

Subject Guides

Chemical Engineering

1. Getting Started – *What's it all about?*

If you are not sure what your topic is all about, look up it in a **dictionary** or **encyclopedia**. Start with:

Title	Item Location	Call No.
Kirk-Othmer encyclopedia of chemical technology	Kejuruteraan	TP9.K592 1978 r Kejuruteraan
Ullmann's encyclopedia of industrial chemistry	Kejuruteraan	TP9.U41 1985 f r Kejuruteraan
Encyclopedia of chemical processing and design	Kejuruteraan	TP9.E56 2006 Kejuruteraan
Concise polymeric materials encyclopedia	Kejuruteraan	TP1110.C744 1999 f r Kejuruteraan
Encyclopedia of food science and technology	Kejuruteraan	TP368.2.E59 1992 f r Kejuruteraan

What's the latest? For a recent overview of your topic try a **handbook** or a **yearbook**. They can have all kinds of facts, figures and precise information. Try:

Title	Item Location	Call no.
Perry's chemical engineers' handbook	Kejuruteraan	TP155.C5185 1997 r Kejuruteraan
CRC handbook of chemistry and physics : a ready- reference book of chemical and physical data	Kejuruteraan	QD65.C911 2005 r Kejuruteraan
Guidelines for chemical process quantitative risk analysis	Kejuruteraan	TP155.5 .G947 2000 Kejuruteraan

2. Next Steps – *Start with a book*

Use the **Keyword search** in the Library's Catalogue. You can search using words like - **plastics**

You can also browse the catalogue, or browse the shelves at the following **call numbers** –

TP	Chemical Technology
TP155 – 156	Chemical Engineering
TP1080 – TP1185	Polymers
TA170 - 171	Environmental Engineering

3. Locating up-to-date information – *Subject-specific journal articles*

For recent information, journal articles are often the best sources. Looking through individual journals in the hope of finding relevant material is time-consuming. It is better to use the databases to find articles on your topic. Access to all *databases* is via the Library's e-Resources.

Start with the following **key databases** for this subject –

Database name	Content Notes
ScienceDirect	An electronic collection of science, technology and medicine full text and bibliographic information published by Elsevier Science and its various imprints, including Academic Press and the Harcourt Health Sciences group.
Proquest science journals	Proquest science journals is a resource for students studying applied and general science. It covers all major fields of study including physics, chemistry, engineering, earth sciences and astronomy.
Scopus	<p>In January 2007 Scopus announced an agreement with major publishers and societies to add their archives. Scopus has now loaded complete archives for over 2,450 Journals from several publishers back to 1823, Volume 1, Issue 1. With the addition of the archives the pre-1996 material has grown from 15 million records to 18 million records.</p> <p>In 2007 and 2008, abstracts from complete archives have been added from: Springer/Kluwer, American Physical Society (APS), American Institute of Physics (AIP), Institute of Physics (IoP), Royal Society of Chemistry (RSC). In addition: The full archive of the journals Nature and Science have now been completed and includes first record of "The Lancet" in 1823.</p> <p>By adding the archives a wide variety of users will be able to retrieve more results when searching in Scopus. One example is the famous paper of Einstein, Podolsky and Rosen, who in 1935 introduced a thought experiment challenging long-held ideas about the relation between the observed values of physical quantities and the values that can be accounted for by a physical theory. What became known as the EPR paradox (after the last names of the authors), is still being cited in Scopus - so far over 2,600 times.</p>
SpringerLink	SpringerLink is a visionary information service created for the Internet by the science publisher Springer. SpringerLink is divided according to field into the so-called Online Libraries of life sciences, chemical sciences, geosciences, computer science, mathematics, medicine, physics & astronomy, engineering, environmental sciences, law, and economics.
PolymersnetBase	<p>Welcome to a wealth of data online with the new CRC POLYMERS_{net}BASE.</p> <p>Now you can simultaneously search three databases of polymer information:</p> <ul style="list-style-type: none"> • Polymeric Materials Encyclopedia • Polymers: A Property Database • Polymer Books from Taylor and Francis
NanonetBase	NANO_{net}BASE is the world's premier online collection of nanoscience and nanotechnology references. Bringing together leading experts from the most prestigious and cutting-edge academic, industrial, and government institutions, it offers researchers, students, and professionals the most authoritative and convenient source available for both introductory and specialized information

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There may be other databases for the subject. Check online at <http://lib.usm.my/equip-usm/custom/dbusm.jsp>

Make sure you use the right words for your search. When you are searching, near enough may not be good enough. Ask the library staff for assistance check a database guide or attend an information skills class.

Once you have found your journal articles, you may need to search the Library's catalogue for the journal title. Use the Title or Keyword search in the Catalogue. Remember that many journals are now available in full text online through the Library's Catalogue. They are also linked directly from within your database search.

4. Exploring further – Selected Internet Sites

Start with the following **key internet sites** for this subject –

http://chembiofinderbeta.cambridgesoft.com/	ChemBioFinder - providing free chemical searching to hundreds of thousands of scientists since 1995.
http://webbook.nist.gov/	NIST chemistry webbook – contains Thermochemical data, Reaction thermochemistry data, Ion energetics data etc.
http://hermes.erin.gov.au/pls/cig_public!/CIGPPU BLIC.pStart	National Chemical Information Gateway - relevant information about chemicals as quickly and easily as possible. Information has been arranged into topics
http://www.aiche.org/	American Chemical Society - the worlds leading organization for chemical engineering professionals.
http://www.abklex.de/chemeng/chem-eng.html	Chemical Engineering URL's Directory
http://www.che.ufl.edu/WWW-CHE/index.html	WWW Virtual Library – Chemical Engineering – A catalogs of information resources that relevant to chemical and process engineering
http://www.webelements.com/	WebElements periodic table - a high quality source of chemistry information on the WWW relating to the periodic table. Coverage is such that professional scientists and students at school interested in chemistry and other sciences will all find something useful
http://www.icheme.org/	IChemE - the hub for chemical, biochemical and process engineering professionals worldwide.

5. Finding specialized information – You may also need these

For some topics you will need to consult specialist information sources

ASTM	TA404.5.A512 2005 f Kejuruteraan	Annual book of Standards
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More questions? – Ask at the Information desk or check the Library's Web Page: at <http://www.lib.usm.my> or <http://library.eng.usm.my/englib/index.html>