MIT
Harvard* finds Harvard University or Harvard Smithsonian Ctr Astrophys
Harvard Univ* finds Harvard University

Country

Enter either a single country or an abbreviated country name.
Note: Remember that you can also use the alphabetical list to find a country.

Germany find Germany
AUSTR* finds Austria or Australia

Journals

Enter either the Thomson Scientific 20-character abbreviated journal name or a partial abbreviation.
Note: Remember that you can also use the alphabetical list to find a journal.

Nature finds *Nature*
Astro* finds *Astronomy and Astrophysics*, *Astrophysical Journal*, *Astrophysical Letters*, etc.
Astrophys J finds *Astrophysical Journal*

Title Word

Highly Cited and Hot Papers only. Enter either a single word, phrase, or partial word with a wildcard to find articles with that word in the title. You may enter up to 5 search terms separated by AND or OR. Searches containing certain common words (referred to as stopwords) may return zero results.

apoptosis finds papers with apoptosis in the title
apopto* find papers with apoptosis, apoptotic, etc. in the title
monoclonal antibod* finds papers with monoclonal antibody, monoclonal antibodies, etc., in the title
climate chang* or global warm* finds papers with climate change, climate changes, or global warming in the title

Sorting Options

- Overall rankings for scientists, institutions, countries, and journals can be sorted by total citations, total papers, citations per paper, and field.

- Field rankings for scientists, institutions, countries, and journals can be sorted by total citations, total papers, citations per paper, and alphabetically.

- Hot papers and highly cited papers can be sorted by total citations, publication year, and journal title.

- Research Fronts can be ranked by total citations, total papers, citations per paper, mean year, and alphabetically.

Word or Term

Research Fronts only. Find a word in a Research Front. Enter a single word, short phrase, or partial word with a wildcard. You may enter up to 5 search terms separated by AND or OR. Searches containing certain common words (referred to as stopwords) may return zero results.

apoptosis finds fronts with apoptosis in the title
apopto* find fronts with apoptosis, apoptotic, etc. in the title
breast cancer finds fronts with breast cancer in the title
cancer and therap* finds fronts with cancer therapies, cancer patients receiving therapy, etc.

Link to *Web of Science*®

Link to *Web of Science* (for mutual subscribers) by clicking on the Go To *Web of Science* button in the paper listing. You can find detailed bibliographic and citation information, including abstracts and links to full-text, as well as cited and citing papers. You may also create a citation alert from within *Web of Science* to notify you by email of new citation activity for a particular article.

Getting Help

The Thomson Scientific Customer Support Center provides you with a single point of access for all available support materials and reference tools for *Essential Science Indicators*, including educational tutorials, training and technical support.

www.scientific.thomson.com/support/products/esi

Click the **Help** button on any page to get detailed help on features, along with search tips and examples. If you have questions that are not addressed in the help, contact the Technical Help Desk:

www.scientific.thomson.com/support/techsupport

Questions about network connections and/or the use of your Web browser should be directed to your network administrator.

TUTORIAL AVAILABLE!
An educational tutorial of *Essential Science Indicators* is available at
www.scientific.thomson.com/tutorials/esi2

Sign up for Web-based training on *Essential Science Indicators* at
www.scientific.thomson.com/support/training/webtraining

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