

## Library Instruction: Physical Chemistry

### Seeking information about chemistry instrumentation and substances

#### I. Information Seeking: Review

- A. Information Needs: Identify the subject matter (e.g., science, chemistry), type of information (e.g., basic overviews, in-depth articles), and levels (e.g., general public, professional, or scholarly literature) you need in order to match that need with the subjects, information type and levels covered by the contents of a database
- B. Information Seeking Techniques: Browse, Search
- C. Search Process: search engine matches key words in query to documents or document summaries in databases
- D. General steps to for seeking information:
  1. Identify and conceptualize topic: Identify information needs and find key terms
  2. Search database for citations to in-depth information
  3. Locate the information

#### II. Using Library Resources for Seeking Information on Your Topics

- A. Locate resources for identifying and conceptualizing topics/key terms: Seeking overviews and summaries of concepts
  1. Browse print sources from relevant sections of Reference Collection
    - See list of suggested sources for Chemistry from the in the STL Select an Area to Research page ([http://lib.newpaltz.edu/research\\_areas/chemistry.html](http://lib.newpaltz.edu/research_areas/chemistry.html))
    - See LC Classification System for relevant call number areas to browse (<http://www.loc.gov/catdir/cpso/lcco/lcco.html>). For Example,
      - Q1-390 [Science (General)]
      - QD1-999 [Chemistry]
      - QH301-705.5 [Biology]
      - QE996.5 [Geology]
  2. Do an Advanced Search of the STL online catalog for a relevant subject heading (e.g., chemistry) and limit the search to the Reference Collection
- B. Resources for researching topics in-depth
  1. Varied subject, full text databases [e.g., Science Direct, JSTOR, Wilson Select Plus]
  2. Electronic databases for Chemistry [e.g., ACS Publications, SciFinder]
  3. Other specialized subject databases [e.g., Lexis-Nexis Legal Search, Medline]
  4. STL online catalog
  5. STL MetaLibrary
- C. Resources for locating documents
  1. Electronic database being searched
  2. SFX and/or Serials Solutions and/or STL online catalog
  3. ILLiad

### III. Searching Electronic Databases

- A. Steps for Searching databases (E.g., Science Direct)
1. Go to STL homepage > Databases > Quicklinks > Science Direct > click on Go
  2. Click on the Search button at the top of the page to reach the interface for the **search engine**
  3. Enter your key terms in the spaces in the query boxes — specifying the appropriate Boolean Operators to connect terms, which document field you want to search, and any limiters to your search
  4. Check results for amount of documents found and their relevance to your needs
  5. Refine search query until you obtain the results you are looking for
  6. Preserve results: print, email, save with My Ebsco
  7. Locate the documents you want in full-text form from an electronic database, or in print form from STL, or in either form via interlibrary loan
- B. Demonstration Exercise: varying key terms and search fields in queries  
**[For this example, insert your own search terms for an instrumentation technique and a substance—e.g., the use of calorimetry in research on polystyrene. Note use of underlined italics to denote a search terms.]**

**Note the quantity and quality of results for each of the following searches:**

1. Search your instrumentation term [e.g., calorimetry] in the Abstract, Title and Keywords fields AND your substance term [e.g., polystyrene] in the Abstract, Title and Keywords fields
2. Search your instrumentation term [e.g., calorimetry] in the Keywords field AND your substance term [e.g., polystyrene] in the Keywords field
3. Search your instrumentation term [e.g., calorimetry] in the Title field AND your substance term [e.g., polystyrene] in the Abstract field
4. Search your instrumentation term [e.g., calorimetry] in the Keywords field AND (your substance term AND an additional term) [e.g., (polystyrene AND heat)] in the Abstract field

### IV. Seek additional help with library resources and services

- **STL Select an Area to Research** — Click on the **Select an Area to Research** button on the STL homepage for links to academic discipline-based areas to Research (e.g., Chemistry, Biology, Geology).
- **“Ask a librarian”** — click on the **Ask a Librarian** link from the STL homepage to select options for contacting a librarian for help
- **Interlibrary loans** — click on the **ILLiad** link from the STL homepage; create an ILLiad account (or use your present one if you have already signed up); fill out the interlibrary request form