



cea

How to conduct a literature search

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Service d'appui à la recherche et à l'information scientifique



Agenda

- 1. Literature search methodology**
- 2. How to use WoS and Scopus for a literature search ?**
- 3. Zotero**



Literature search methodology



A literature search is a systematic and well-organized search for the already published data to identify a breadth of good quality references on a specific topic.

01

Understand, express
and formulate the
question

02

Build a search
strategy

03

Identify the relevant
types of document
and related
information sources
and adapt the
search strategy
accordingly



Define the research question and the concepts

→ Define the research question:

Write down your research question as a short sentence

→ Define the subject semantics :

- Identify the concepts / terms
- For each concept, make a list of the **synonyms**, the **specific terms**, the **generic terms**, the **abbreviations and acronyms**, the **alternative spelling**, **translations**

→ Define the timespan

→ Identify the document types (scientific publications, patents,...)

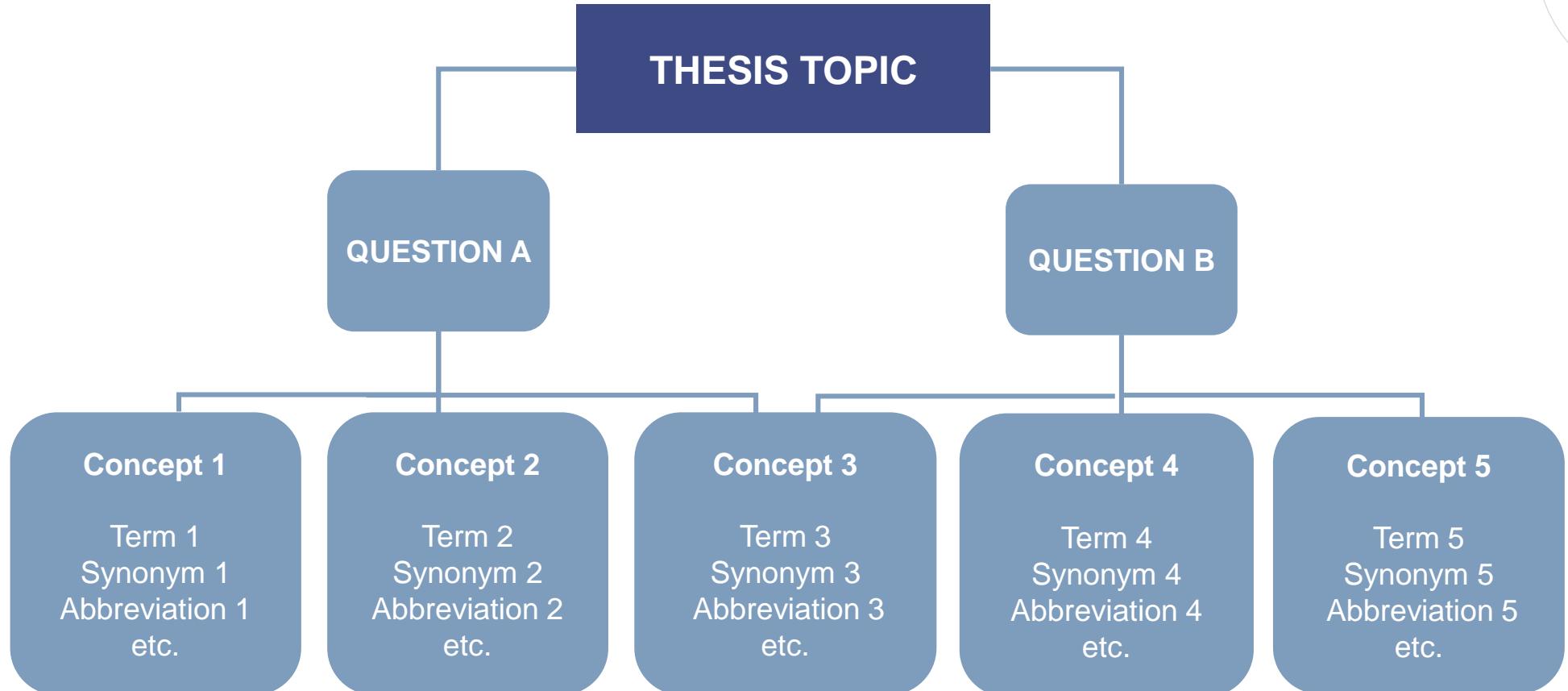


Define the research question and the concepts

→ Look for the publications of a well-known expert

When an expert of the field has been identified, add his/her publications

Formulate the question



Terminology ressources



Wikipedia



International
Electrotechnical
Commission



INIS thesaurus



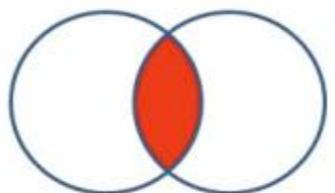
BOOLEAN OPERATORS

AND : Search records where the two terms are found

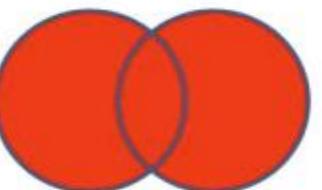
OR : Search records containing at least one of the two terms

NOT : Records where one of the words is found but not the other

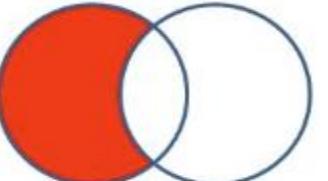
A AND B



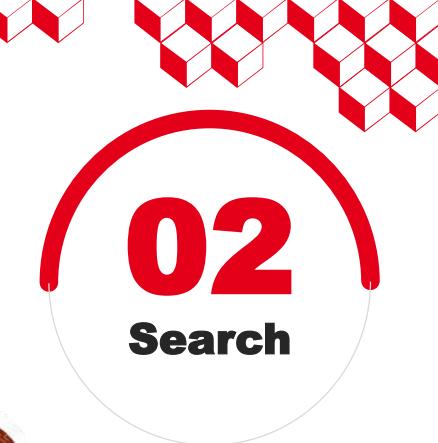
A OR B



A NOT B



Search Query



OTHER OPERATORS

- Proximity Operators: NEARx, W/x, PRE/x,... (distance x)

turbulent NEAR/4 flow

- turbulent water flow
- turbulent two-phase flow
- turbulent and steady state liquid flow
- flow of turbulent character



- Quotation marks " " to search for an exact phrase

- Truncation & wildcards: *, ?, \$

- combin^{*} → combine, combined, combination, ...
- characteri?ation → characterisation, characterization
- behavio\$r → behaviour, behavior

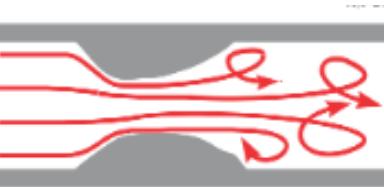


- micro\$algaX → micro-alga

- Brackets for the distributivity



turbulent AND flow



" turbulent flow "
~~turbulent two phase flow~~



Build the query

→ Build the advanced search strategy

Break down the search into the different identified key concepts.

To get a clear final query :

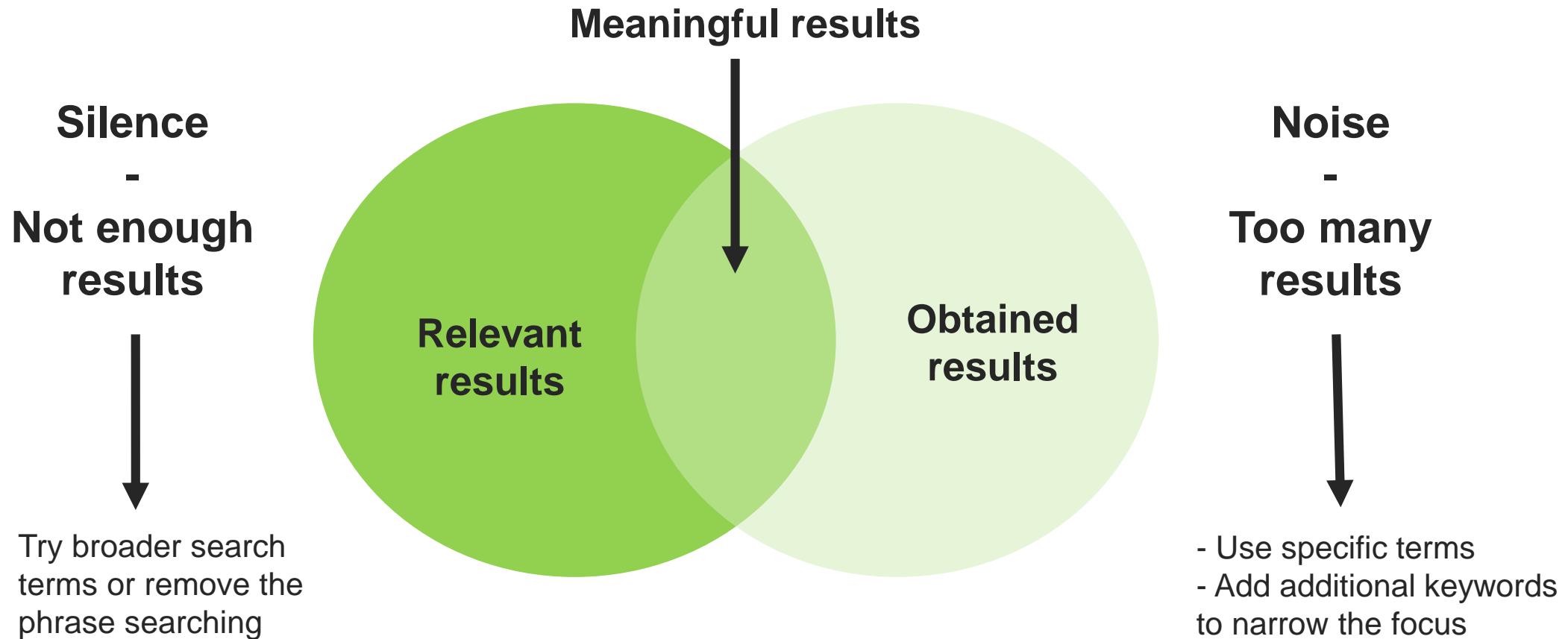
Use one line for each key concept
and
Combine each line together

→ Try out several keywords combination

In order to get the right balance of relevant results to answer the question

Keywords and efficiency

Objective: optimize database interrogation methods to maximize the number of usable results



Search Query

| | | | | | | | | | | |
|----------------|-----------|--------|-----------|-----------|----|--------|----|-----------|---|-----|
| | Concept 1 | AND | Concept 2 | | | | | | | |
| FIELD 1 | = (| Term A | OR | Synonym A | OR | Term B | OR | Synonym B |) | AND |
| FIELD 2 | = (| Term C | OR | Synonym C | OR | Term D | OR | Synonym D |) | |

Example : tritium trapping / detritiation

Concept 1: Tritium, tritiated, hydrogen isotope

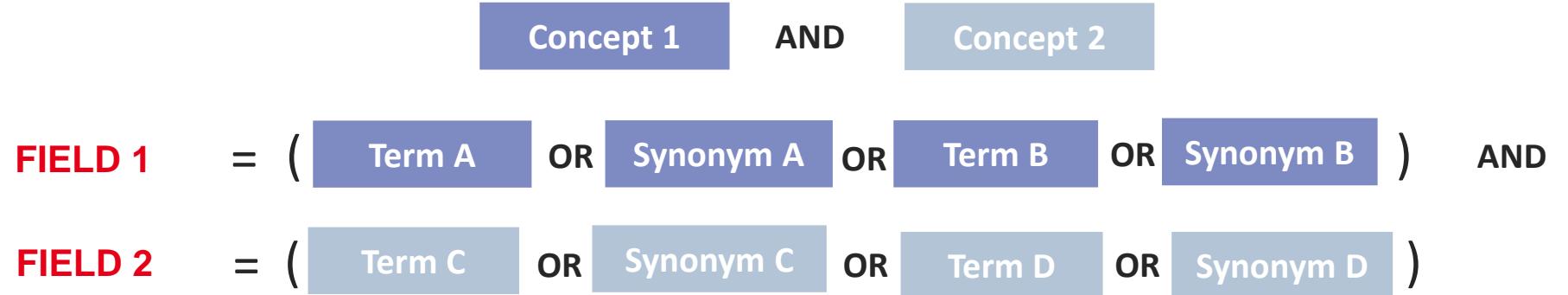
Triti* **OR** (hydrogen NEAR/2 isotop*)

Concept 2: trapping, stripping, capturing, removing, absorbing, ...

Trap* **OR** strip* **OR** captur* **OR** remov* **OR** a**B**sor* **OR** a**D**sor*

Search Query

02
Search

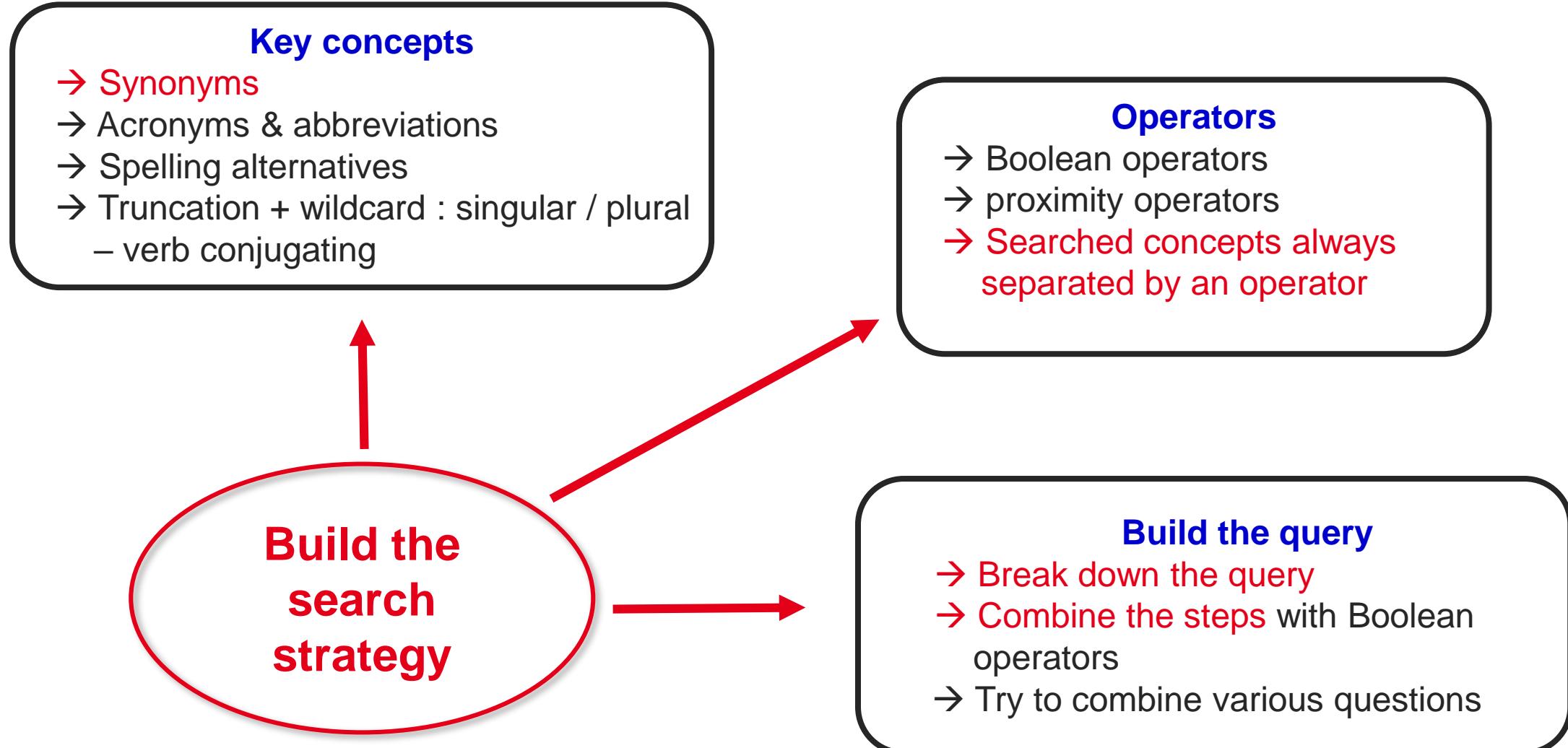


Example : tritium trapping / detritiation

Concept 1+2: detritiation

TS=((triti* OR (hydrogen NEAR/2 isotop*)) AND
 (trap* OR strip* OR captur* OR remov* OR a?sor*)) OR
 TI=(detritiati*)

Summary





Example

Subject :

Additive manufacturing of stainless steel

- ▶ **Concept 1** Additive manufacturing
- ▶ **Concept 2** Stainless steel



Concept 1 : Additive manufacturing

- 3D printing, 3-dimensional printing, three-D printing,..
- Powder bed fusion (PBF)
- Electron beam melting (EBM)
- Selective laser melting (SLM)
- Selective laser sintering (SLS)
- Direct metal laser sintering (DMLS)
- Laser metal deposition (LMD)
- Direct energy deposition (DED)
- Extreme high-speed laser cladding (EHLA)
- Electron beam freeform fabrication (EBF3)
- Wire-arc additive manufacturing (WAAM)

3D printing

From Wikipedia, the free encyclopedia

For methods of transferring an image onto a 3D surface, see [pad printing](#). For methods of generating autostereoscopic lenticular images, see [lenticular printing](#) and [holography](#).

3D printing or **additive manufacturing** is the [construction](#) of a [three-dimensional object](#) from a [CAD model](#) or a [digital 3D model](#).^{[1][2]} It can be done in a variety of processes in which material is deposited, joined or solidified under [computer control](#),^[3] with the material being added together (such as plastics, liquids or powder grains being fused), typically layer by layer.



3D printing processes

Article Talk

From Wikipedia, the free encyclopedia

A variety of [processes](#), [equipment](#), and [materials](#) are used in the production of a three-dimensional object via [additive manufacturing](#). **3D printing** is also known as additive manufacturing, because the numerous available 3D printing process tend to be additive in nature, with a few key differences in the technologies and the materials used in this process.

Some of the different types of physical transformations which are used in 3D printing include melt extrusion, light polymerization, continuous liquid interface production and sintering.

Types of 3D printing processes [edit]

There are many different 3D printing processes, that can be grouped into seven categories:^[1]

- Vat photopolymerization
- Material jetting
- Binder jetting
- Powder bed fusion
- Material extrusion
- Directed energy deposition
- Sheet lamination



| Type | Technologies | Materials |
|--------------------|---|--|
| Material jetting | Drop-on-demand or continuous (single- or multi-nozzle) particle deposition | Hot-melt materials (wax, thermoplastic, metal alloy), dispersed materials (technical ceramics, metals, polymers) |
| | Fused deposition modeling (FDM) or fused filament fabrication (FFF) and fused pellet fabrication or fused particle fabrication | Thermoplastics, eutectic metals, edible materials, rubbers, modeling clay, plasticine |
| Material extrusion | Robocasting or MIG welding 3D printing ^[11] or direct ink writing (DIW) or extrusion based additive manufacturing of metals (EAM) and ceramics (EAC) | Metal-binder mixtures such as metal clay, ceramic-binder mixtures (including ceramic clay and ceramic slurries), cermet, metal matrix composite, ceramic matrix composite, metal (MIG welding) ^[11] |
| | Additive friction stir deposition (AFSD) | Metal alloys |
| | Composite filament fabrication (CFF) | Nylon or nylon reinforced with carbon, Kevlar or glass fibers |
| | | |
| Light polymerized | Stereolithography (SLA) | Photopolymer (including preceramic polymers) |
| | Digital light processing (DLP) | Photopolymer |
| | Continuous liquid interface production (CLIP) | Photopolymer + thermally activated chemistry |
| Powder Bed | Powder bed and inkjet head 3D printing (3DP) | Almost any metal alloy, powdered polymers, Plaster |
| | Electron-beam melting (EBM) | Almost any metal alloy including titanium alloys |
| | Selective laser melting (SLM) | Titanium alloys, cobalt-chrome alloys, stainless steel, aluminium |
| | Selective heat sintering (SHS) ^[12] | Thermoplastic powder |
| | Selective laser sintering (SLS) | Thermoplastics, metal powders, ceramic powders |
| | Direct metal laser sintering (DMLS) | Metal alloys |
| Laminated | Laminated object manufacturing (LOM) | Paper, metal foil, plastic film |
| Powder fed | Laser metal deposition (LMD) or Directed Energy Deposition (DED) | Metal alloys |
| | Extreme high-speed laser cladding (EHLA) ^[13] | Metal alloys |
| Wire | Electron beam freeform fabrication (EBF ³) | Metal alloys |
| | Wire-arc additive manufacturing (WAAM) | Metal alloys |



Concept 1 : Additive manufacturing

(3D OR “3 D” or “three D” OR “three dimensional”) NEAR/1 print*) OR “additive manufactur”

OR

(“powder bed fus*” OR “electron beam melt*” OR “selective laser melt*” OR “selective laser sinter*” OR “direct metal laser sinter*” OR “laser metal deposit*” OR “direct* energy deposit*” OR “extreme high speed laser clad*” OR “electron beam freeform fabricat*” OR “wire arc additive manufactur*”)

OR

PBF OR EBM OR SLM OR SLS OR DMLS OR LMD OR DED OR EHLA OR EBF3
OR WAAM



Concept 2 : Stainless steel

- stainless steel
- austenitic (stainless) steel
- martensitic (stainless) steel
- ferritic (stainless) steel
- duplex (stainless) steel
- precipitation hardening (stainless) steel
- SS316, (SS)316L, (SS)316N
- SS304, (SS)304L, (SS)304N

Types [\[edit \]](#)

Stainless steel is classified into five main families that are primarily differentiated by their [crystalline structure](#):

- austenitic
- ferritic
- martensitic
- duplex
- precipitation hardening



Concept 2 : Stainless steel

stainless NEAR/2 steel

OR

SS316 OR SS316L OR 316L OR SS16N OR 316N OR SS304 OR SS304L OR 304L OR
SS304N OR 304N



Exercise

Subject :

Wire diagnosis using reflectometry *to detect faulty wires*

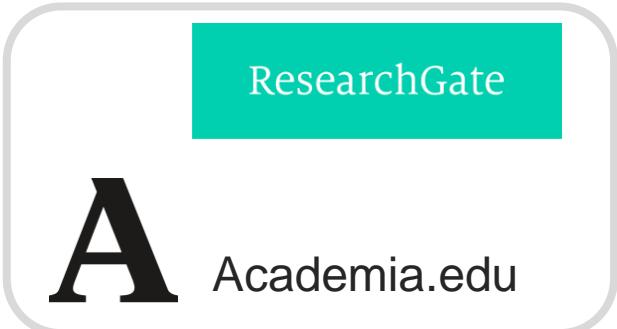
- ▶ **Concept 1** wire
- ▶ **Concept 2** fault
- ▶ **Concept 2** reflectometry

Which sources and tools to use ?

Internet



Social networks



Bibliographic databases





Which use of Google and Google Scholar ?



Queries

- Search often based on a few keywords
- Limited advanced search
- No confidentiality

from



to



Outcomes

- No exhaustiveness and no sorted results
- A lot of noise
- Confirmation bias
- No reproducible results

Very good to become familiar with a subject
(upstream to the state-of-the-art)



Which use of bibliographic databases ?



WEB OF SCIENCE™

Scopus



More structured sources

03
Identify

Queries

- Advanced search interface
- Possible complex queries
- Saved queries

Outcomes

- Exhaustive results
- More relevant results
- Filters on results
- Grouped export of results



Perfect for a state-of-the-art

Scientific and technical documentation

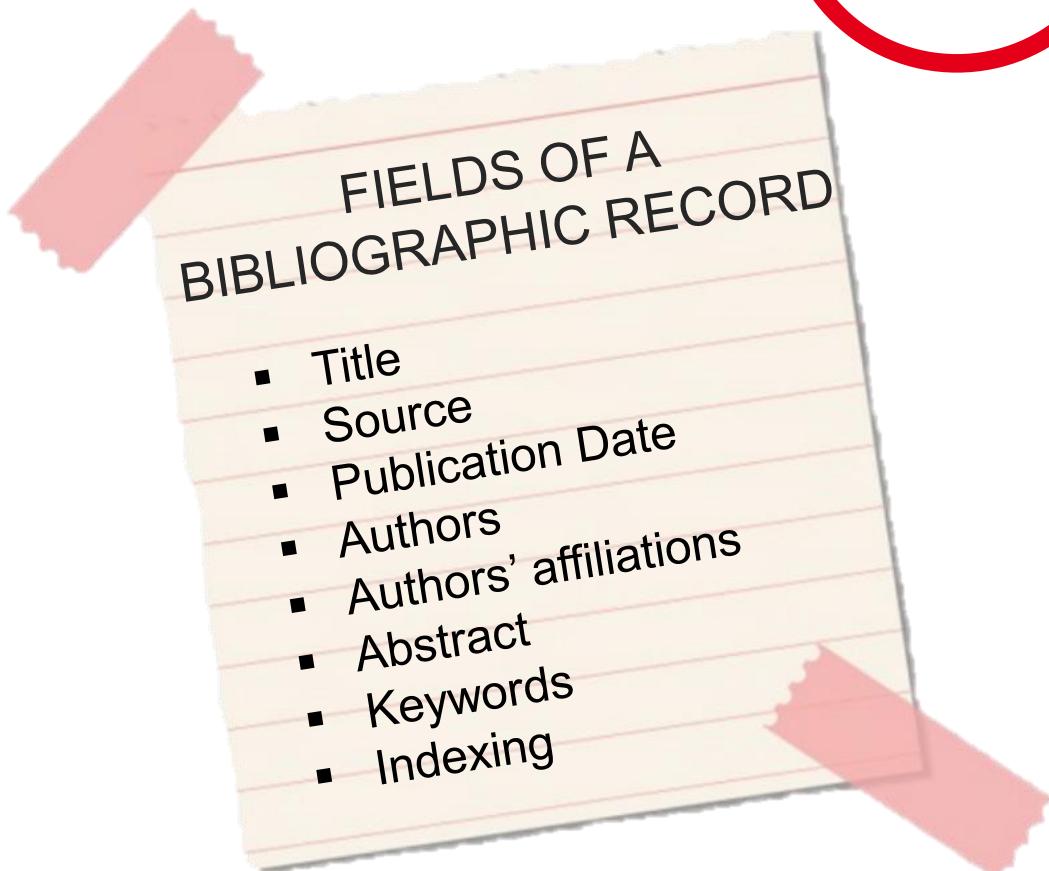


- Scientific journal articles
- Conference proceedings
- Patents
- Technical reports
- Theses
- Technical articles in trade magazine
- Research data
- Standards
- Books, Monographs
- Protocols
- ...



Bibliographic Databases

- ❑ Secondary sources for searching across various primary sources
- ❑ Made up of a collection of bibliographic records
- ❑ It is defined by its coverage, more specifically how the base is constituted
- ❑ The articles are read by librarians and the items are reworked and indexed



03
Identify



Examples of Bibliographic Databases

Specialized Bibliographic databases

| Database | Supplier | Field |
|--|--|--|
| Materials Science & Engineering Collection |  | Material Science & Engineering |
| INIS  |  | Civil nuclear applications |
| INSPEC |  | Physics, Electronics, Computer Science |
| Pubmed  |  | Biology, Medicine |
| Reaxys |  | Chemistry |
| SciFinder |  | Chemistry |

Multi-disciplinary Citation databases

| Database | Supplier |
|----------------|--|
| Web of Science |  |
| Scopus |  |



How to search in WoS and Scopus



Web of Science

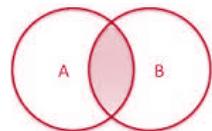
The infographic consists of three horizontal boxes, each containing an icon with a red circle and a line pointing to text. A small logo for 'WEB OF SCIENCE' is located on the left side of the first box.

- Multi-disciplinary – More than 24 000 journals indexed**
Icon: A stylized building or journal icon.
- Since 1945 – Weekly update**
Icon: A calendar icon.
- Journals, conferences, books**
Icon: An open book or document icon.

Source : Freepik

<https://www.webofscience.com/wos>

Operators



Boolean
operators

AND
OR
NOT



Proximity
operators

* : multi-character
? : 1 character
\$: 0 or 1 character

Wildcards



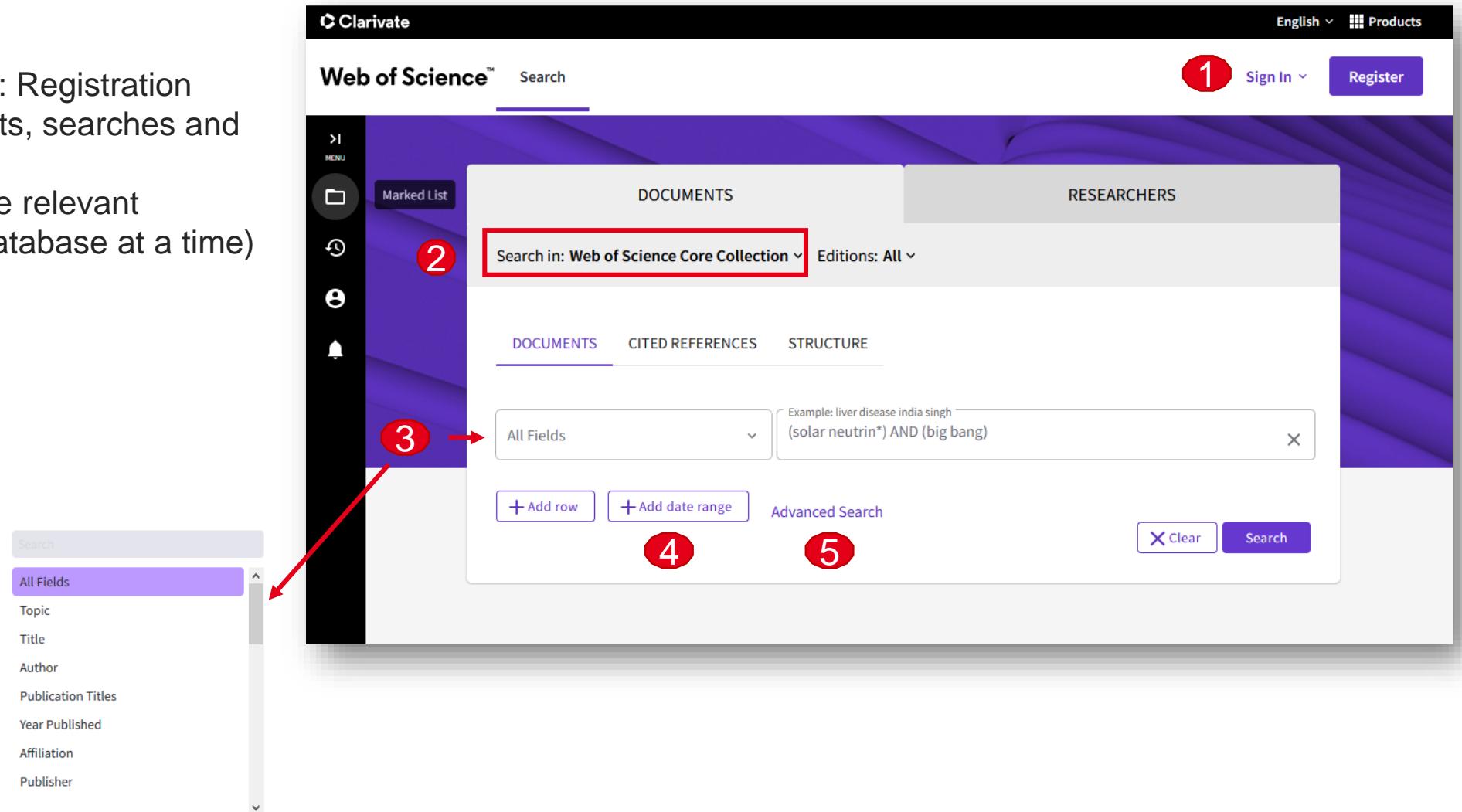
NEAR/n : terms joined by the operator are within a specified number of words of each other (no specific order)

"expression" : to search for a specific phrase, punctuation is ignored, wildcards can be used

WoS user-interface

Web of Science™

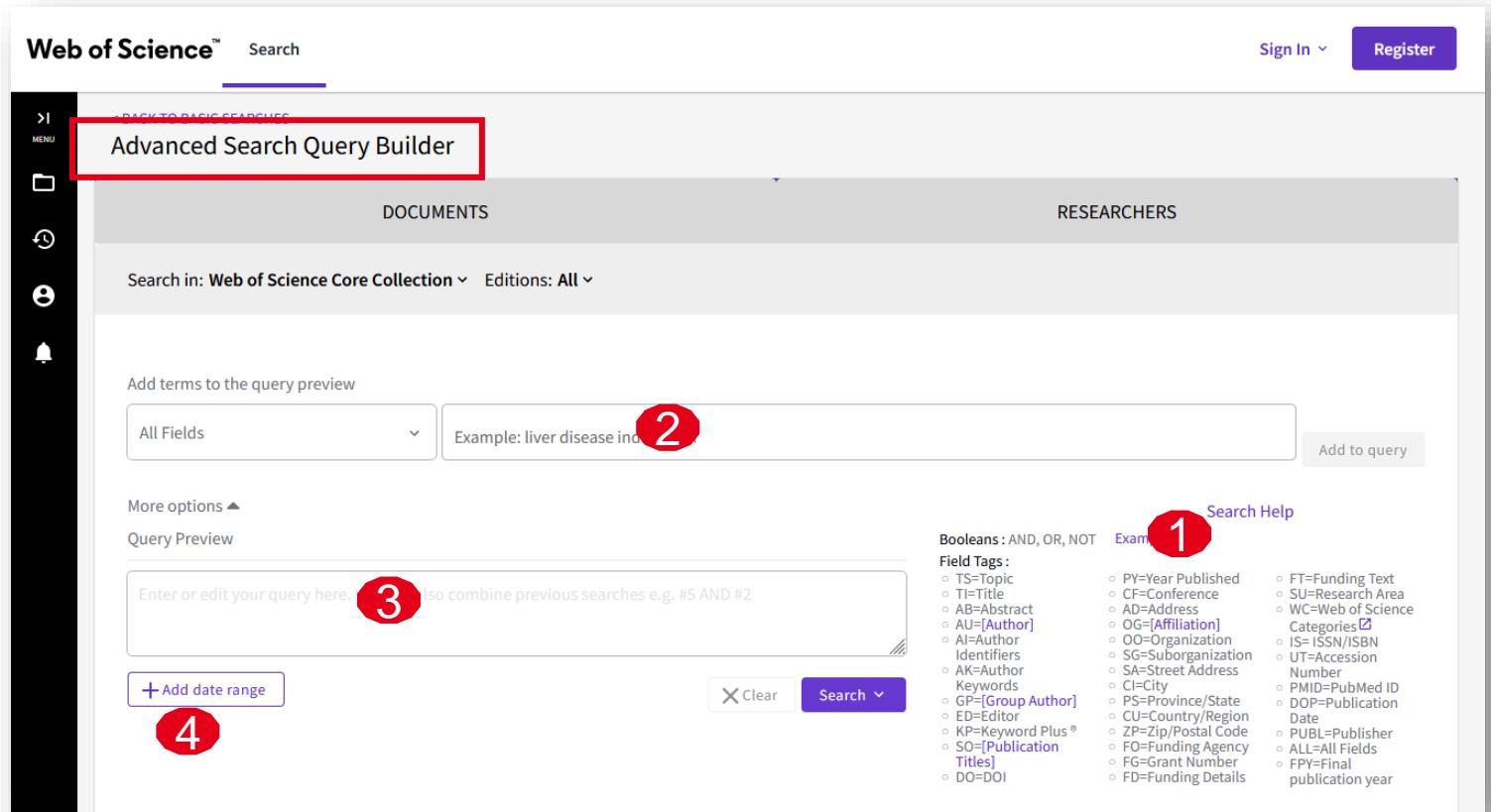
- 1- Create an account / Login: Registration required to save results lists, searches and create alerts
- 2- Database choice (for more relevant searches, query in one database at a time)
- 3- Search fields
- 4- Timespan settings
- 5- Link to advanced search



The screenshot shows the Web of Science search interface. A red arrow points from the 'Search fields' callout (3) to the search dropdown menu on the left side of the screen. The dropdown menu includes options like 'All Fields', 'Topic', 'Title', 'Author', etc. Callout 1 points to the 'Sign In' button in the top right corner. Callout 2 points to the 'Search in' dropdown menu which is set to 'Web of Science Core Collection'. Callout 3 points to the 'All Fields' search field in the main search bar. Callout 4 points to the '+ Add row' button for advanced search. Callout 5 points to the 'Advanced Search' link below the search bar.

Advanced search

- 1**- Advanced search using boolean operators and search fields
- 2**- Basic query builder
- 3**- Query preview + combine queries
- 4**- Timespan settings

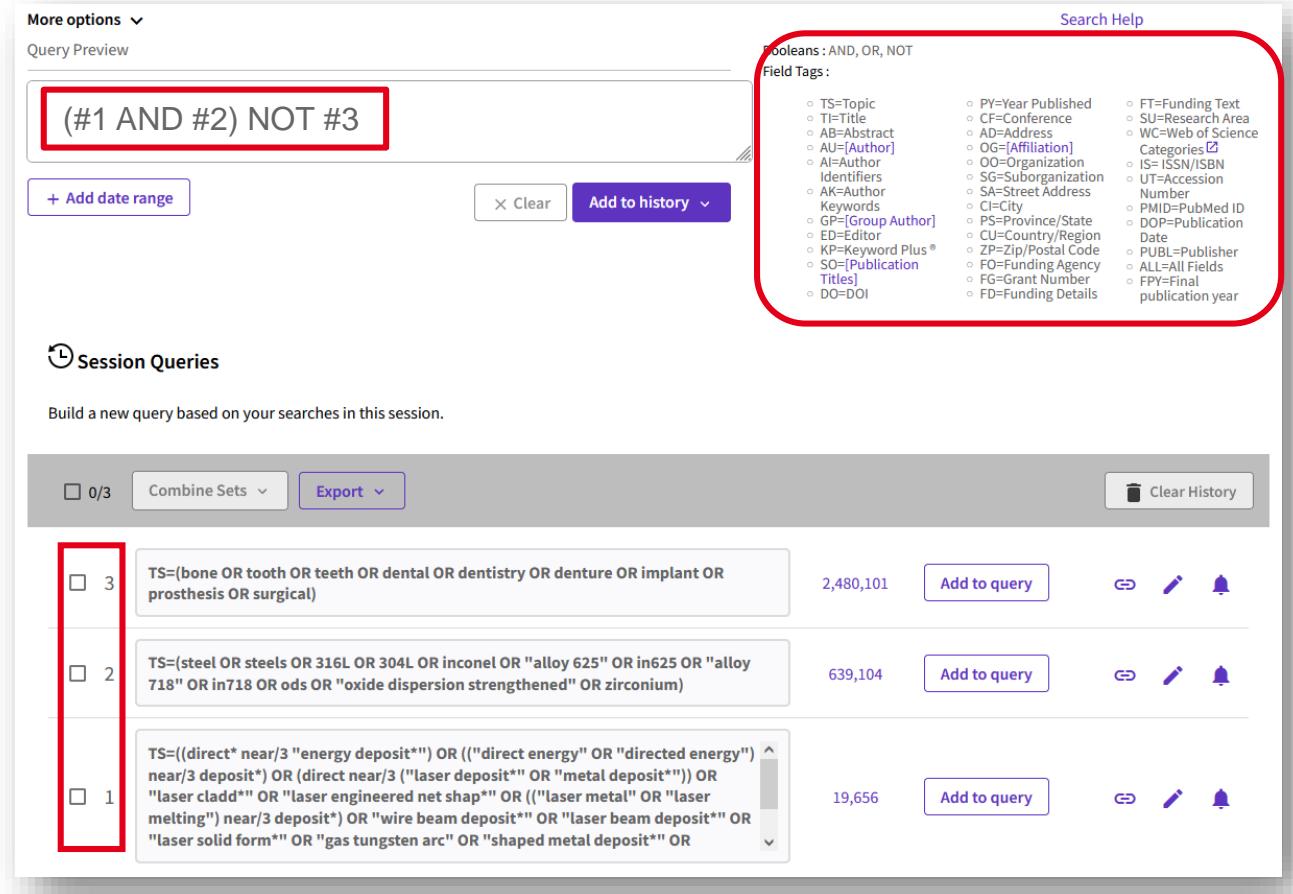


Information search

Web of Science™

Link to advanced search on home page

Remember to use the advanced search to break down your search into several steps and use the search history to combine the queries



The screenshot shows the Web of Science search interface. At the top, there's a search bar containing the query: (#1 AND #2) NOT #3. Below the search bar are buttons for '+ Add date range', 'Clear', and 'Add to history'. To the right of the search bar is a 'Field Tags' section with a list of options like TS=Topic, PY=Year Published, and FT=Funding Text. A red box highlights this section. Below the search bar is a 'Session Queries' section showing three previous searches: 1. TS=(bone OR tooth OR teeth OR dental OR dentistry OR denture OR implant OR prosthesis OR surgical) with 2,480,101 results; 2. TS=(steel OR steels OR 316L OR 304L OR inconel OR "alloy 625" OR in625 OR "alloy 718" OR in718 OR ods OR "oxide dispersion strengthened" OR zirconium) with 639,104 results; and 3. TS=((direct* near/3 "energy deposit*") OR ("direct energy" OR "directed energy") ^ near/3 deposit*) OR (direct near/3 ("laser deposit*" OR "metal deposit*")) OR "laser cladd*" OR "laser engineered net shap*" OR ("laser metal" OR "laser melting") near/3 deposit*) OR "wire beam deposit*" OR "laser beam deposit*" OR "laser solid form*" OR "gas tungsten arc" OR "shaped metal deposit*" OR "laser cladd*" OR "laser engineered net shap*" OR ("laser metal" OR "laser melting") near/3 deposit*) with 19,656 results. Each query has an 'Add to query' button and edit/refresh/bell icons. A 'Search Help' section is also visible.

Boolean operators and field tags

Search history

Search results

Web of Science™

→ Filter and export results

Use the features available on the results page: additional **filters**, **export** results, **save query** and set up **alerts**

Advanced Search > Results for (#1 AND #2) NOT #3

6,043 results from Web of Science Core Collection for:

Q. (#1 AND #2) NOT #3

[Copy query link](#)

[Analyze Results](#) [Citation Report](#) [Create Alert](#)

Refine results

Search within results...

Filter by Marked List

Quick Filters

- Highly Cited Papers 35
- Hot Papers 3
- Review Article 139
- Early Access 73
- Open Access 1,413
- Enriched Cited References 872

Export

Sort by: Relevance 1 of 121

1 Effects of preheating and cooling on the crack defects of **laser solid formed** Rene 104 superalloy parts

Ying, WS; Han, FZ and Wang, JH
Jun 2020 | Mar 2020 (Early Access) | **PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART B-JOURNAL OF ENGINEERING MANUFACTURE** 234 (8), pp.1087-1101

In this study, **laser solid forming** technology has been used to fabricate Rene 104 nickel-based superalloy parts, and severe crack problems were found during the **laser solid forming** process. To solve the crack problems, the effects of preheating and cooling on the microstructure and crack defects of the **laser solid forming** Rene 104 superalloy were experimentally investigated. The experimental re ... [Show more](#)

[Full Text at Publisher](#) ... [Related records](#)

2 Plastic behavior and improved constitutive model of a **laser-solid-formed** alloy under the synergistic effects of temperature, strain rate, and stress state

Wang, J.; Hu, XY; (...); Zhang, XQ
May 2022 (Early Access) | **MECHANICS OF ADVANCED MATERIALS AND STRUCTURES**

Enriched Cited References

Classical J(2) plasticity theory is the most popular continuum plasticity model. However, this plasticity theory is inapplicable for some metals due to the tension/compression asymmetry behavior. According to our previous study, the tension and compression mechanical response of **laser-solid-formed** Ti-6Al-4V alloy was significantly different in not only yield stress but also work hardening rate. ... [Show more](#)

[View full text](#) ... [Related records](#)

Filters

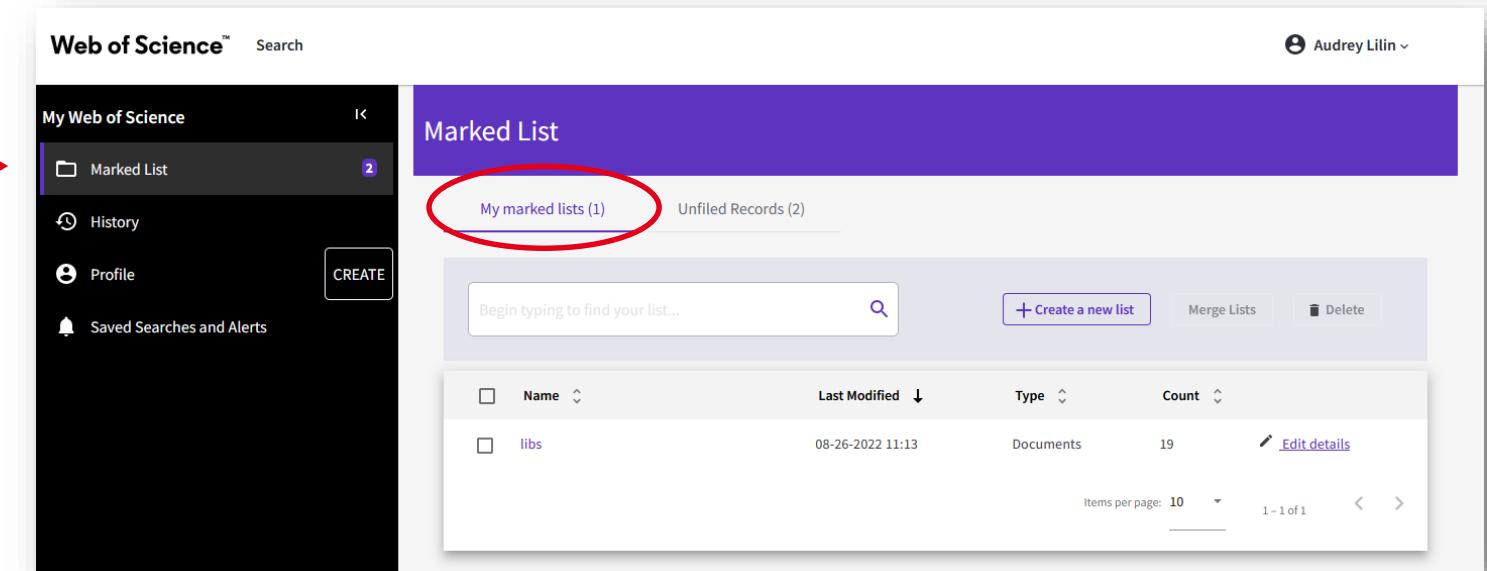
Create alert

Export

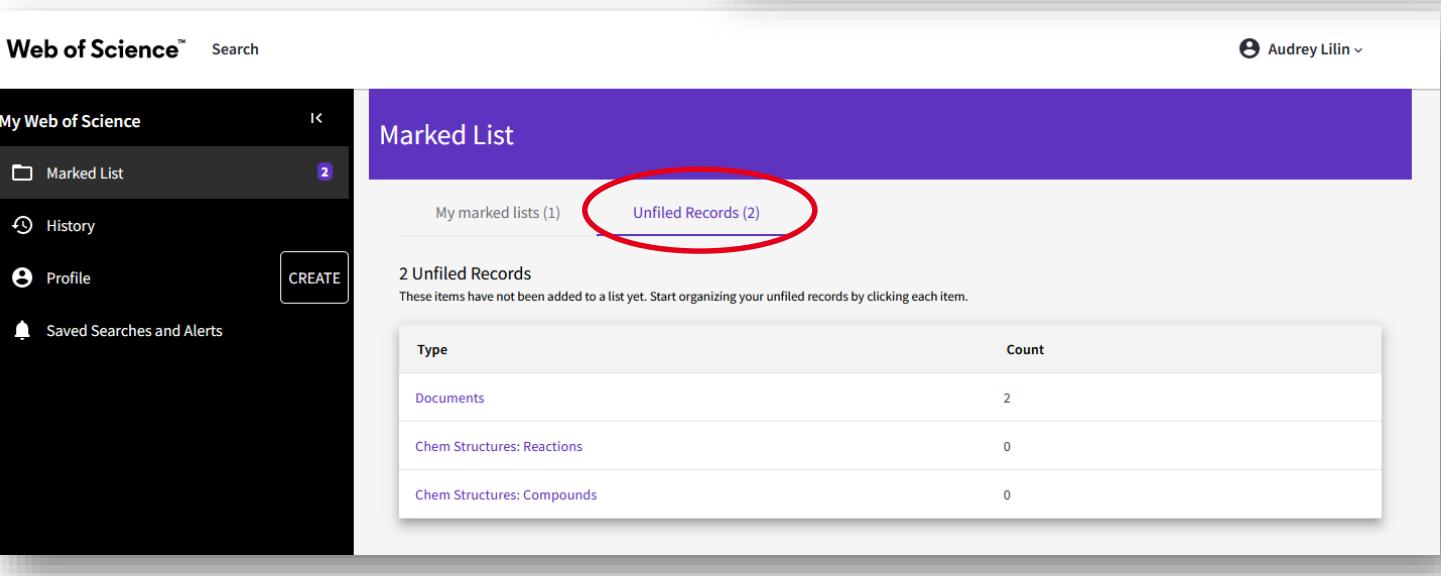
Marked lists

Web of Science™

Saved Marked Lists



The screenshot shows the 'My Web of Science' sidebar with 'Marked List' selected. The main area is titled 'Marked List' and shows two sections: 'My marked lists (1)' and 'Unfiled Records (2)'. A red circle highlights the 'My marked lists (1)' link. Below it is a search bar and a table listing one item: 'libs' (Last Modified: 08-26-2022 11:13, Type: Documents, Count: 19). There are buttons for '+ Create a new list', 'Merge Lists', and 'Delete'.

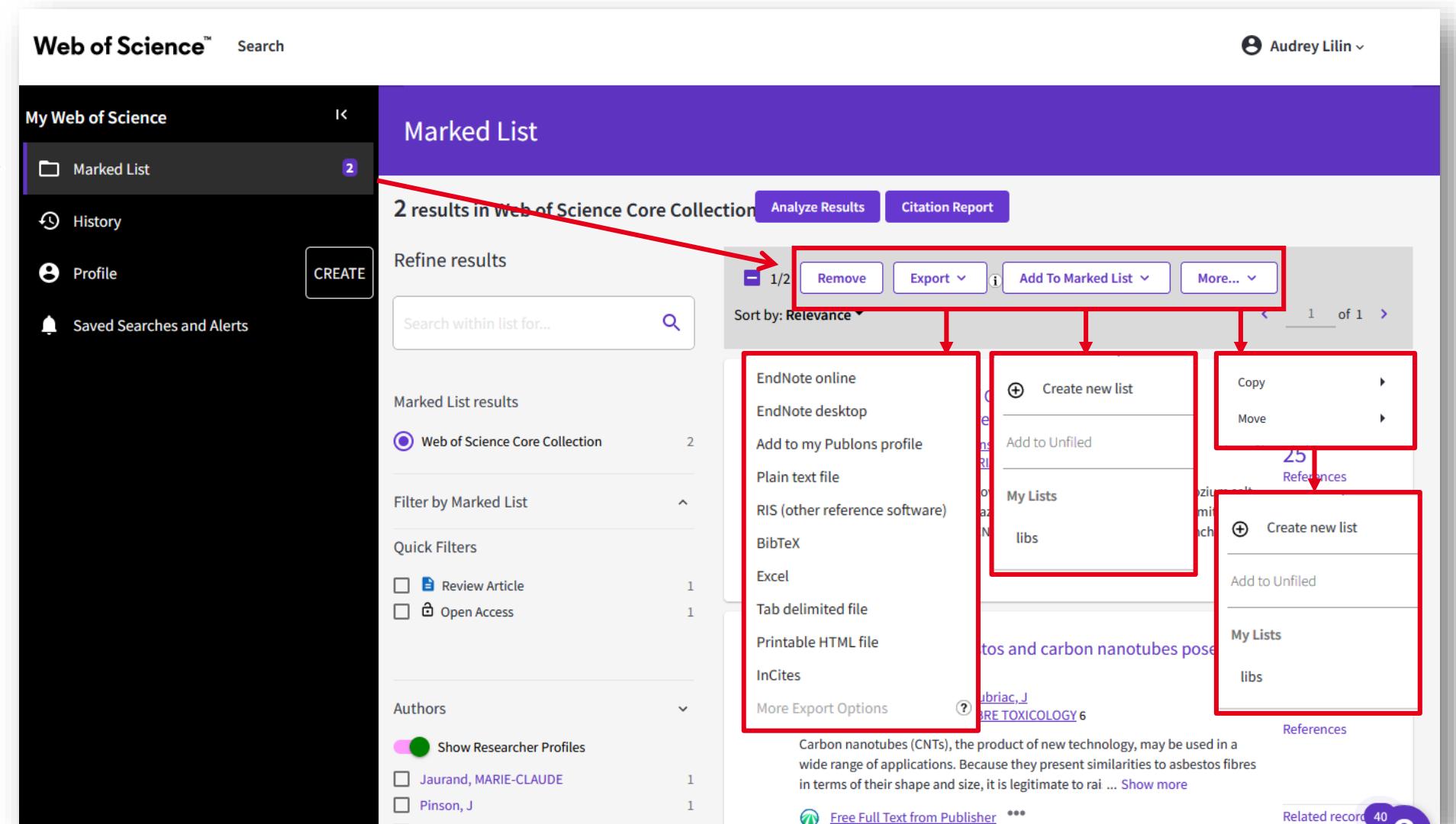


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Unsaved Marked Lists

Use of marked lists

50 Marked Lists maximum
Possibility of adding references



The screenshot shows the 'Marked List' interface in the Web of Science Core Collection. A red arrow points from the 'Marked Lists maximum' text in the sidebar to the 'Marked List' button in the top navigation bar. Another red arrow points from the 'Possibility of adding references' text in the sidebar to the 'Add To Marked List' button in the top right corner of the main content area.

Marked List

2 results in Web of Science Core Collection

Refine results

Search within list for...

Sort by: Relevance

1/2

Remove Export Add To Marked List More...

EndNote online
EndNote desktop
Add to my Publons profile
Plain text file
RIS (other reference software)
BibTeX
Excel
Tab delimited file
Printable HTML file
InCites
More Export Options

>Create new list
Add to Unfiled
My Lists
libs

Copy Move

25 References

Create new list
Add to Unfiled
My Lists
libs

References

Carbon nanotubes (CNTs), the product of new technology, may be used in a wide range of applications. Because they present similarities to asbestos fibres in terms of their shape and size, it is legitimate to rai ... Show more

Free Full Text from Publisher ***

Related record 40



Alerts to update the results

Web of Science™

Available from results page
and search history

Create alert

From results:

Advanced Search > Results for (#1 AND #2) NOT #3

6,043 results from Web of Science Core Collection for:

Q (#1 AND #2) NOT #3

Copy query link

Analyze Results Citation Report Create Alert

Publications You may also like...

Refine results

Search within results...

Filter by Marked List

Quick Filters

- Highly Cited Papers 35
- Hot Papers 3
- Review Article 139
- Early Access 73
- Open Access 1,413
- Enriched Cited References 872

0/6,043 Add To Marked List Export Sort by: Relevance 1 of 121

1 Effects of preheating and cooling on the crack defects of laser solid formed Rene 104 superalloy parts 5 Citations 34 References

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Full Text at Publisher ... Related records

2 Plastic behavior and improved constitutive model of a laser-solid-formed alloy under the synergistic effects of temperature, strain rate, and stress state 61 References

Wang, J.; Hu, XY; (...); Zhang, XQ May 2022 (Early Access) | MECHANICS OF ADVANCED MATERIALS AND STRUCTURES

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View full text ... Related records

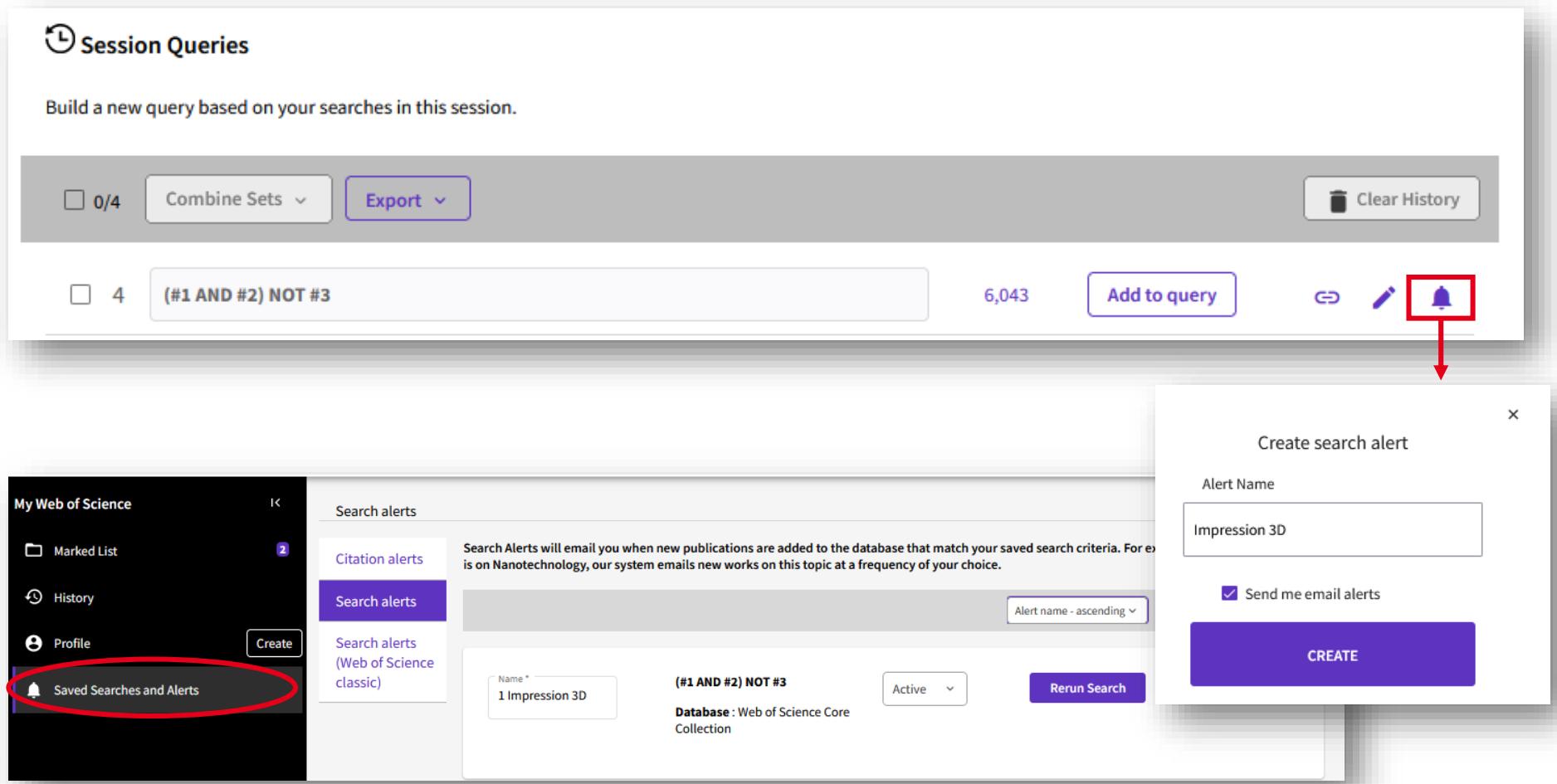


CAUTION

Do not mention a date in
the alert, nor a specific time
period

Alerts to update the results

From search history:



The screenshot shows the 'Session Queries' section of the Web of Science interface. At the top, there are buttons for '0/4' queries, 'Combine Sets', 'Export', and 'Clear History'. Below this, a search history entry is displayed: '4 (#1 AND #2) NOT #3' with a count of '6,043' results. To the right of this entry are buttons for 'Add to query', a link icon, a pencil icon, and a bell icon. A red box highlights the bell icon, with a red arrow pointing down to a larger inset window titled 'Create search alert'. This inset window contains fields for 'Alert Name' (set to 'Impression 3D'), a checked checkbox for 'Send me email alerts', and a large purple 'CREATE' button.

Session Queries

Build a new query based on your searches in this session.

0/4 Combine Sets Export Clear History

4 (#1 AND #2) NOT #3 6,043 Add to query

Create search alert

Alert Name: Impression 3D

Send me email alerts

CREATE



Example : searching ‘Additive manufacturing of stainless steel’

► Concept 1 Additive manufacturing

TS=((3D OR “3 D” or “three D” OR “three dimensional”) NEAR/1 print*) OR “additive manufatur*” OR (“powder bed fus*” OR “electron beam melt*” OR “selective laser melt*” OR “selective laser sinter*” OR “direct metal laser sinter*” OR “laser metal deposit*” OR “direct* energy deposit*” OR “extreme high speed laser clad*” OR “electron beam freeform fabricat*” OR “wire arc additive manufatur*”) OR (PBF OR EBM OR SLM OR SLS OR DMLS OR LMD OR DED OR EHLA OR EBF3 OR WAAM))

► Concept 2 Stainless steel

TS=((stainless NEAR/2 steel) OR (SS316 OR SS316L OR 316L OR SS16N OR 316N OR SS304 OR SS304L OR 304L OR SS304N OR 304N))



Exercise : queries in WoS

Concept 1 : reflectrometry :

#1 TS=(reflectometr* OR TDR OR FDR OR ellipsomet*)

Concept 2 : cables :

#2 TS=(cable OR wire OR wiring OR line OR « twisted pair »)

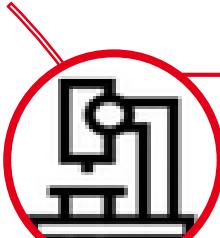
Concept 3 : fault :

#3 TS=(fault OR defect* OR « partial discharge » OR anomal* OR abnormal* OR aging OR aged)

#1 AND #2 AND #3



Scopus



Multi-disciplinary – More than 25 000 journals indexed



Mainly since 1996 – Daily update



Journals, conferences, books, reports

Source : Freepik

<https://www.scopus.com>

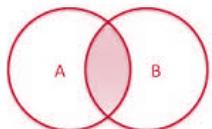
Operators



AND
OR
AND NOT should always be used
at the end of the query



**Boolean
operators**



**Proximity
operators**

* : multi-character
? : 1 character

Wildcards

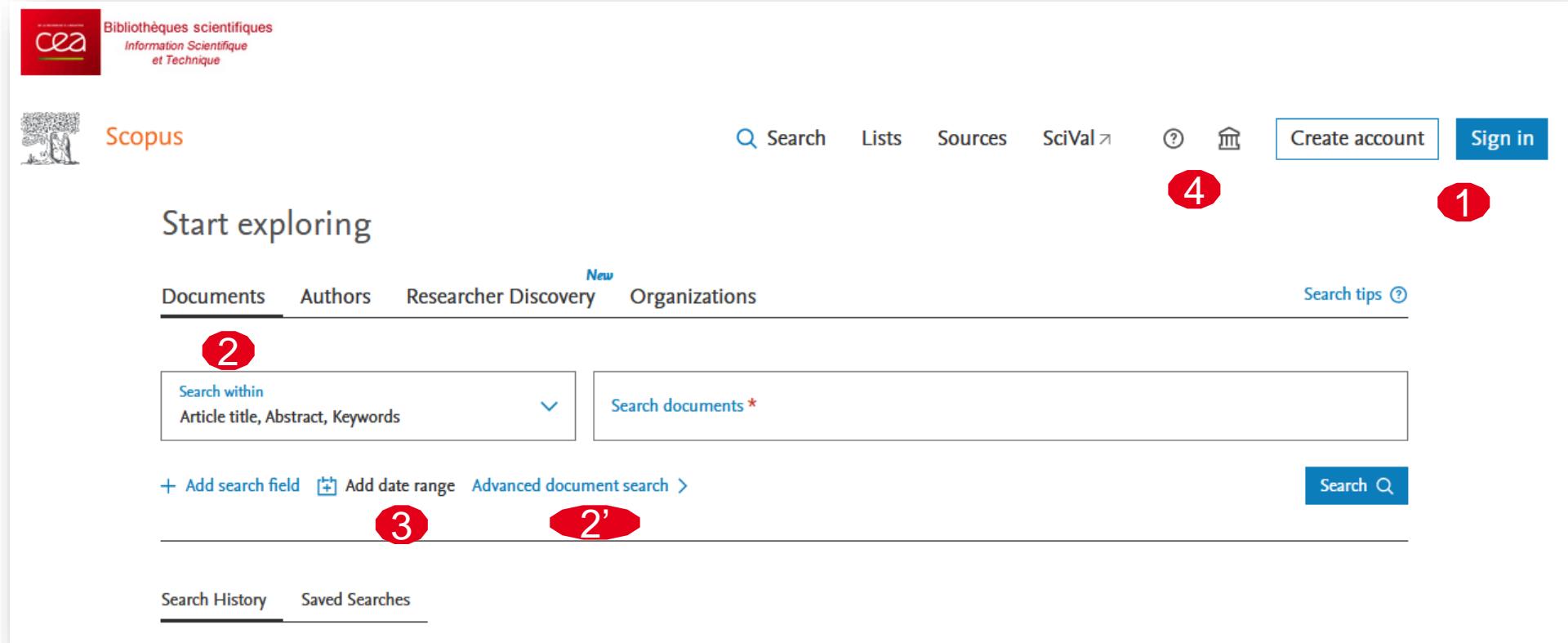


PRE/n : $0 \leq n \leq 255$, the first term of the query **must precede** the second
 W/n : $0 \leq n \leq 255$, **no order** between terms
 "expression" : to search for a specific phrase, punctuation is ignored, wildcards can be used

Scopus user-interface

Scopus

- 1- Create an account / Sign in: Registration required to save results lists, searches and create alerts
- 2- To choose basic search, advanced search (2'), authors search or organizations search
- 3- Timespan settings
- 4- Help



The screenshot shows the Scopus search interface. At the top left is the CEA logo and text "Bibliothèques scientifiques Information Scientifique et Technique". The top right features the Scopus logo, a search bar, and navigation links for "Search", "Lists", "Sources", "SciVal", "Create account", and "Sign in".

In the center, there's a "Start exploring" section with tabs for "Documents" (selected), "Authors", "Researcher Discovery", and "Organizations". Below this is a search form with a dropdown menu "Search within Article title, Abstract, Keywords" (labeled 2) and a search input field "Search documents *". There are also buttons for "Add search field", "Add date range", and "Advanced document search".

At the bottom of the search form are buttons for "Search" and "Search tips". Below the search form are links for "Search History" and "Saved Searches".

Red numbers 1 through 4 are overlaid on the interface to indicate specific features:

- 1**: Located near the "Create account" and "Sign in" buttons.
- 2**: Located next to the "Search within" dropdown menu.
- 2'**: Located next to the "Advanced document search" link.
- 3**: Located below the "Search History" link.
- 4**: Located near the "Search tips" link.

Advanced search

Advanced search

[Basic Search](#) **Advanced**

Enter query string
AUTHOR-NAME(charpak,g)

Outline query Add Author name / Affiliation Clear form **Search Q**

ALL("Cognitive architectures") AND AUTHOR-NAME(smith)
TITLE-ABS-KEY(*somatic complaint wom?n) AND PUBYEAR AFT 1993
SRCTITLE(*field ornith*) AND VOLUME(75) AND ISSUE(1) AND PAGES(53-66)

Operators AND OR AND NOT PRE/ W/
Field codes Textual Content Abstract (ABS) All Fields (ALL) Doc Title (TITLE) Doc Title, Abstract (TITLE-ABS)
Doc Title, Abstract, Keyword (TITLE-ABS-KEY) Doc Title, Abstract, Keyword, Author (TITLE-ABS-KEY-AUTH)
Affiliations

AND NOT should always be used at the end of the query

Click on the field code to have information about it
Click on + to add the field code to the search query

Search history
3 (TITLE-ABS-KEY (particl*)) AND (AUTHOR-NAME (charpak,g))
2 AUTHOR-NAME (charpak,g)
1 TITLE-ABS-KEY (particl*)

Combine queries... e.g. #1 AND NOT #3
109 document results
231 document results
2,081,448 document results

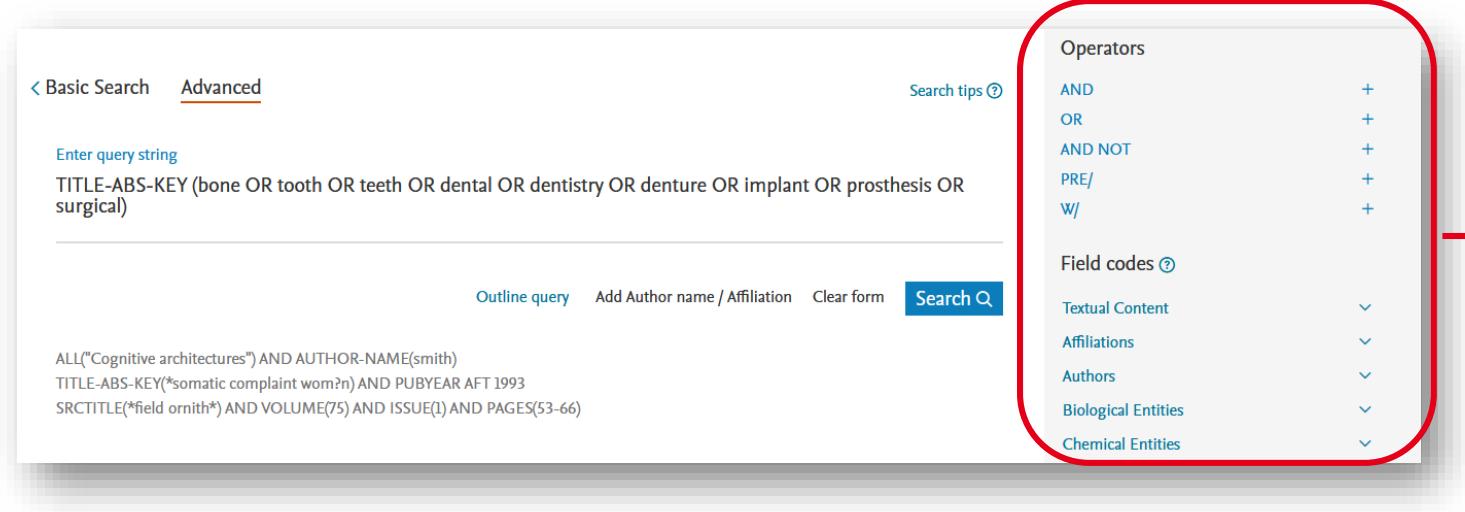
Click to show the results for this search

Information search

Scopus

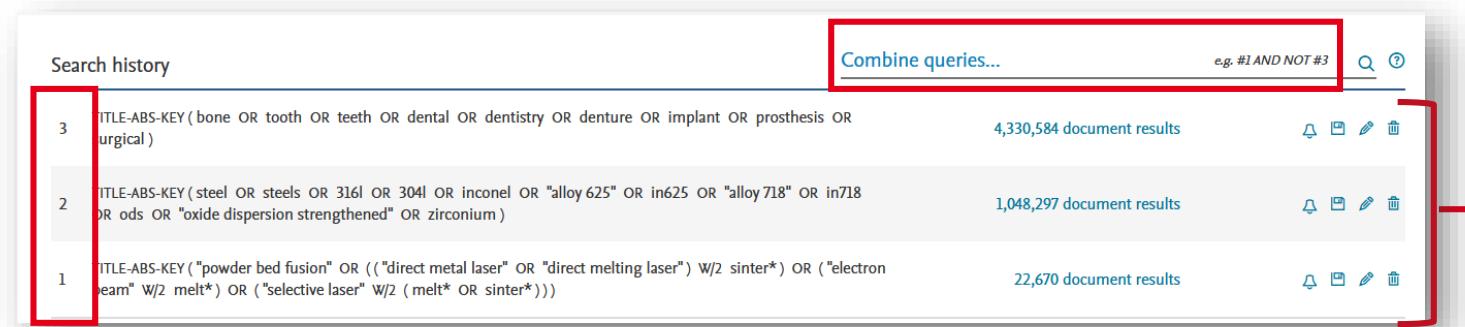
Link to advanced search on home page

Remember to use the advanced search to break down your search into several steps and use the search history to combine the queries



The screenshot shows the Scopus search interface in Advanced mode. The search bar contains the query: TITLE-ABS-KEY (bone OR tooth OR teeth OR dental OR dentistry OR denture OR implant OR prosthesis OR surgical). Below the search bar are buttons for Outline query, Add Author name / Affiliation, Clear form, and Search. To the right is a panel titled "Operators" containing AND, OR, AND NOT, PRE/, and W/ with plus signs for adding. Below this is a "Field codes" section with expandable dropdowns for Textual Content, Affiliations, Authors, Biological Entities, and Chemical Entities.

Operators and field codes



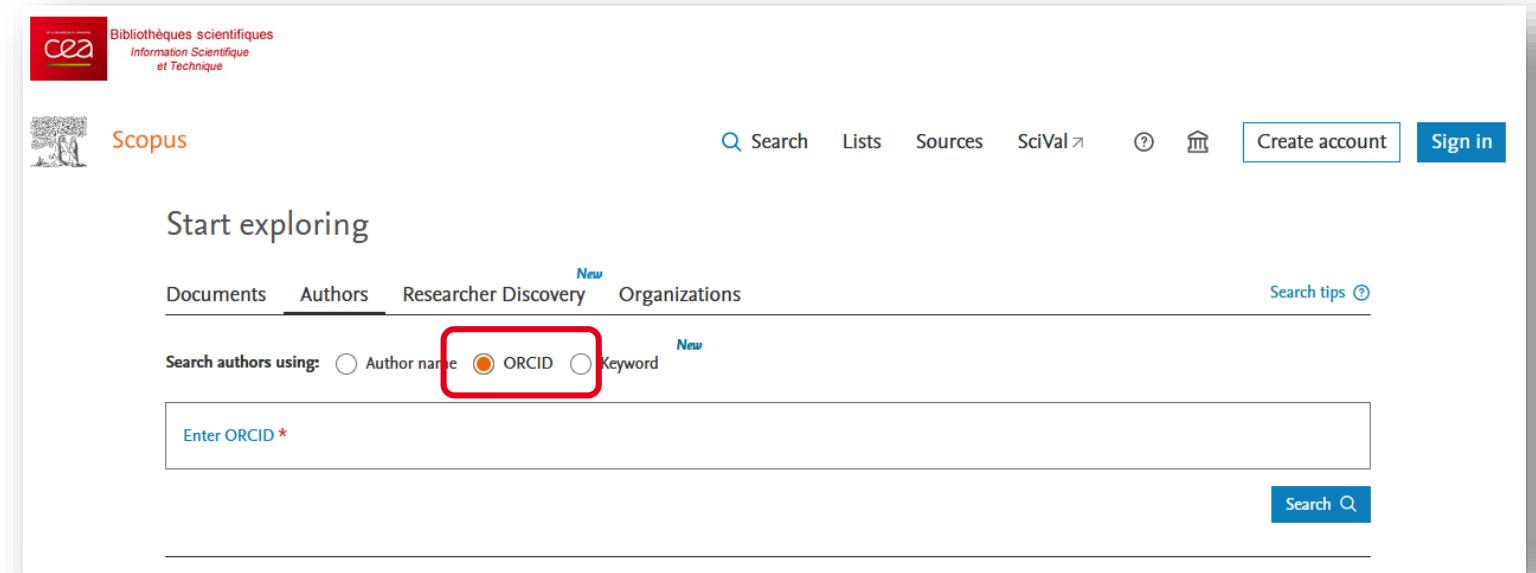
The screenshot shows the Scopus search history. It lists three previous searches: 1. TITLE-ABS-KEY ("powder bed fusion" OR (("direct metal laser" OR "direct melting laser") W/2 sinter*) OR ("electron beam" W/2 melt*) OR ("selective laser" W/2 (melt* OR sinter*))), 2. TITLE-ABS-KEY (steel OR steels OR 316l OR 304l OR inconel OR "alloy 625" OR in625 OR "alloy 718" OR in718 OR ods OR "oxide dispersion strengthened" OR zirconium), and 3. TITLE-ABS-KEY (bone OR tooth OR teeth OR dental OR dentistry OR denture OR implant OR prosthesis OR surgical). The search history also includes a "Combine queries..." button and a search bar with placeholder "e.g. #1 AND NOT #3".

Search history

Information search

→ Search for author's publications

Search by ORCID number,
when the author has created
one

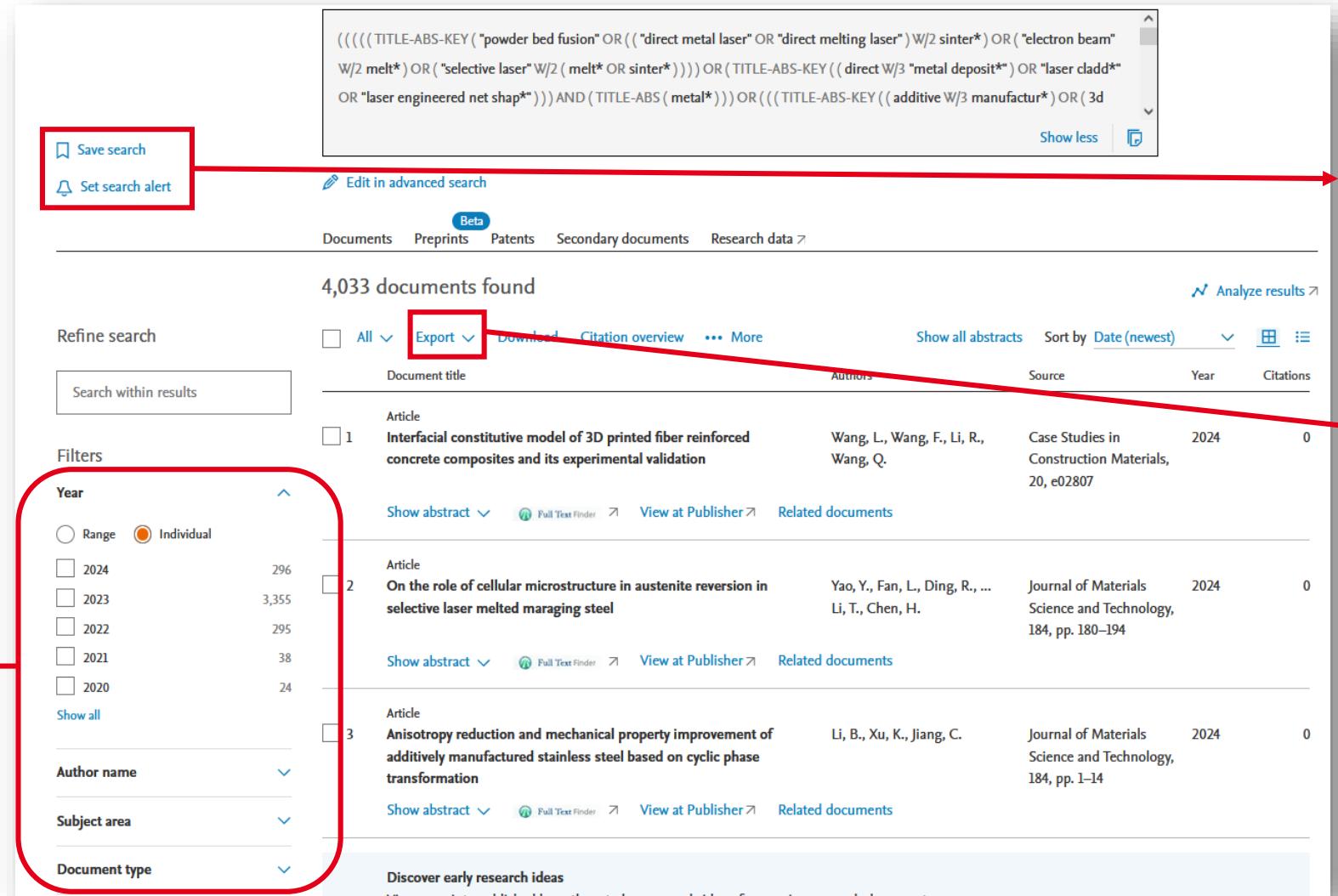


The screenshot shows the Scopus homepage. At the top left is the CEA logo and text "Bibliothèques scientifiques Information Scientifique et Technique". The top right features the Scopus logo, a search bar, and links for "Create account" and "Sign in". Below the header is a navigation bar with tabs: "Documents", "Authors" (selected), "Researcher Discovery", and "Organizations". A "Search tips" link is also present. The main search area includes a "Start exploring" section, a search input field with placeholder "Enter ORCID *", and a "Search" button. Below the search input is a "Search authors using:" dropdown with three options: "Author name" (radio button), "ORCID" (radio button, highlighted with a red box), and "Keyword".

Search results

→ Refine search and export results

Use the features available on the results page: additional **filters**, **export** results, **save query** and set up **alerts**



The screenshot shows the Scopus search results page for a query related to powder bed fusion and metal deposition. The results are filtered by date (newest) and include 4,033 documents.

Top Right: Save search and Set search alert buttons are highlighted with red arrows pointing to them from the left side.

Middle Left: A red box highlights the "Filters" section, which includes dropdown menus for Year, Author name, Subject area, and Document type. A red arrow points to this section from the left side.

Middle Top: The "Export" button in the refine search toolbar is highlighted with a red box and a red arrow pointing to it from the right side.

Top Center: The search query is displayed in a large text box, and the "Edit in advanced search" link is visible below it.

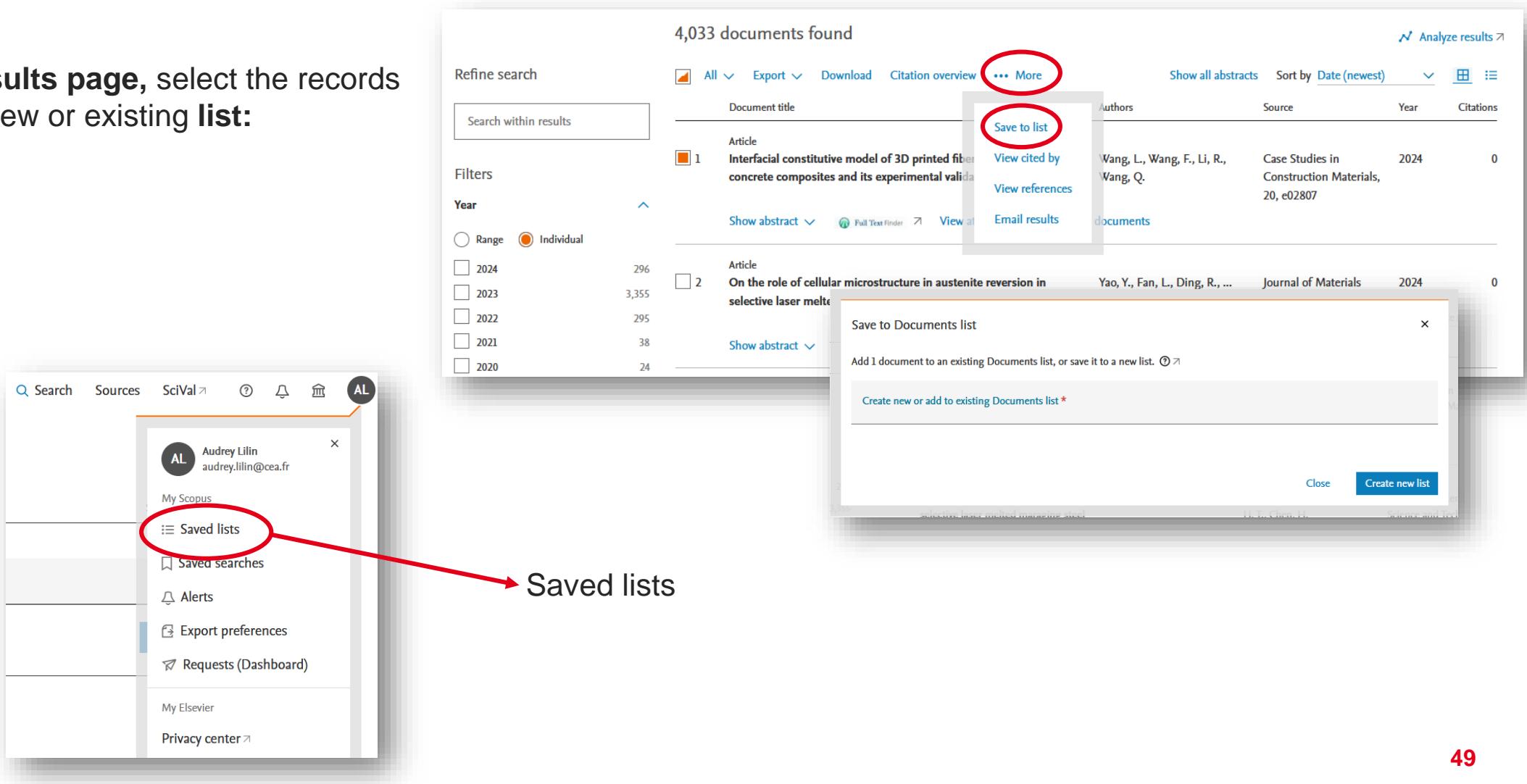
Bottom: The search results are listed, each with a title, authors, source, year, and citations. Action buttons like "Show abstract", "Full Text Finder", "View at Publisher", and "Related documents" are shown for each result.

Save search
and Set
search alert

Export

Use of lists

From the results page, select the records to save in a new or existing list:



The screenshot illustrates the process of saving documents from a search results page into a list.

Left Panel (User Profile):

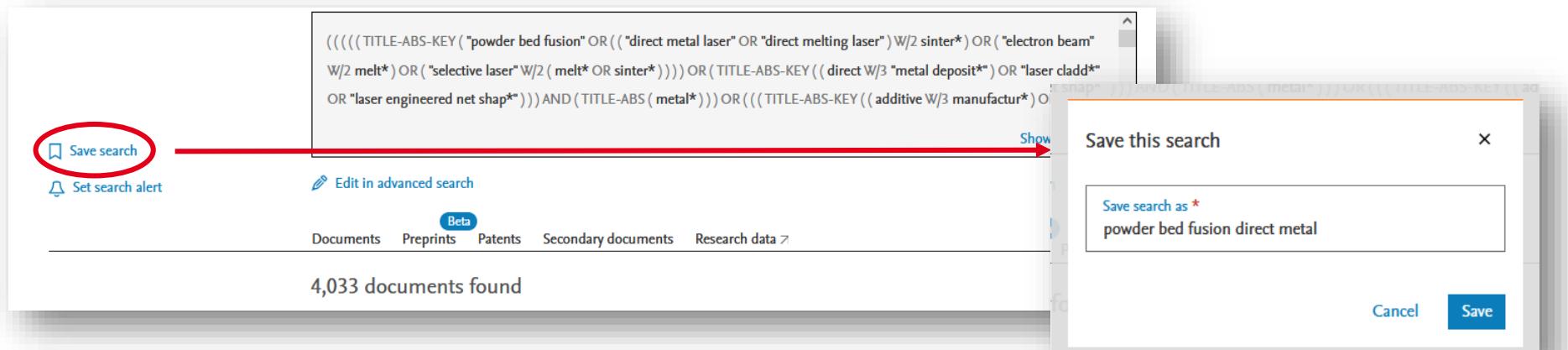
- Shows a user profile for "Audrey Lilin" with email "audrey.lilin@cea.fr".
- A red circle highlights the "Saved lists" link under "My Scopus".
- A red arrow points from this link to the text "Saved lists" below.

Right Panel (Search Results):

- Shows a search result for "4,033 documents found".
- The "More" button and the "Save to list" button are circled in red.
- A modal window titled "Save to Documents list" is open, prompting the user to "Add 1 document to an existing Documents list, or save it to a new list." It includes a "Create new or add to existing Documents list*" input field and "Close" and "Create new list" buttons.
- The search results table includes columns for Authors, Source, Year, and Citations.

Save the search

From results:



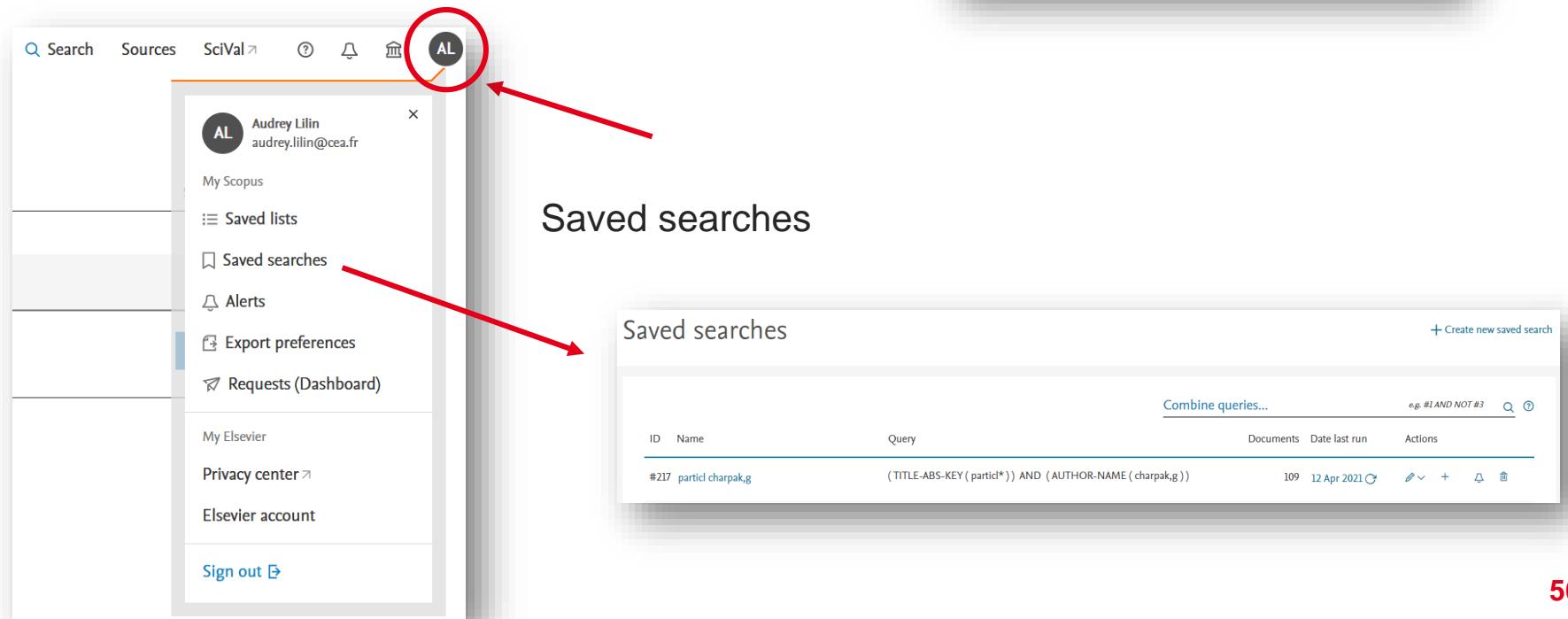
(((TITLE-ABS-KEY ("powder bed fusion" OR (("direct metal laser" OR "direct melting laser") W/2 sinter*) OR ("electron beam" W/2 melt*) OR ("selective laser" W/2 (melt* OR sinter*))) OR (TITLE-ABS-KEY ((direct W/3 "metal deposit*") OR "laser cladd*") OR "laser engineered net shap*)) AND (TITLE-ABS (metal*))) OR (((TITLE-ABS-KEY ((additive W/3 manufacturer*) OR ("laser cladding" W/2 (additive OR manufacturer*))) AND (TITLE-ABS (additive*))) OR (TITLE-ABS-KEY ((additive W/3 manufacturer*) OR ("laser cladding" W/2 (additive OR manufacturer*))))))

Show

Save this search

Save search as *
powder bed fusion direct metal

Cancel **Save**



Search Sources SciVal ⓘ ⓘ ⚡ 🔍

AL Audrey Lilin audrey.lilin@cea.fr

My Scopus

Saved lists

Saved searches **AL**

Alerts

Export preferences

Requests (Dashboard)

My Elsevier

Privacy center ⓘ

Elsevier account

Sign out ⓘ

Saved searches

Saved searches

+ Create new saved search

Combine queries... e.g. #1 AND NOT #3

| ID | Name | Query | Documents | Date last run | Actions |
|------|-------------------|--|-----------|---------------|---------|
| #217 | particl charpak,g | (TITLE-ABS-KEY(particl*)) AND (AUTHOR-NAME(charpak,g)) | 109 | 12 Apr 2021 | ⋮ |

Alerts to update the results

→ Set search alert

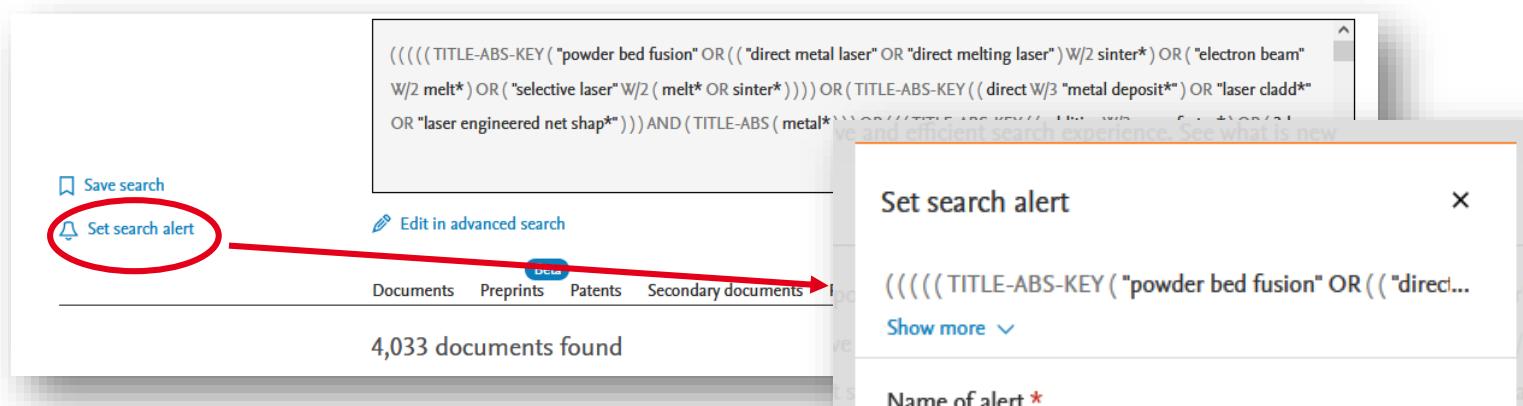
Available from results page
and search history



CAUTION

Do not mention a date in
the alert, nor a specific time
period

From results:



The screenshot shows a search results page for a query related to 3D printing. At the top left, there are buttons for 'Save search' and 'Set search alert'. The 'Set search alert' button is circled in red. Below it is an 'Edit in advanced search' link. A horizontal menu bar includes 'Documents', 'Preprints', 'Patents', and 'Secondary documents'. The main content area displays the search results with the text '4,033 documents found'.

Set search alert

((((TITLE-ABS-KEY ("powder bed fusion" OR (("direct metal laser" OR "direct melting laser") W/2 sinter*) OR ("electron beam" W/2 melt*) OR ("selective laser" W/2 (melt* OR sinter*))) OR (TITLE-ABS-KEY ((direct W/3 "metal deposit*" OR "laser cladd*" OR "laser engineered net shap*"))) AND (TITLE-ABS (metal*))) OR ((TITLE-ABS KEY /> ... See what is new

Show more ▾

Name of alert *

Email address *

Separate email addresses with a semicolon, comma, or space

Frequency

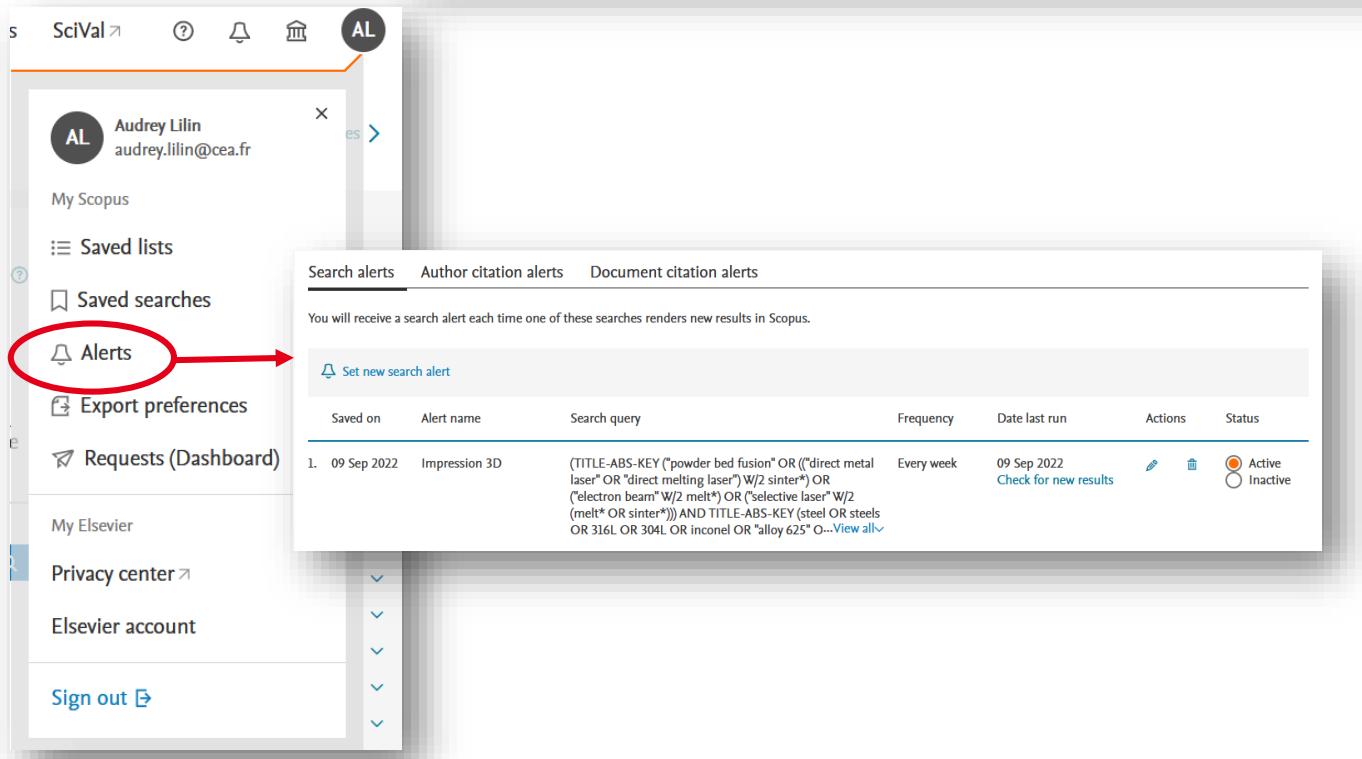
on

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

Alerts to update the results

→ Set search alert

From search history:

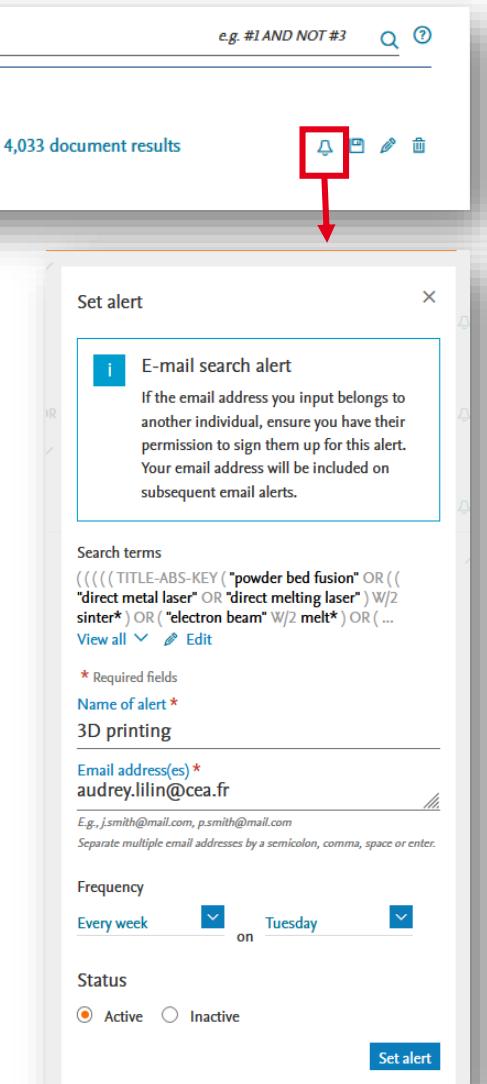


Search history

```
((((TITLE-ABS-KEY ("powder bed fusion" OR (( "direct metal laser" OR "direct melting laser") W/2 sinter*) OR ("electron beam" W/2 melt*) OR ("selective laser" W/2 ( melt* OR sinter*))) OR (TITLE-ABS-KEY(( direct W/3 "metal deposit*") OR "laser cladd*" OR "laser engineered net shap*")) AND (TITLE-ABS(metal*)) OR (((TITLE-ABS-KEY(( additive W/3 manufactur*) OR (3d W/3 print*) OR ("three dimensional" W/3 print*) OR ('3 dimensional" W/3 print*))) OR (TITLE-ABS-KEY((( "direct energy" OR "directed energy") W/3 dep... View More
```

Combine queries...

4,033 document results



Set alert

E-mail search alert

If the email address you input belongs to another individual, ensure you have their permission to sign them up for this alert. Your email address will be included on subsequent email alerts.

Search terms

```
(((((TITLE-ABS-KEY ("powder bed fusion" OR(( "direct metal laser" OR "direct melting laser") W/2 sinter*) OR ("electron beam" W/2 melt*) OR ("selective laser" W/2 ( melt* OR sinter*))) AND TITLE-ABS-KEY(steel OR steels OR 316L OR 304L OR inconel OR "alloy 625" O...View all
```

* Required fields

Name of alert * 3D printing

Email address(es) * audrey.lilin@cea.fr

Frequency Every week on Tuesday

Status Active

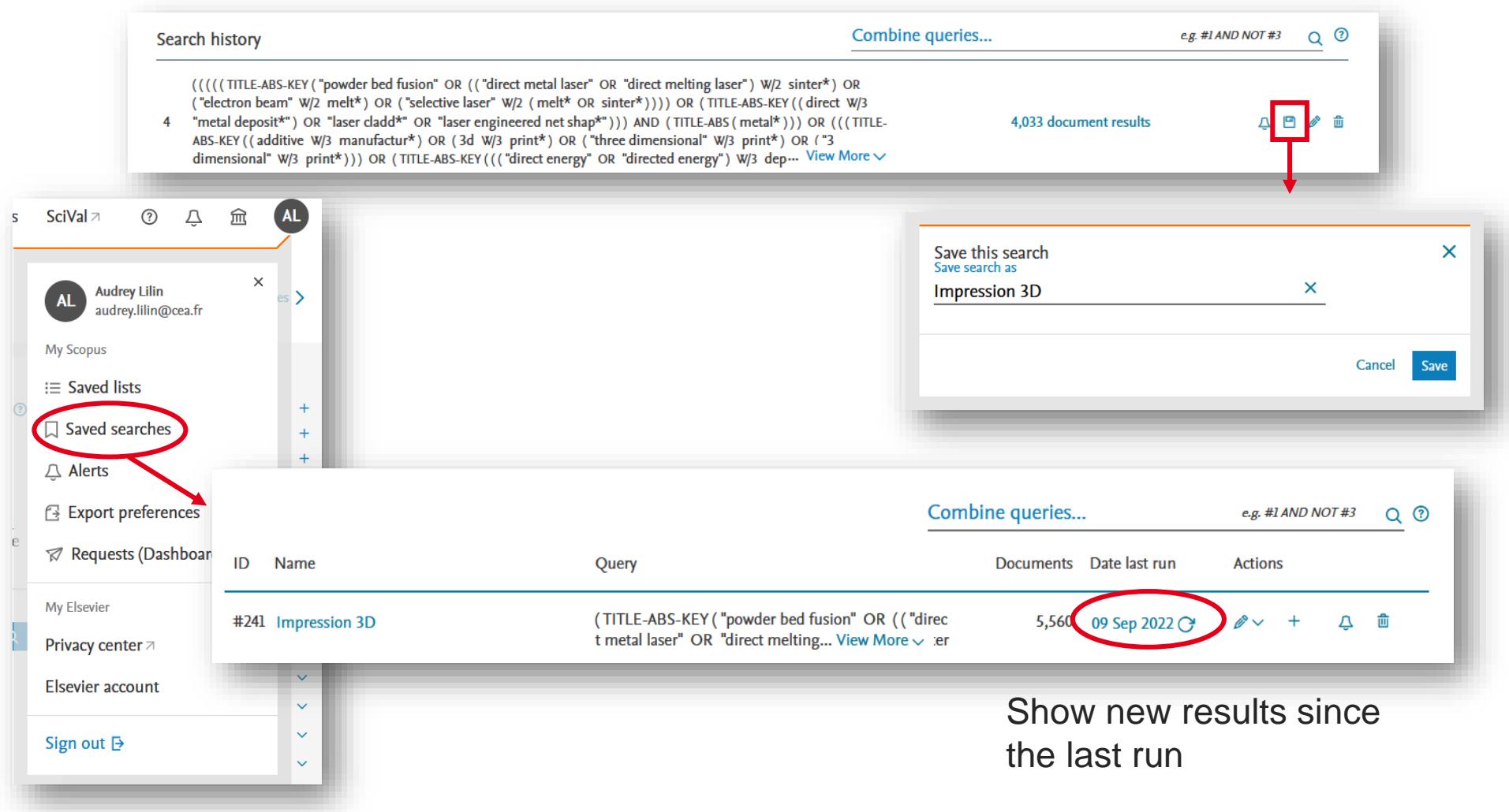
Set alert

Follow-up on the latest additions

Scopus

→ Save and run a query

From search history:



The screenshot illustrates the process of saving and running a search query in the Scopus platform.

Search History: The top section shows a complex search query with 4,033 document results. A red box highlights the "Save" icon (a clipboard with a pencil) in the top right corner of the search results panel, with a red arrow pointing down to it.

Saved Searches: On the left, the user's profile (Audrey Lilin) is shown. Below it, the "Saved searches" option is highlighted with a red circle and a red arrow pointing to it from the bottom left.

Results Table: The main area displays a table of search results. The first row, titled "#241 Impression 3D", includes the query, document count (5,560), date last run ("09 Sep 2022"), and actions. A red circle highlights the "Date last run" column, with a red arrow pointing to it from the bottom right.

Text at Bottom: The text "Show new results since the last run" is located at the bottom right of the interface.

Exemple : searching ‘Additive manufacturing of stainless steel’

► Concept 1 Additive manufacturing

TITLE-ABS-KEY(((3D OR “3 D” or “three D” OR “three dimensional”) PRE/1 print*) OR “additive manufatur*” OR (“powder bed fus*” OR “electron beam melt*” OR “selective laser melt*” OR “selective laser sinter*” OR “direct metal laser sinter*” OR “laser metal deposit*” OR “direct* energy deposit*” OR “extreme high speed laser clad*” OR “electron beam freeform fabricat*” OR “wire arc additive manufatur*”) OR (PBF OR EBM OR SLM OR SLS OR DMLS OR LMD OR DED OR EHLA OR EBF3 OR WAAM))

► Concept 2 Stainless steel

TITLE-ABS-KEY((stainless W/2 steel) OR (SS316 OR SS316L OR 316L OR SS16N OR 316N OR SS304 OR SS304L OR 304L OR SS304N OR 304N))



Exercise : queries in Scopus

Concept 1 : reflectrometry :

#1 TITLE-ABS-KEY(reflectometr* OR TDR OR FDR OR ellipsomet*)

Concept 2 : cables :

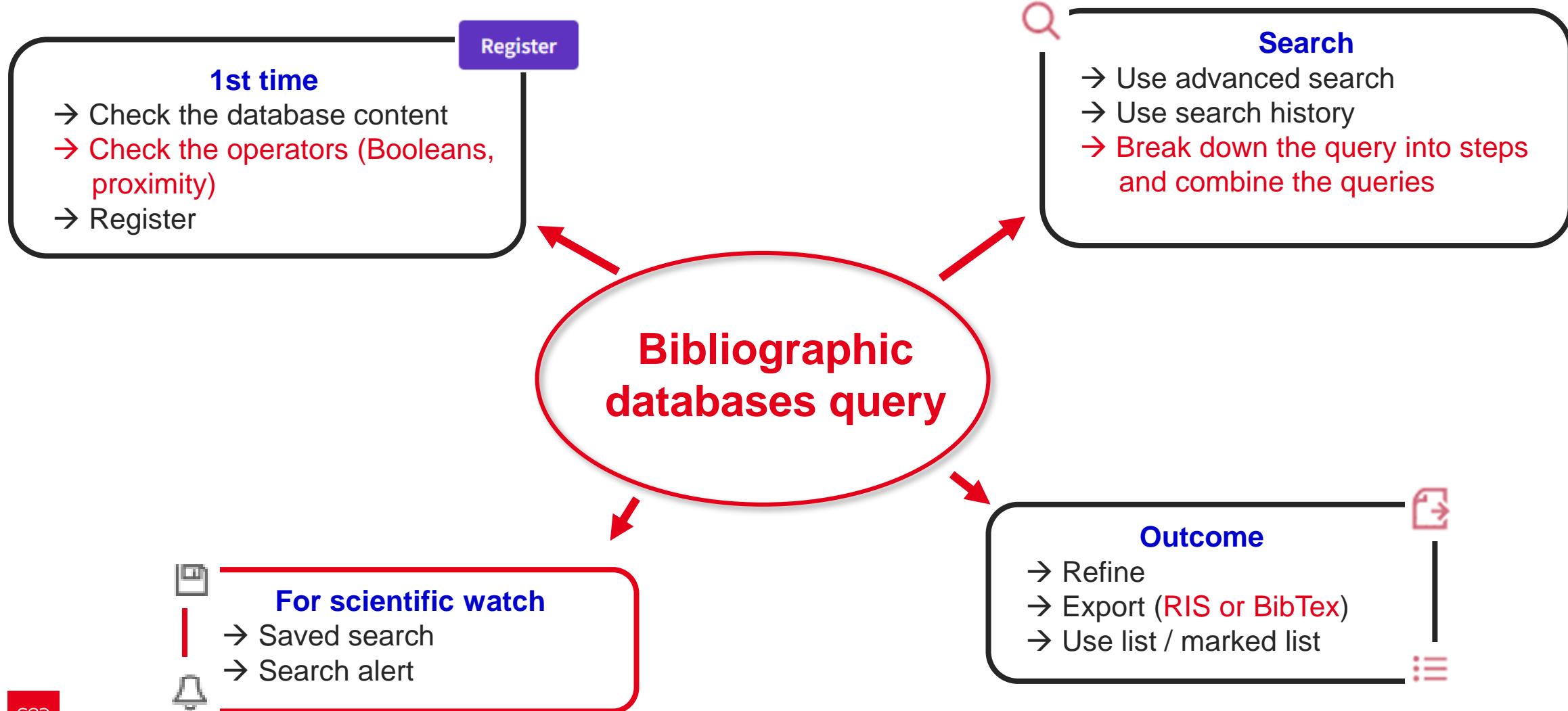
#2 TITLE-ABS-KEY(cable OR wire OR wiring OR line OR « twisted pair »)

Concept 3 : faults :

#3 TITLE-ABS-KEY(fault OR defect* OR « partial discharge » OR anomal* OR abnormal* OR aging OR aged)

#1 AND #2 AND #3

Search in a bibliographic database: summary





Zotero



Why use a reference tool ?

- To help you collect, manage and sort your references
- To keep your references consistent
- To make your life easier

Zotero

Zotero is a free, easy to use reference management software that enables users to collect, organize and use their references in their academic writings.

It is an open-source platform which works on both Macs and PCs.

Installation :

You can download Zotero on the [Zotero download page](#). Be sure to also install the Zotero Connector for your browser.

Online support:

<https://www.zotero.org/support/start>



Zotero 6 for Windows

Your personal research assistant

[Download](#)

[Other platforms](#)

[Installation Help](#)



Zotero Connector

Save to Zotero from your browser

[Install Chrome Connector](#)

Zotero Connectors automatically sense content as you browse the web and allow you to save it to Zotero with a single click.

[Zotero Connectors for other browsers](#)



Plugins

Install one of the many third-party plugins and become even more productive.

[Browse Plugins](#)



How does Zotero work ?

- ❑ Zotero collects ‘metadata’
- ❑ This includes: title, author name, date of publication etc.
- ❑ This can be automatically collected by Zotero, or manually added

| Info | Notes | Marqueurs | Connexe |
|----------------------|--------------------|----------------------------------|----------------------------------|
| Type de document: | Article de journal | | |
| Titre: | | | |
| Auteur: | (Nom), (Prénom) | <input type="button" value="−"/> | <input type="button" value="+"/> |
| Résumé: | | | |
| Publication: | | | |
| Lieu: | | | |
| Édition: | | | |
| Date: | | | |
| Section: | | | |
| Pages: | | | |
| Langue: | | | |
| Titre abrégé: | | | |
| ISSN: | | | |
| URL: | | | |
| Consulté le: | | | |
| Archive: | | | |
| Loc. dans l'archive: | | | |
| Catalogue de bibl.: | | | |
| Cote: | | | |
| Autorisations: | | | |
| Extra: | | | |

Zotero dashboard

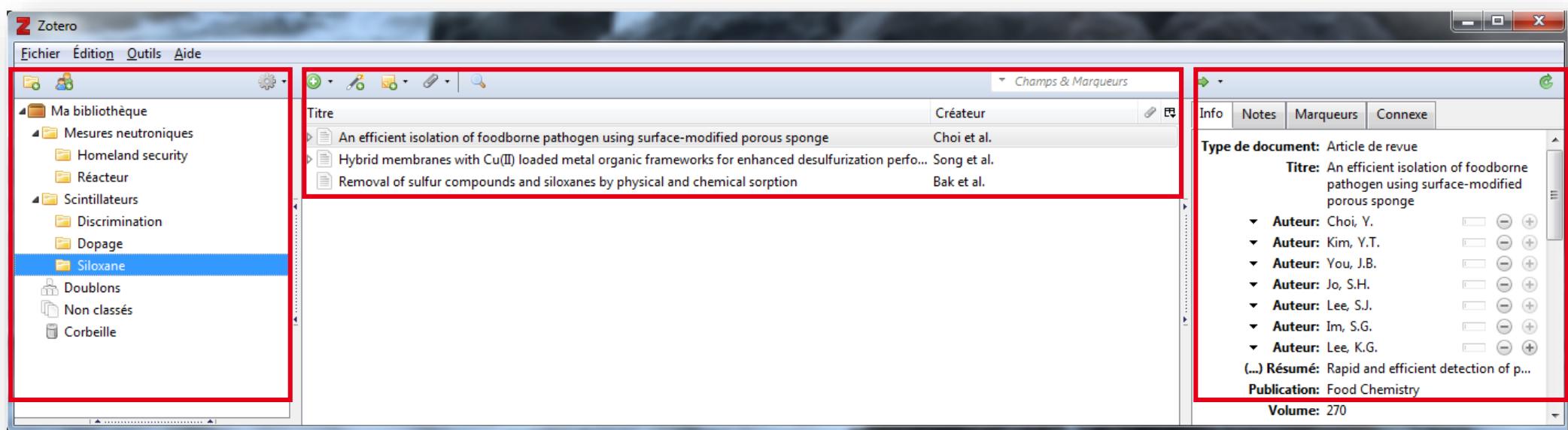
Left pane

« My library »,
which contains
all the items

Collections and
subcollections

Center pane

The list of all the items available in the selected collection

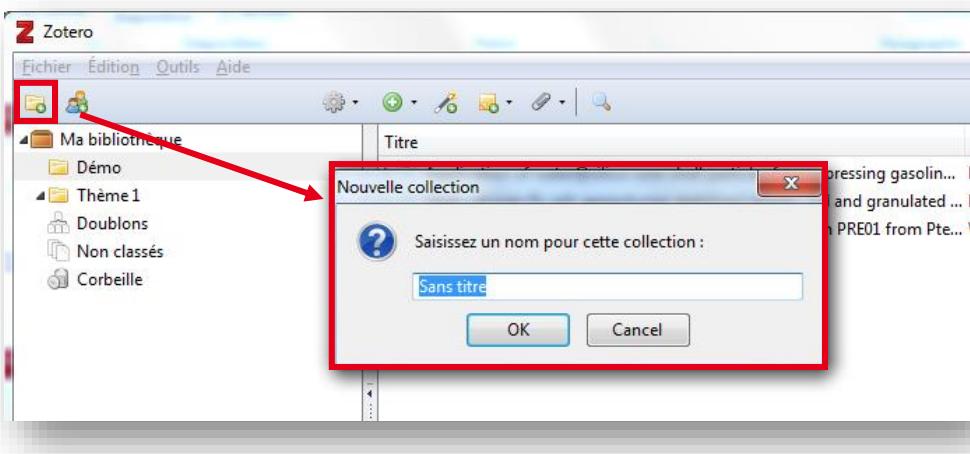


Right pane

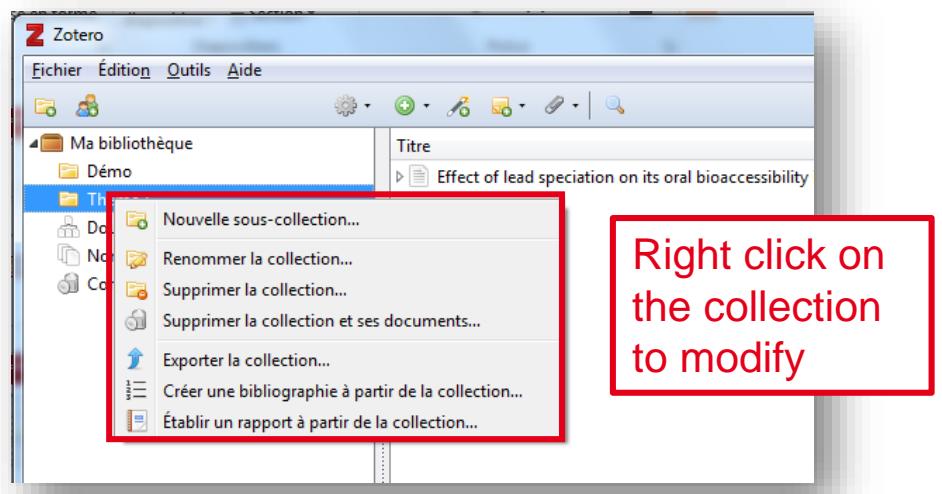
Metadata of the
selected items

Collections

Create new collections



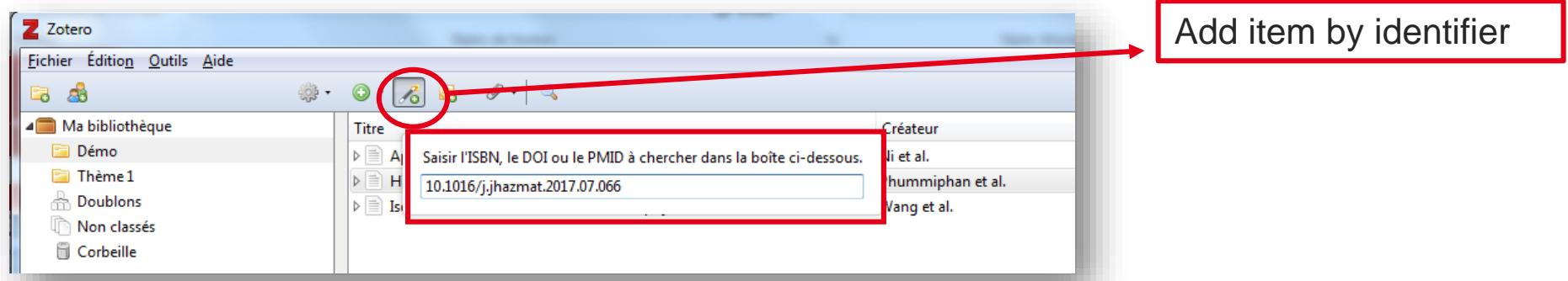
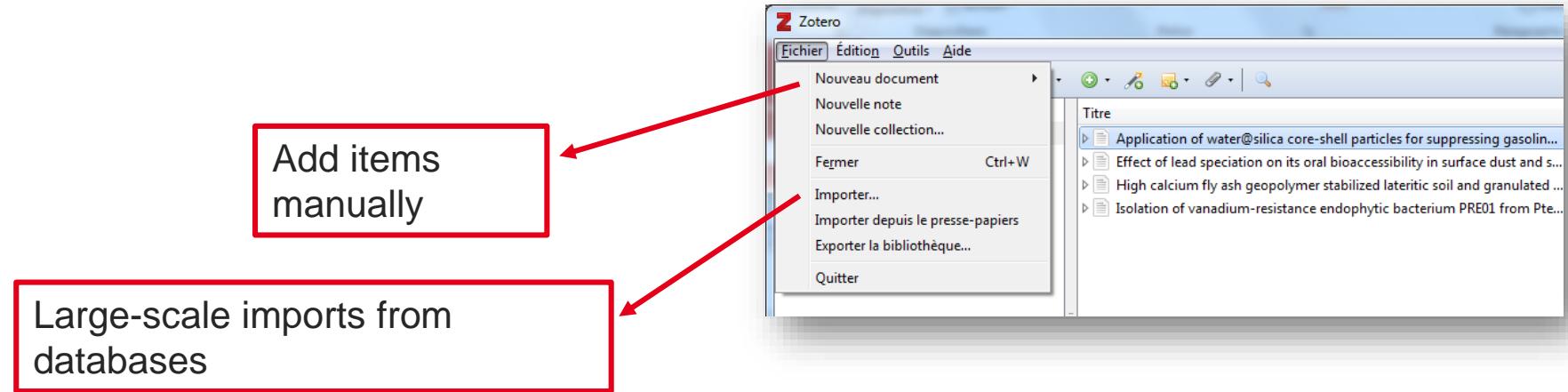
Create subcollections,
rename or delete collections



Items that are not in any collection can be found in the “Unfiled Items” special collection at the bottom of the collections list in the left Zotero pane.

Deleting a collection **does not** **delete** the items in the collection. Items are still accessible by clicking on “My Library” or the “Group library” name.

Adding items to collections





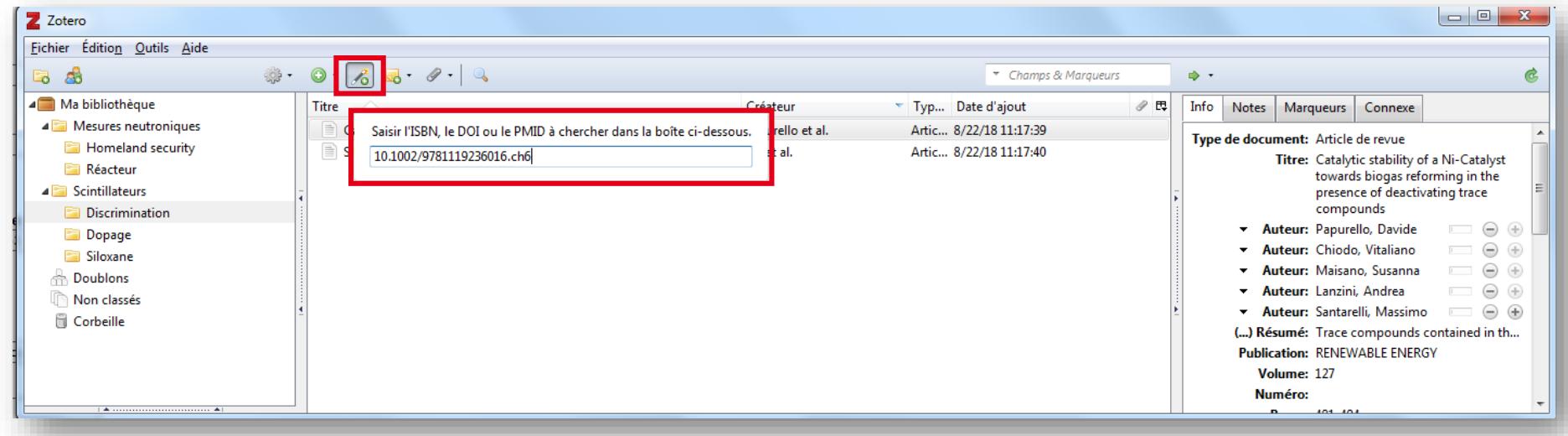
Adding items using Zotero Connector

- When Zotero recognizes that an article/book is open in your browser the Z icon () is replaced by a save icon which will be a book, article, image, or other single item (e.g.    )
- Clicking on it will add the item to the current collection in Zotero
- If the save icon is a folder (), the webpage contains multiple items. Clicking it will open a dialog box from which items can be selected and saved to Zotero

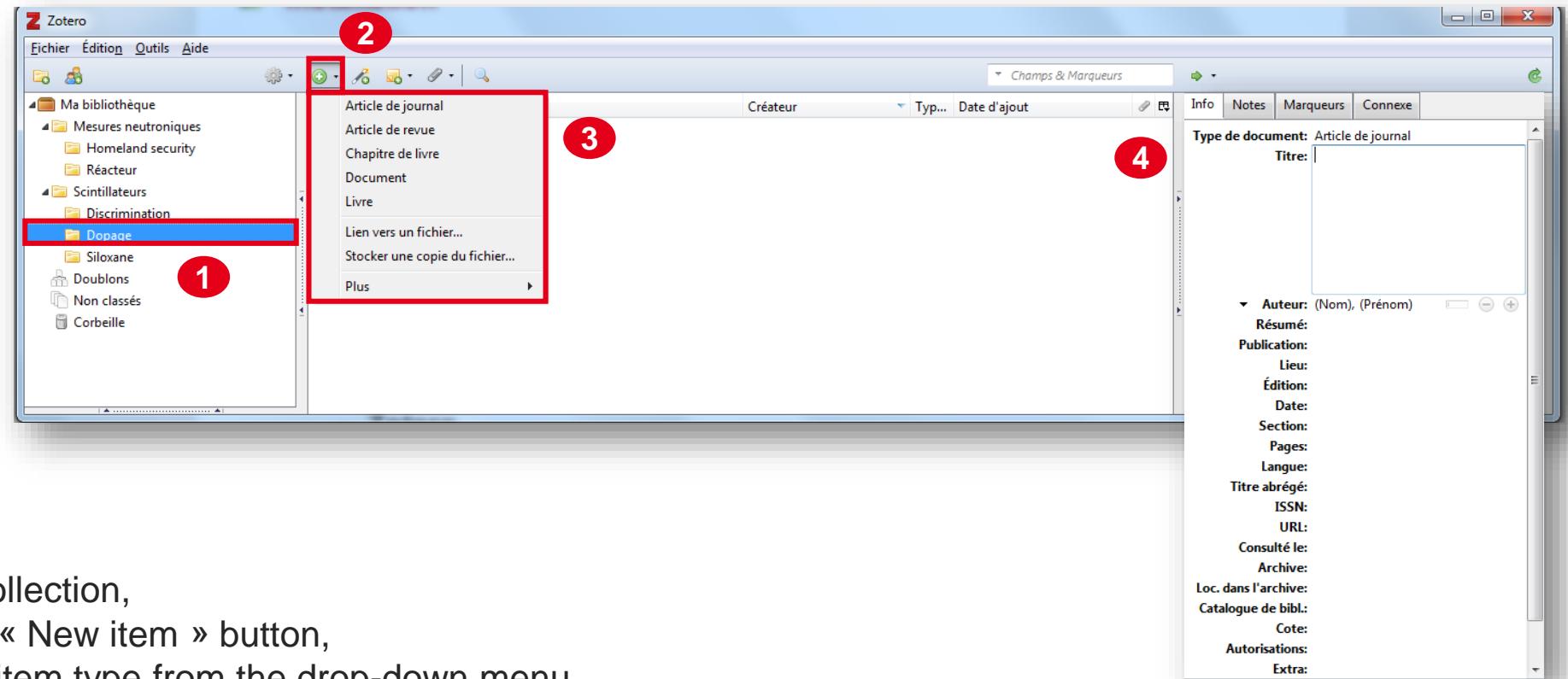
Adding item by identifier

You can quickly add all the details about an item by using the ISBN, DOI, PubMed ID, arXiv ID or ADS Bibcode

This is done by clicking the Add Item by Identifier button (a magic wand symbol) in the Zotero toolbar, typing in the ID number and pressing enter.



Adding item manually



Add item **manually** by:

- 1**- Selecting the target collection,
- 2**- Clicking on the green « New item » button,
- 3**- Selecting the desired item type from the drop-down menu,
- 4**- Entering the item's bibliographic information via the right-hand pane

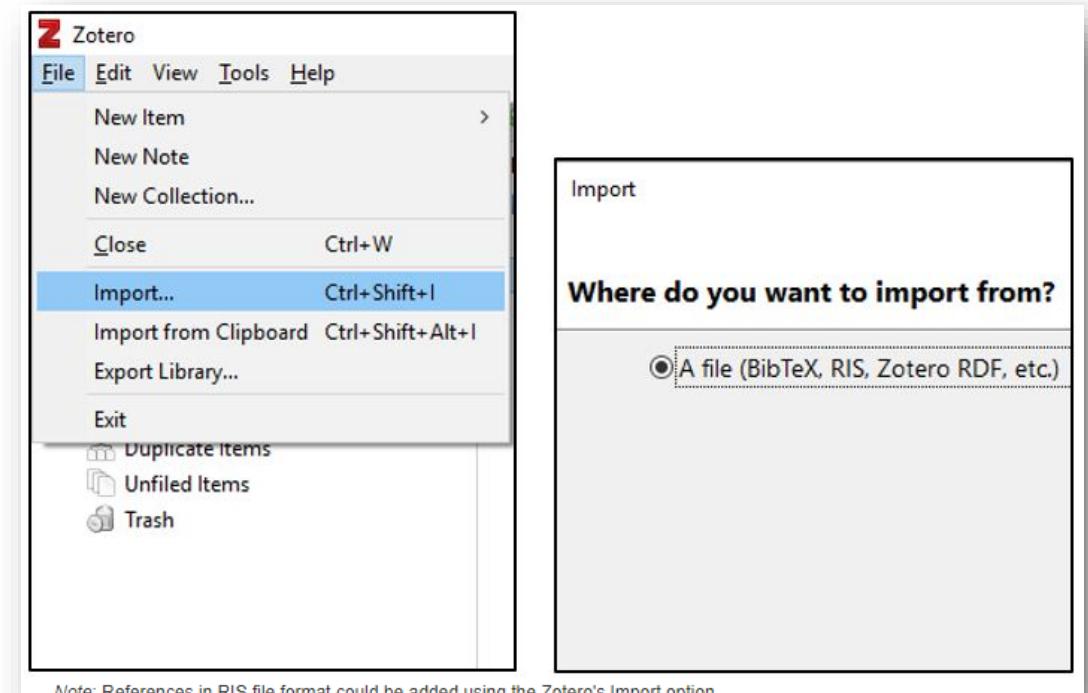
Adding items from WoS or Scopus

You can add or import references from WoS or Scopus in two ways:

1. Using the Zotero Connector: the easiest and most common approach
3. Importing BibTeX or RIS file

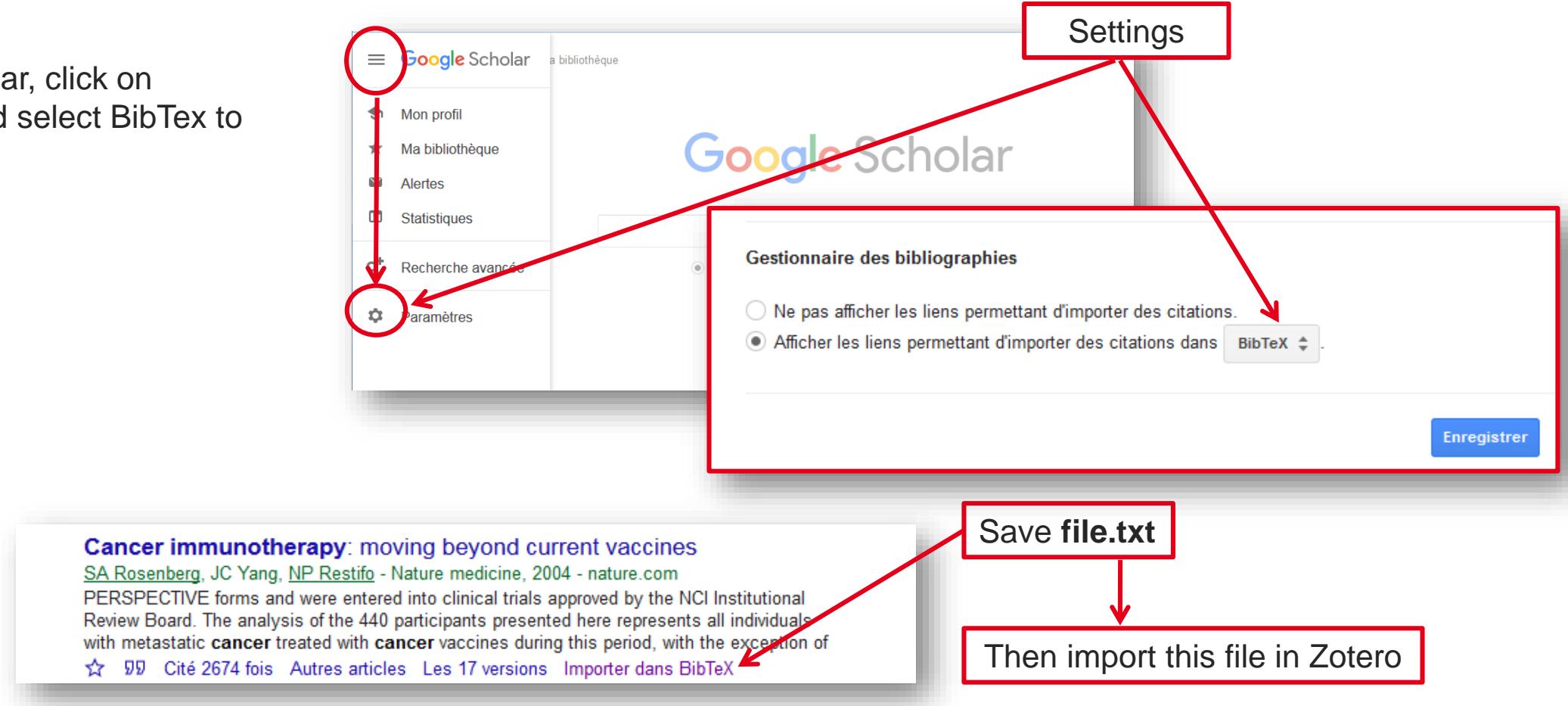
Importing BibTeX or RIS file :

1. Select records on the « results page » of WoS or Scopus, then export them in BibTeX (file.bib) or RIS (file.ris) format
2. Import this file into Zotero



Adding items from Google Scholar

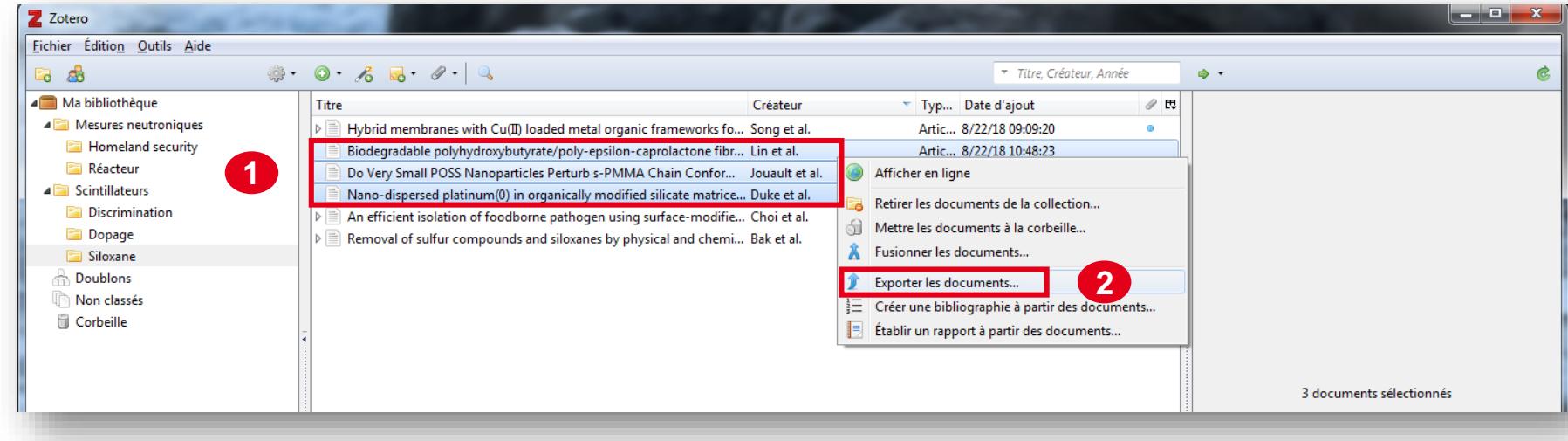
In Google Scholar, click on « settings », and select BibTex to display links



Sharing items

To export items :

- 1- Select items
- 2- Right click and select « Export items... »
- 3- When sharing items with another Zotero user, select Zotero RDF with files and notes for the most complete transfer



To import items :

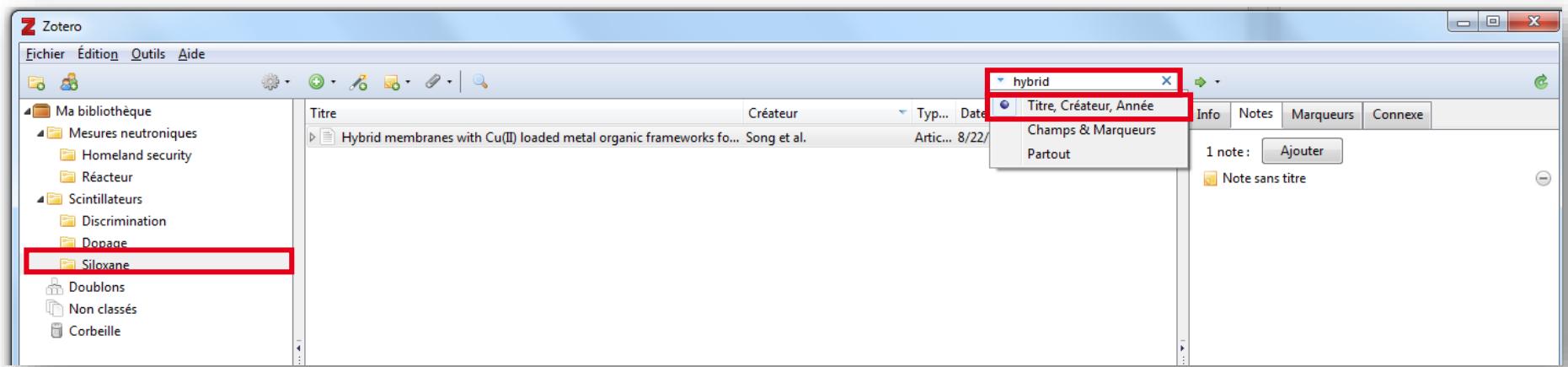
Zotero can import bibliographic data stored in a variety of standardized formats used by databases and other reference management tools. The most popular formats are RIS, Bib(La)Tex, and MODS.

If you have a database stored in one of these formats, such as a BibTeX database you've compiled or a RIS database you've exported from another reference manager, you can import them into Zotero by clicking File → "Import..." and choosing "A file".

Search items

Quick search

To begin the search, click inside the search box at the top-right of the center pane and start typing your search terms. As you type, only the items in the center column that match the search terms will remain.

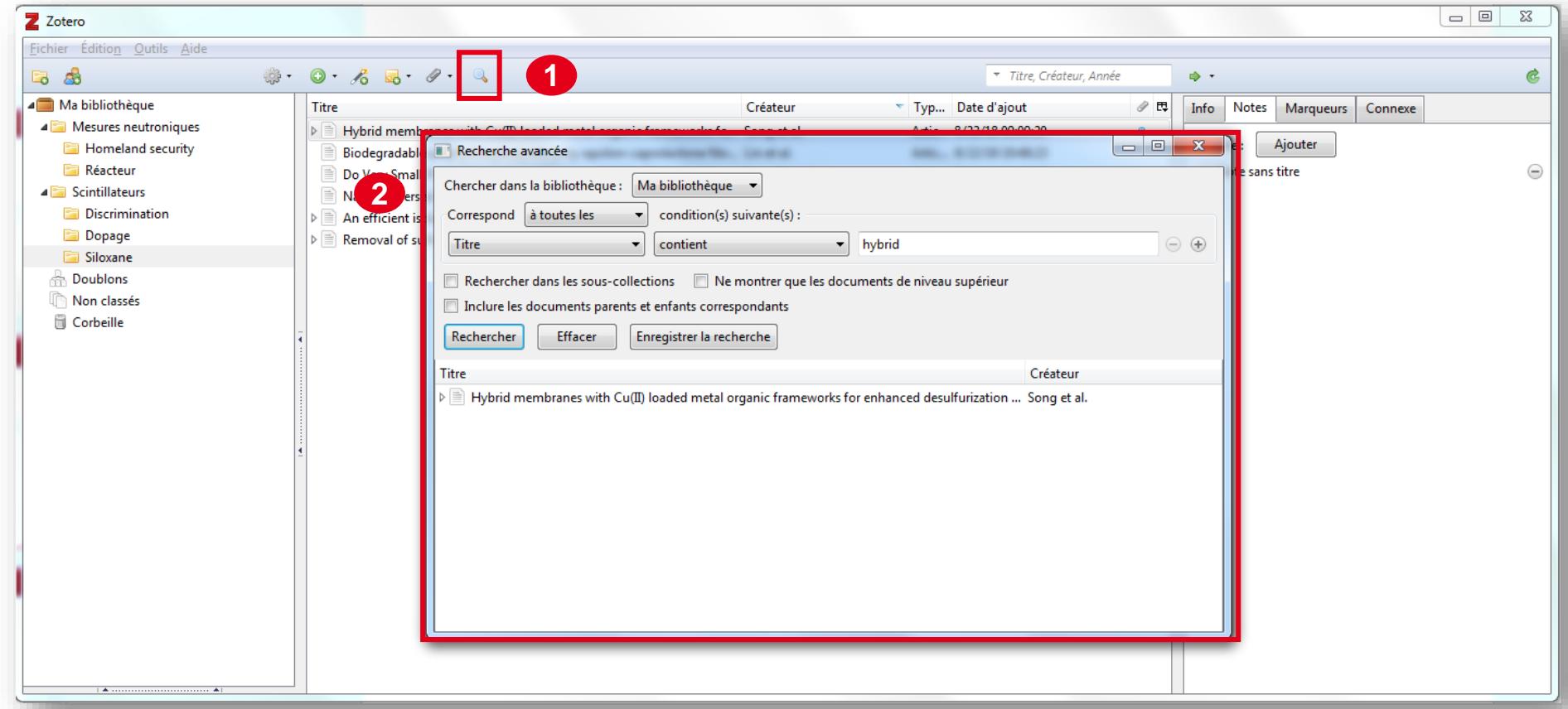


Search items

Advanced search

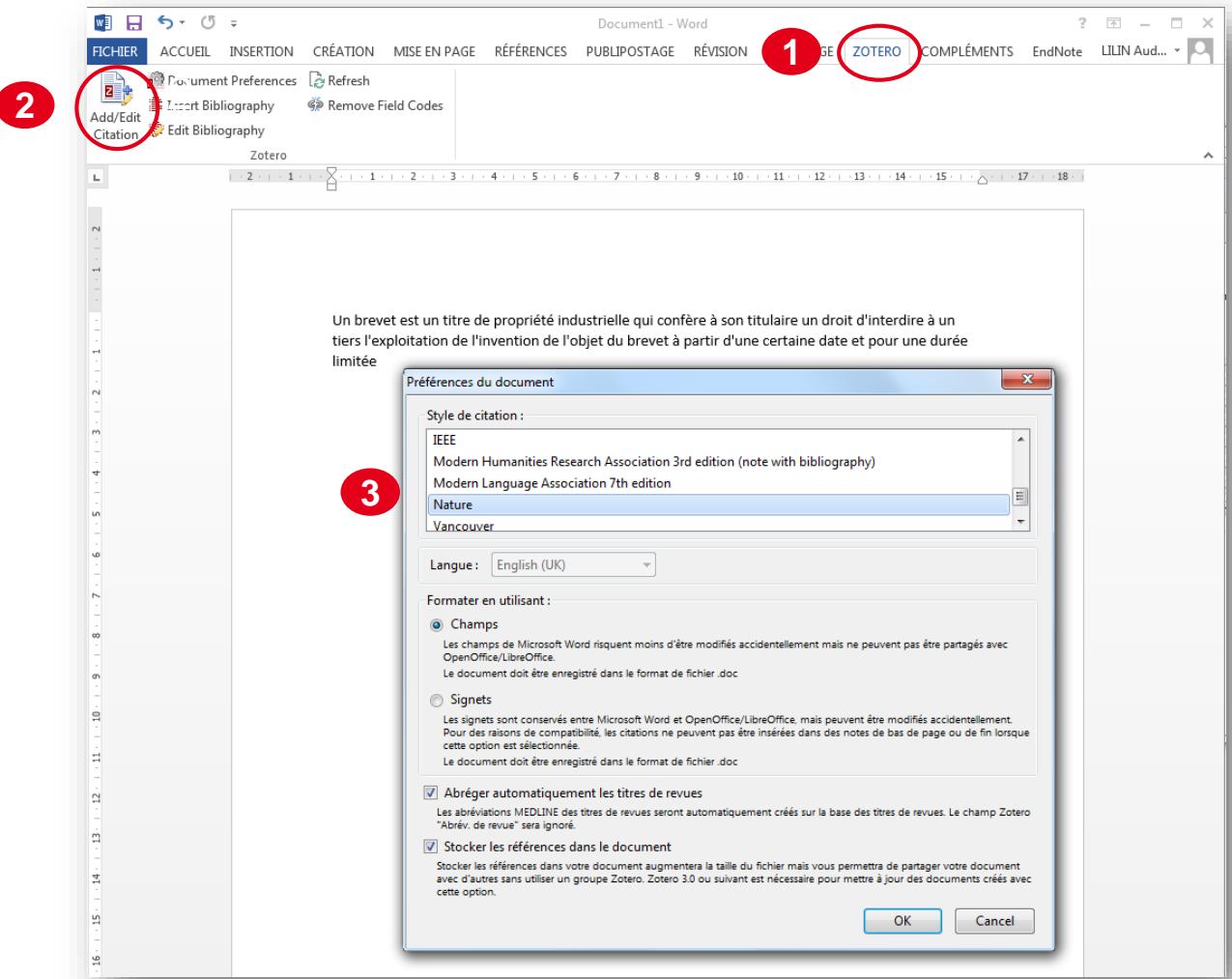
To open the Advanced Search window, click on the magnifying glass icon (🔍) at the top of the center pane.

In this window, you can filter items by the content of specific fields or by other properties, like item type or the collection an item belongs to. Multiple filters can be set up by clicking the plus button.

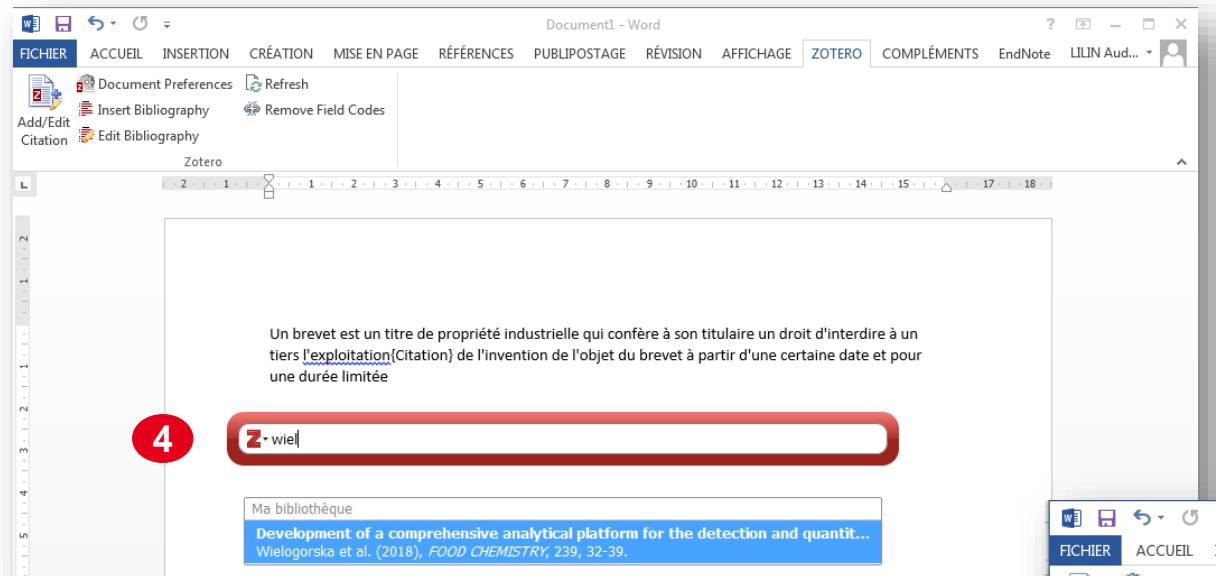


Using the Zotero Word plugin

- 1- Zotero tab,**
- 2- At the cursor location, click “Add/Edit Citation”**
- 3- Choose citation style**
- 4- Search items in library**
- 5- Add new quotations if necessary**
- 6- Edit the bibliography**



Using the Zotero Word plugin



Document1 - Word

FICHIER ACCUEIL INSERTION CRÉATION MISE EN PAGE RÉFÉRENCES PUBLIPOSTAGE RÉVISION AFFICHAGE ZOTERO COMPLÉMENTS EndNote LILIN Aud...

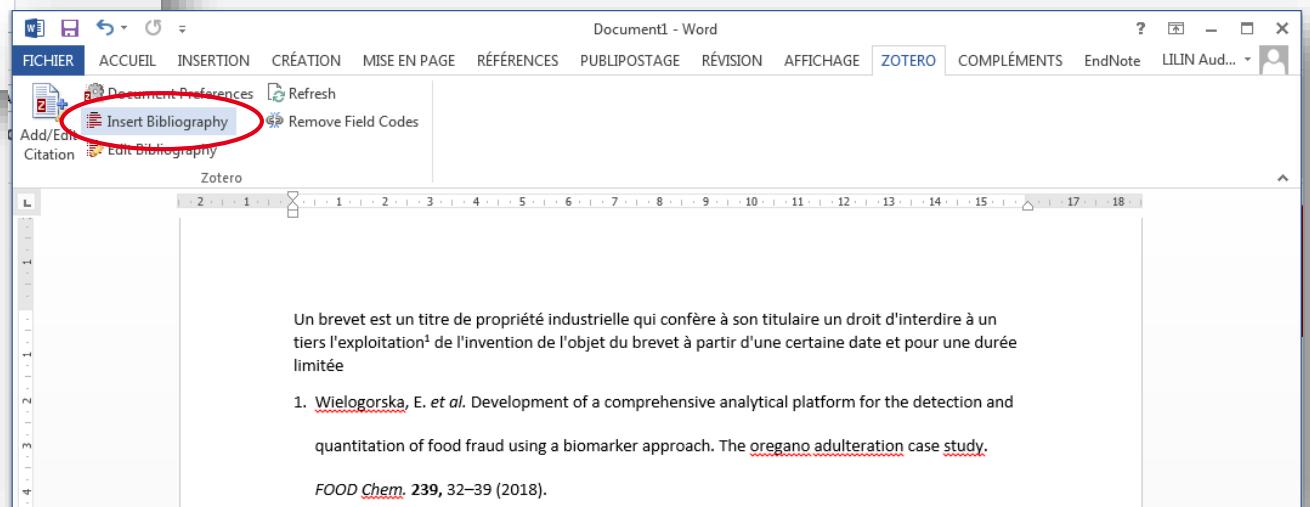
Add/Edit Document Preferences Refresh
Citation Insert Bibliography Remove Field Codes
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Zotero

Un brevet est un titre de propriété industrielle qui confère à son titulaire un droit d'interdire à un tiers l'exploitation¹ de l'invention de l'objet du brevet à partir d'une certaine date et pour une durée limitée

4 

Ma bibliothèque
Development of a comprehensive analytical platform for the detection and quantit...
Wielogorska et al. (2018), FOOD CHEMISTRY, 239, 32-39.



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1. Wielogorska, E. et al. Development of a comprehensive analytical platform for the detection and quantitation of food fraud using a biomarker approach. The oregano adulteration case study. FOOD Chem. 239, 32–39 (2018).

6 

Zotero tab

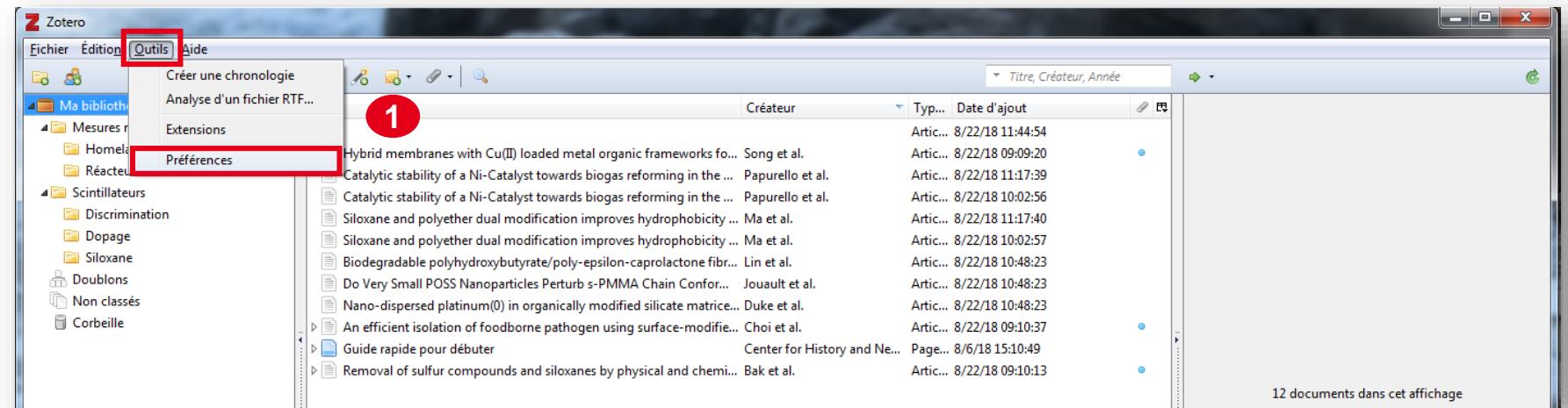
The Zotero tab contains these icons:

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| Add/Edit Citation |  | Add a new citation or edit an existing citation in your document at the cursor location. |
| Add/Edit Bibliography |  | Insert a bibliography at the cursor location or edit an existing bibliography. |
| Document Preferences |  | Open the Document Preferences window, e.g. to change the citation style. |
| Refresh |  | Refresh all citations and the bibliography, updating any item metadata that has changed in your Zotero library. |
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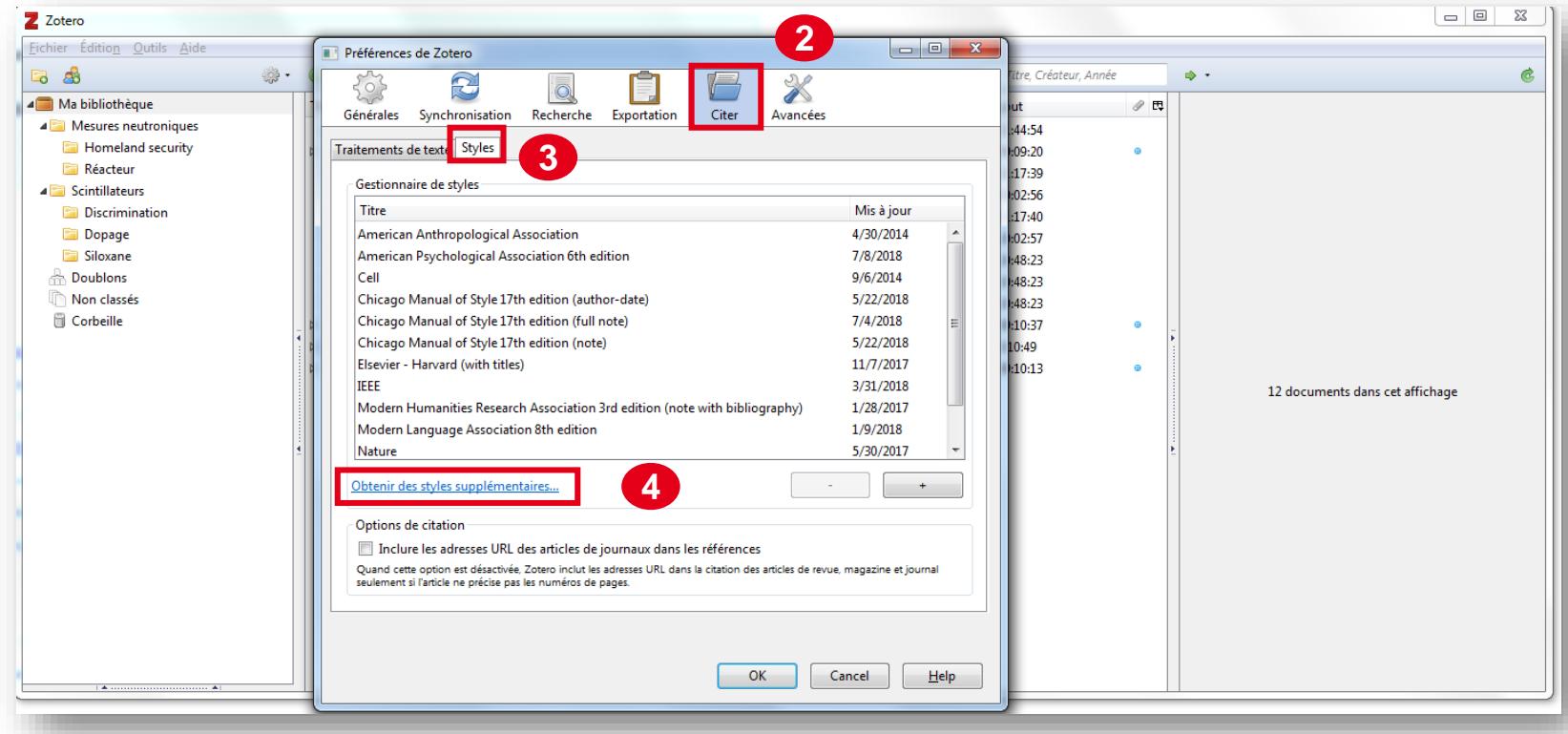
Installing additional styles

1- Tools > Preferences



Installing additional styles

- 2-** Cite pane
- 3-** Styles tab
- 4-** Click on the “Get additional styles...” option



Installing additional styles

- 5- Search for the style
- 6- Select the style title to install in Zotero

Zotero Style Repository

Here you can find [Citation Style Language](#) 1.0.1 citation styles for use with [Zotero](#) and other CSL 1.0.1-compatible software. For more information on using CSL styles with Zotero, see the [Zotero wiki](#).

Style Search

Format: numeric

IEEE

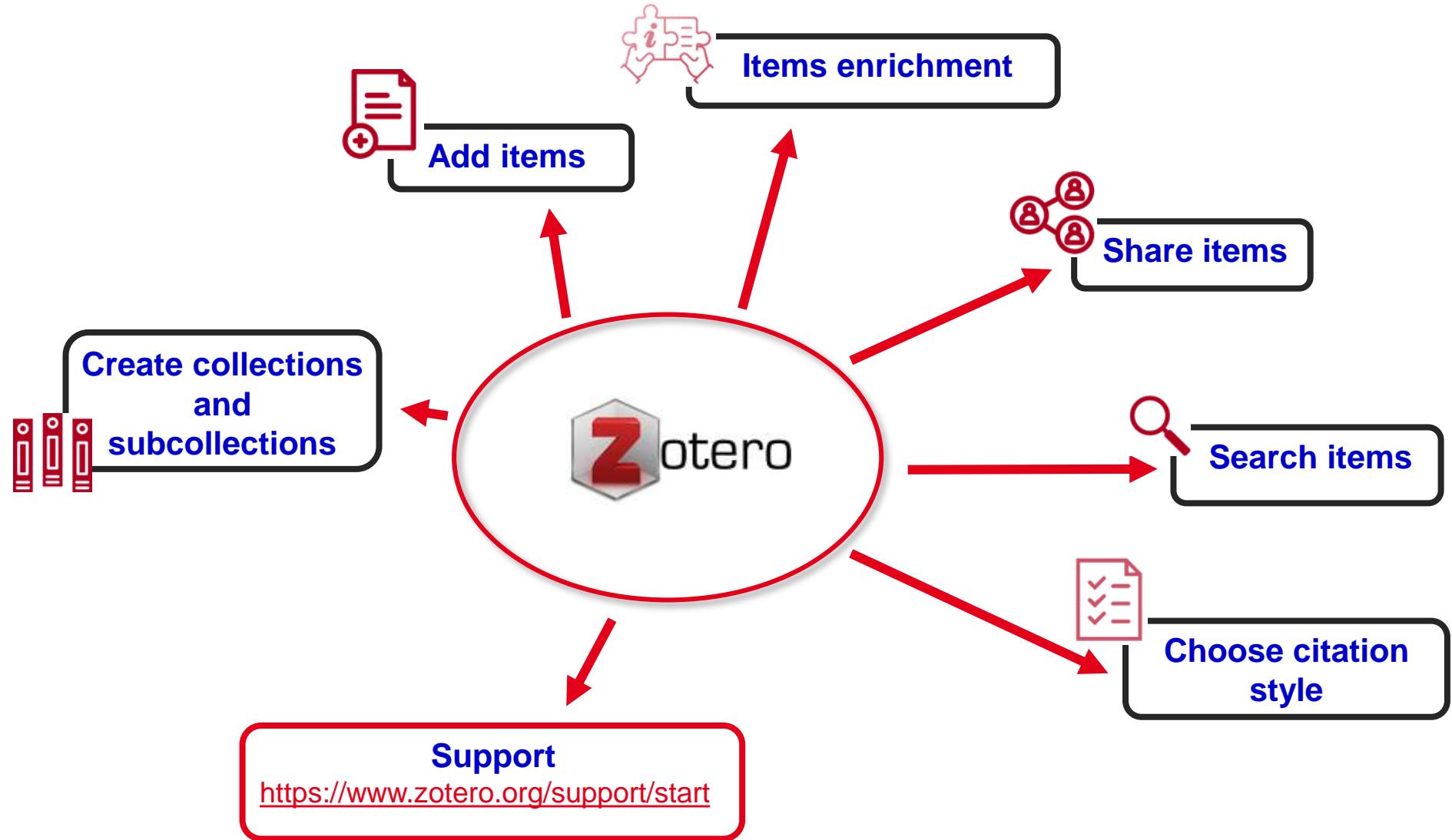
Show only unique styles

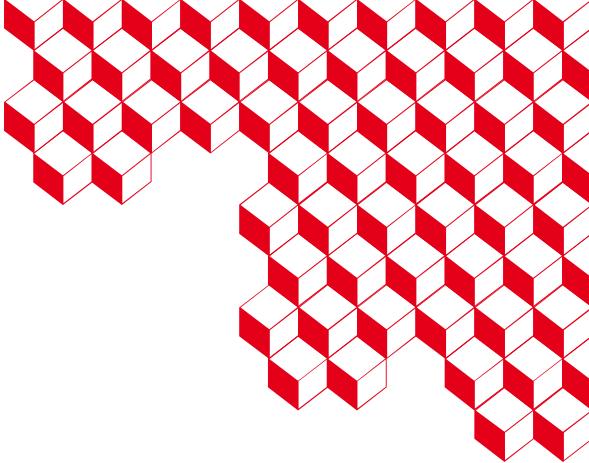
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- [IEEE](#) Bibliography
- [IEEE](#) [1] R. Hisakata, S. Nishida, and A. Johnston, "An adaptable metric shapes perceptual space," *Curr. Biol.*, vol. 26, no. 14, pp. 1911–1915, Jul. 2016.
- [IEEE](#) [2] E. Musk, "The secret Tesla Motors master plan (just between you and me)," *Tesla Blog*, 02-Aug-2006. [Online]. Available: <https://www.tesla.com/blog/secret-tesla-motors-master-plan-just-between-you-and-me>. [Accessed: 29-Sep-2016].
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- [IEEE](#) [4] J. Sambrook and D. W. Russell, *Molecular cloning: a laboratory manual*, 3rd ed. Cold Spring Harbor, NY: CSHL Press, 2001.
- [IEEE Design & Test](#) (2014-05-15 02:20:32)

Summary





Thank you

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