Library Workshop for
LIFS, CHEM & OCES Research Postgraduate

Jacky Leung
Science Librarian
lbjacky@ust.hk
Science Research Guides

HTTP://LIBGUIDES.UST.HK/SCIRESEARCH
Learning outcomes

- Review the habits of researcher
- Search for literature using Subscribed Databases & Google Scholar
- Locate High Impact Journals for publishing
Research Habits
Survey on Research Habits?

Please fill in the online survey:

- Where do you go (or which search tools do you use) to find information
- How do you keep records and organize references (documents you have read and will use in writing your paper)
Questions in mind?

Are you usually look for articles from NIH, NCBI (PubMed), PNAS, and get data from DataOne?

How you get to the site? bookmarked links, search in Google?

Can you get the full-text articles all the time?
Share your experience

Then we move on to searching tips
Is Google where you start first?
Settings: 1. Off-campus full-text access
2. Bibliography manager > RefWorks
Import references directly to RefWorks

Google Scholar

Scholar Settings

Search results

Collections
- Languages
- Library links
- Search articles (✓ include patents)
- Search legal documents

Results per page
- Google's default (10 results) provides the fastest results.

Where results open
- Open each selected result in a new browser window.

Bibliography manager
- Don't show any citation import links.
- Show links to import citations into RefWorks

Save  Cancel
Starting Point... Google Scholar??

Click for "Advanced Search"

Stand on the shoulders of giants
Google Scholar Advanced Search
Analyze Google Scholar Results

Different versions of the same paper

Track Impact

Find full-text

Manage References

Find@HKUST
### Metrics

#### Top Publications - Life Sciences & Earth Sciences

<table>
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<tr>
<th>Publication</th>
<th>h5-index</th>
<th>h5-median</th>
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</thead>
<tbody>
<tr>
<td>Nature</td>
<td>349</td>
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<tr>
<td>Science</td>
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<tr>
<td>Cell</td>
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<td>Nucleic Acids Research</td>
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<td>Nature Reviews Molecular Cell Biology</td>
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<tr>
<td>Neuron</td>
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</table>

*Stand on the shoulders of giants*
Library can help!!

1. **Library PowerSearch**
2. **E-book Collections**
3. **E-journals**: browse by titles, subjects or call numbers
   - Some back issues may only be available in print or microforms
4. **HKUST SPD**
   - One stop platform to aid the discovery of HKUST research output
5. **HKUST E-Theses**
6. **Databases**: alphabetical or by subject
   - Off-campus access to databases, e-books and e-journals requires ITSC username & password for authentication
<table>
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<tr>
<th>Library E-resources Cover?</th>
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<tbody>
<tr>
<td><strong>Journal Articles &amp; Conference Proceedings</strong></td>
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<tr>
<td><strong>CHEM</strong>: INSPEC, PubChem, SciFinder Scholar</td>
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<td><strong>E-books</strong></td>
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<td>Patsnap, Google Patents</td>
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<tr>
<td><strong>Statistics</strong></td>
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<tr>
<td>OECD iLibrary, Passport</td>
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<td><strong>These &amp; dissertations</strong></td>
</tr>
<tr>
<td>ProQuest Dissertation &amp; Theses (A&amp;I), HKUST E-theses</td>
</tr>
</tbody>
</table>
Library E-resources Cover?

Most databases have full-text.

Some only provide citations
- authors, article title, publication title, volume, issue, page numbers & abstract (article summary).

In that case...
- Use links resolvers [Find HKUST]
- Search the catalog for journal title or book info

Still can’t find the full-text, paper or microform?
- Use Document Delivery (from HKUST's collection)
- or InterLibrary Loan via [http://library.ust.hk/illiad]
Science Specific Databases

http://library.ust.hk/collections-resources/databases/all-databases/?subj=Science
PowerSearch
Databases Searching...

SciFinder Scholar

Web of Science
Database Search (General)

Use Boolean to refine/focus your search: [AND, OR]
E.g. “Renewable energy” AND “Clean power sources”; (Renewable OR Clean)

Use Exact Phrase: [“ ”] double inverted commas
E.g. “Renewable energy”; “Clean power sources”

Use Truncation to look for variants: [* or ! or $ check database or search engine]
E.g. ident* retrieves: identity, identities, identify, etc.

Use Wildcard: [ ? check database and search engine]
E.g. wom?n will retrieve both woman and women
Also for words that have British and American spelling variations, e.g. organisation Vs. organization
Go Searching...

SciFinder Scholar
For off campus access, it required your ITSC login / password
SciFinder

Database Guide: http://libguides.ust.hk/scifinder

SciFinder® is a research discovery application that provides integrated access to the world’s most comprehensive and authoritative source of references, substances and reactions in chemistry and related sciences.
Reference Search: Find the most up-to-date chemistry and related science information found in journals, patents, dissertations and more.

Substance Search: Find substance information including chemical structures, chemical names, CAS Registry Numbers®, properties, commercial availability and regulatory information.

Reaction Search: Find dependable and current chemical reaction information including reaction schemes, experimental procedures, conditions, yields, solvents, catalysts.
Reference Search
Research topic

Tip
You can include up to three synonyms or acronyms for a concept. Place them in parentheses immediately following the concept and separate them with commas. E.g., cat (kitten, feline, fells catus)
Scifinder returns a set of topic candidates.

4. Select the answer set that you want to use from the list.
   - Click the box to select an option. A green checkmark indicates it has been selected.

5. Click Get References.

Tip:
All concepts “present anywhere in the reference” is often a good starting point. If the number of references is too large or you find many non-relevant references, consider selecting the narrower option in which all of the concepts are “closely associated with one another.”

Now what?
After you click Get References, SciFinder will retrieve the answers which meet your query requirements. To learn about working with the answers, please see the companion document titled, “How to... Work with Reference Answer Sets.”
Reference Search
Sort by accession number

Reference Search Results

1. Deepwater Horizon oil slick characterization with UAVSAR: Continuing investigations
   - Title: Deepwater Horizon oil slick characterization with UAVSAR: Continuing investigations
   - Authors: Halp, Dea
de, Tom, J., et al.
   - Year: 2013
   - Language: English
   - Summary: In June 2010, the UAVSAR platform was deployed to the Gulf of Mexico in response to the Deepwater Horizon oil spill. We have analyzed the quad-polarized L-band SAR data collected over the main oil slick to develop and validate algorithms for improved discrimination of all slicks on water and identification of all properties. Our results show that radar backscatter from both clean water and all in the slick is predominantly from a single surface scattering, consistent with the bidirectional scattering mechanism across the incidence angle range of 26-60°. We find that the change of backscattering amplitude is due to oil concentration, type of oil, and age of oil.

2. Comparative study of different exposure routes on the biotransformation and genotoxicity of PAHs in the Atlantic Ocean, Sargasso Sea, Bermuda region
   - Title: Comparative study of different exposure routes on the biotransformation and genotoxicity of PAHs in the Atlantic Ocean, Sargasso Sea, Bermuda region
   - Authors: Bostock, Miles, Dr., et al.
   - Year: 2003
   - Language: English
   - Summary: In this study, abiotic experiments were carried out in order to come to a better understanding of the fate of polycyclic aromatic hydrocarbons (PAHs) in the marine environment and also on their biodegradation. Biotransformation and genotoxic effects in fish, juveniles of sargassumfish (Sargassum maximus) were exposed to PAHs through different routes (1) a mix of dissolved PAHs, (2) a PAHs/PAH acid mixture, and (3) an oil fuel mixture. Fish were exposed 6 days followed by a 5-day digestion period. In each experiment, PAH contents in the seawater were analyzed regularly by gas chromatography.

Tip
An Accession Number is a unique identifier given to a record when it is entered in the database. In the CAsplus database, it begins with the year in which the record is put into the database, followed by a colon and sequential numbering.
Reference Search
Access Full Text

Three Display options are available:

- One bar shows the bibliographic information.
- Two bars shows the bibliographic information and a partial abstract. It is the default, shown here.
- Three bars shows the bibliographic information and the full abstract.

Use the page controls to navigate through your answer set.

The magnifying glass is a link to a “Quick View.” Click it to open a new window that contains the reference details. Close the window to return to your active session.

Click the Full Text link to launch the CAS Full Text Options page (not shown).

Click the molecule icon to see the Substances indexed for a document (not shown). CAS analysts identified these substances as being important to the science reported in the document.

Click the Citings icon to retrieve the documents that have cited this reference.

Tip
With the Full Text link, European and US patents are often immediately available via Espacenet. If your company purchases journal subscriptions, your knowledge center or SciFinder Administrator can set up the CAS Full Text Options page to let you immediately access records from those journals from your desktop.
Reference Search
Analyze by document type

Click the Analyze tab. By default, the answer set is analyzed by Author Name.

Click the drop-down arrow to see the available Analyze by: options.

Click Show More to see additional data when it is available (see inset), or to select more than one analysis subset:
- E.g., it is useful when you want to select several variations of an author’s name.

Tip
Some document types are listed in all capital letters. These subsets are unique to MEDLINE® (aka PubMed). The 30 JOURNAL ARTICLES in MEDLINE are also included in the Journal subset which contains the documents from both MEDLINE and CPlus.
Analyze by document type

Tip
The Analyze capability is an effective way to learn more about your results because you can use Clear Analysis to return to the original answer set. After you have explored the answer set several ways, you can then decide how you want to narrow it, make that selection, and then click Keep Analysis or choose to narrow the answer set using other techniques.
Reference Search
Narrow down your research topic using "Refine"

The Answer Set is Narrowed to 236 References

Tips:
- SciFinder automatically searches for both singular and plural forms of a word (method; methods), alternate word endings and forms (clean; cleaning), and common synonyms (ocean; sea; marine) to save you time and increase comprehensiveness.
- When searching or refining by Research Topic, you can include up to three synonyms, separated by commas and enclosed in one set of parentheses.
- When you refine by Research Topic, both the old and new hit terms are highlighted in the title and are bolded in the abstract.
Substance Search
Chemical structure query

Types of Substance Searches

On the Explore tab, under SUBSTANCES, you can search by any of the five options.

Click Advanced Search to see criteria that you can add to a search to make it more specific:

Tip
If you are using the stand-alone drawing editor (available from www.cas.org), then click Import CXF to upload the structure.

These search limiters are available as part of the Refine and Analyze functions, so you can also apply them later in your search process.
Substance Search
Chemical structure query

1. Select Chemical Structure (the default).
2. Click the picture of the structure drawing window to launch the Structure Editor.
3. Draw your structure.
4. Specify the type of structure search.
5. Click OK to transfer the structure and type of search to the search page.

---

Tip
To learn about structure drawing, refer to the online help or the "Introduction to the SciFinder Drawing Editor" tutorial on cas.org.

---

**SELECT...**

**IF YOU WANT TO RETRIEVE...**

**Exact Search**
The specific structure as drawn in the query, including:
- Stereoisomers
- Salts and mixtures
- Polymers with one exactly matching monomer
- Isotopes
- Tautomers

**Substructure Search**
The structure as drawn or as part of a larger molecule in which there is:
- Substitution at open positions
- Additional ring fusion

**Similarity Search**
(Queries cannot include variable groups, repeating groups, or variable attachment positions)
- Similar chemical structures containing:
  - Positional isomers
  - Different or fewer substituents
  - Different ring systems
Substance Search
Chemical structure query

Click Search to retrieve the answers that meet your query requirements.

For Similarity searches, after you click Search, you will see a Similarity Candidates window. To select the degree(s) of similarity for your answers, check the box(es) of interest. Then, click Get Substances.

Tip
Optional: Select Show precision analysis to include additional structure criteria in your search:
- Conventional Exact
- Closely Associated Tautomers and Zwitterions
- Loosely Associated Tautomers and Zwitterions, and Other.

Now what?
After you click Search, SciFinder will retrieve the answers that meet your query requirements. To learn about working with the answers, please see the companion document titled, “How to... Work with a Substance Answer Set.”
Substance Search
Chemical structure query
SciFinder Scholar
Reaction structure query

1. To begin, go to the left navigation pane and click Reaction Structure.
2. Click the picture of the reaction drawing window to launch the Reaction Editor.

Tip
Click ? to access context-specific online help.

Tip
If you are using the stand-alone drawing editor (available from www.cas.org), then click Import CXF to upload the structure.
SciFinder Scholar

Reaction structure query

When you click OK in the Reaction Editor, your reaction and Search type are transferred to the reaction search page.

1. (optional) Click Advanced Search to see additional search options.

2. (optional) Select limiters, such as Number of Steps, to further restrict your search.

3. Click Search.

Tip
The limiters are available as part of the Refine and Analyze functions, so it is often advantageous to start with a broad search and narrow the answer set later.

Now what?
After you click Search, SciFinder will retrieve the answers which meet your query requirements. To learn about working with the answers, please see the companion document titled, “How to... Work with Reaction Answer Sets.”
SciFinder Scholar
Reaction structure query

1. Draw your reaction.
   Learn about drawing in the Reaction Editor with the following tutorials, available in the online SciFinder Help:
   - “Introduction to the SciFinder Drawing Editor”
   - “Introduction to Reaction Searching”

2. Select the type of reaction search that you want to conduct.

<table>
<thead>
<tr>
<th>SELECT...</th>
<th>IF YOU WANT TO...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable only at the specified positions</td>
<td>Prohibit substitution at all atoms (except variables and R-groups) and prohibit additional ring fusion.</td>
</tr>
<tr>
<td>Substructure of more complex structures</td>
<td>Allow additional substitution and ring fusion.</td>
</tr>
</tbody>
</table>

3. Click OK to transfer the reaction and type of search to the search page.

Tip on Stereo Searching
CAS scientists apply structure data to a record by reporting the information in the original document. If no stereo is identified, then the molecule is listed as a “flat” (2-dimensional) structure. If you search stereo bonds, you can miss relevant data that was listed in the literature only in a 2-dimensional format, whereas searching the flat structure will retrieve both 2-dimensional and 3-dimensional (stereo) structures.
SciFinder Scholar
Reaction structure query
Go Searching...

Web of Science
Web of Science

Citations cover over 10,000 high-impact journals

Provides citation analysis on:
- **Times cited** (cited n times 被引用次數): indicates the number of times a published paper was cited by other papers.
- **View related records**: other documents that have one or more cited references in common with the reference you are viewing.

Citation analysis
- Discover the high impact (most highly cited) journals and articles in a subject area

Library Guide for Web of Science:
- [http://libguides.ust.hk/wos](http://libguides.ust.hk/wos)
Access Web of Science

For off campus access, it required your ITSC login / password
Web of Science
Basic search

Search: Web of Science™ Core Collection

Basic Search
- direct dye* or reactive dye*
- "cotton fabric"

Topic

TIMESPAN
- All years
- From 1975 to 2014

MORE SETTINGS
Multifunctional properties of cotton fabric treated with chitosan and carboxymethyl chitosan

By: Gupta, Deepthi; Hale, Adane
CARBOHYDRATE POLYMERS Volume: 69 Issue: 1 Pages: 164-171 Published: MAY 1 2007

Times Cited: 49 (from Web of Science Core Collection)
1. **Times Cited** – “49” indicates the number of times this paper was cited (quoted) by other papers, i.e., who used Gupta’s paper?

2. **Find@HKUST** - to locate full-text from other databases
Web of Science
Inter-library loan

Fill-in the request form

Photocopy Request
Enter information below and press the Submit Request button.

- Article Author
- Article Title
- Title
- Volume
- Issue
- Month
- Year
- Pages
- ISSN/ISBN
1. **Cited Reference** – “13” indicates the number of articles, books or other materials listed in the reference list (or bibliography) of this research paper, i.e., these are what Gupta cited!

2. **Impact factor** – is a measure of the relative importance of a journal
Web of Science (Advanced features)
Register for a WOS account

1. From the first Web of Science screen, click on the link to 'Sign-in.'
2. Enter the information required and submit your registration.
Web of Science (Advanced features)
Create alert / Save search history
Web of Science (Advanced features)
Check your search history
Web of Science (Advanced features)
Cited-Reference Searching
Web of Science (Advanced features)
Cited-Reference Searching

What is it?

"Cited-Reference Searching" is a process where you start with a reference (normally a journal article or book) that you have read and which is important for your research.

You then search for other publications that have cited that reference.

If the reference that you started with was highly relevant to your research, it is quite possible that other publications that have cited that reference are also relevant to your research.
Web of Science (Advanced features)
Cited-Reference Searching

Cited author: Tang, BZ
Cited work: Macromolecules
Cited year: 1999

Other publications that have cited that reference
**Web of Science (Advanced features)**

**Cited-Reference Searching**

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**Cited Reference Search**

Find the articles that cite a person's work.

**Step 2:** Select cited references and click "Finish Search."

Hint: Look for cited reference variants (sometimes different pages of the same article are cited or papers are cited incorrectly).

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**CITED REFERENCE INDEX**

References: 1 - 6 of 6

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<table>
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<tr>
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<th>Cited Author</th>
<th>Cited Work (SHOW EXPANDED TITLES)</th>
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<th>Volume</th>
<th>Issue</th>
<th>Page</th>
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<td></td>
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<td>View Record in Web of Science Core Collection</td>
</tr>
</tbody>
</table>
Web of Science (Advanced features)

Cited-Reference Searching

Citing Articles: 69
For: Strong luminescence from poly(1-alkynes)...

Times Cited Counts
76 in All Databases
70 in Web of Science Core Collection
61 in Science Citation Index Expanded (SCI/SE)
15 in Conference Proceedings Citation Index - Science (CPCI-S)
1 in Book Citation Index - Science (BKCI-S)

Refine Results

Web of Science Categories
- POLYMER SCIENCE (40)
- MATERIALS SCIENCE MULTIDISCIPLINARY (10)
- CHEMISTRY PHYSICAL (8)
- OPTICS (8)

Search within results for...
Organize References

**RefWorks**

Online tool to help you organize your citations and create a consistently formatted bibliography (reference list)

You can import citations directly to RefWorks from most Library databases & Google Scholar

Create folders to organize your citations

Generate a bibliography in different styles (AIP, ACM, Elsevier,)

Use "Write-N-Cite" to create in-text references

Library Guide for RefWorks:

- [https://libguides.ust.hk/newrefworks](https://libguides.ust.hk/newrefworks)
Browsing Journals... much easier!

BrowZine

BrowZine is an app that consolidates scholarly journals from multiple publishers and platforms into an easily browsable format, optimized for tablets.

Current and back issues of journals back to 2005.

Article links can be also be shared via email and various social media platforms and exported to Refworks.

Library Guide for BrowZine:
- https://libguides.ust.hk/browzine
PowerSearch integration

“View Journal Contents” – open the current issue of the journal

“View Issue Contents” – open and highlight the article in the particular issue of the journal

“Download PDF” – Get full-text PDF in one-click!
Install browser plugins!!
Look for Open access articles

Unpaywall

Open Access Button
Ready to Getting Published?

Resources for Authors:
- Elsevier (Author workshop – video)
- Springer (Author workshop - video)
- Taylor & Francis

Research Bridge – Open Access

Tips on Managing Your Publications
- Use a consistent, unique name
- Update your publication list regularly
- Keep track of times cited by others
- Set up Google Author Profile, ResearcherID (WoS), ORCID
- Inform database providers of any errors in their records
Make sure... Create your ORCID!

http://repository.ust.hk/orcid/

• The aim is to provide a persistent digital identifier that distinguishes you from every other researcher

• A profile to showcase your outstanding works, suitable for applying scholarship, research funding
Data management... is also important

HTTPS://LIBGUIDES.UST.HK/DATA-CURATION
Deposit your dataset in DataSpace@HKUST
Ask for Help... never to late

Library Services for Postgraduate:
http://library.ust.hk/help-for/postgraduates/

One-to-one coaching

Jacky Leung
lbjacky@ust.hk
Go to [http://library.ust.hk/feedback](http://library.ust.hk/feedback)

Find the workshop
- PDEV6770A Search Research Literature (for LIFS, CHEM & OCES)
- Click “Feedback”
Ask a Librarian @
WhatsApp: 9701 1055
Tel: 2358 6760
Email: lbref@ust.hk
one-to-one coaching: lbjacky@ust.hk