



Egas Moniz Health & Science
Campus Universitário, Monte da Caparica
Almada Portugal

Bibliometric research

WoS & Scopus



Ana Teresa Santos
atsantos@egasmoniz.edu.pt

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What is...?

Bibliometric research



Bibliometrics...

“..the application of mathematics and statistical methods to books and other media of communication.”

Bibliometric research

Bibliometric research is a field of study within information science and library science that involves **the quantitative analysis of publications, citation patterns, and other bibliographic data.** The primary aim of bibliometric research is to measure and evaluate various aspects of scholarly communication and scientific output.

Examples

- **Citation counts:** The number of times a particular work (such as a journal article, book, or conference paper) has been cited by other works.
- **Publication counts:** The number of publications produced by individuals, institutions, or countries within a certain field or discipline.
- **Citation networks:** The relationships between different works based on citations, which can be visualized as networks or graphs.
- **Impact factors:** Measures of the influence or importance of scholarly journals based on citation data.
- **Collaboration patterns:** The extent to which researchers collaborate with each other, as evidenced by co-authorship relationships.

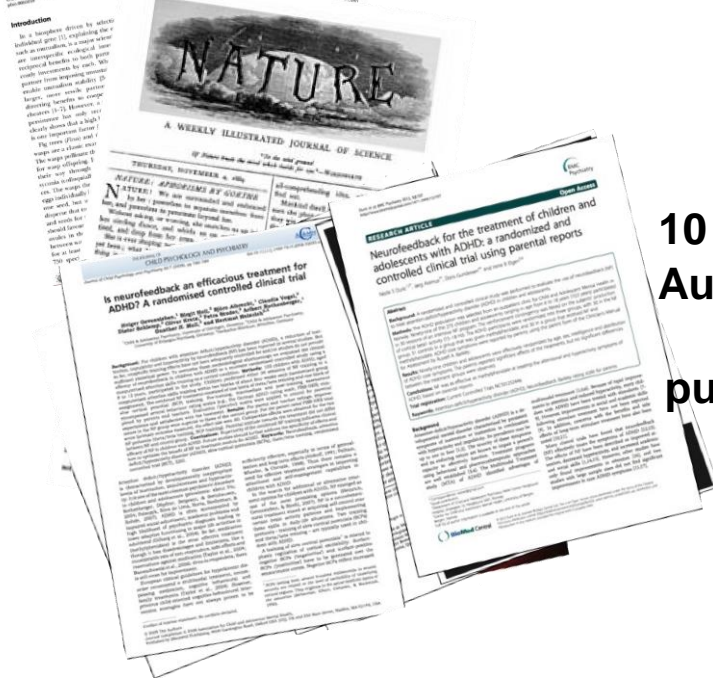
Importance of bibliometric research

- **Prior knowledge:** Before starting any academic work, it's important to have a solid understanding of what has already been researched and published on the subject at hand. Bibliographic research allows it.
- **Contextualization:** By reviewing the existing literature, you can contextualize your own work within the broader context of the field of study. This helps to show how your research relates to what others have done and what gaps you intend to fill.
- **Identification of gaps:** By reviewing the literature, you can identify gaps in existing knowledge, underexplored areas, or unresolved questions. This can provide valuable insights into where to direct your own research.
- **Validation and theoretical foundation:** By citing and referencing previous work, you validate your own work and place it within the body of knowledge of the field. Additionally, a solid theoretical foundation from existing literature can underpin your own conclusions and arguments.
- **Avoiding duplication of efforts:** Bibliographic research allows you to know what has already been done and avoid repeating studies or approaches that have already been explored. This helps save time and resources.
- **Inspiration and new ideas:** By reviewing the work of other researchers, you can draw inspiration from their approaches, methods, and results, which can lead to new ideas and insights for your own research.

DIMENSION OF EVIDENCE



Expected to double every 19 years



10 000 000 Authors to be published

25 000 World Medical Journals



1 - 2 Million articles published

DIMENSION OF THE EVIDENCE

- If one were to read everything that is published....
- Would have to read more than 5,500 articles/day
- Reading 2 articles/day (excellent!!!) after 1 year would be 55 centuries. late
- and ruined (thousands of €/year)!





Where to find...?

The best evidence

Best Evidence Search

Primary Sources

Bireme (2001, p. 7) classifies as primary sources "**the complete texts** according to the classic types of scientific literature (journals, monographs, theses, etc.), as well as other original sources of hyper-textual and numerical data".

Ex. Scientific Electronic Library Online (SCIELO).

Secondary Sources

They include **all indexes, databases, and directories**, whose records refer to primary sources, entities, and events in the health area. This also includes information services associated with these sources.

Ex. Scopus and Web of Science (WoS).

Tertiary Sources

They are those "**generated with added value**" from **primary and secondary sources**, and which have didactic objectives or support the decision-making of different user communities.

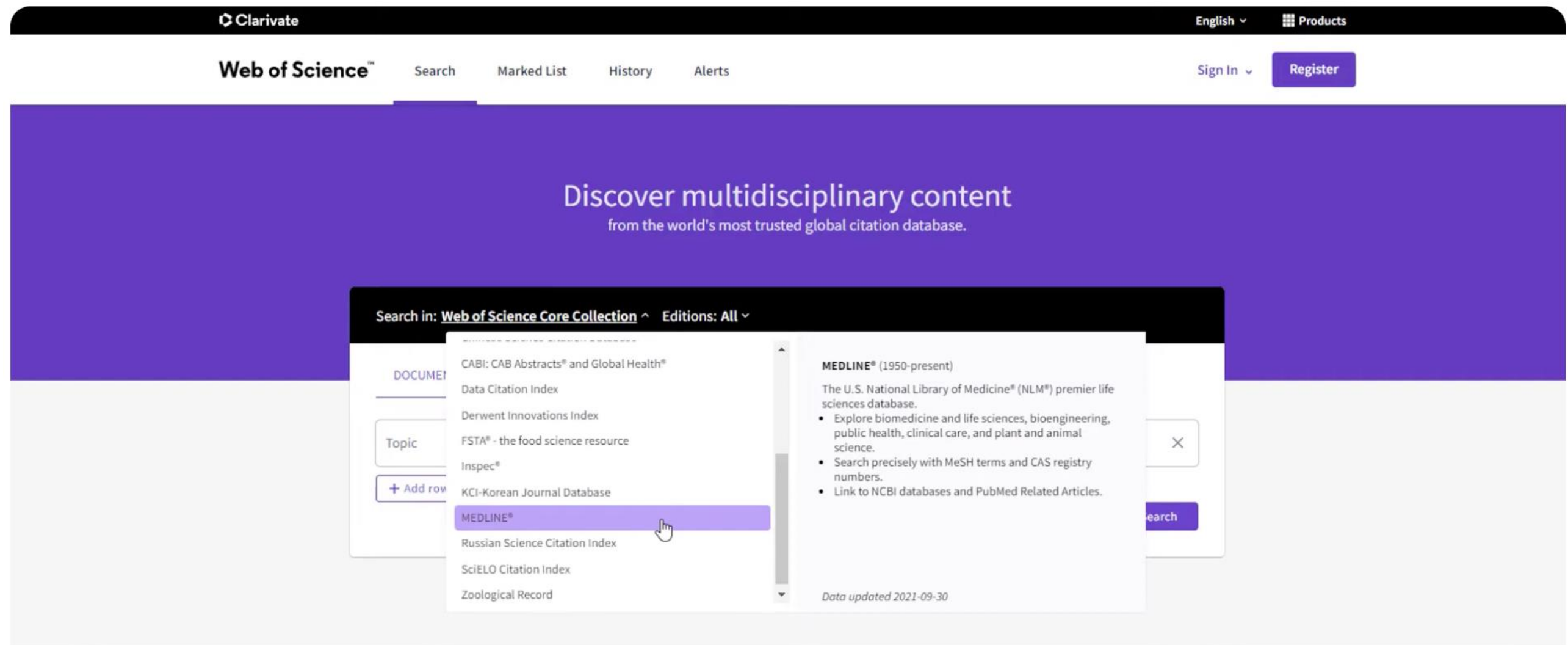
Ex. Cochrane Library.

Scopus vs Web of Science

	Scopus	Web of science
Coverage	Broader coverage , particularly in terms of international and multidisciplinary content. It includes a wide range of journals, conference proceedings, trade publications, and patents from various fields.	Broad range of disciplines but is often perceived as having a more selective and curated collection of journals. It emphasizes quality over quantity and includes fewer journals compared to Scopus.
Citation Indexes	It provides citation data and analysis tools similar to Web of Science, allowing users to track citations, calculate citation metrics (such as h-index), and identify influential publications and authors.	It offers a more extensive set of citation indexes , including the Science Citation Index Expanded, Social Sciences Citation Index, Arts & Humanities Citation Index, and more. These indexes provide detailed citation relationships and facilitate citation analysis across various disciplines.
Search Interface and Features	User-friendly search interface with advanced search options and filtering capabilities. It provides tools for refining search results, analyzing trends, and identifying potential collaborators.	Robust search interface with advanced search features. It offers unique features such as "Cited Reference Search," allowing users to trace citation patterns and identify citing articles for a particular reference.
Metrics and Evaluation	Citation counts, h-index, SJR (SCImago Journal Rank), and SNIP (Source Normalized Impact per Paper) for evaluating research impact and journal quality.	Journal impact factors, citation counts, and h-index. It also offers additional tools for research evaluation, including the Journal Citation Reports (JCR) and Essential Science Indicators (ESI).
User Community and Support	Large and diverse user community , with users from academia, industry, and government institutions. Elsevier provides customer support and training resources for Scopus users.	Significant user base and is widely used in academic and research settings . Clarivate Analytics offers support services, training materials, and workshops for Web of Science users.

Web of Science

Web of Science is a bibliographic database provided by Clarivate Analytics. It covers a wide range of academic disciplines, including natural sciences, social sciences, arts, and humanities.



Web of Science

Clarivate English Products

Web of Science™ Search Marked List History Alerts Sign In Register

Search > Results

2,313 results from Web of Science Core Collection for:

Q coffee* and *forest* (Topic)

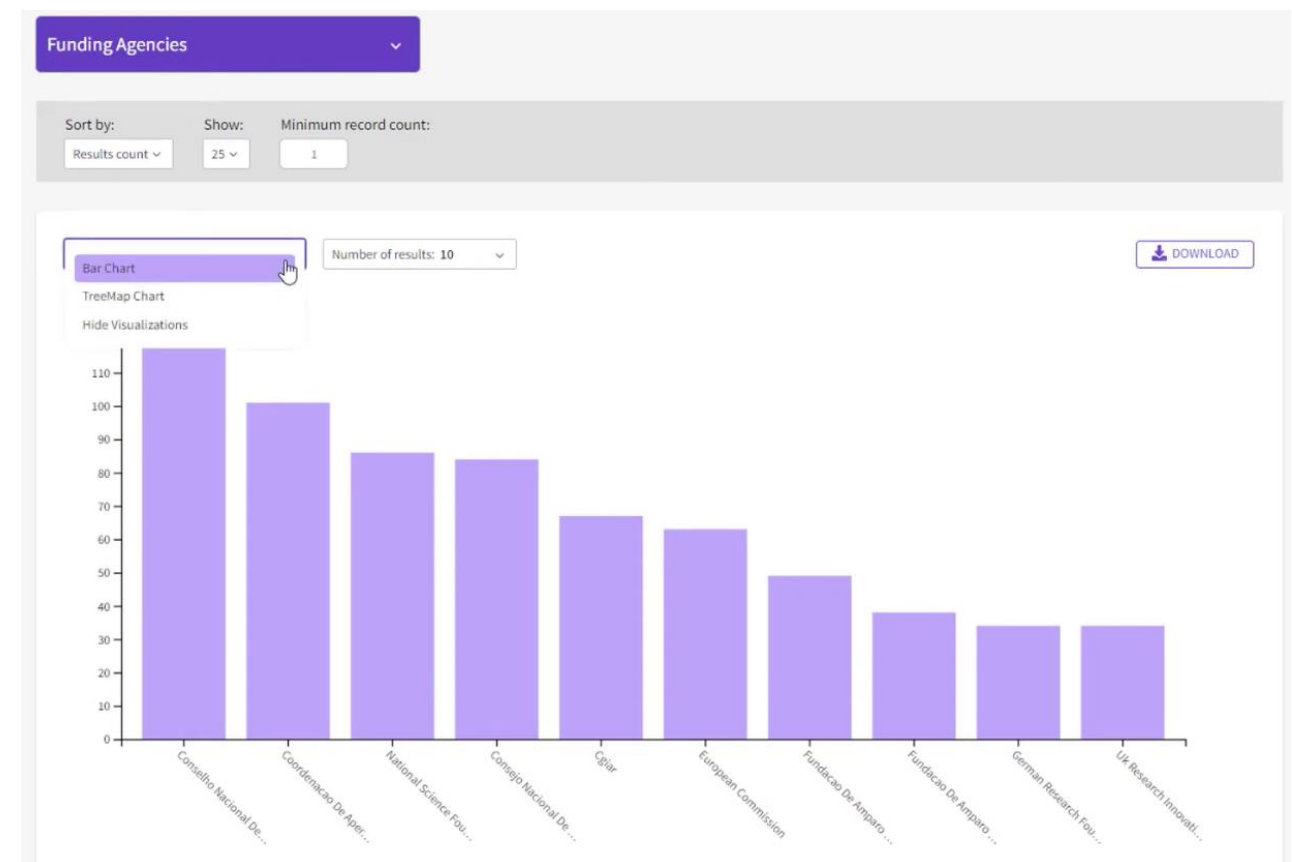
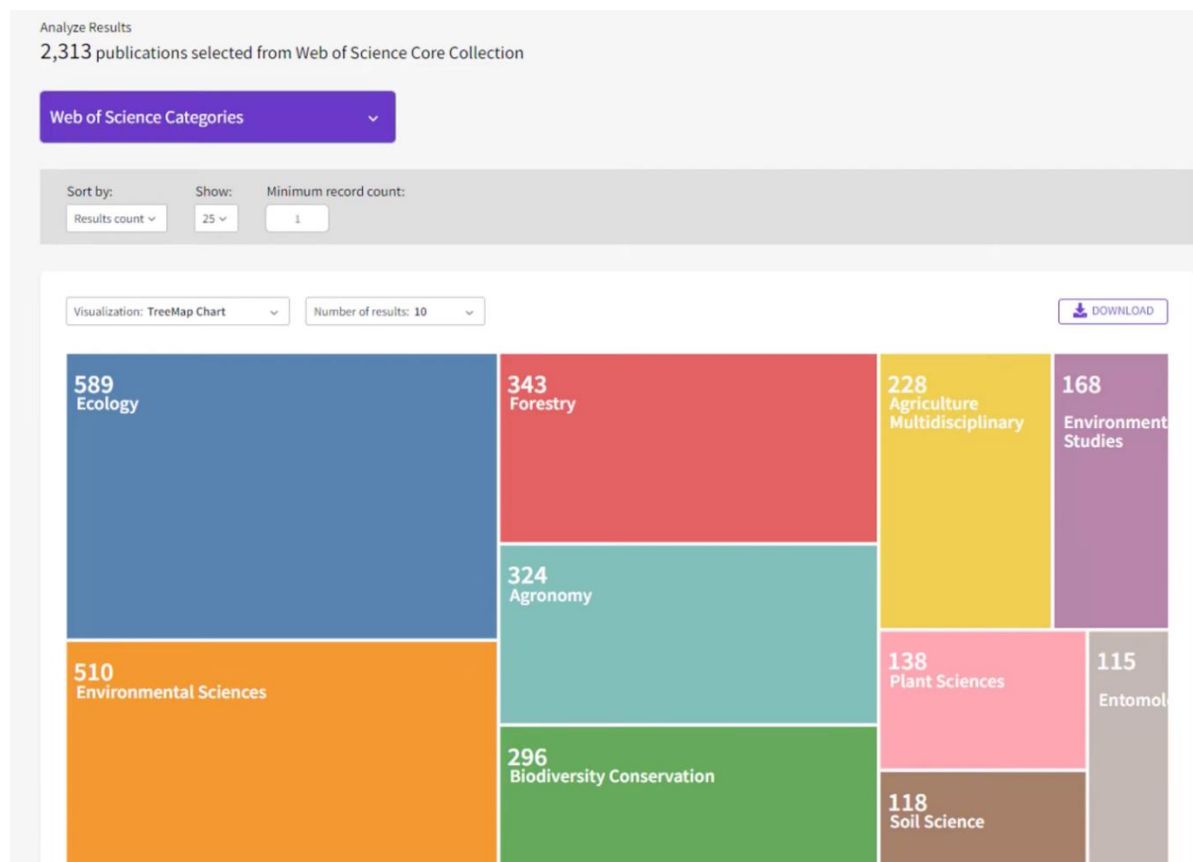
Copy query link

Publications You may also like...

Analyze Results Citation Report Create Alert

Web of Science Categories

- Publication Years
- Document Types
- Web of Science Categories
- Authors
- Affiliations
- Publication Titles
- Publishers
- Funding Agencies
- Grant Numbers
- Open Access



Web of Science

<input type="checkbox"/>	Uk Research Innovation Ukri	34	1.470%
<input type="checkbox"/>	Natural Environment Research Council Nerc	27	1.167%
<input type="checkbox"/>	Natural Sciences And Engineering Research Council Of Canada Nserc	21	0.908%
<input type="checkbox"/>	Federal Ministry Of Education Research Bmbf	20	0.865%
<input type="checkbox"/>	French National Research Agency Anr	19	0.821%
<input type="checkbox"/>	Departamento Administrativo De Ciencia Tecnologia E Innovacion Colciencias	18	0.778%
<input type="checkbox"/>	Ministry Of Education Culture Sports Science And Technology Japan Mext	17	0.735%
<input type="checkbox"/>	United States Department Of Agriculture Usda	15	0.649%
<input type="checkbox"/>	International Foundation For Science	14	0.605%
<input type="checkbox"/>	Japan Society For The Promotion Of Science	14	0.605%
<input type="checkbox"/>	Us Fish Wildlife Service	14	0.605%
<input type="checkbox"/>	European Commission Joint Research Centre	13	0.562%
<input type="checkbox"/>	Grants In Aid For Scientific Research Kakenhi	13	0.562%
<input type="checkbox"/>	National Geographic Society	13	0.562%
<input checked="" type="checkbox"/>	Cirad	12	0.519%
<input checked="" type="checkbox"/>	Deutscher Akademischer Austausch Dienst Daad	12	0.519%

Analyze Data Table

Refining will return you to the search results

Data rows displayed in table
 All data rows (up to 100,000)

<input type="checkbox"/>	Uk Research Innovation Ukri	34	1.470%
<input type="checkbox"/>	Natural Environment Research Council Nerc	27	1.167%
<input type="checkbox"/>	Natural Sciences And Engineering Research Council Of Canada Nserc	21	0.908%
<input type="checkbox"/>	Federal Ministry Of Education Research Bmbf	20	0.865%
<input type="checkbox"/>	French National Research Agency Anr	19	0.821%
<input type="checkbox"/>	Departamento Administrativo De Ciencia Tecnologia E Innovacion Colciencias	18	0.778%
<input type="checkbox"/>	Ministry Of Education Culture Sports Science And Technology Japan Mext	17	0.735%
<input type="checkbox"/>	United States Department Of Agriculture Usda	15	0.649%
<input type="checkbox"/>	International Foundation For Science	14	0.605%
<input type="checkbox"/>	Japan Society For The Promotion Of Science	14	0.605%
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<input type="checkbox"/>	European Commission Joint Research Centre	13	0.562%
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<input type="checkbox"/>	National Geographic Society	13	0.562%
<input type="checkbox"/>	Cirad	12	0.519%
<input type="checkbox"/>	Deutscher Akademischer Austausch Dienst Daad	12	0.519%

Analyze Data Table

Refining will return you to the search results

Data rows displayed in table
 All data rows (up to 100,000)

Web of Science

Truncation symbols are also known as wildcard characters

- * Any number of characters, including zero
carbon finds carbon, hydrocarbon or polycarbonate
- \$ Zero or one character only
eight\$ finds eight, eighth or eighty
- ? one character only and can be repeated
wom?n finds woman, women...

Web of Science

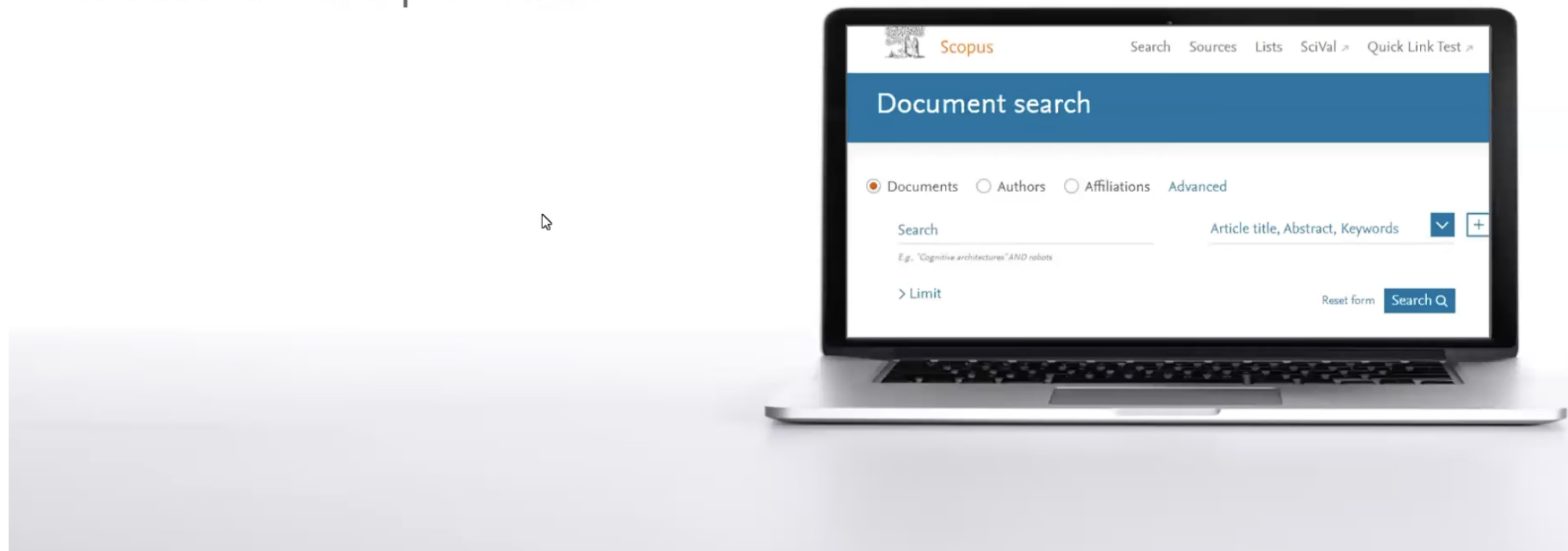
When using more than one keyword in your search, you will need to use connector words, called Boolean Operators.

AND	OR	NOT
<ul style="list-style-type: none">• When you use AND, ALL of your keywords are included in each search• Decreases the number of search results	<ul style="list-style-type: none">• When you use OR, ANY of your keywords are included in each search• Increases the number of search results	<ul style="list-style-type: none">• Words that follow NOT are excluded from your search results• Decreases the number of search results
<p>"video games" 18,737 results</p> <p>"video games" AND teenagers 547 results</p>	<p>teenagers 105,806 results</p> <p>teenagers OR adolescents 230,911 results</p> <p>OR is used with synonyms or related terms</p>	<p>"video games" 18,737 results</p> <p>"video games" NOT violence 17,880</p>

Scopus

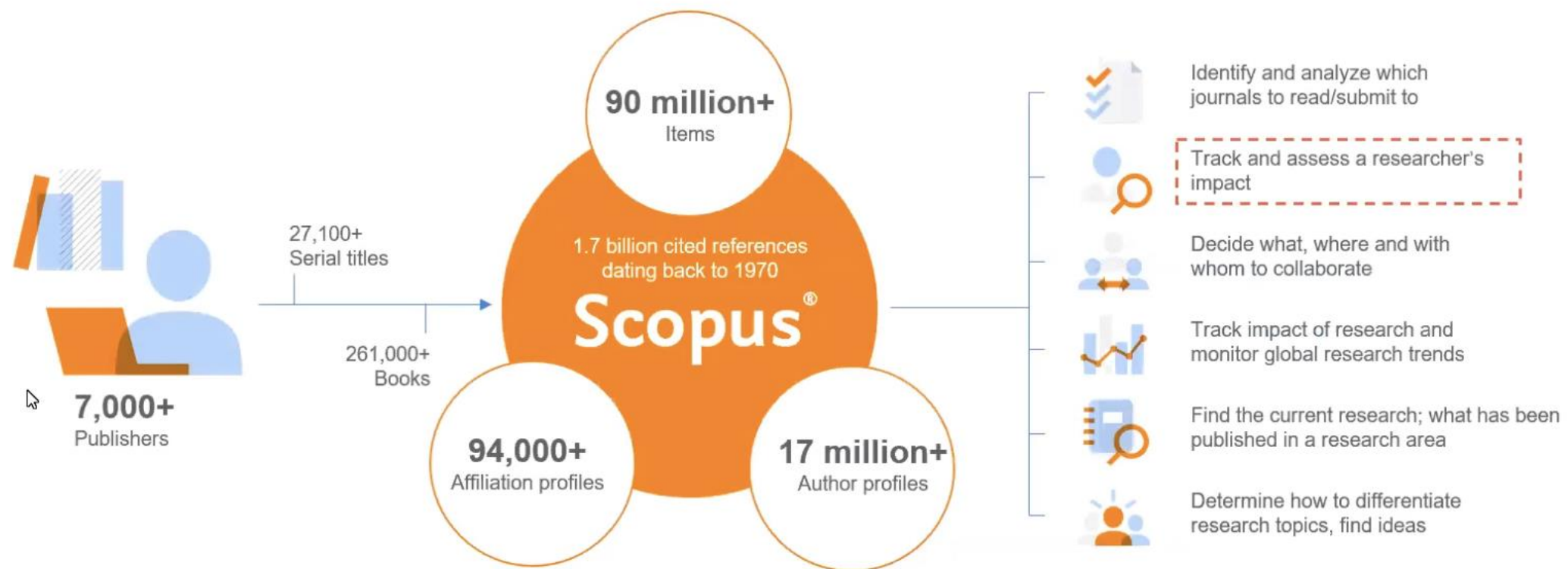
What is Scopus?

Scopus is a global, multidisciplinary database for discovering academic literature and includes visualisation tools to analyze search results; as well as metrics to measure research performance.



Scopus

Where does Scopus data come from and how is it used?



Scopus

Scopus Coverage Summary

- Updated daily—approximately **12,000** new articles per day indexed
- **20.54M** open access documents
- “Articles in Press” from **>8,740** titles
- **1.56M** preprints from multiple preprint servers
- **6,128** active Gold Open Access journals indexed

Number of journals by subject area**	Journals	Conferences	Books	Patents
Physical sciences 9,065	27,950* active peer-reviewed journals 6,128 Gold OA Journals (DOAJ/ROAD) 19.1M fully-indexed funding acknowledgements 1.56M preprints	149K conference events 11.6M conference papers 12.9% of database items	69.2K individual book series volumes 289K stand-alone books 2.48M total book items	49.0M patents
Health sciences 7,596	<ul style="list-style-type: none">• Full metadata, abstracts and cited references (refs post-1970 only)• Citations back to 1970	Mainly Engineering and Computer Sciences	Focus on Social Sciences and A&H	5 major patent offices: <ul style="list-style-type: none">• WIPO• EPO• USPTO• JPO• UK IPO
Social sciences and humanities 11,526				
Life sciences 5,164				

Scopus

Basic search



Search Lists Sources SciVal ?

Welcome to a more intuitive and efficient search experience. [See what is new](#)

Advanced query

Search within Article title, Abstract, Keywords	Search documents * biofuels
AND	
Search within Article title, Abstract, Keywords	Search documents biodiesel
AND	
Search within Article title, Abstract, Keywords	Search documents bioethanol\$

[Save search](#)
[Set search alert](#)

[+ Add search field](#) [Reset](#) [Search](#)

TRY:

Biofuel

Biofuel **OR** biodiesel **OR** bioethanol\$

Scopus

Specific operators

Proximity operators - W/n, PRE/n

You can choose between two Proximity operators to find words within a certain distance from each other: Pre/n specifies a word order whereas W/n does not.

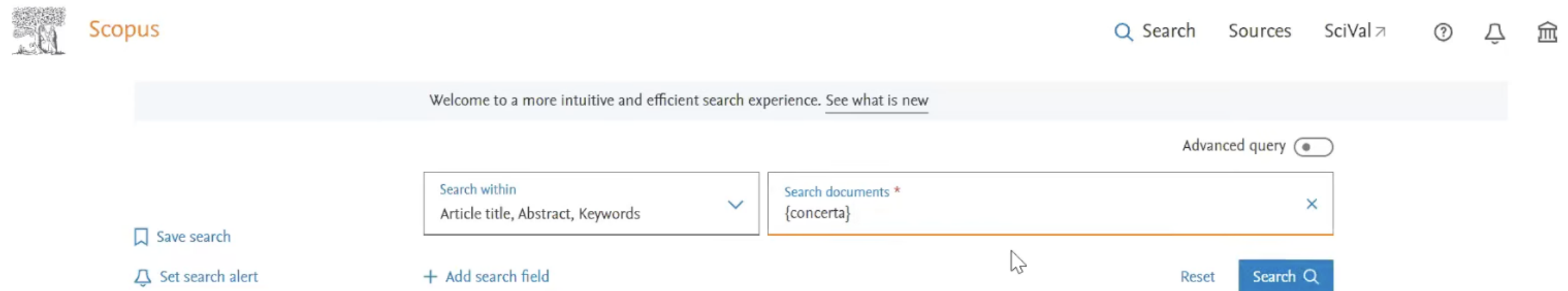
Proximity operator	Example
W/n	Indicates distance between words, but not the order — e.g., journal W/2 publishing, where <i>journal</i> can be found within a distance of two words from <i>publishing</i>
Pre/n	Terms must appear in a specific order between words — e.g., behavioral PRE/3 disturbances, where <i>behavioral</i> precedes <i>disturbances</i> within three words

TRY:

Biofuel **AND** biodiesel **AND** bioethanol\$ **AND** titanium W/3 nanoparticle

Scopus

Specific names



The screenshot shows the Scopus search interface. At the top left is the Scopus logo. To the right are navigation links: Search, Sources, SciVal, a help icon, a notification bell, and a library icon. Below the navigation is a welcome message: "Welcome to a more intuitive and efficient search experience. [See what is new](#)". The main search area features a search bar with the text "{concerta}" entered. To the left of the search bar is a dropdown menu labeled "Search within" with the options "Article title, Abstract, Keywords". To the right of the search bar is a toggle for "Advanced query" which is currently turned off. Below the search bar are buttons for "Save search", "Set search alert", "Add search field", "Reset", and "Search".

TRY:

Biofuel **AND** biodiesel **AND** bioethanol\$ **AND** {*Chlorella vulgaris*}

Scopus

Advanced search

Scopus

Search Lists Sources SciVal [?](#) [Create account](#) [Sign in](#)

Welcome to a more intuitive and efficient search experience. [See what is new](#)

Advanced query

TITLE-ABS-KEY (biofuel AND biodiesel AND bioethanol\$ AND {Chlorella vulgaris}) AND AFFILCOUNTRY (china)

[Save search](#) [Set search alert](#) [Edit in advanced search](#) [Show less](#)

[Documents](#) [Preprints](#) [Patents](#) [Secondary documents](#) [Research data](#)

TRY:

TITLE-ABS-KEY (biofuel AND biodiesel AND bioethanol\$ AND {Chlorella vulgaris})

TITLE-ABS-KEY (biofuel AND biodiesel AND bioethanol\$ AND {Chlorella vulgaris})
AND AFFILCOUNTRY (china)

TITLE-ABS-KEY (biofuel AND biodiesel AND bioethanol\$ AND {Chlorella vulgaris})
AND AFFILCOUNTRY (china) AND AUTH (wang)

Scopus

Combine searches

Scopus

Search Lists Sources SciVal ? ? Create account Sign in

← Back Combine queries Search tips ?

26 X AND 25 X

Change all operators v Clear Show results >

Search History Saved Searches

26 TITLE-ABS-KEY (biofuel AND biodiesel AND bioethanol\$ AND {chlorella vulgaris}) AND AUTH 1 results Set Alert More

25 TITLE-ABS-KEY (biofuel AND biodiesel AND bioethanol\$ AND {chlorella vulgaris}) AND AFFILCOUNTRY (china) 5 results Set Alert More

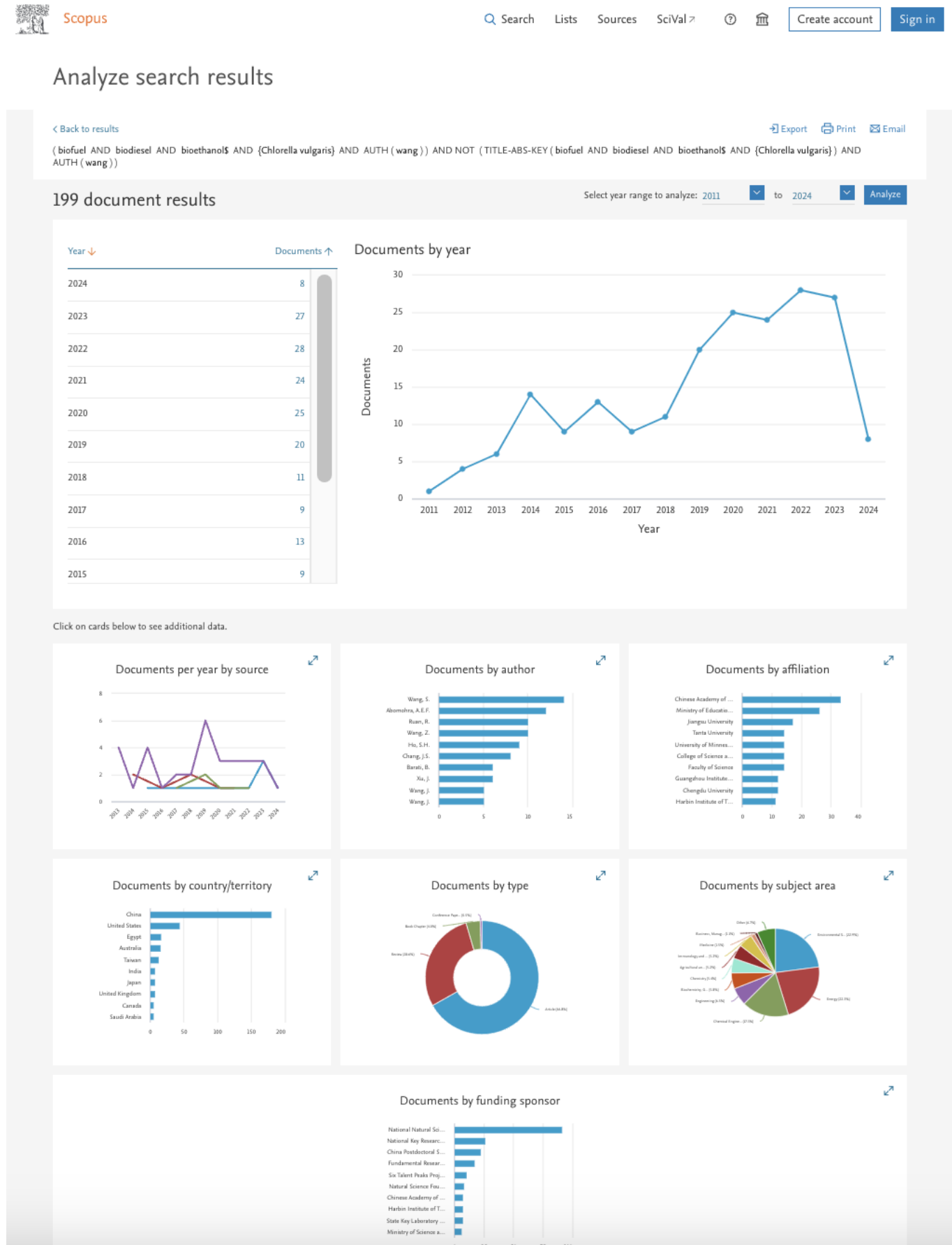
TRY:

(TITLE-ABS-KEY (biofuel AND biodiesel AND bioethanol\$ AND {Chlorella vulgaris}) AND AUTH (wang)) AND (TITLE-ABS-KEY (biofuel AND biodiesel AND bioethanol\$ AND {Chlorella vulgaris}) AND AFFILCOUNTRY (china))

(TITLE-ABS-KEY (biofuel AND biodiesel AND bioethanol\$ AND {Chlorella vulgaris}) AND AUTH (wang)) AND NOT (TITLE-ABS-KEY (biofuel AND biodiesel AND bioethanol\$ AND {Chlorella vulgaris}) AND AFFILCOUNTRY (china))

Scopus

Analyze results



Scopus

Export results

What information can be exported?

- Citation information
- Bibliographical information -
- Abstract and Keywords
- Funding
- Details
- Other information

Export document settings

You have chosen to export 1555 documents

Select your method of export

MENDELLEY ExLibris RIS Format CSV BibTeX Plain Text

What information do you want to export?

<input checked="" type="checkbox"/> Citation information	<input type="checkbox"/> Bibliographical information	<input type="checkbox"/> Abstract & keywords	<input type="checkbox"/> Funding details	<input type="checkbox"/> Other information
<input checked="" type="checkbox"/> Author(s)	<input type="checkbox"/> Affiliations	<input type="checkbox"/> Abstract	<input type="checkbox"/> Number	<input type="checkbox"/> Tradenames & manufacturers
<input checked="" type="checkbox"/> Author(s) ID	<input type="checkbox"/> Serial identifiers (e.g. ISSN)	<input type="checkbox"/> Author keywords	<input type="checkbox"/> Acronym	<input type="checkbox"/> Accession numbers & chemicals
<input checked="" type="checkbox"/> Document title	<input type="checkbox"/> PubMed ID	<input type="checkbox"/> Index keywords	<input type="checkbox"/> Sponsor	<input type="checkbox"/> Conference information
<input checked="" type="checkbox"/> Year	<input type="checkbox"/> Publisher		<input type="checkbox"/> Funding text	<input type="checkbox"/> Include references
<input checked="" type="checkbox"/> EID	<input type="checkbox"/> Editor(s)			
<input checked="" type="checkbox"/> Source title	<input type="checkbox"/> Language of original document			
<input checked="" type="checkbox"/> volume, issue, pages	<input type="checkbox"/> Correspondence address			
<input checked="" type="checkbox"/> Citation count	<input type="checkbox"/> Abbreviated source title			
<input checked="" type="checkbox"/> Source & document type				
<input checked="" type="checkbox"/> Publication Stage				
<input checked="" type="checkbox"/> DOI				
<input checked="" type="checkbox"/> Open Access				

Cancel Export

Thresholds

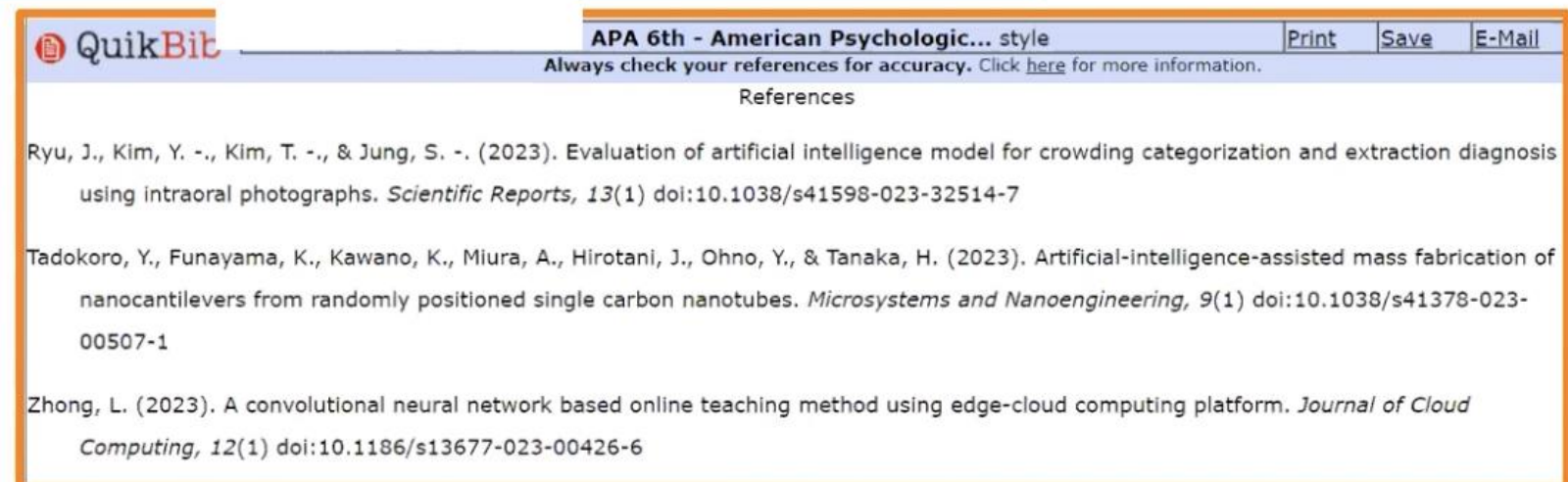
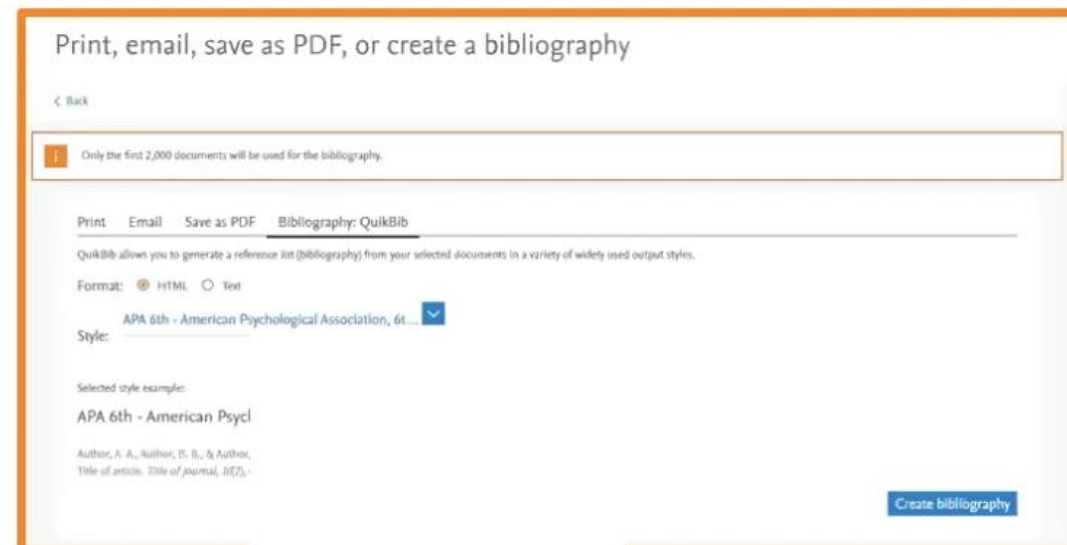
- up to 500 items to Mendeley
- Up to 2,000 citation & bibliographic information
- 20,000 records to a CSV file

Scopus

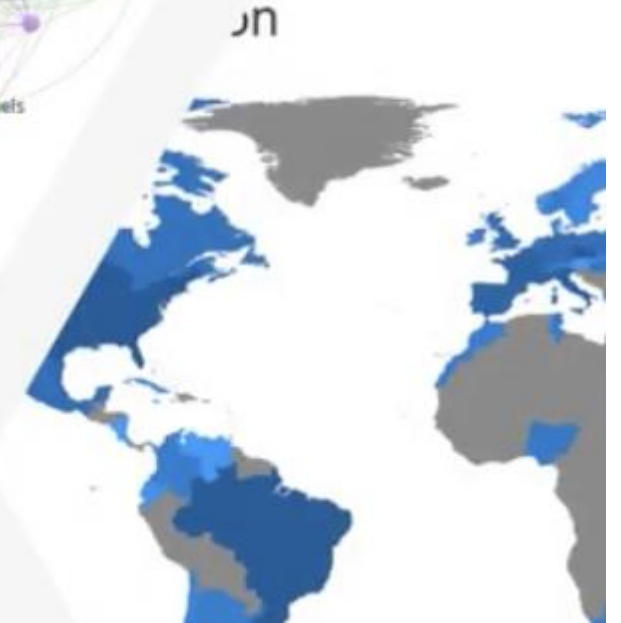
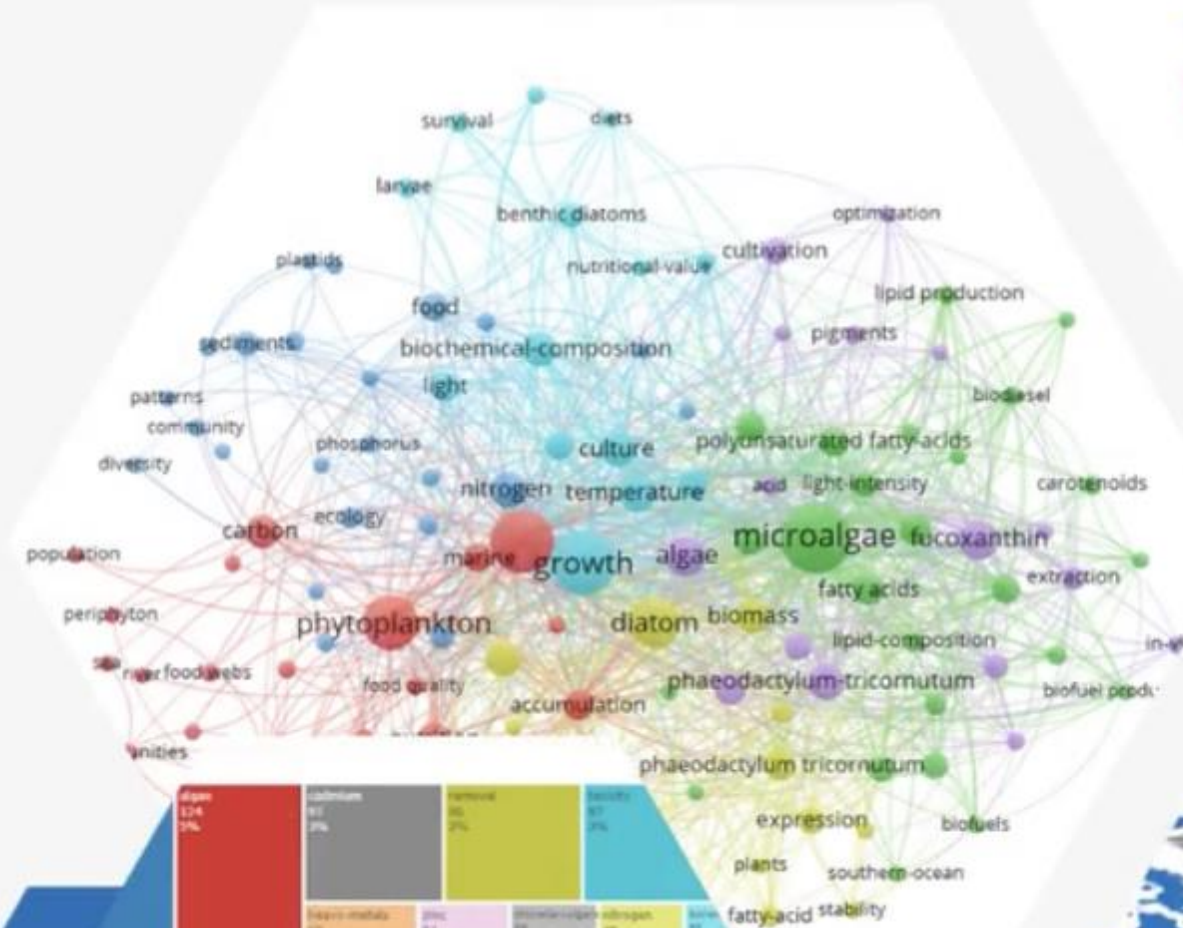
Export bibliographic references

Create a bibliography

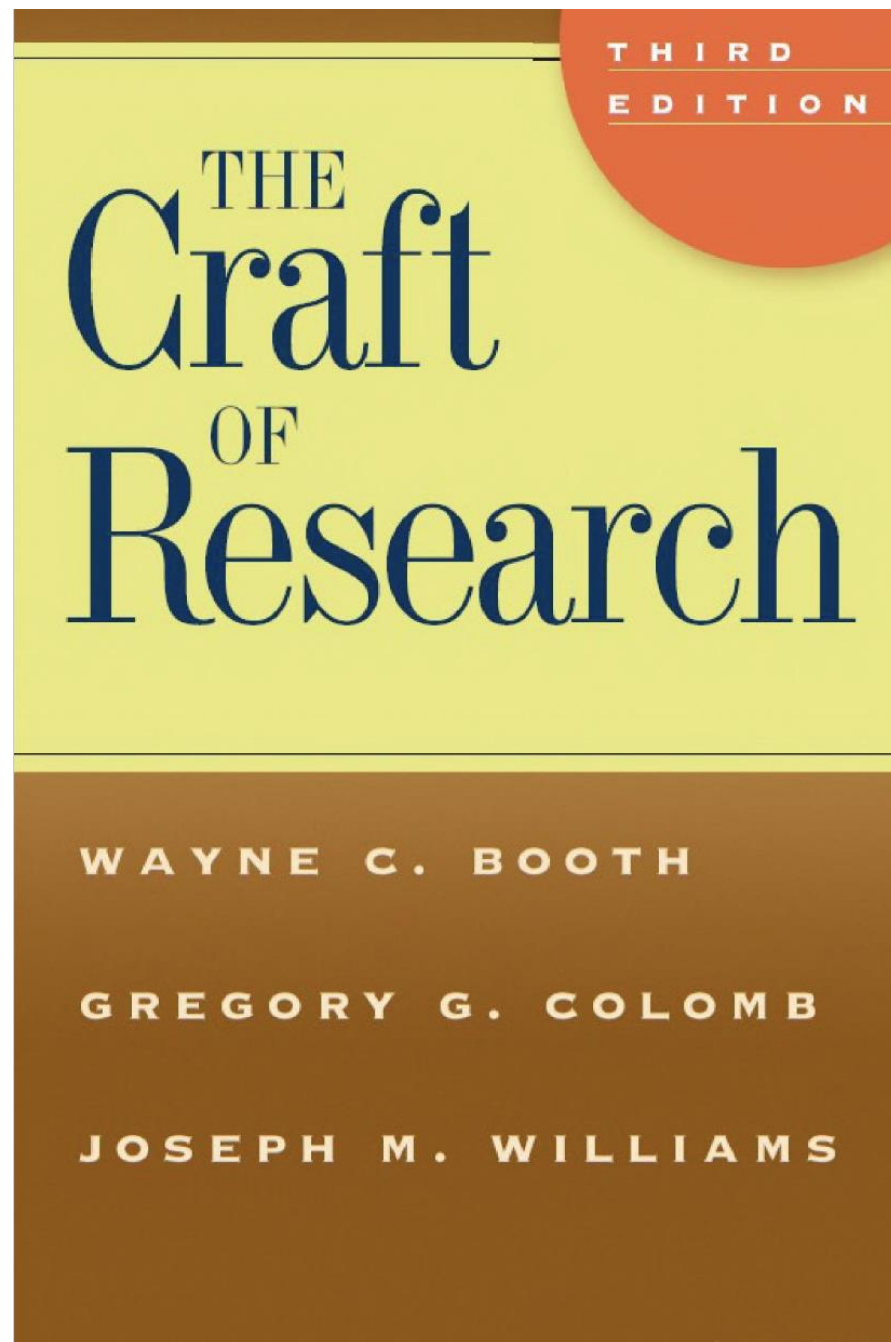
- From Scopus results lists, select the document(s) you want to include in your bibliography (**up to 1,000**).
- Select a 'Format'
- Available formats are:
 - HTML and Text
- Select your bibliographic 'Style'.
- QuikBib opens in a new window or tab, displaying the new bibliography for the document.



Softwares

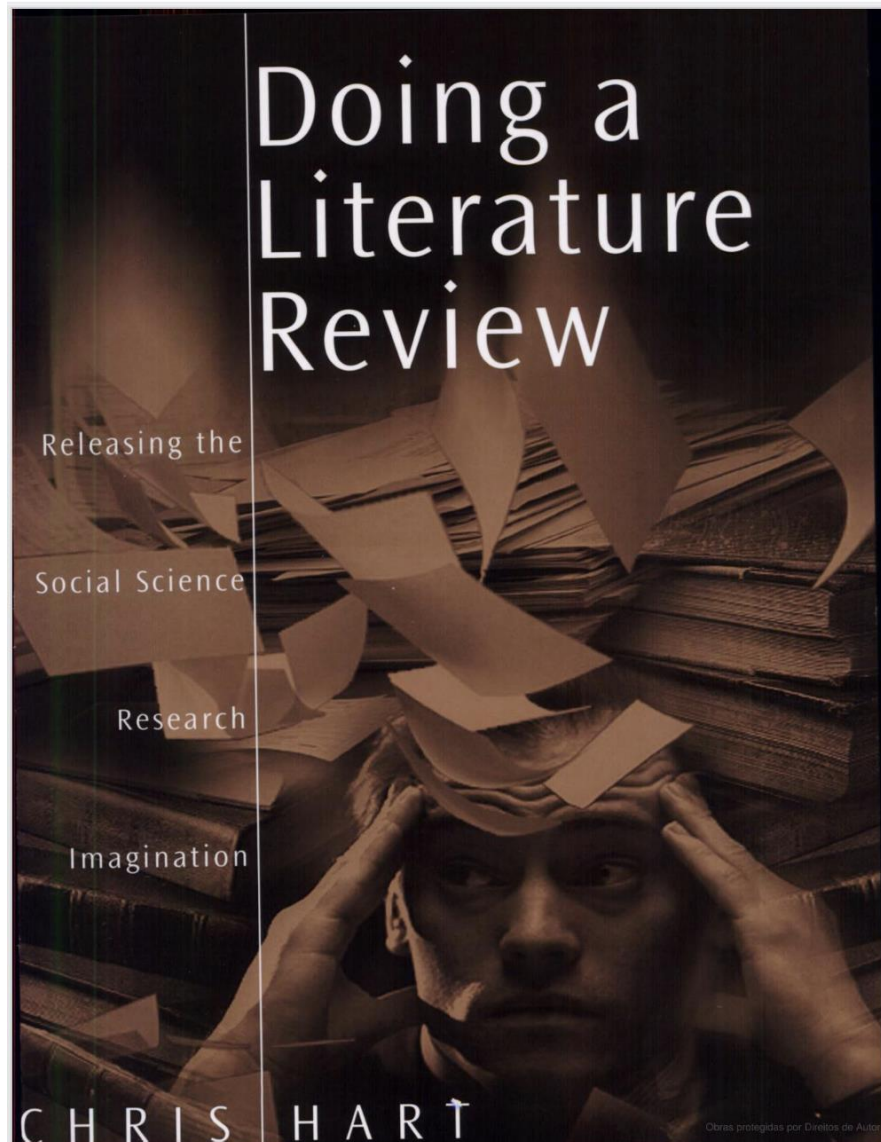


Booth, W. C., Colomb, G. G., & Williams, J. M. (2008). *The craft of research* (3rd ed.). University of Chicago Press.



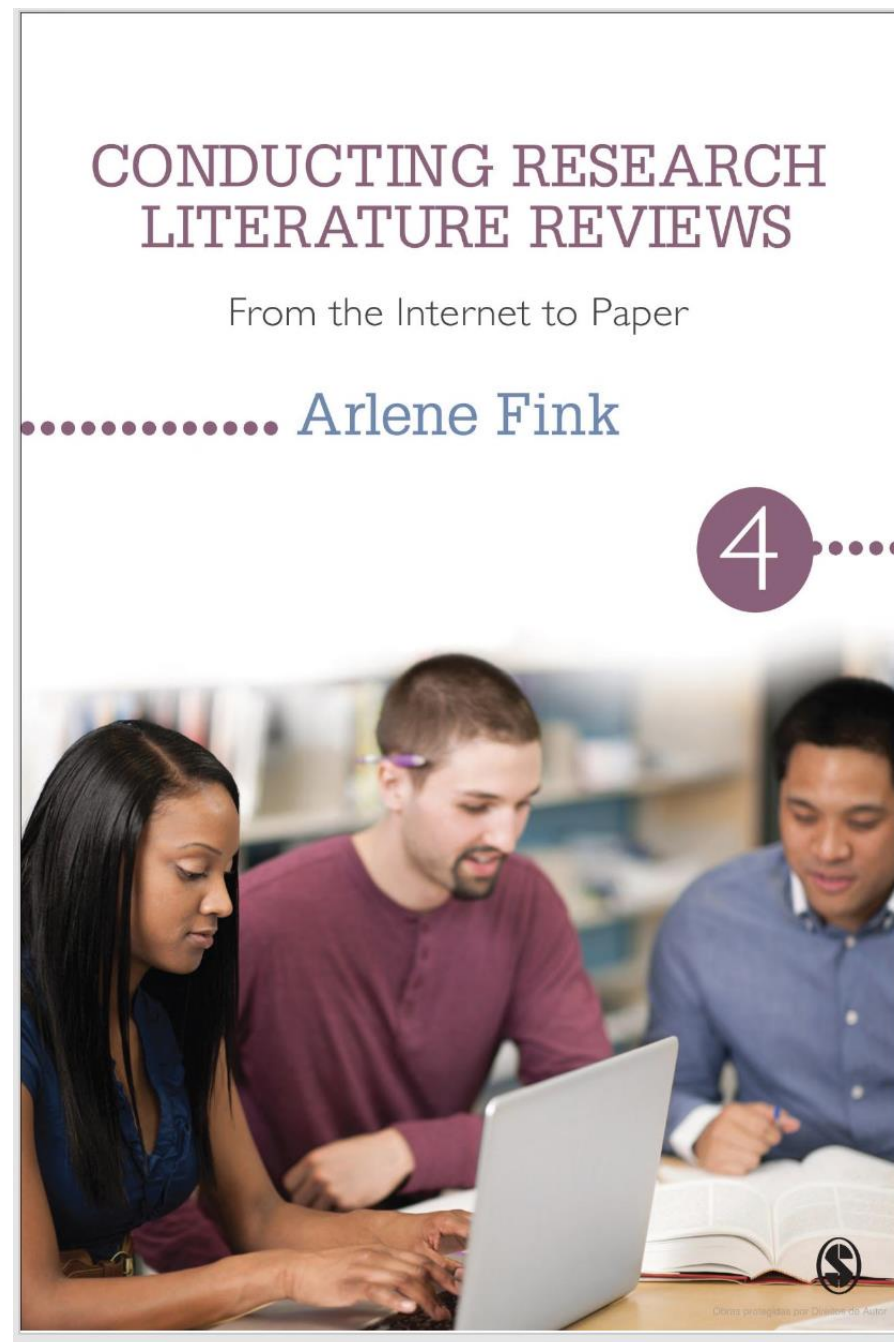
This book provides comprehensive guidance on conducting research in various disciplines, including the importance of literature review and bibliographic research.

Hart, C. (2001). Doing a literature review: Releasing the social science research imagination. Sage Publications.



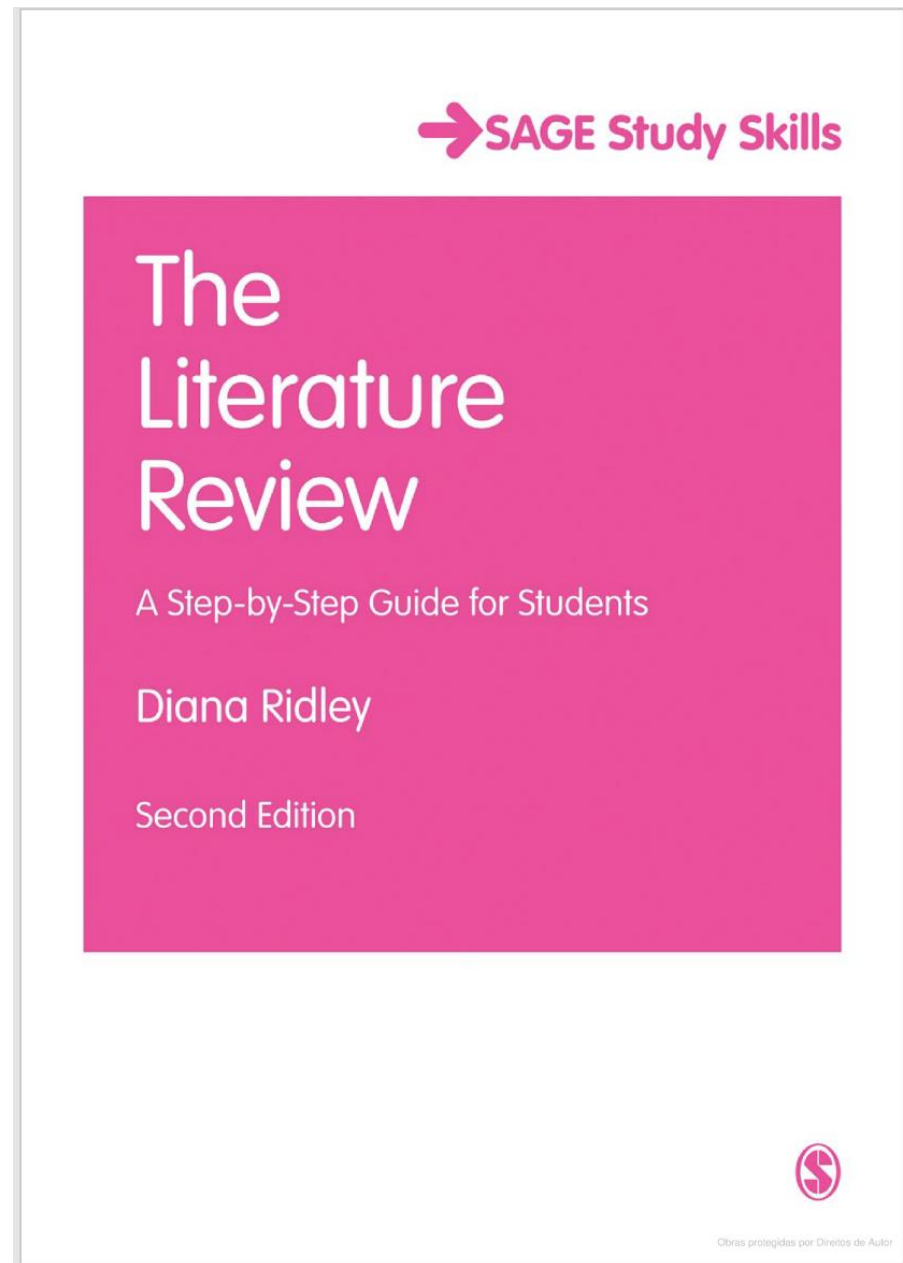
This book offers practical advice on how to conduct literature reviews, emphasizing the significance of bibliographic research in research projects..

Fink, A. (2014). Conducting research literature reviews: From the internet to paper (4th ed.). Sage Publications.



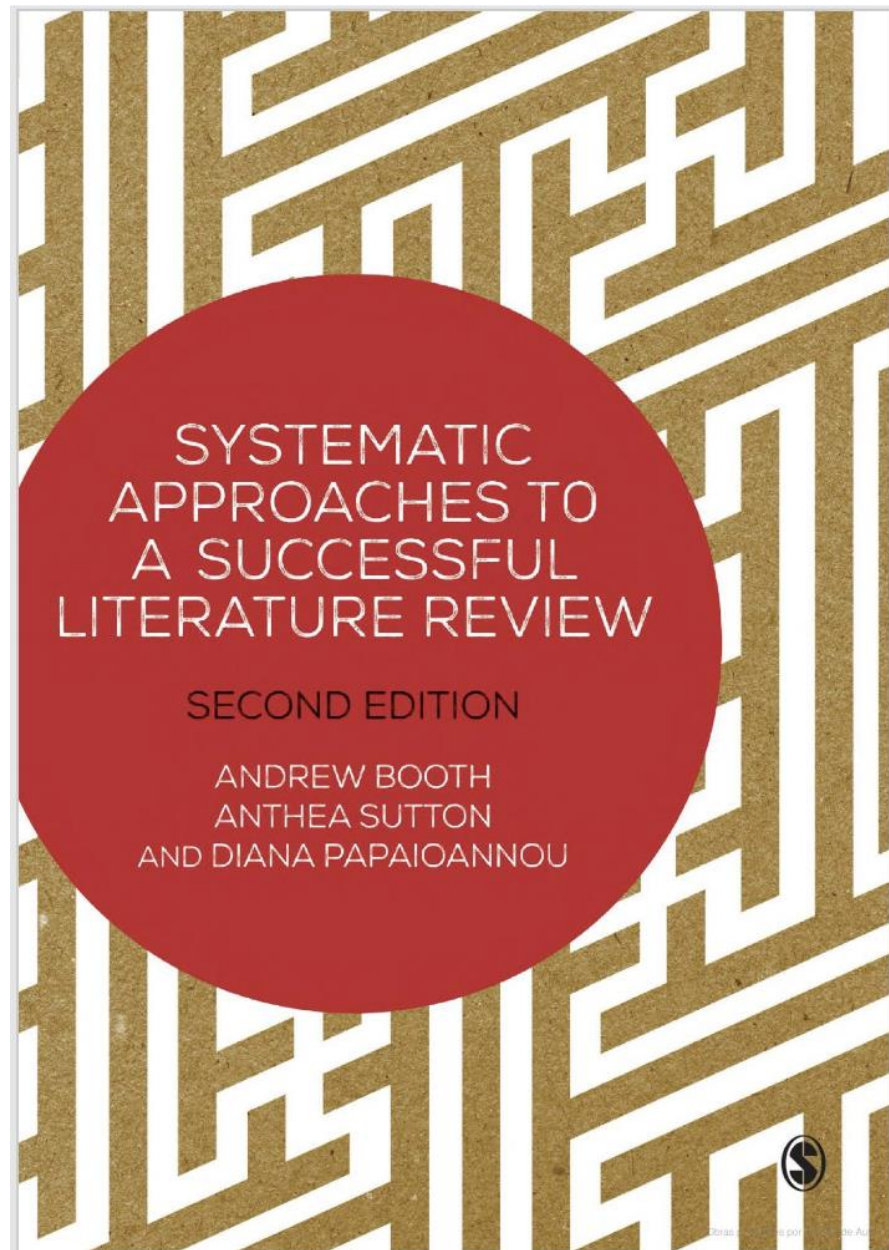
This book covers the process of conducting literature reviews across different sources, highlighting the role of bibliographic research in gathering relevant materials.

Ridley, D. (2012). *The literature review: A step-by-step guide for students* (2nd ed.). Sage Publications.



This guide offers step-by-step instructions for conducting literature reviews, emphasizing the importance of thorough bibliographic research.

Booth, A., Sutton, A., & Papaioannou, D. (2016). Systematic approaches to a successful literature review. Sage Publications.



This book explores systematic approaches to literature reviews, including strategies for effective bibliographic research to ensure comprehensive coverage of relevant literature.



Questions?