The Library
UC SAN DIEGO

Chemistry Research Resources

http://ucsd.libguides.com/chemistry

(Everything listed here is linked on the guide.)

With all of these databases, you can:

- Connect to the full text of the articles you find via UC-eLinks
- Export or import references to the bibliographic manager of your choice (EndNote, etc.)
- Set up search alerts to be notified when new articles of interest are added.

	Why Use?	Notes
SciFinder	• Set of connected databases that together allow you to search millions of chemistry journal articles, conference papers, patents, AND chemical substances and reactions. • Core resource for biochemistry, materials science, nanotechnology, chemical engineering, physics, environmental sciences, and biomedical sciences. • Search by author or topic, plus substance name or CAS registry number, structure, substructure, and reaction. • Information on registration, training resources: http://ucsd.libguides.com/scifinder	• Requires a one-time registration, then login with that username and password with each use. • Does not work with WebVPN (Proxy and AnyConnect client VPN will work). • Natural language searching rather than "and/or" Booleans.
Web of Science	• Indexes millions of journal articles and conference proceedings in all science and engineering subjects (6,700+ journals). Excellent starting place for any topic search. • For each article, you get a list of the papers the authors cited, any papers that have since cited the article, and related articles based on common citations.	• Can cross search with Inspec and Derwent Innovations Index (patents).
PubMed	• Covers the biomedical literature and related sciences (biochemistry, bionano- topics, biomaterials, etc). • Rich subject terms (MeSH) that help with searching and finding related articles.	• The free www.pubmed.gov link will get you to most full text (via Proxy or VPN), but the UC version will get you to UC-eLinks.
Reaxys	• Database of 26 million substances with lots of property data, and 39 million reactions. Each property and reaction has at least one associated journal reference. • Search by substance name/CAS-RN, structure, substructure, reaction, or property values. Some author and topic searching as well.	• Not as strong for keyword/topic or author searching. • Some overlap with SciFinder, but lots of unique content (indexes more properties). • Use with SciFinder for any substance or reaction searching.
Compendex	• Indexes engineering journals and conference proceedings. • Includes: chemical engineering, nanotechnology, materials science, and environmental science.	• Can get list of citing papers for the article via Scopus (though we don't access to the full database).
Inspec	• Indexes journals and conference proceedings in physics, electrical engineering, and computer science. • Good for physical chemistry and nano- topics.	• Can cross search with Web of Science.
Google Scholar	• Like Google, but searches scholarly literature at the article text level. • Good for quick searches and known items.	• Limited options for sorting and refining searches.

And if you need more resources…. *(NOT a complete list)*

Books – Print and Online

- All of our books are in Roger, the Library catalog – http://roger.ucsd.edu
- Most of the books we currently acquire are online, including Wiley, Springer, American Chemical Society, Royal Society of Chemistry, Elsevier/Science Direct, etc.
- Along with the catalog, you can also search within the full text of the books (and articles) at the publishers' websites.

Dissertations

- Start with the Dissertations & Theses database.
- UC dissertations from 1997 to date are free to download. Others can be requested.

Crystallographic Data

- Cambridge Structural Database System (CSDS)
  - 800K+ small-molecule organic and metal-organic crystal structures, with property data and journal article references.
  - Web version and "power user" version that can be downloaded.
- Inorganic Crystal Structure Database
  - 177K+ inorganic crystal structure, with property data and article references
- Powder Diffraction File (Library use only, in the GIS lab)
  - Powder diffraction and single crystal data, 354K entries (mostly inorganic)
- International Tables for Crystallography

More Organic Chemistry Resources

- Science of Synthesis
  - Reviews of reliable and effective 28K synthetic methods, with experimental procedures.
- Organic Reactions
  - Reviews of 200K+ reactions, including scope/limitations, applications to synthesis, and experimental procedures.
- e-EROS – Encyclopedia of Reagents for Organic Synthesis
  - In-depth information on 4500 reagents and catalysts.
- Organic Syntheses
  - Another collection of synthetic methods, with all experimental procedures repeated for reproducibility and reliability.
- MarinLit
  - Data and journal article references for marine natural products.

More Physical Property Data Resources

- SciFinder and Reaxys are great starting places.
- Knovel
  - Searches across handbooks and databases from multiple publishers.
- CRCnetBASE
  - Includes Handbook of Chemistry & Physics, Combined Chemical Dictionary.
- Merck Index
  - Property data for 10,000 significant compounds.

Background Information / Getting Started with New Topics

Overviews of topics with bibliographies of articles for more reading. Some examples:

- Kirk-Othmer Encyclopedia of Chemical Technology
- Ullmann's Encyclopedia of Industrial Chemistry
- Encyclopedia of Biological Chemistry
- Encyclopedia of Inorganic Chemistry
- Comprehensive Renewable Energy
- Polymer Science: A Comprehensive Reference
- Wiley Encyclopedia of Chemical Biology
- Encyclopedia of Chemical Physics & Physical Chemistry