

4 Databases

4.1 Web of Science

4.1.1 About Web of Science

This database contains citation information. You can search for articles from almost 8,000 journals. From one article, you can find bibliographical information, the abstract, a full-text link, and cited/citing articles. In addition, you can use various analytical tools.

Items	Information
Subject	all
Creator	Thomson Scientific
Content	Bibliographic information of journal article, et al.
Source	Ca.9,300 titles : Natural science over 5,800, Social science over 1,735, Arts & Humanities over 1,140
Coverage	“Science Citation Index Expanded [SCIE]” (1900-) “Social Sciences Citation Index [SSCI]”(1980-) “Arts & Humanities Citation Index [A&HCI]”(1980-) “Index Chemicus” “Current Chemical Reactions”
Update	weekly
URL	http://www.library.tohoku.ac.jp/dbsi/wos/
How to use	Available(free) *under contract of university

4.1.2 Features

- Covers all subjects
- It's possible to search for the relation between one article and another
- Various analyzing functions

4.1.3 Operation

e.g. To search for an article written by Krunks.M, which has “spray pyrolysis” and “solar cell” as the keywords.

1) Start screen

The screenshot shows the ISI Web of Knowledge search interface. The browser title is "ISI Web of Knowledge [v.4.1] - Web of Science Home - Microsoft Internet Explorer". The page has a green header with the logo and navigation links like "Sign In", "My EndNote Web", etc. Below the header is a navigation bar with "All Databases", "Select a Database", "Web of Science", and "Additional Resources". Under "Web of Science", there are tabs for "Search", "Cited Reference Search", "Structure Search", "Advanced Search", "Search History", and "Marked List (0)". A red box highlights the "Search" tab with the label "Select Search mode".

The main search area is titled "Web of Science®" and contains a "Search for:" section with three input fields. The first field has an example "oil spill* AND 'North Sea'" and a dropdown menu set to "Topic". The second field has an example "O'Brian C* OR O'Brian C*" and a dropdown menu set to "Author". The third field has an example "Cancer* OR Journal of Cancer Research and Clinical Oncology" and a dropdown menu set to "Publication Name". A red box highlights these fields with the label "Enter keywords and Choose tag". Below the input fields are "Search" and "Clear" buttons.

At the bottom of the search area, there is a "Current Limits: [Change Limits and Settings]" section. A red box highlights this section with the label "Change Limits and Settings". The limits listed are: "Timespan=All Years. Databases=Science Citation Index Expanded (SCI-EXPANDED); Social Sciences Citation Index (SSCI); Arts & Humanities Citation Index (A&HCI); Index Medicus (IC); Current Contents/Social & Behavioral Sciences (CCS-EXPANDED) [back to 1840]".

On the right side of the page, there is a "Discover Web of Science" section with a list of features: "Explore top high-impact journals with powerful tools such as cited reference searching and Author Finder. 756 categories thoroughly". Below this is a "Sign In | Register" section with a list of benefits: "Save and manage your references online with EndNote Web - freely available and fully integrated.", "Save and run searches", "Create alerts and RSS feeds", and "Choose your start page". At the bottom right, there is a "Training and Support" section with links for "Help Desk", "Provide Feedback", and "Search the Web with Thomson Scientific WebPlus".

2) Enter keyword

The screenshot shows the ISI Web of Knowledge search page. The search bar contains the query: "spray pyrolysis" AND "solar cell" in Topic. Below it, the Author field contains "Krunks M*" in Author. The interface includes a "Search" button and a "Clear" button. Callouts provide the following information:

- For Phrase Search, use double quotation like "spray pyrolysis".**
- Select tag from pull-down menu.**
- For right truncation, add "*" like "Krunks M*".**
- You can add another field if you want.**
- By "Author Finder", you can limit author's subject category and institution.**

More search tips

- Use terms without quotation to find the records which contain all terms.
- Wildcards are available. "flavor\$ r" matches flavor and flavour, "sul*ur" matches sulfur and sulphur.
- solar cell (without quotation marks) finds the records containing the word solar and the word cell.
- Stopwords (e.g. words such as A, THE, OF, IN) are not searchable.

3) Results list

The image shows a screenshot of the ISI Web of Knowledge search results page. Several elements are highlighted with red boxes and labeled with text boxes:

- Search condition:** A box pointing to the search query: `Topic=("spray pyrolysis" AND "solar cell") AND Author=(Krunks M*)`. Below the query, it says "Timespan=All Years. Databases=SCH-EXPANDED, SSCI, A&HCI, IC, CCR-EXPANDED [back to 1840]."
- Number of results:** A box pointing to the text "Results: 10" and the pagination controls "1 of 1".
- Functions of Refine, Analyze, etc.:** A box pointing to the "Refine Results" sidebar on the left, which includes sections for "Subject Areas", "Document Types", "Authors", "Source Titles", "Publication Years", "Institutions", "Languages", and "Countries/Territories".
- Settings results to output:** A box pointing to the "Output Records" section at the bottom, which has three steps:
 - Step 1: "Selected Records on page" (selected), "All records on page", and "Records [] to []".
 - Step 2: "Authors, Title, Source" (selected), "plus Abstract", "Full Record", and "plus Cited Reference".
 - Step 3: "[How do I export to bibliographic management software?]", "Print", "E-mail", "Add to Marked List", "Save to EndNote Web", and "Save To..." with a "Save" button.

The main results list shows six entries, each with a title, author(s), source, volume, issue, pages, and publication date. For example, the first entry is: "Title: Thermoanalytical studies of titanium(IV) acetylacetonate xerogels with emphasis on ev... Author(s): Acik IO, Madarasz J, Krunks M, et al. Source: JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY Volume: 88 Issue: 2 Pages: 55 Times Cited: 0".

4) Detailed display

Bibliographic information links, to see another list, Abstracts. etc

Zinc oxide thin films by the spray pyrolysis method

Full Text | Print | E-mail | Add to Marked List | Save to EndNote Web | more

Holdings | Go | options

Author(s): Krunks M, Mellikov E

Source: THIN SOLID FILMS Volume: 270 Issue: 1-2 Pages: 33-36 Published: DEC 1 1995

Times Cited: 71 **References:** 10

Abstract: Undoped and In-doped ZnO thin films have been prepared on glass substrates from solutions of Zn(CH₃CO₂)₂ · 2H₂O in a mixture of deionized water and isopropyl alcohol by spray pyrolysis. Their optical, morphological and structural qualities have been studied and the effect of the preparation conditions discussed. It was shown that the main factors determining the parameters of ZnO films are the growth temperature and the indium concentration. The growth temperatures of 625-675 K, indium doping levels of 1-1.5 at % and precursor concentrations of 0.1-0.2 mol l⁻¹ are preferable to achieve ZnO films with optical and structural qualities as required for solar cell applications.

Document Type: Article

Language: English

Author Keywords: zinc oxide; pyrolysis; solar cells; indium

KeyWords Plus: ZNO

Addresses: Krunks, M (reprint author), TALLINN TECH UNIV, INST MAT TECHNOL, CHAIR SEMICOND MAT TECHNOL, EHITAJATE 5, TALLINN 0026, ESTONIA

Publisher: ELSEVIER SCIENCE SA LAUSANNE, PO BOX 564, 1001 LAUSANNE 1, SWITZERLAND

Subject Category: Materials Science, Multidisciplinary; Materials Science, Coatings & Films; Physics, Applied; Physics, Condensed Matter

IDS Number: TM187

ISSN: 0040-6090

Cited by: 71
This article has been cited 71 times (from Web of Science).
Winfield RJ, Koh LHK, O'Brien S, et al. Extimer laser processing of ZnO thin films prepared by the sol-gel process. APPLIED SURFACE SCIENCE 4 855-858 DEC 15
Murali KR Properties of sol-gel dip-coated zinc oxide thin films. JOURNAL OF PHYSICS AND CHEMISTRY OF SOLIDS 12 2293-2296 DEC
Kim H, Wang SJ, Park HH, et al. Study of Ag nanoparticles incorporated SnO₂ transparent conducting films by photochemical metal-organic deposition. THIN SOLID FILMS 2-4 198-202 DEC 3

[view all 71 citing articles]
Create Citation Alert

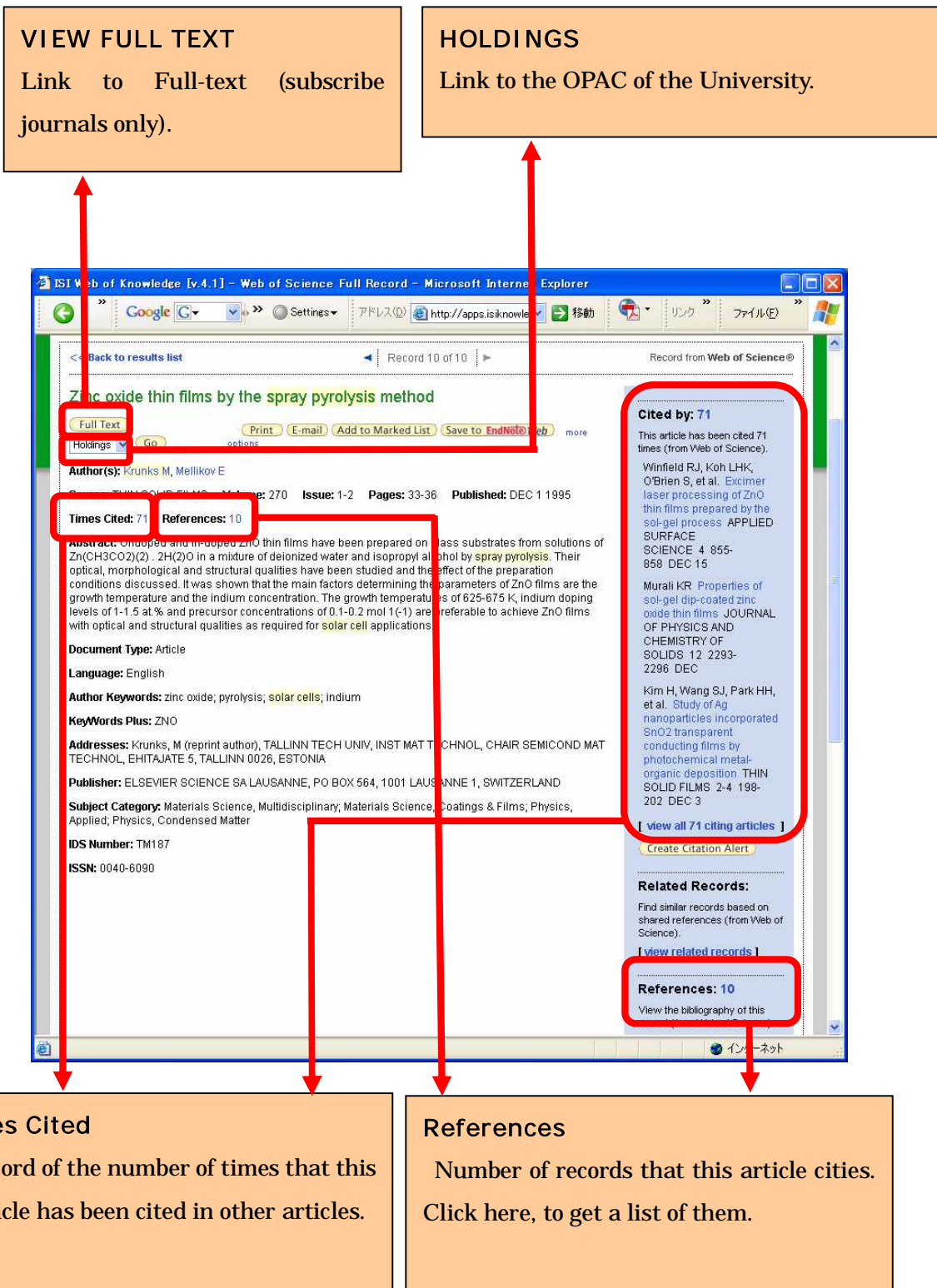
Related Records:
Find similar records based on shared references (from Web of Science).
[view related records]

References: 10
View the bibliography of this record (from Web of Science).

Author keywords, Addresses of authors, Publisher, and so on.

- Number of "Cited by" articles
This article has been cited by some other articles. This number will change when someone cite this article in future.
- Related Records
You can find the list of articles which have similar references.
- Number of "References"
Reference list of this article. This number will not change.

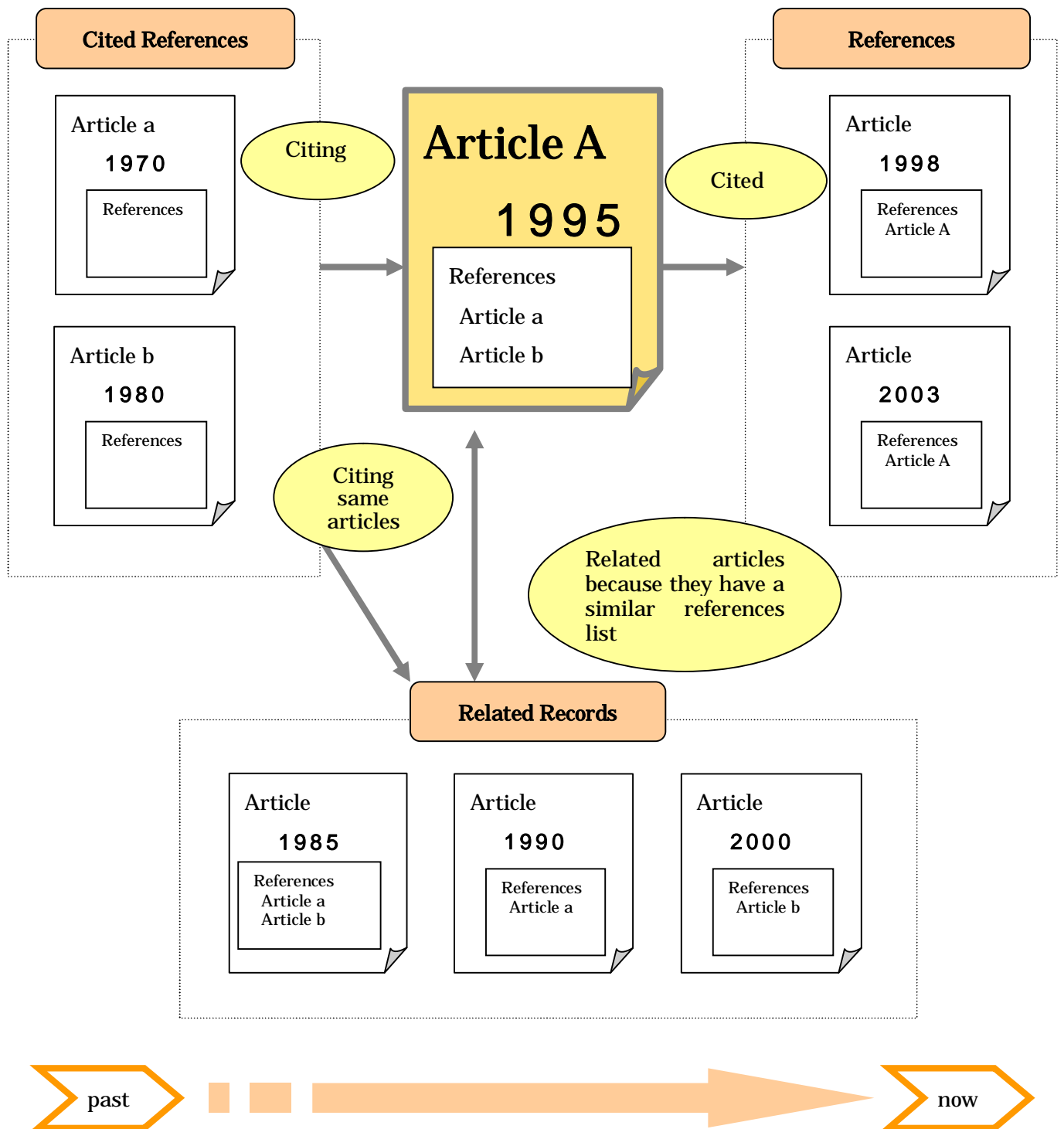
4.1.4 Relation of articles



Character	Information	Example
*	Right truncation	sul*ur* → sulfur, sulphur sulfuric, sulphuric
?	Singular letter variant	wom?n → woman, women
\$	Plural letters variant	labo\$r → labor, labour
SAME	Keywords are contained in same sentence	cellulose SAME wood → wood cellulose, cellulose from wood

Items	Information	Example
TOPIC	Retrieve from article title, abstracts and keywords. Plural words without quotation marks, will retrieve records that contain all of the words.	reduc* sodium → reduced sodium, reducing sodium
AUTHOR	Recommended "Family name(one space)First letter of first name + *". Searchable by all authors (not only first author).	田中耕一 = Tanaka K* de la Rosa M = de\$la\$Rosa M* Shi Wa Yen = Yen S* OR Shi W* Schröder A = Schr*der A*
GROUP AUTHOR	Select from "group author index".	CERN MACRO COLLABORATION TIMI STUDY GRP
SOURCE TITLE	Search registered title from "full source titles list". If you know abbreviated title only, use "*".	IEEE CIRCUITS DEVICES JOURNAL OF AIRCRAFT PHYS* REV*
ADDRESS	Confirm registered name by "abbreviations help", "*" is recommendable. Use "SAME" to search faculty or institute.	東北大学医学部 = Tohoku Univ SAME Med* IBM 東京基礎研究所 = IBM SAME Tokyo Res*

4.1.5 Article Relations in Web of Science

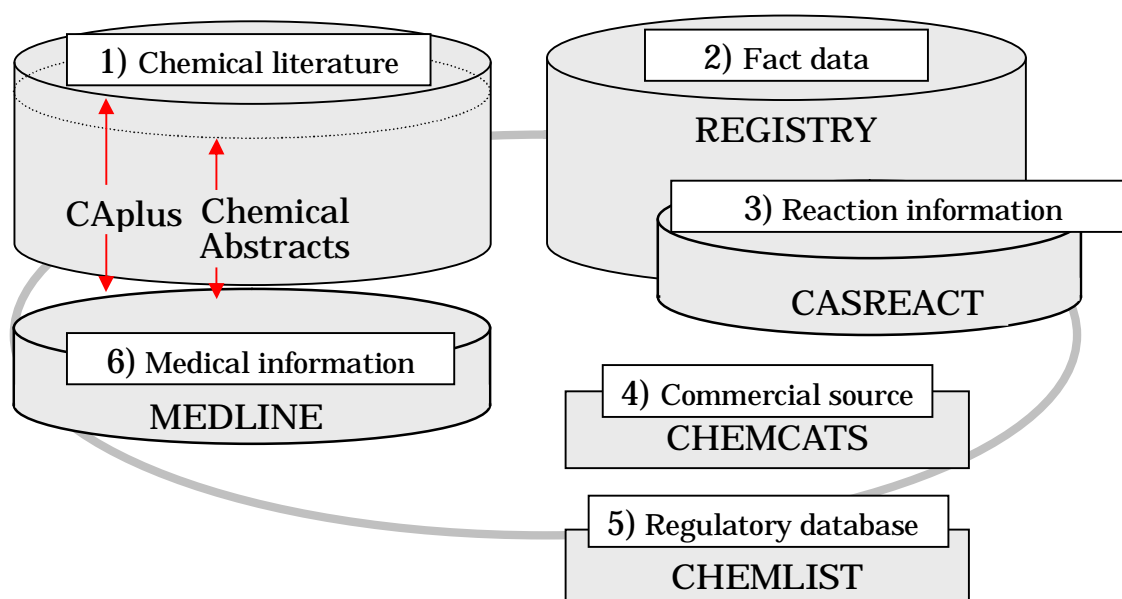


4.2 SciFinder Scholar

4.2.1 About SciFinder Scholar

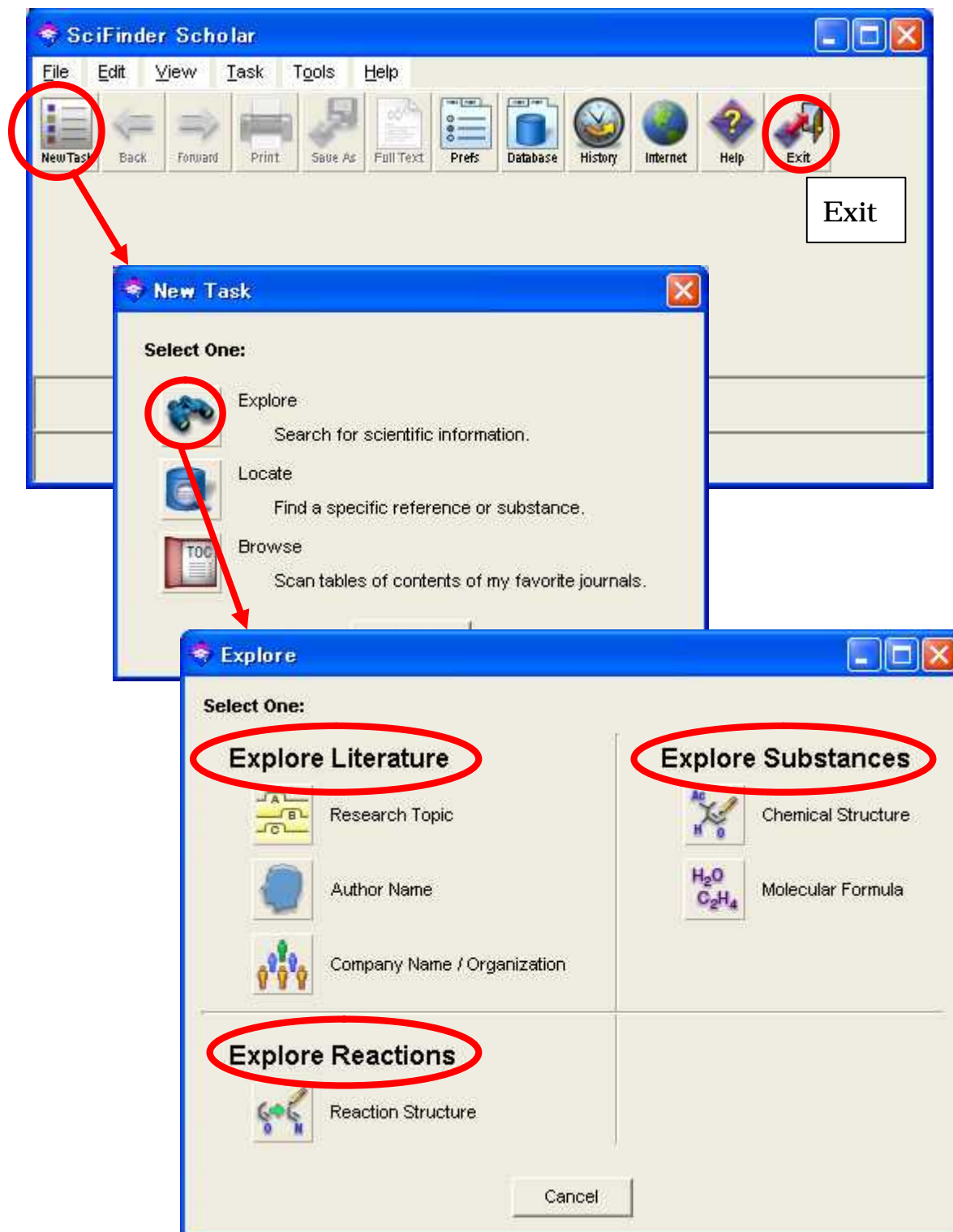
Item	information
Subject	Chemistry, chemical engineering, physics, pharmacology, life science, agriculture, etc.
Creator	CAS(Chemical Abstracts Service)
Type	Article, proceedings, patent, thesis, technical report, etc.
Source	Approximately 9,500 journals (Chemistry, from 150 countries)
Coverage	1840-
Update	Daily
URL	Exclusive browser download is needed.
How to use	Registration is required by laboratory. Pay for use.
Other	Info. http://www.library.tohoku.ac.jp/dbsi/scifinder/

- 1) Chemical literature information - Article, patent, etc. (1840-)
- 2) Fact data - Compounds, etc. (1957-)
- 3) Reaction information of organic compounds - Reaction information issued as article or patents (1840-)
- 4) Commercial source information - Including supplier addresses and pricing information
- 5) Regulatory information - Including substance identity information, inventory status, and compliance information.
- 6) Medical information - Including information in "MEDLINE" (1950-)





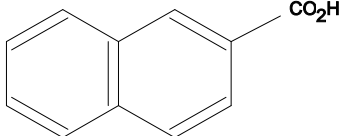






4.2.2 Begin Search

You will find the “New Task” window at the first step. There are 3 kinds of search flow: Explore, Locate, Browse.



Major Search Items

	Item	Information	Example
Explore Literature	 Research Topic	Search by topic. Enter keyword or sentence.	[I am interested in] composition for polymer-dispersed liquid crystal
	 Author Name	Search by author name.	Tanaka (Last name) K (First name or initial)
	 Company Name / Organization	Search by organization.	Tohoku Univ, Japan Seiko Epson Corp, Japan Sony Corp, Japan
Explore Substances	 Chemical Structure	Search by structure. There is the default editor, and it's possible to copy and paste from "ISIS/DRAW" and "ChemDraw".	
	 Molecular Formula	Search by molecular formula.	C11H8O2 O2C11H8 O2 C11 H8
Locate	 Bibliographic Information	By journal name, article title	Cellular Microbiology
	 Document Identifier	By CA abst. number By patent number	122:252283 (CAN) JP07026265
	 Substance Identifier	By CAS registered name By other name By CAS registry number	2-Naphthalenecarboxylic acid Isonaphthoic acid 93-09-4(93094)

4.2.3 Literature Search (Basic Flow)

Introducing the basic flow of literature search, using the example of the following research topic:

e.g. Search the literature written about “composition of polymer-dispersed liquid crystal display”.

- 1) You find ”I am interested in” in the Explore window. Enter the keyword after this phrase. By clicking “Filters”, you can set Publication Year, Author Name and more.

Explore by Research Topic

Describe your topic using a phrase.

I am interested in:

composition of polymer-dispersed liquid crystal display

Examples:
The effect of antibiotic residues on dairy products
Photocyanation of aromatic compounds
Hydrocarbon-water emulsions as fuels


Filters ▼

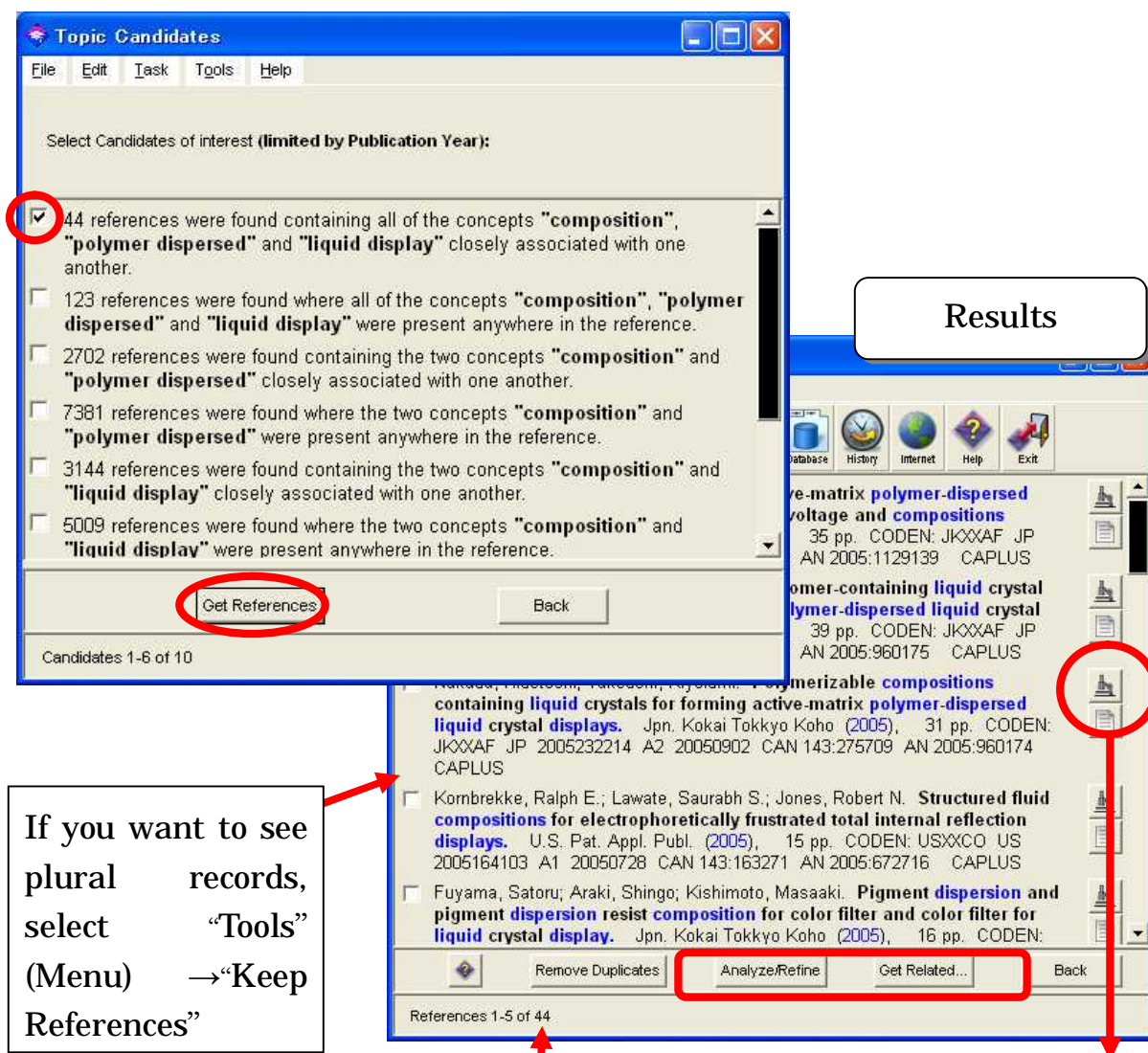
Publication year	Only return references published in this year or range of years: <input type="text"/>
Document type	Only return references coming from the following sources: <input type="checkbox"/> Clinical Trial <input type="checkbox"/> Journal <input type="checkbox"/> Conference <input type="checkbox"/> Patent
Language	Only return references from papers written in the following languages: <input type="checkbox"/> Chinese <input type="checkbox"/> French <input type="checkbox"/> Japanese <input type="checkbox"/> English <input type="checkbox"/> German <input type="checkbox"/> Spanish
Author name	Only return references written by the following author: Last: <input type="text"/> First: <input type="text"/> Middle initial: <input type="text"/>
Company name	Only return references written by the following company: <input type="text"/>

■ Publication Year
■ Document Type
■ Language
■ Author Name
■ Company Name

OK Cancel

2) If you click the “OK” button, the windows will appear as below.

This window shows you the number of results for your search under several search conditions. Select a results group, and click the “Get References” button to see the result list. Confirm the detailed information by clicking the  icon.



Topic Candidates

Select Candidates of interest (limited by Publication Year):

- 44 references were found containing all of the concepts "composition", "polymer dispersed" and "liquid display" closely associated with one another.
- 123 references were found where all of the concepts "composition", "polymer dispersed" and "liquid display" were present anywhere in the reference.
- 2702 references were found containing the two concepts "composition" and "polymer dispersed" closely associated with one another.
- 7381 references were found where the two concepts "composition" and "polymer dispersed" were present anywhere in the reference.
- 3144 references were found containing the two concepts "composition" and "liquid display" closely associated with one another.
- 5009 references were found where the two concepts "composition" and "liquid display" were present anywhere in the reference.

Get References Back

Candidates 1-6 of 10

Results

...ve-matrix **polymer-dispersed** voltage and **compositions** 35 pp. CODEN: JKXXAF JP AN 2005:1129139 CAPLUS

...mer-containing **liquid crystal** **polymer-dispersed liquid crystal** 39 pp. CODEN: JKXXAF JP AN 2005:960175 CAPLUS

...merizable **compositions** containing **liquid crystals** for forming active-matrix **polymer-dispersed liquid crystal displays**. Jpn. Kokai Tokkyo Koho (2005), 31 pp. CODEN: JKXXAF JP 2005232214 A2 20050902 CAN 143:275709 AN 2005:960174 CAPLUS

Korbekke, Ralph E.; Lawate, Saurabh S.; Jones, Robert N. **Structured fluid compositions for electrophoretically frustrated total internal reflection displays**. U.S. Pat. Appl. Publ. (2005), 15 pp. CODEN: USXXCO US 2005164103 A1 20050728 CAN 143:163271 AN 2005:672716 CAPLUS


Fuyama, Satoru; Araki, Shingo; Kishimoto, Masaaki. **Pigment dispersion and pigment dispersion resist composition for color filter and color filter for liquid crystal display**. Jpn. Kokai Tokkyo Koho (2005), 16 pp. CODEN: ...


Remove Duplicates Analyze/Refine Get Related... Back

References 1-5 of 44

If you want to see plural records, select “Tools” (Menu) → “Keep References”

Number of results

 Detail (next page)

 Full-text

Via “ChemPort”, you can see the full-text of a journal to which your organization subscribes.

3) Detailed literature information (e.g. patent)

Bibliographic Information

Liquid crystal composition for polymer-dispersed liquid crystal displays. Kobayashi, Hidekazu; Chino, Eiji; Yazaki, Masayuki; Iizaka, Hideto. (Seiko Epson Corp, Japan). Jpn. Kokai Tokkyo Koho (1995), 12 pp. CODEN: JKXXAF **JP 07026265 A2** 19950127 Heisei. Patent written in Japanese. Application: JP 93-168196 19930707. Priority: . CAN 122:252283 AN 1995:508066 CAPLUS

Patent Family Information

Patent No.
Application No.
JP 07026265 JP
1993-168196 19930707

Priority Application
JP 1993-168196 19930707

Abstract

The title photoresist compn. contains 1-5% I [R = alkyl, alkoxy, alkylamino; X = F, Cl, CN] or II [R = alkyl, alkoxy, alkylamino, X = F, Cl, CN] in a host liq. crystal. Low driving potential and light resistance are superior and the compn. is useful in laptop computers.

R-C1CCCCC1-C(=O)OC2=CC=C(C#N)C=C2X **I**

Patent Classifications

Main IPC: C09K019-56. **Secondary IPC:** C09K019-20; C09K019-22; C09K019-30; C09K019-32; C09K019-38; C09K019-46; C09K019-60; G02F001-13. **Additional IPC:** G02F001-1333.

Indexing -- Section 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Liquid crystals
(compn.; polymer dispersed)

Optical imaging devices
(liq.-crystal, low-voltage drive, light)

92-94-4D, p-Terphenyl, cyano-, derivs.
93-09-4D, 2-Naphthoic acid, derivs., cyanophenyl or cyanobiphenyl ester
98-89-5D, Cyclohexanecarboxylic acid, derivs., cyanophenyl and cyanobiphenyl esters

- Title
- Author
- Organization
- Source
- Language
- CA number (CAN)
- Accession number (AN)
- Patent info.,

■ Abstract

■ Patent classification

■ Indexing

Accession number

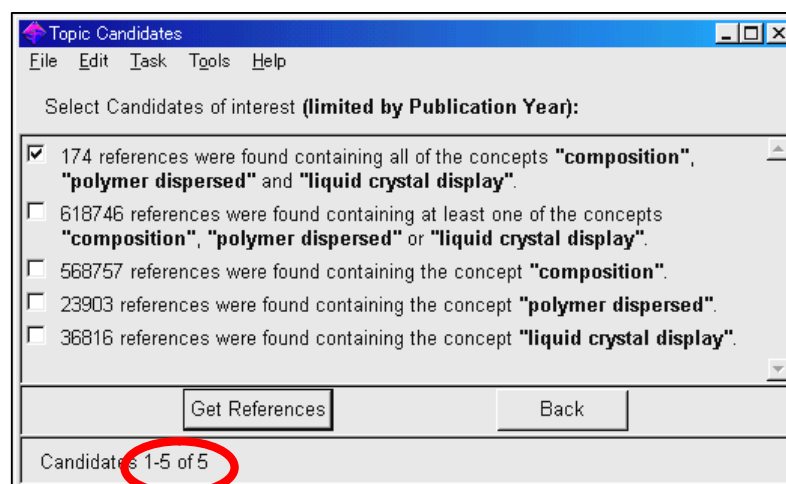
CA section

4.2.4 Search by "Research Topic"

Tips

- Check commonly used abbreviations, such as "BTU" and "Prep".
 - Check commonly misspelled words ("affect" instead of "effect")
 - Check words spelled according to either British or American English ("colour" or "color")
- You will get different search results depending upon the sentence you entered. Compare the two examples that follows(they use the same words):

e.g.1) composition and polymer-dispersed liquid crystal display



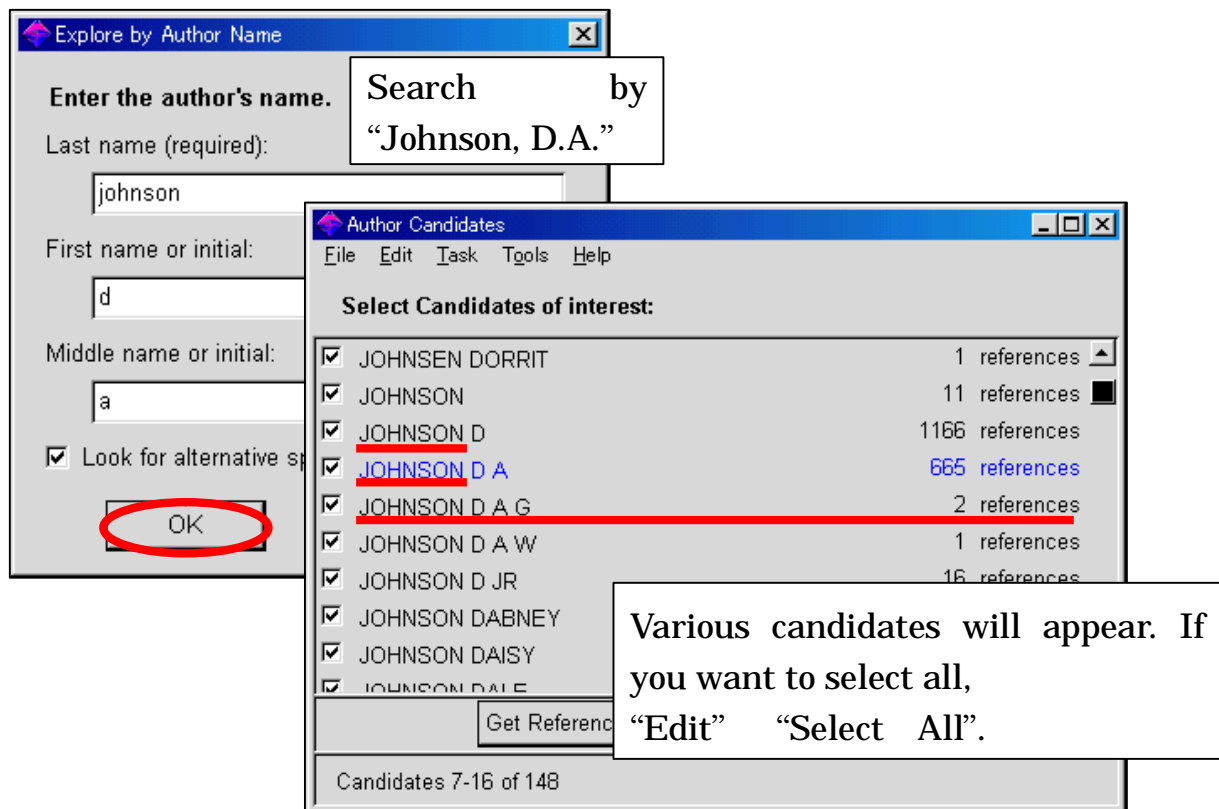
e.g.2) composition of polymer-dispersed liquid crystal display

See the results Part II 4.2.3

- If you use plural words combined with "and" or "or", enter as follows;
e.g.) numeric and bibliographic data
numeric data and bibliographic data
- If you want to get results that include different words, add them inside () as follows;
e.g.) the milk production of cow(cattle, bovines)

4.2.5 Search by "Author"

Family name is mandatory for an author search. Enter first or middle name if necessary. If you can not identify the correct author because of many authors of the same name, the "Analyze / Refine" function is recommended.



4.2.6 Search by "Document Identifier"

When you get the results of this search, you had better write down the specific number to identify the record.

e.g. Kobayashi, Hidekazu; Chino, Eiji; Yazaki, Masayuki; Iizaka, Hideto.

Liquid crystal composition for polymer-dispersed liquid crystal displays.

Jpn. Kokai Tokkyo Koho (1995), 12 pp. CODEN: JKXXAF JP07026265

A2 19950127 Heisei. CAN 122:252283 AN 1995:508066 CAPLUS

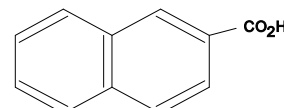
Database name

Accession Number CA Number Patent Number

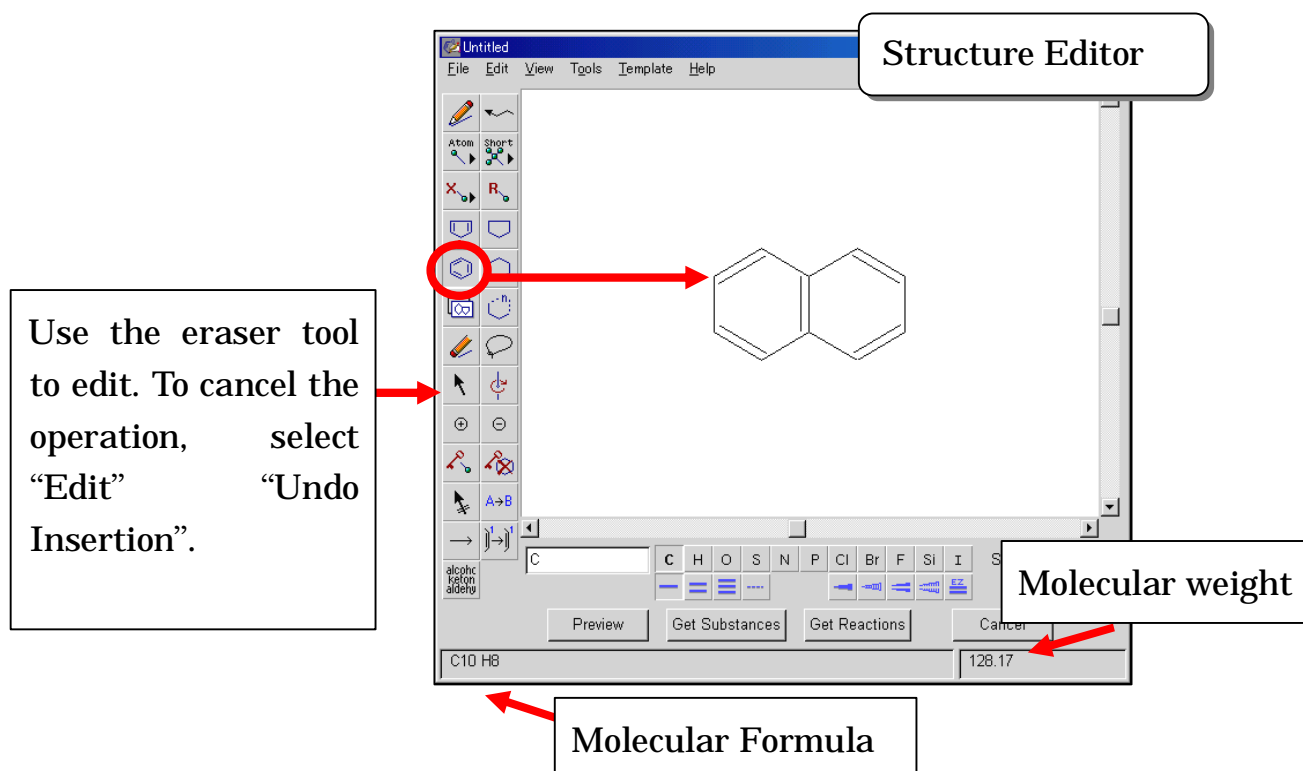
4.2.7 Chemical Substance Search(Basic Flow)

Introducing basic flow of chemical substance search by example “Chemical Structure” as follows:

e.g. Search the name of chemical substance and its CAS registered number.



- 1) To draw a Benzene ring, click the Benzene icon.
Place the cursor in the editor window, then click.
- 2) To combine another Benzene ring, overlap them with combine point. The color of the point will change, then click there.

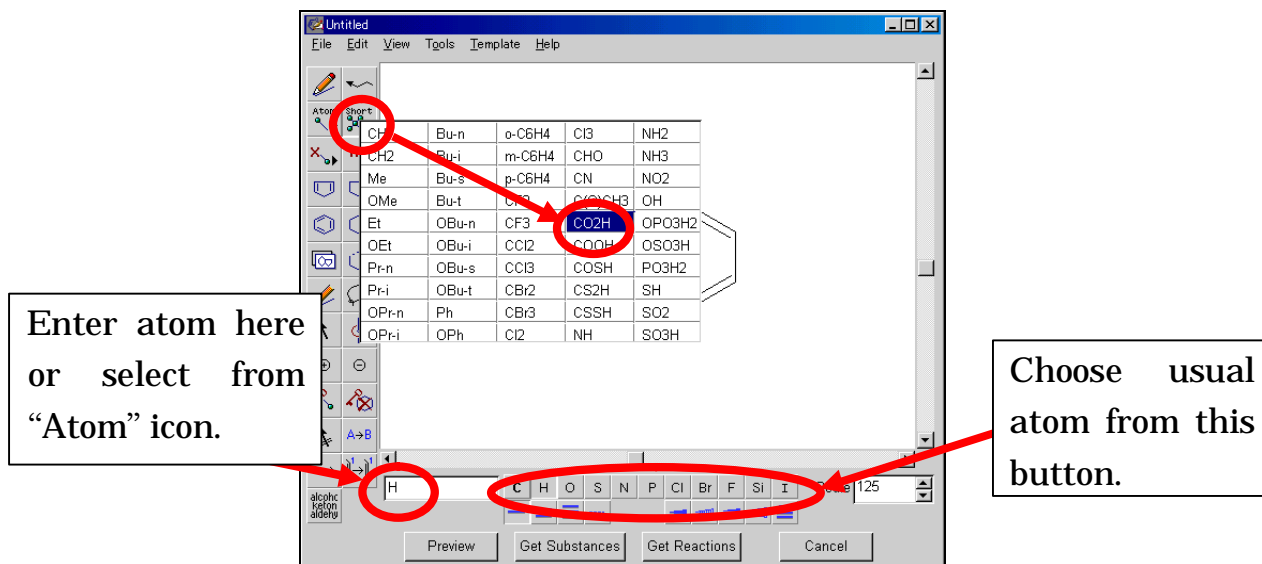


Use the eraser tool to edit. To cancel the operation, select “Edit” “Undo Insertion”.

Molecular Formula

Molecular weight

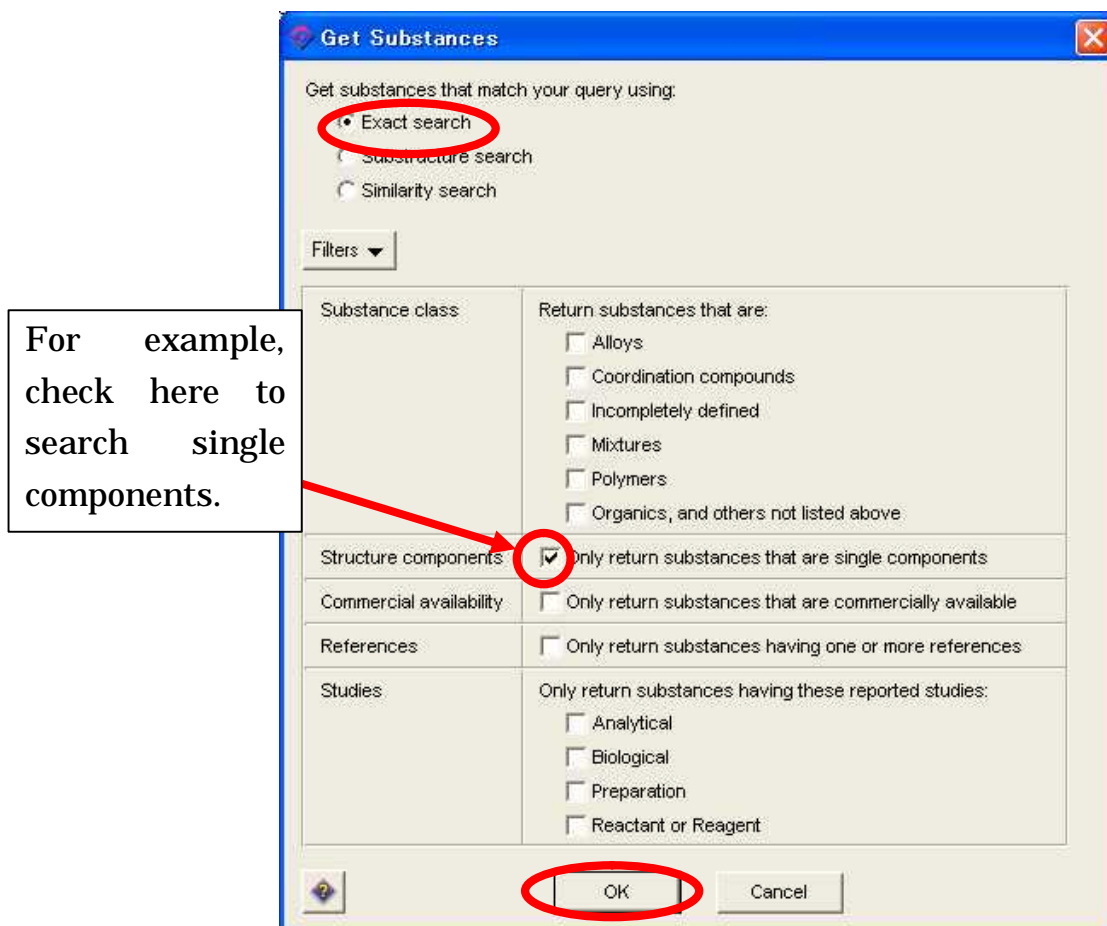
3) To add functional groups(e.g. CO₂H), select from “Short” icon.



Enter atom here or select from “Atom” icon.

Choose usual atom from this button.

4) After drawing, click “Get Substances” button. You will see a dialog box as below. Check “Exact search”, and check your search options by clicking “Filters”.



For example, check here to search single components.

5) Results appear in order of CAS registry number.

Sort results by "View" menu.

To view selected data only, check the boxes and "Tools" "Keep Substances"

Number of results

The screenshot shows the iFinder Scholar interface with the following details:

- Menu Bar:** Edit, View, Task, Tools, Help
- Toolbar:** Back, Forward, Print, Save As, Full Text, Prefs, Database, History, Internet, Help, Exit
- Results Grid:**
 - Top-left: 50787-42-3, Component Number 1, O=C(O)c1ccc2ccccc2c1, ~2 References REGISTRY
 - Top-middle: 40480-74-8, O=C(O)c1ccc2ccccc2c1, $\cdot H^+$, ~2 References REGISTRY
 - Top-right: 3198-25-2, [O-]C(=O)c1ccc2ccccc2c1, ~1 Reference REGISTRY
 - Bottom-left: 93-09-4, O=C(O)c1ccc2ccccc2c1, ~1375 References REGISTRY
- Bottom Panel:** Get References, Get Reactions, Analyze/Refine, Back
- Status Bar:** Substances 16-22 of 22

6) Detailed information of chemical substance

Detail of Substance 22

File Edit Help

Registry Number: 93-09-4

Formula: C₁₁ H₈ O₂

CA Index Name: 2-Naphthalenecarboxylic acid

Other Names: 2-Naphthoic acid (BCI); β-Naphthalenecarboxylic acid; β-Naphthoic acid; 2-Carboxynaphthalene; Isonaphthoic acid

Experimental Properties

Calculated Properties

-- Resources --

References: ~1378

STN Files: CAPLUS, AGRICOLA, ANABSTR, BEILSTEIN, BIOSIS, BIOTECHNO, CA, CAOLD, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, CSNB, DDFU, DETHERM, DRUGU, EMBASE, GMEJIN, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK, MSDS-OHS, RTECS, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL

(Additional Information is available through STN International. Contact your information specialist, a local CAS representative, or the CAS Help Desk for Assistance)

Database: REGISTRY

Close

CAS registry number

Experimental Properties

Calculated Properties

Resources

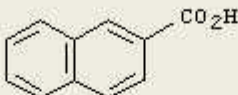
- CAS registry number
- Structure
- Formula
- CA name
- Other name
- Resources

Experimental Properties window

Experimental Properties for 93-09-4

File Edit Help

Registry Number: 93-09-4



Formula: C₁₁ H₈ O₂

CA Index Name: 2-Naphthalenecarboxylic acid

Property	Value	Condition	Note
Boiling Point	>300 °C		(1) SRC
Carbon-13 NMR Spectrum	See spectrum		(2) WSS
Carbon-13 NMR Spectrum	See spectrum		(3) WSS
Carbon-13 NMR Spectrum	See spectrum		(4) WSS
Carbon-13 NMR Spectrum	See spectrum		(4) WSS
Carbon-13 NMR Spectrum	See spectrum		(5) WSS
Carbon-13 NMR Spectrum	See full text		(6) CAS
IR Absorption Spectrum	See spectrum		(7) AIST
IR Absorption Spectrum	See spectrum		(7) AIST
IR Absorption Spectrum	See full text		(8) CAS
Mass Spectrum	See spectrum		(9) WSS
Mass Spectrum	See spectrum		(9) WSS
Mass Spectrum	See spectrum		(9) WSS
Mass Spectrum	See spectrum		(9) WSS
Mass Spectrum	See full text		(10) CAS
Mass Spectrum	See full text		(11) CAS
Mass Spectrum	See full text		(12) CAS
Mass Spectrum	See full text		(13) CAS
Mass Spectrum	See full text		(14) CAS
Mass Spectrum	See full text		(15) CAS
Melting Point	186-187 °C		(16) CAS
Melting Point	186 °C		(17) IC
Melting Point	185.5 °C		(1) SRC
Melting Point	185-187 °C		(18) CAS
Melting Point	180-183 °C		(19) IC
Permeability	See full text		(20) CAS

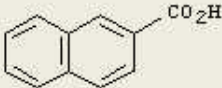
Print Close

Calculated Properties window

Calculated Properties for 93-09-4

File Edit Help

Registry Number: 93-09-4



Formula: C₁₁ H₈ O₂

CA Index Name: 2-Naphthalenecarboxylic acid

<u>Property</u>	<u>Value</u>	<u>Condition</u>	<u>Note</u>
Bioconcentration Factor	140	pH 1 Temp: 25 °C	(22)
Bioconcentration Factor	139	pH 2 Temp: 25 °C	(22)
Bioconcentration Factor	131	pH 3 Temp: 25 °C	(22)
Bioconcentration Factor	85.8	pH 4 Temp: 25 °C	(22)
Bioconcentration Factor	19.3	pH 5 Temp: 25 °C	(22)
Bioconcentration Factor	2.29	pH 6 Temp: 25 °C	(22)
Bioconcentration Factor	1.0	pH 7 Temp: 25 °C	(22)
Bioconcentration Factor	1.0	pH 8 Temp: 25 °C	(22)
Bioconcentration Factor	1.0	pH 9 Temp: 25 °C	(22)
Bioconcentration Factor	1.0	pH 10 Temp: 25 °C	(22)
Boiling Point	332.9±11.0 °C	Press: 760 Torr	(22)
Density	1.265±0.06 g/cm ³	Temp: 20 °C Press: 760 Torr	(22)
Enthalpy of Vaporization	60.77±3.0 kJ/mol	Press: 760 Torr	(22)
Flash Point	151.3±13.9 °C		(22)
Freely Rotatable Bonds	1		(22)
H Acceptors	2		(22)
H Donors	1		(22)
H Donor/Acceptor Sum	3		(22)
Koc	1190	pH 1 Temp: 25 °C	(22)
Koc	1190	pH 2 Temp: 25 °C	(22)
Koc	1120	pH 3 Temp: 25 °C	(22)

4.3 Pubmed

4.3.1 About Pubmed

Item	Information
Subject	Medicine (Pharmacology) , Nursing
Creator	U.S. National Library of Medicine
Type	Article, Reviews, Monograph and more
Source	Approximately 4,800 (70 countries)
Coverage	1951-
Update	Weekly (Daily, without subject headings)
URL	http://www.ncbi.nlm.nih.gov/PubMed/
How to use	Free. Access the URL above.
Other	Offered also via “Medline(Ovid)”(see Part II 4.4)

4.3.2 Features

- Searchable via Entrez system which developed by NCBI. Entrez includes many databases, so across searching or link to other databases are possible.
- “MeSH” thesaurus are available to search articles written about the specific topic.
- PubMed provides links to other site as well as biological resources, research tools, and more.

4.3.3 PubMed and Other Resources in Entrez

Entrez is the research platform including Pubmed, offered by NCBI. Each databases links to other like synapses. They offer 2 type searches as below.

(<http://www.ncbi.nlm.nih.gov/Dat abase/index.html>)

The diagram illustrates the interconnected nature of Entrez databases. PubMed is highlighted as a central hub, with lines connecting it to other databases such as Nucleotide, Gene, Protein, Structure, SNP, UniGene, UniSTS, OMIM, PMC, Journals, HomoloGene, Books, Genome, Cancer Chromosomes, PopSet, and Taxonomy. A legend on the left indicates the size of the database, with PubMed being the largest at 10,000,000 records.

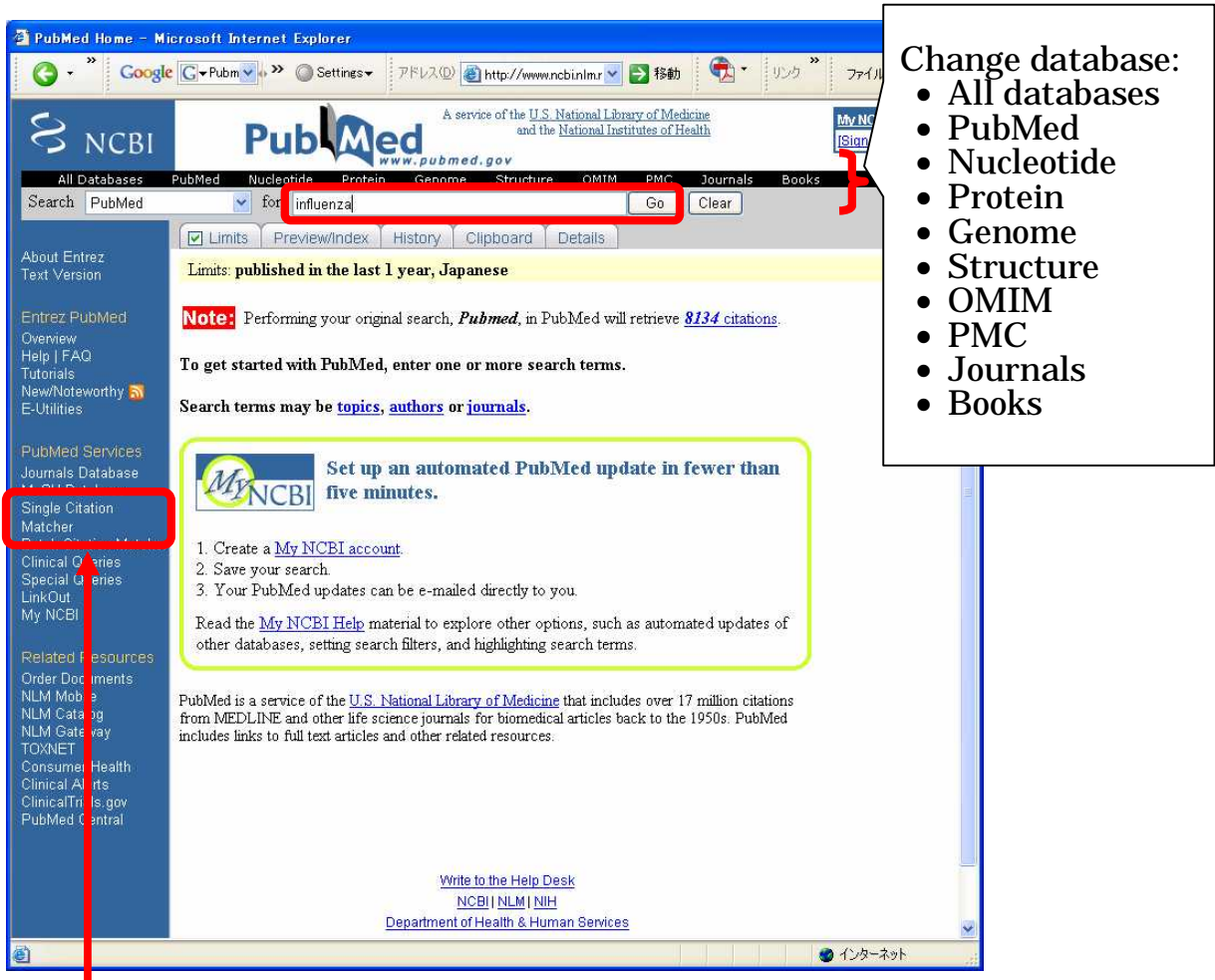
The screenshot of the Entrez website shows the 'All Databases' tab selected. The search bar is empty, and the 'GO' button is visible. The 'Welcome to the Entrez cross-database search page' message is displayed. The 'All Databases' tab is highlighted, and a list of databases is shown, including PubMed, PubMed Central, Site Search, CoreNucleotide, EST, GSS, Protein, Genome, Structure, Taxonomy, SNP, Gene, HomoloGene, GENSAT, Probe, Genome Project, dbGaP, UniGene, CDD, 3D Domains, UniSTS, PopSet, GEO Profiles, GEO DataSets, Cancer Chromosomes, PubChem BioAssay, PubChem Compound, PubChem Substance, and Protein Clusters.

Start from PubMed, referable to other databases.

Search across all databases in "All Databases" tab.

4.3.4 Keyword Search

(1) In initial screen, automatically “PubMed” database is selected. For switch other database, click the name in black line. Enter keyword (“influenza” in this example) “for” field, then click the “Go” button for search.



Via “Single Citation Matcher”, you can search by journal title, volume and issue, and so on. See Part II 4.3.5

2) Results list

Number of result

influenza - PubMed Results - Microsoft Internet Explorer

NCBI PubMed A service of the U.S. National Library of Medicine and the National Institutes of Health

Search PubMed for influenza

Display Summary Show 20 Sort By Send to

All: 45646 Review: 3706

Items 1 - 20 of 45646

1: Normile D. Avian influenza. Flu virus research yields results but no magic bullet for pandemic. Science. 2008 Feb 29;319(5867):1178-9. No abstract available. PMID: 18309058 [PubMed - in process]

2: Wang R, Solli L, Dugan V, Runstadler J, Happ G, Slemmons RD, Taubenberger JK. Examining the hemagglutinin subtype diversity among wild duck-origin influenza A viruses in cloacal swabs and a novel RT-PCR method. Virology. 2008 Feb 27; [Epub ahead of print] PMID: 18308356 [PubMed - as supplied by publisher]

3: Lindh E, Huovilainen A, Ratti O, Ek-Kommonen C, Sironen T, Huhtamo E, Poysa H, Vaheri A, Vapalahti O. Orthomyxo-, paramyxo- and flavivirus infections in wild waterfowl in Finland. Virol J. 2008 Feb 28;5(1):35 [Epub ahead of print] PMID: 18307758 [PubMed - as supplied by publisher]

4: Hart JC. The 1957 Asian influenza epidemic. 1958. Conn Med. 2008 Feb;72(2):107-13. No abstract available. PMID: 18306839 [PubMed - in process]

5: Kawai N, Ikematsu H, Iwaki N, Kawashima T, Maeda T, Hirotsu N, Nishimura M, Kashiwagi S. [Detection of respiratory syncytial virus with nested RT-PCR and a new rapid detection test kit in patients with influenza-like illness, including elderly adults] Kansenshogaku Zasshi. 2008 Jan;82(1):1-5. Japanese. PMID: 18306671 [PubMed - in process]

Change display mode, number of showing, and sort key.

-  : No Abstract
-  : Abstract
-  : Free in PMC
-  : Free Full Text

3) Detailed display

The image shows a screenshot of a Microsoft Internet Explorer browser displaying a PubMed search result. The browser's address bar shows the URL <http://www.ncbi.nlm.nih.gov/pubmed/18301768>. The page title is "Multiple dendritic cell populations activate CD4 T cells after viral stimulation. [PLoS ONE. 2008] - PubMed Result - Microsoft Internet Explorer".

The PubMed interface includes a search bar, navigation tabs (All Databases, PubMed, Nucleotide, Protein, Genome, Structure, OMIM, PMC, Journals, Books), and a search filter set to "PubMed". The search results show one entry: "1: PLoS ONE, 2008 Feb 27;3(2):e1691." A red box highlights a button that says "Open access to full text on PLoS one".

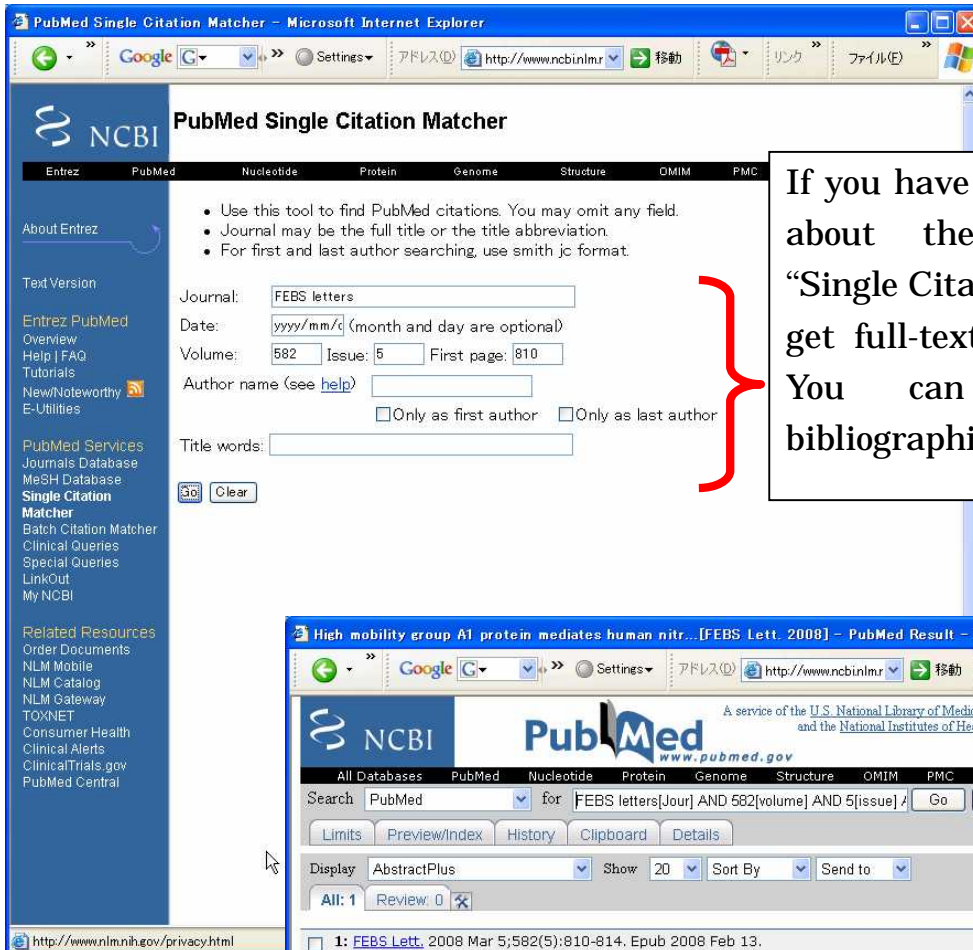
The article title is "Multiple dendritic cell populations activate CD4 T cells after viral stimulation." The authors listed are "Mount AM, Smith CM, Kupresanin F, Stoermer K, Heath WR, Belz GT." The abstract text begins: "Dendritic cells (DC) are a heterogeneous cell population that bridge the innate and adaptive immune systems. CD8alpha DC play a prominent, and sometimes exclusive, role in driving amplification of CD8(+) T cells during a viral infection. Whether this reliance on a single subset of DC also applies for CD4(+) T cell activation is unknown. We used a direct ex vivo antigen presentation assay to probe the capacity of flow cytometrically purified DC populations to drive amplification of CD4(+) and CD8(+) T cells following infection with influenza virus by different routes. This study examined the contributions of non-CD8alpha DC populations and CD4(+) T cells in cutaneous and subcutaneous infection, and confirmed that in vivo, effective immunodominance is dominated by presentation of antigen on CD8alpha DC. In contrast, CD4(+) T cell priming by DC following cutaneous infection, and CD4(+) T cell priming by DC following subcutaneous infection, could be tailored to prime helper T cells." The PMID is 18301768.

Below the abstract, there are options to view the full text: "Full Text", "PDF (433K)", "Contents", and "Archive". A red box highlights the "PDF (433K)" option. A red arrow points from the "Open access to full text on PLoS one" button to the "PDF (433K)" option.

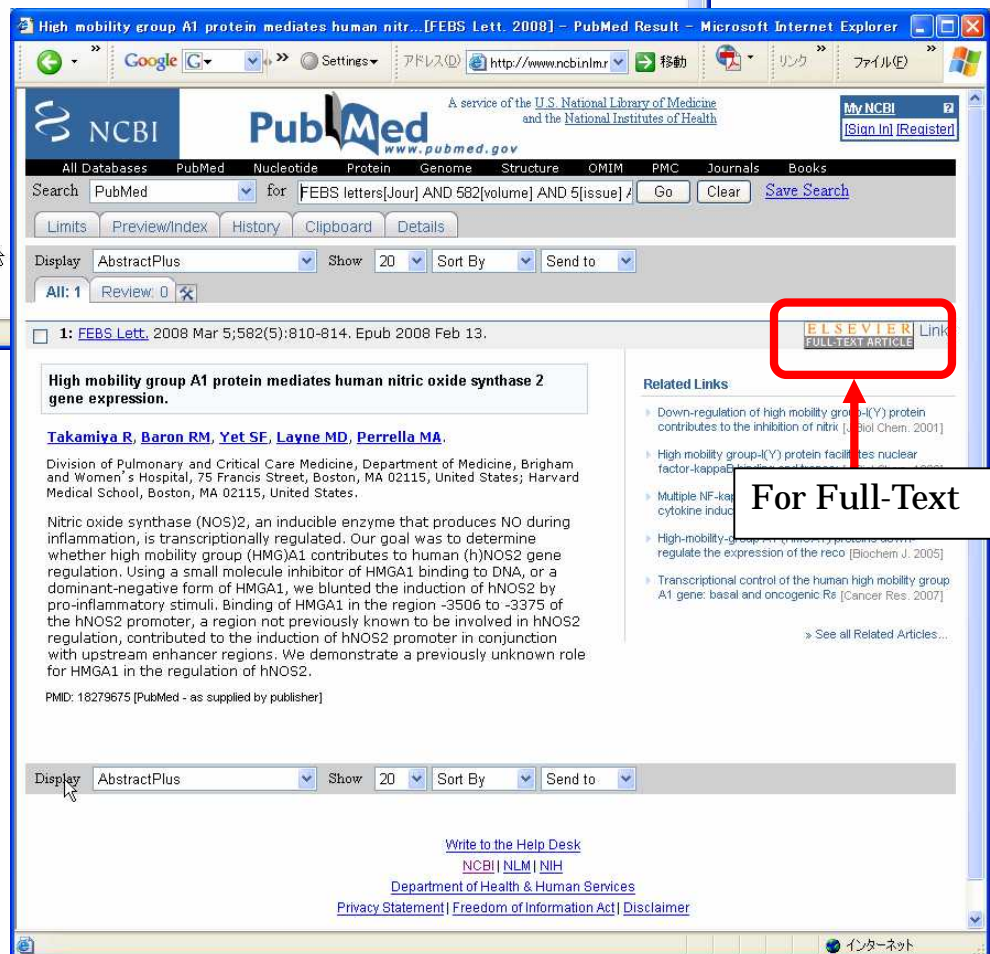
The PLoS ONE article page shows the title "Multiple Dendritic Cell Populations Activate CD4+ T Cells after Viral Stimulation" by Adele M. Mount, Christopher M. Smith, Fiona Kupresanin, Kristina Stoermer, William R. Heath, and Gabrielle T. Belz. The article is published in PLoS ONE, 2008, 3(2): e1691. The abstract text is repeated: "Dendritic cells (DC) are a heterogeneous cell population that bridge the innate and adaptive immune systems. CD8alpha DC play a prominent, and sometimes exclusive, role in driving amplification of CD8+ T cells during a viral infection. Whether this reliance on a single subset of DC also applies for CD4+ T cell activation is unknown. We used a direct ex vivo antigen presentation assay to probe the capacity of flow cytometrically purified DC populations to drive amplification of CD4+ and CD8+ T cells following infection with influenza virus by different routes. This study examined the contributions of non-CD8alpha DC populations..."

A text box on the left side of the image contains the text: "PDF version is available from here." with a red arrow pointing to the "PDF (433K)" option.

4.3.5 Single Citation Matcher



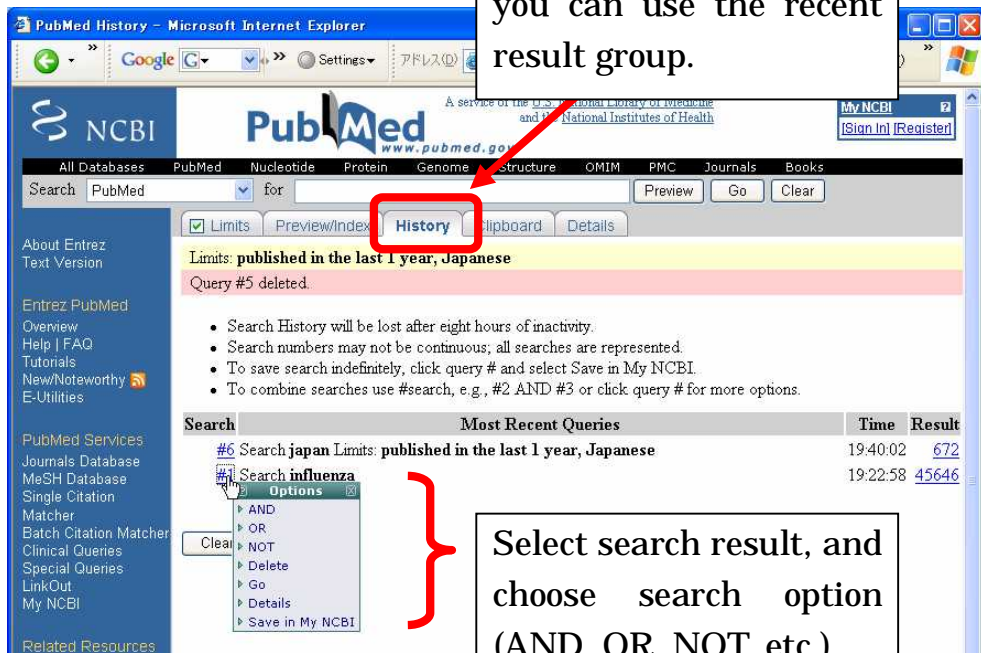
If you have the information about the article, use “Single Citation Matcher” to get full-text in short time. You can search by bibliographic information.



For Full-Text

4.3.6 History Search

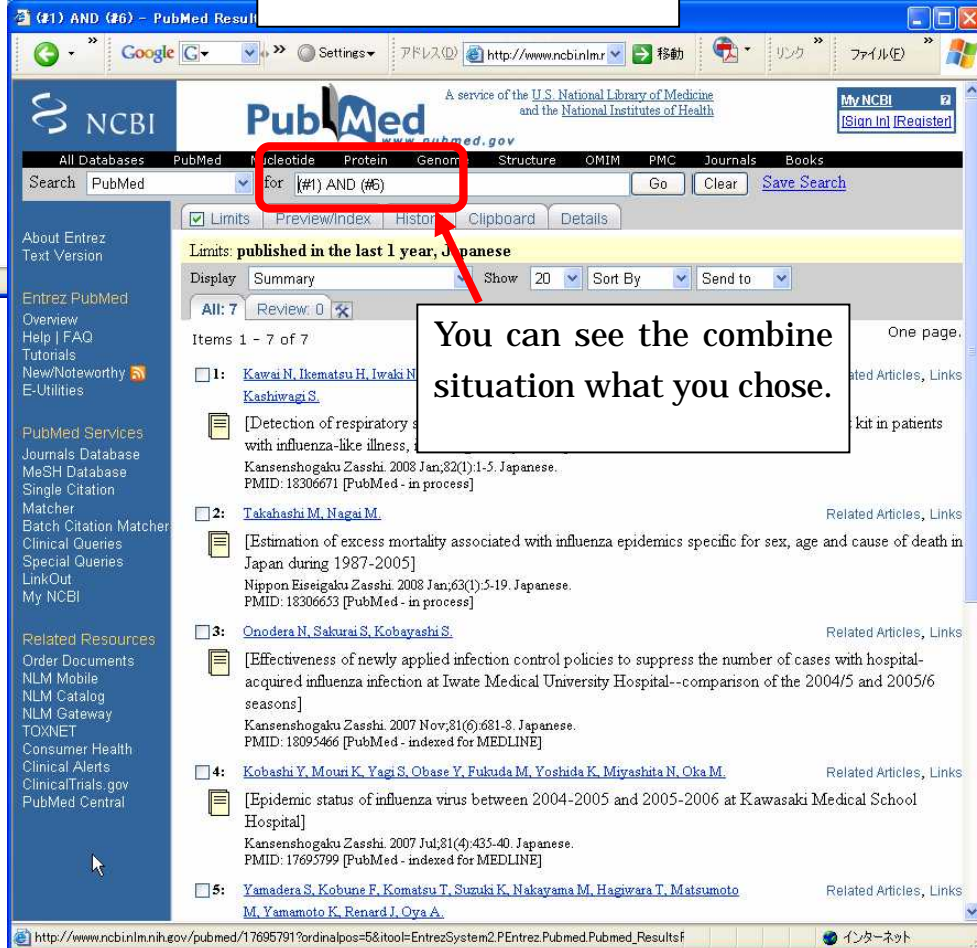
By click "History" tab, you can use the recent result group.



Search History will be lost after eight hours of inactivity.
Search numbers may not be continuous; all searches are represented.
To save search indefinitely, click query # and select Save in My NCBI.
To combine searches use #search, e.g., #2 AND #3 or click query # for more options.

Search	Time	Result
#6 Search japan Limits: published in the last 1 year, Japanese	19:40:02	672
#5 Search influenza	19:22:58	45646

Select search result, and choose search option (AND, OR, NOT, etc.)



Search for: (#1) AND (#6)

Limits: published in the last 1 year, Japanese

Display: Summary Show 20 Sort By Send to

All: 7 Review: 0

Items 1 - 7 of 7

- [Kawai N, Ikematsu H, Iwaki N, Kashiwagi S.](#)
[Detection of respiratory syncytial virus with influenza-like illness, Kansenshogaku Zasshi. 2008 Jan;82(1):1-5. Japanese. PMID: 18306671 [PubMed - in process]]
- [Takahashi M, Nagai M.](#)
[Estimation of excess mortality associated with influenza epidemics specific for sex, age and cause of death in Japan during 1987-2005] Nippon Eiseigaku Zasshi. 2008 Jan;63(1):5-19. Japanese. PMID: 18306653 [PubMed - in process]]
- [Onodera N, Sakurai S, Kobayashi S.](#)
[Effectiveness of newly applied infection control policies to suppress the number of cases with hospital-acquired influenza infection at Iwate Medical University Hospital--comparison of the 2004/5 and 2005/6 seasons] Kansenshogaku Zasshi. 2007 Nov;81(6):681-8. Japanese. PMID: 18095466 [PubMed - indexed for MEDLINE]]
- [Kobashi Y, Mouji K, Yagi S, Obase Y, Fukuda M, Yoshida K, Miyashita N, Oka M.](#)
[Epidemic status of influenza virus between 2004-2005 and 2005-2006 at Kawasaki Medical School Hospital] Kansenshogaku Zasshi. 2007 Jul;81(4):435-40. Japanese. PMID: 17695799 [PubMed - indexed for MEDLINE]]
- [Yamadera S, Kobune F, Komatsu T, Suzuki K, Nakayama M, Hagiwara T, Matsumoto M, Yamamoto K, Renard J, Oya A.](#)

You can see the combine situation what you chose.

4.4 Medline

4.4.1 About Medline

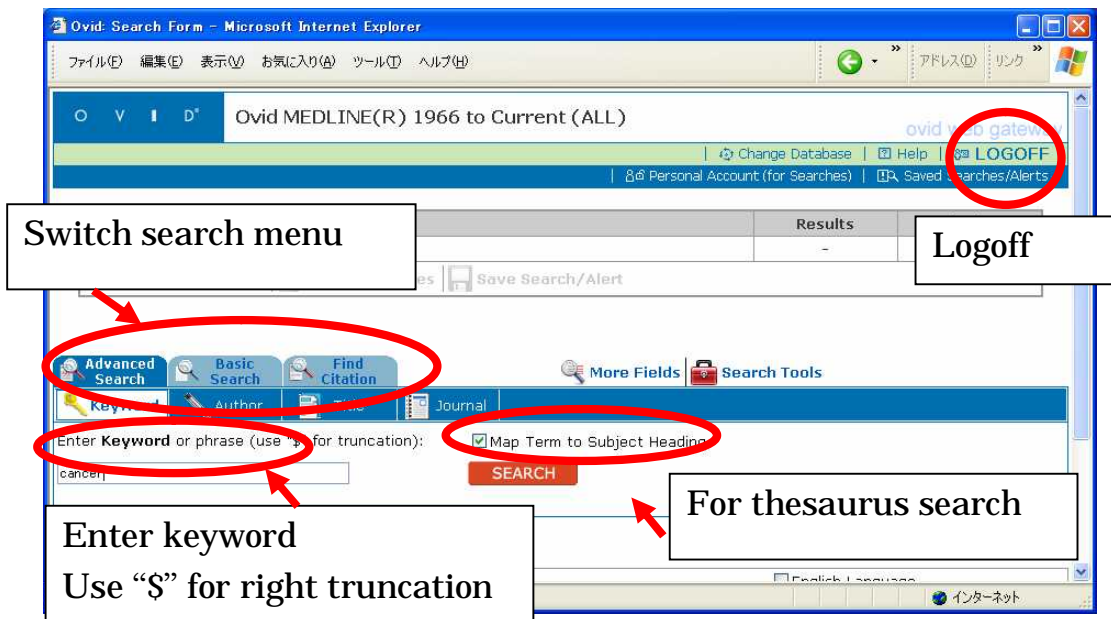
Item	Information
Subject	Medicine (Pharmacology) , Nursing, Dentistry
Creator	U.S. National Library of Medicine
Type	Article, Reviews, Monograph and more
Source	Approximately 4,800 (70 countries)
Coverage	1951-
Update	Weekly (Dairy, without subject headings)
URL	http://www.library.tohoku.ac.jp/dbsi/ovid/
How to use	Registration required as a laboratory. Free for charge to University members. You can use this database without registration at computers in the library.
Other	Offered also via “PubMed”(free) http://www.ncbi.nlm.nih.gov/PubMed/

4.4.2 Features

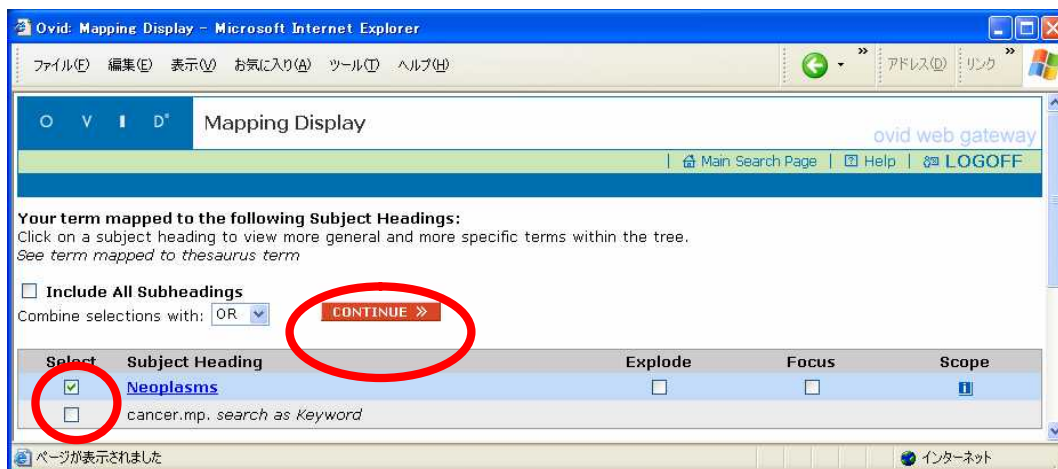
- Searchable not only by the title or author, but also medicine or name of disease.
- Includes a “MeSH” thesaurus to search articles written about the specific topic(they appear under various terms).
- You can search in-process data before the thesaurus is given with “MEDLINE In-Process & Other Non-Indexed Citations (PREM) ”

4.4.3 Keyword Search Using Thesaurus

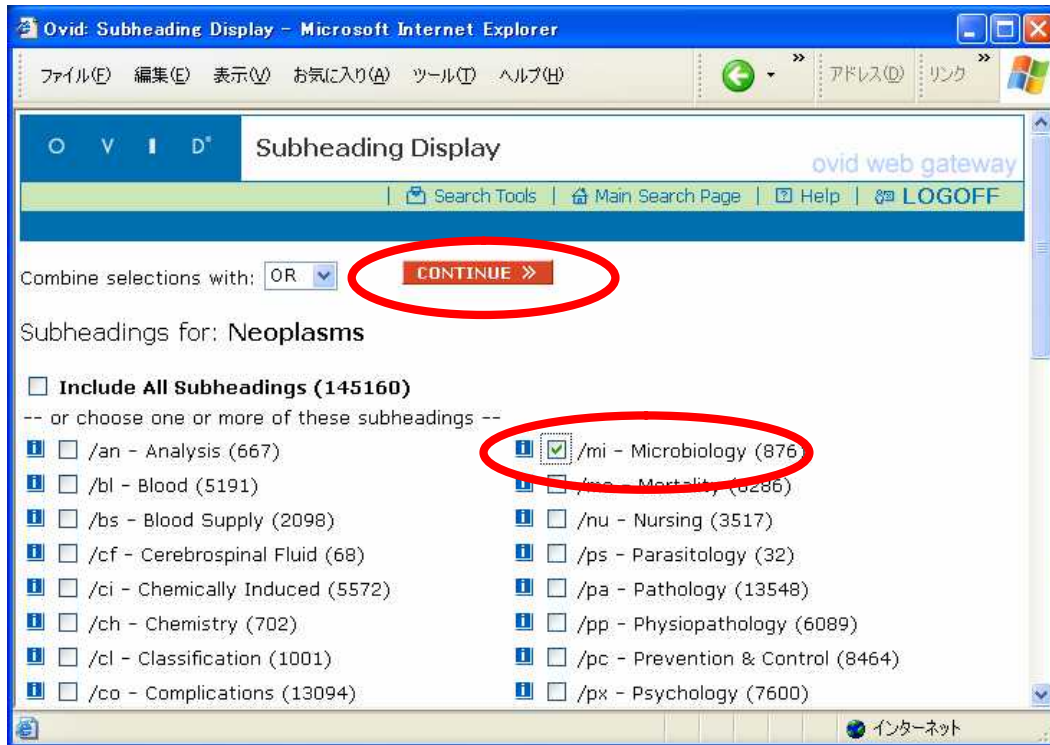
1) You can see “Enter Keyword” on the “Default screen”. To switch to another search, click the icon. Enter keyword (“cancer” in this example) , then click the “Search” button.



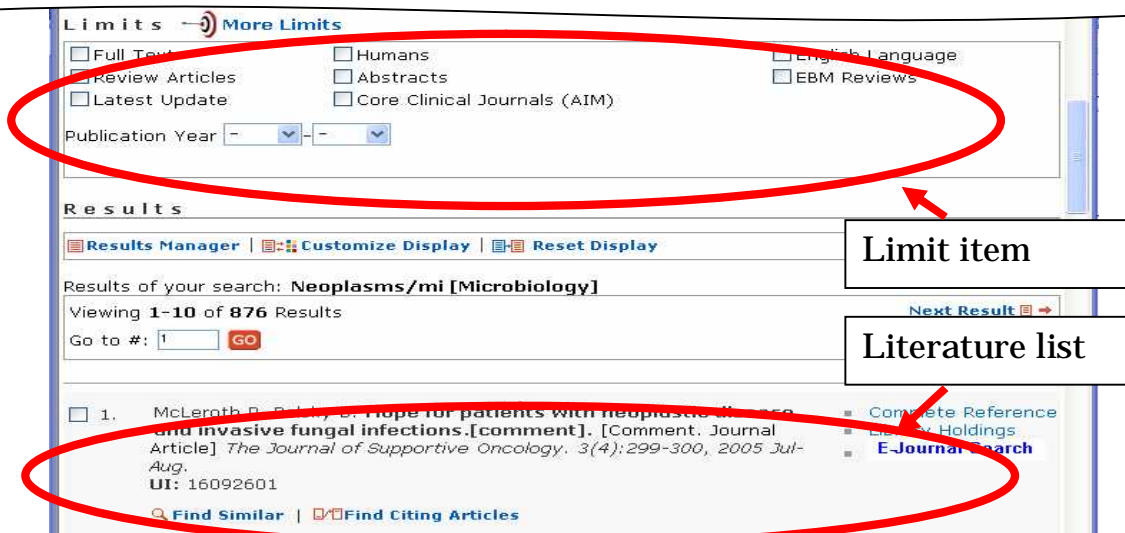
2) Medline gives a thesaurus list relating to the entered keyword. Select thesaurus word that you are searching for, then click the “Continue” button. (In this example, “Neoplasms” has been selected) .



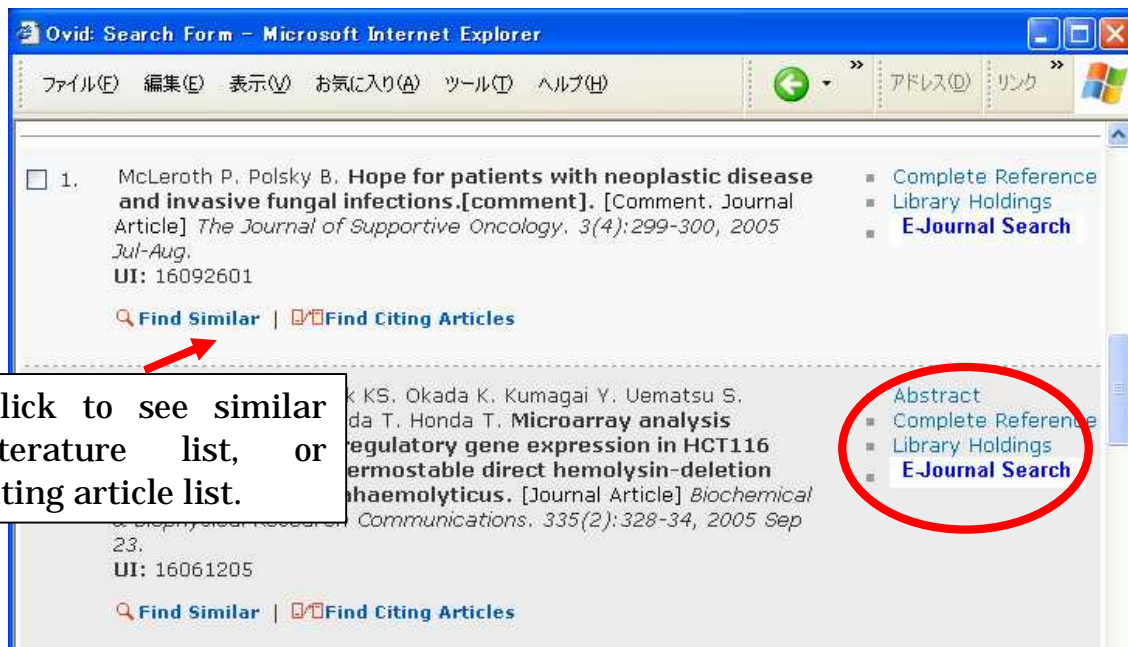
3) In the next step, you will find “Subheadings.” Select items and click “Continue”. (“Microbiology” has been selected in this example).



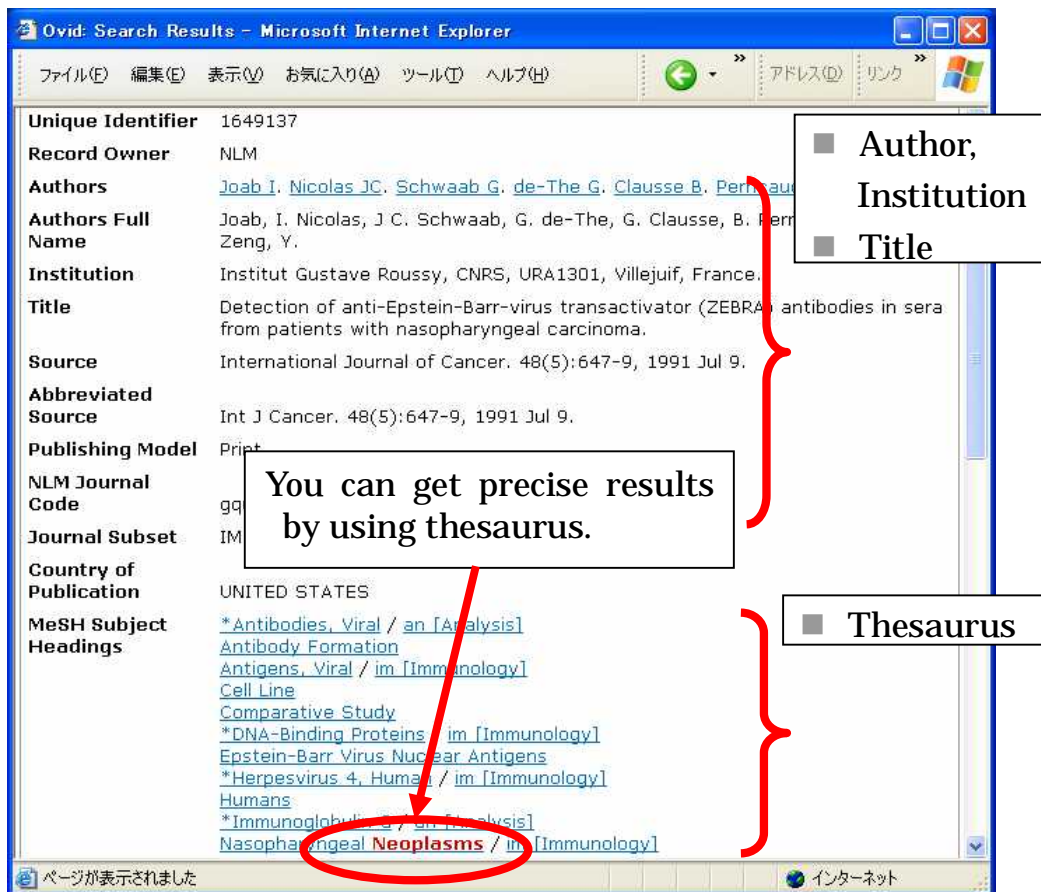
4) You can see the reference list under the “Search History”.



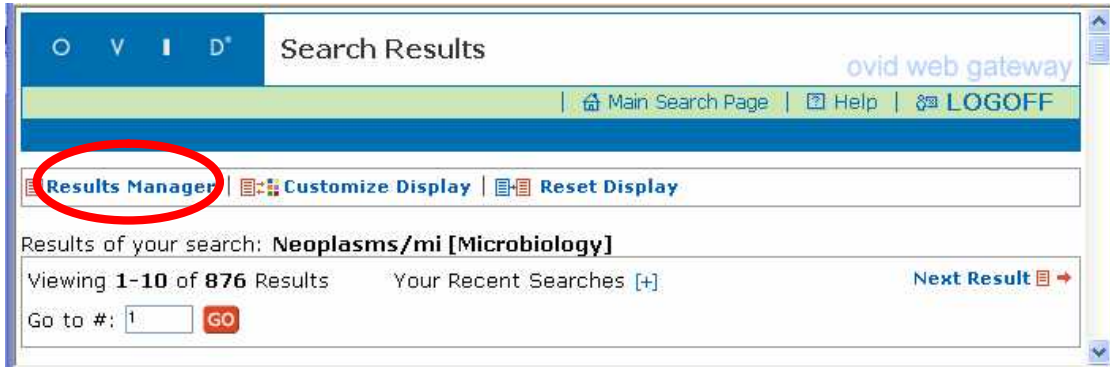
5) You can refer to the “Abstract” or to “Complete Reference” if you want. Confirmation of the holding information of Tohoku University is available.



6) You can find the thesaurus used in this literature in detail information.

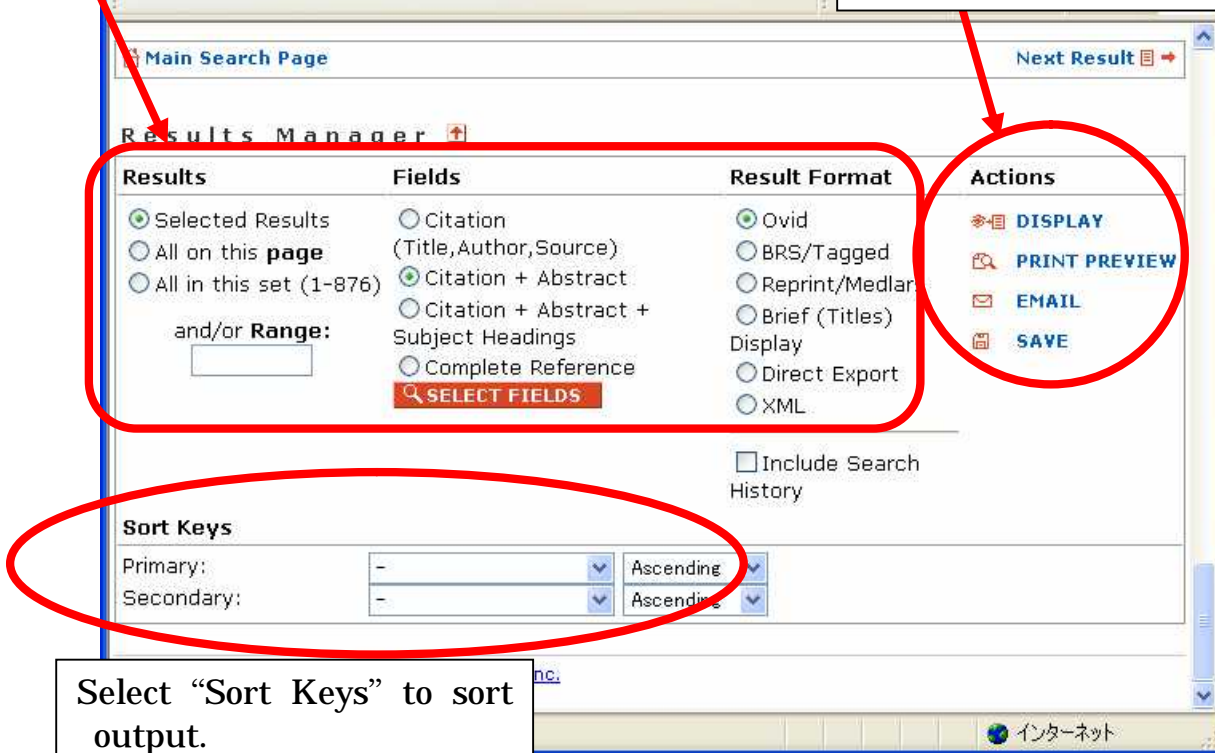


7) You can download the result list using “Results Manager”.



Select “Results”, “Fields”, “Results Format”.

Select “Action” (Display, Print, E-mail, Save) .



4.5 Biological Abstracts

4.5.1 About Biological Abstracts

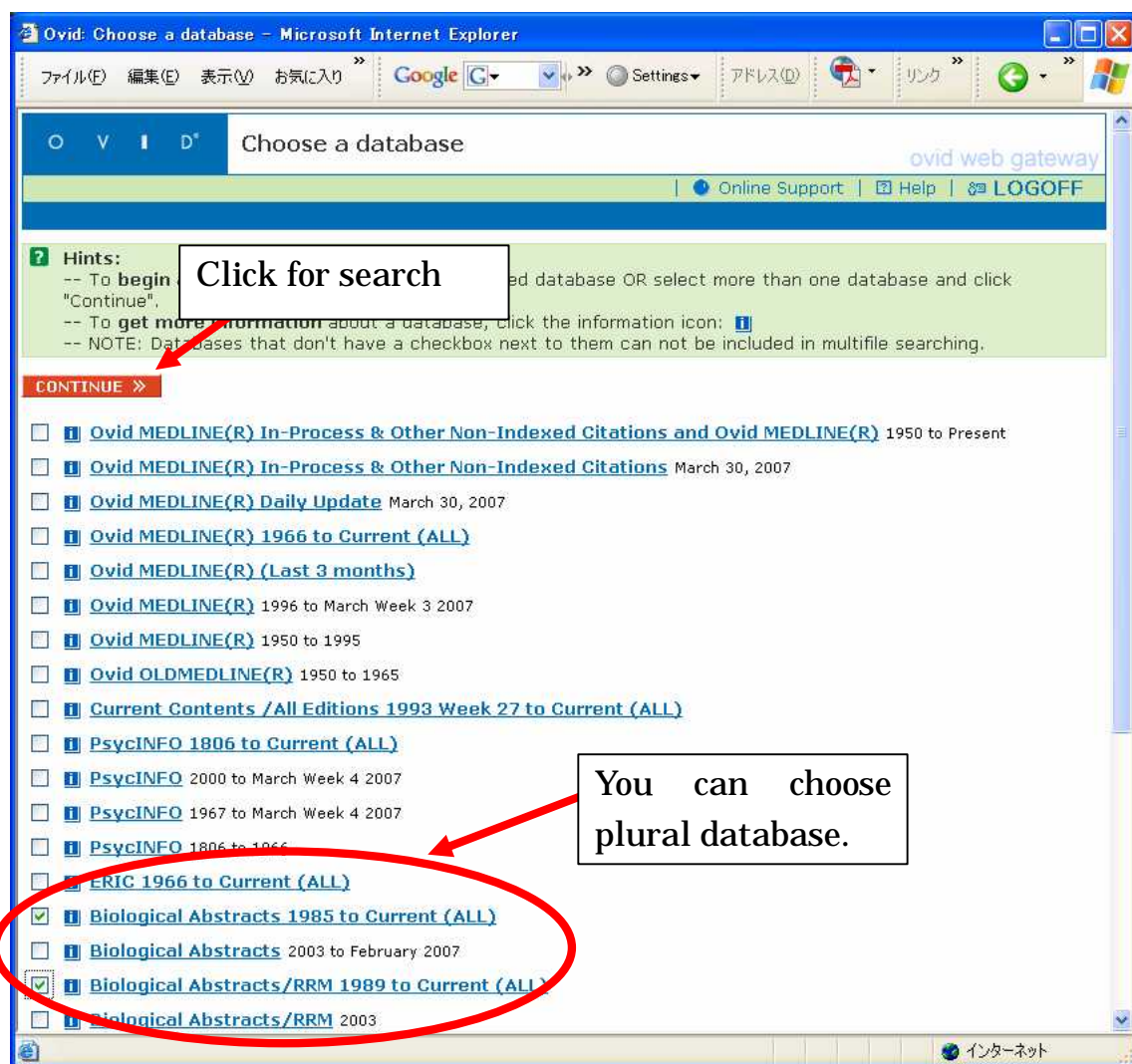
Items	Information
Subject	Biology, Environmental studies, Basic medicine, Agricultural studies, and more.
Creator	BIOSIS
Content	“Biological Abstracts” Article “Biological Abstracts / RRM” Review, Proceedings, patents, Books, and more.
Source	Approximately 4,000 titles (over 90 countries)
Coverage	“Biological Abstracts” 1985- “Biological Abstracts / RRM” 1989-
Update	bi-monthly
URL	http://www.library.tohoku.ac.jp/dbsi/ovid/
How to use	Registration required as a laboratory. Free for University members. You can use this database without registration at computers in the library.



4.5.2 Flow in Search for Biological Abstracts on the OVID system

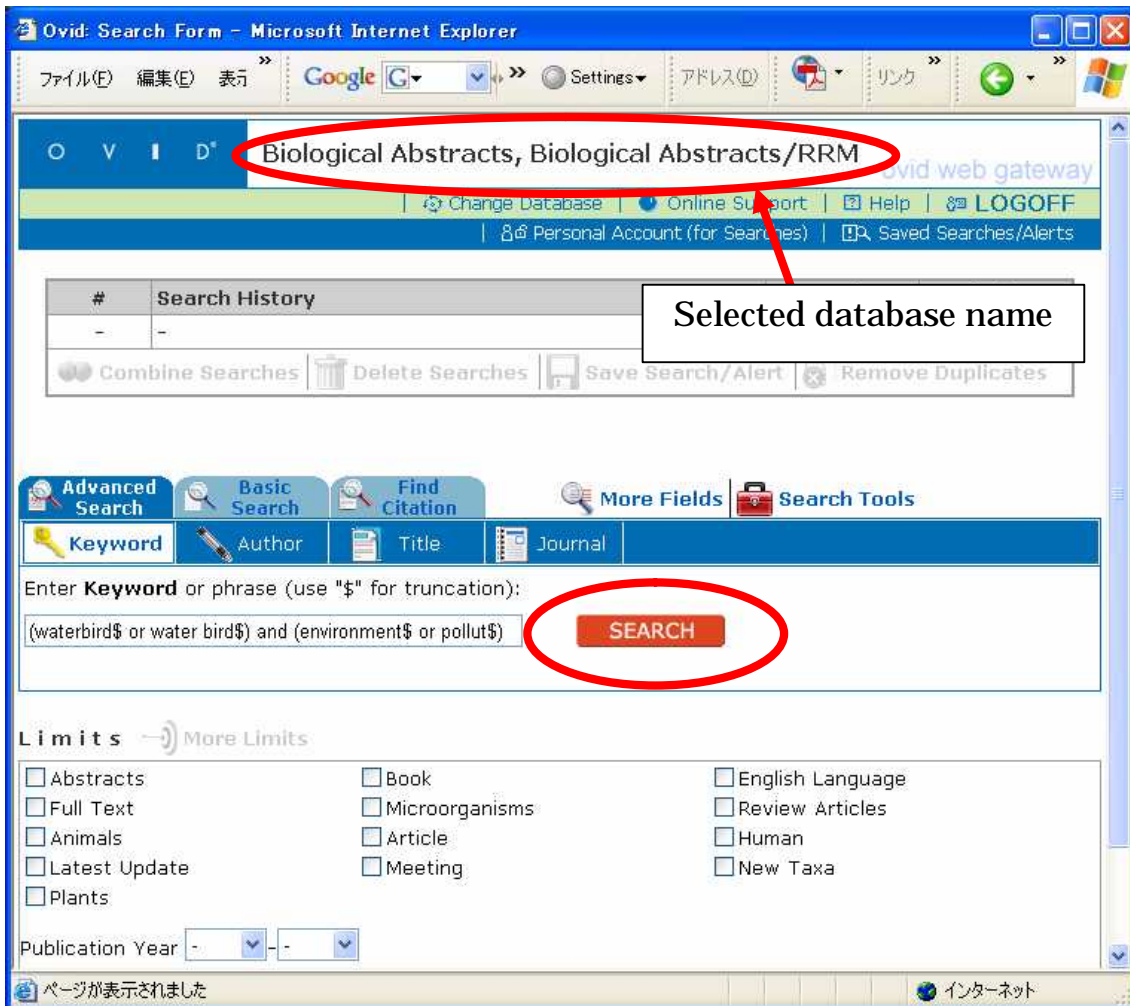
e.g. Search for articles written about water birds and environmental pollution.

1) Select “Biological Abstracts” and “Biological Abstracts / RRM”.



2) Keyword search is the default setting. When you chose plural databases, it is not possible to use the thesaurus.

e.g.) Enter 「(waterbird\$ or water bird\$) and (environment\$ or pollut\$)」



Item	Information
AND	e.g.) “water and birds” water birds, water economy of desert birds...
OR	e.g.) “health or welfare” animal health, animal welfare...
Right truncation	e.g.) “cat\$ ” cat, cats, catalog...
Phrase	“water birds” (= “water adj birds”) water birds

3) Literature including keyword in title, abstracts, and so on. There are links to E-journal, library holdings, etc. If you get too many results, use the “Limit” or “Combine” function.

History

#	Search History	Results	Display
1	((waterbird\$ or water bird\$) and (environment\$ or pollut\$)).mp. [mp=ab, bc, bo, bt, cb, cc, ds, ge, gn, mc, mi, mq, or, ps, sq, st, ti, tm, tn]	867	Details

Combine Searches | Delete Searches | Save Search/Alert | Remove Duplicates

Limit search results

Limits [More Limits](#)

- Abstracts
- Full Text
- Animals
- Book
- Microorganisms
- Article
- English Language
- Review Articles
- Human

Number of results for each database

[Biological Abstracts 1985 to Current \(ALL\)](#) (770 records)
[Biological Abstracts/RRM 1989 to Current \(ALL\)](#) (97 records)

[Results Manager](#) | [Customize Display](#) | [Reset Display](#)

Results of your search: ((waterbird\$ or water bird\$) and (environment\$ or pollut\$)).mp. [mp=ab, bc, bo, bt, cb, cc, ds, ge, gn, mc, mi, mq, or, ps, sq, st, ti, tm, tn]

Viewing 1-10 of 867 Results [Next Result](#)

Go to #: [GO](#)

Results list

1. *Biological Abstracts 1985 to Current (ALL)* VanderWerf, Eric A. [Author, Reprint Author; E-mail: eric@pacificimconservation.org]; Wood, Ken R. [Author]; Swenson, Chris [Author]; LeGrande, Maya [Author]; Eijzenga, Heather [Author]; Walker, Ronald L. [Author]. **Avifauna of Lehua Islet, Hawai'i: Conservation value and management needs** [Article] *Pacific Science*. 61(1). JAN 2007. 39-52.

- [Abstract](#)
- [Complete Reference](#)
- [Library Holdings](#)
- [E-Journal Search](#)

[Find Similar](#) | [Find Citing Articles](#)

4.6 CrossFire

4.6.1 About CrossFire

Item	Information
Subject	Chemistry, Physics, Material science, Medicine, Biology, and more.
Creator	MDL Information Systems
Type	Substance / Reaction / Literature information appeared in Article, Proceedings, Patent, Thesis, and more.
Source & Coverage	“Beilstein” Contents of printed matter (1771- 1980) Approximately 175 academic journals (Organic chemistry) 1981-
	“Gmelin” Contents of printed matter (1772- 1974) Approximately 62 academic journals (Inorganic chemistry) 1975-
Update	Quarterly
URL	Specific browser is required. Download from supplier’s website is available.
How to use	Registration required as laboratory. Pay for use. You can use freely this database at the computer in libraries (Kita-Aobayama, Engineering, Agricultural, and Institute for Materials Research libraries only).
more	Further info. http://www.library.tohoku.ac.jp/dbsi/crossfire/

4.6.2 Features

- Consist of data from traditional reference books going back over 200 years.
- There are many links from one article to another, so you can get a wide range of information about compounds by using this.
- Searchable by chemical structure, reaction and more.

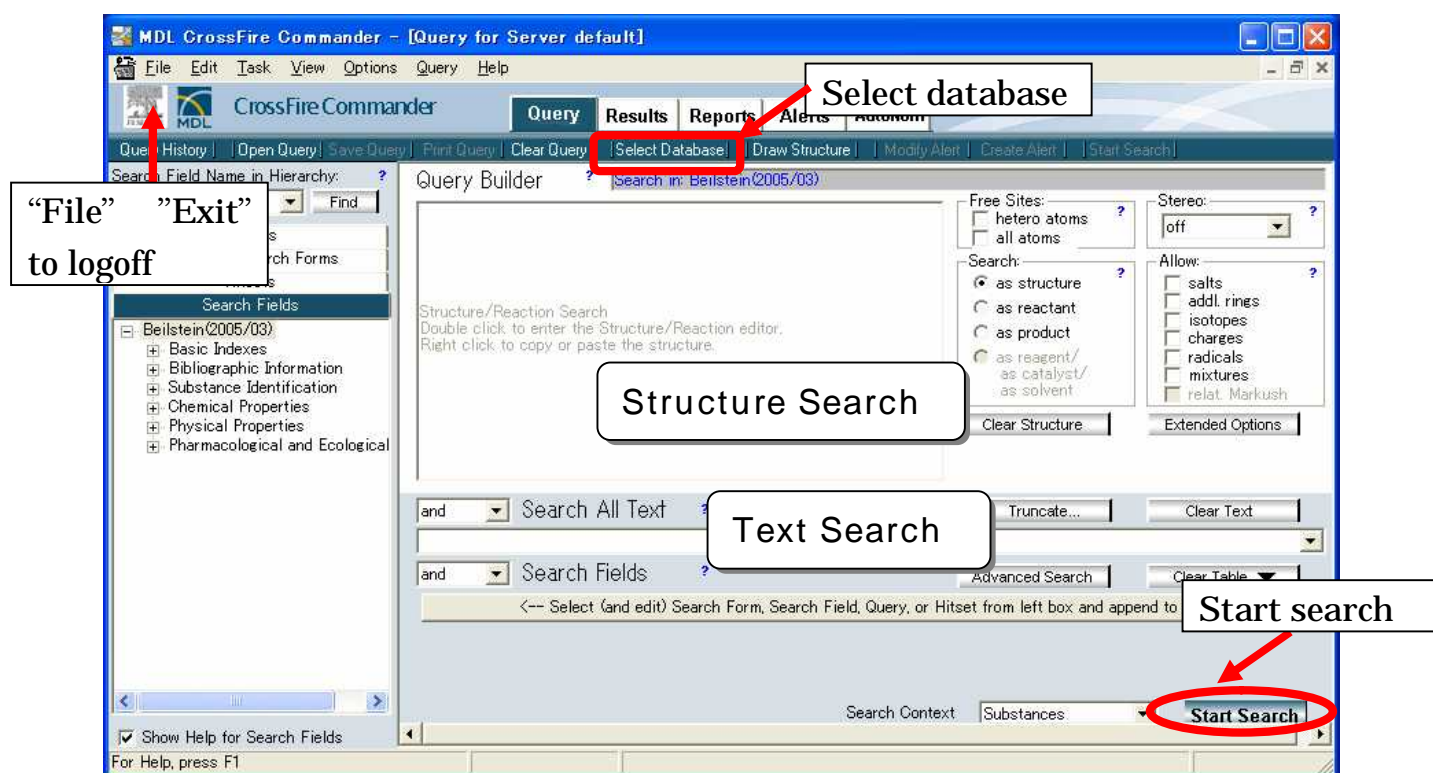
1) Connect and Select Database

When you start “CrossFire Commander” (specific browser of CrossFire) , you will see the search screen as below.

Click the “CrossFire”button to connect the database. After that, you can select the database by check the box(use two databases simultaneously is available).

2) Select Kind of Search and its Operation

There are “Text Search”, “Structure Search”, or these can be combined. Click “Start Search” to submit.



4.6.3 Search for Compounds

e.g. 1 To search for the “boiling point” of benzocaine used as anesthetic (narcotic, opiate) from “Beilstein” and “Gmelin”.

1) Enter Keyword

Enter keyword to “Search All Text” box. You can search by molecular formula, CAS register number, etc. Click “Start Search” after entering keyword, “(anesthetic OR narcotic OR opiate) AND benzocaine”.

Search All Text ? Truncate... Clear Text

(anesthetic OR narcotic OR opiate) AND benzocaine

Search Fields ? Advanced Search Clear Table

2) Choose context and submit search

You can see a bar graph of each context. At this time, choose all words and check “Substances”, then click “Start Search”.

If you want to except some keywords, exclude the check.

Search Word in Context...	SUBSTANCES Substance Properties BISUB	REACTIONS Reaction Data BIREA	CITATIONS [AU, TI, AB, ...] BICIT
<input checked="" type="checkbox"/> (anesthetic* or narcotic* or opiate*)			
<input checked="" type="checkbox"/> benzocaine*			
Select Context:	<input checked="" type="checkbox"/> Substances	<input type="checkbox"/> Reactions	<input type="checkbox"/> Citations
	<input checked="" type="checkbox"/> Beilstein(2005/03)		<input checked="" type="checkbox"/> Gmelin(2005/03)

Please note:

- Different contexts may give different hits. Search more than 1 context to be comprehensive! Results from different databases and contexts are displayed in different windows.
- Words from bibliographic data (Author, Patent Assignee, Journal Name, Patent Number, ...) are NOT searchable in SUBSTANCES or REACTIONS. Please uncheck words in the left column and use DATA SEARCH for these words to get results.
- Substance property data and reactions are not searchable in CITATIONS.

Search Plan

The following searches will be conducted in database(s) Beilstein(2005/03) and Gmelin(2005/03) (2 search(es)):

Beilstein(2005/03) (Substances)	(anesthetic* or narcotic* or opiate*) AND benzocaine*
Gmelin(2005/03) (Substances)	(anesthetic* or narcotic* or opiate*) AND benzocaine*

Hitsets will be given in separate windows!

Bar graph of hits will appear (Belstein and Gmelin)

Search plan according to selection of left window.

Start Search

3) List of Results Group

“Hits” shows the number of results, “Database” shows database name, and “Query” shows your search query.

Click “View” button to display the result group of “Beilstein”.

Your recent search(es) had the following results: Hitset Family (1 of 1): [Previous](#) [Next](#)

No.	Select	Hitset	Hits	Context	Database	Query	Options
1	<input checked="" type="checkbox"/>	Q01	1	Substances	Beilstein(2005/03)	((BISUB=anesthetic* or BIPHARM=anesthetic*) or (BISUB=narcotic* or BIPHARM=narcotic*) or (BISUB=opiate* or BIPHARM=opiate*)) and (BISUB=benzocaine* or BIPHARM=benzocaine*)	
2	<input type="checkbox"/>		0	Substances	Gmelin(2005/03)	(BISUB=anesthetic* or BISUB=narcotic* or BISUB=opiate*) and BISUB=benzocaine*	

Cancel To Report View

4) Display Hits

Search results are displayed in right window. Double click it to display in detail. In left window, you can see search history. Click one to switch the display any time.

The screenshot shows the MDL CrossFire Commander interface. The title bar reads "MDL CrossFire Commander - [Beilstein(2005/03):Q01 Substance 1 of 1]". The menu bar includes File, Edit, Task, View, Options, Window, and Help. The toolbar contains buttons for Query, Results, Reports, Alerts, and AutoNom. The main window is divided into two panes. The left pane shows a search history tree with "Beilstein(2005/03)" expanded to show "Q: Q01 (1 Substances)". A red arrow points from a box labeled "Search history" to this tree. The right pane displays "Hit 1 BRN=638434 C₉H₁₁NO₂; Bio(43)" and a chemical structure of a benzamide derivative. A red arrow points from a box labeled "Double click to display in detail." to the chemical structure. The status bar at the bottom shows "For Help, press F1", "idle", "GRID", and "Substances".

5) Display Hits in Detail

You can see detailed information about the compounds. To see each topics, click the code in “Field Availability List”.

In addition, there are many links to view other compounds, reactions, related literature and so on.

Substance Identification

Beilstein Registry Number: 638434
 Beilstein Preferred RN: 94-09-7
 CAS Registry Number: 94-09-7
 Chemical Name: 4-amino-benzoic acid ethyl ester
 4-Amino-benzoic acid ethyl ester
 benzocaine
 Autname: 4-amino-benzoic acid ethyl ester
 Molecular Formula: C₉H₁₁NO₂
 Molecular Weight: 165.19
 Lawson Number: 16038, 298
 Type of Substance: isocyclic
 Constitution ID: 566958
 Tautomer ID: 597922
 Beilstein Reference: 0-14-00-00422, 1-14-00-00567, 2-14-00-00248, 3-14-00-01025, 4-14-00-01129, 5-14-00-01129, 6-14

Save, Print, Export, etc.

Substance Identification (“Substance”)

- CAS registry number
- Chemical name
- Molecular formula
- and more.

Field Availability List 1-10 of 45

Code	Field Name	Occ.
PHARM	Bioactivity: Pharmacological Data	40
ECI	Ecological Data: Ecotoxicology	3
RX	Reaction	1315
CDER	Derivative	33
PUR	Purification	1
EM	Electrical Moment	5
DFM	Molecular Deformation	1
CPD	Crystal Property Description	2
MP	Melting Point	39
CRYPH	Crystal Phase	

List of data

- Pharmacology data
- Ecological data
- Reaction data
- Substance data
- and more.

Boiling Point 1-3

VALUE (BP)	Pressure (.P) Torr	Entry Date	Note	Ref.
141 - 143	0.8			1
310			1	2
182.8 - 183.9	14		2	3

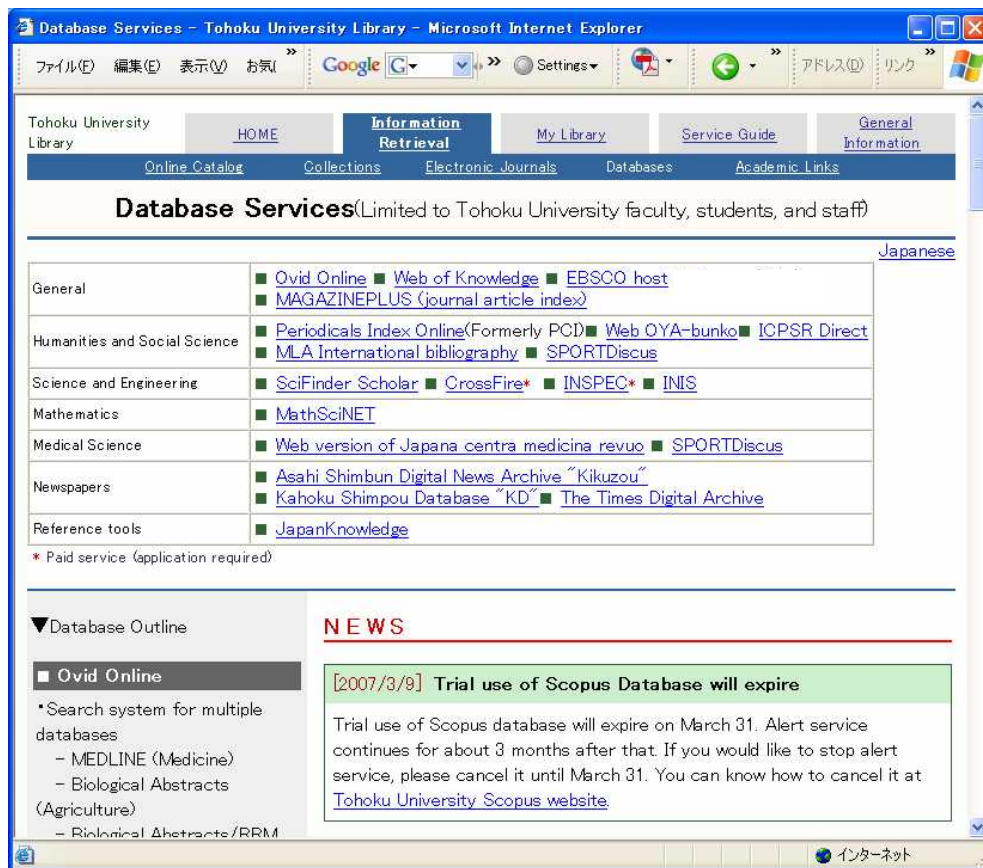
Note 1: Handbook
 Note 2: Handbook
 Ref. 1: [4738126](#); Journal; Grier, JPMSAE; J. Pharm. Sci.; 53; 1964; 1208
 Ref. 2: [1222083](#); Journal; Curtius, JPCEAO; J. Prakt. Chem.; <2> 95; 1877; 341.
 Ref. 3: [2101985](#); Journal; Kohrausch; Stockmair, MOCMB7; Monatsh. Chem.; 66; 1935; 316, 324.

Boiling point data

- Value
- References

- : Jump to “Substance”
- : Check for save or print
- : Save or export

4.7 Other Databases



<http://www.library.tohoku.ac.jp/dbsi/index-e.html>

General	EBSCO host
	MAGAZINEPLUS(Japanese articles)
Humanities and Social Sciences	Periodicals Index Online
	Web OYA-bunko
	ICPSR Direct
	MLA international bibliography
	SPORTDiscus
Science and Engineering	INSPEC (Registration required (charged))
	INIS
	MathSciNet
Newspapers	Asahi Shimbun Digital News Archive
	Kahoku Shimpou Database
	The Times Digital Archive
Reference tools	JapanKnowledge