

*Journal articles, conference papers, and other information sources for materials science research.*

### Electronic Journals and Conference Proceedings

The Hanford Technical Library (HTL) subscribes to thousands of electronic journals. Search for your favorite journal by title <https://library.pnl.gov/journals.asp> or review the **Resources by Subject** page on **Materials Science** at <https://library.pnl.gov/resourcebysubject.asp?subjectid=40> for additional resources.

You can also use Leona, the Library's online catalog, to locate journals or conference proceedings: <http://libcat.pnl.gov>.

**Unless otherwise noted, desktop access to the following resources is available to PNNL staff only; also available at user stations at the Hanford Technical Library.**

### EBooks and Epedias: <https://library.pnl.gov/ebooks.asp>

- **Annual Review of Materials Research:** <http://arjournals.annualreviews.org/loi/matsci> This publication provides original critical reviews of the significant primary literature and current developments in materials science.
- **ASM Handbooks:** <http://products.asminternational.org/hbk/index.jsp> *ASM Handbooks Online* features the complete content of twenty-one American Society for Metals Handbook volumes plus two Desk Editions:
  - **Engineered Materials Handbook, Desk Edition:** <http://products.asminternational.org/hbk/index.jsp> (Under **ASM Desk Editions** in the **Contents** window). This handbook is a comprehensive reference work on the properties, selection, processing, and applications of the most widely used nonmetallic engineering materials.
  - **Metals Handbook, Desk Edition:** <http://products.asminternational.org/hbk/index.jsp> (Under **ASM Desk Editions** in the **Contents** window). This handbook is a reference source on the properties, selection, processing, testing, and characterization of metals and their alloys.
- **Kirk-Othmer Encyclopedia of Chemical Technology:** <http://www.mrw.interscience.wiley.com/emrw/0471238961/home> A chemical encyclopedia providing full text access to information on the latest developments in chemical technology and allied fields. A tip sheet is available at: <https://library.pnl.gov/tipsheet/kirk.pdf>
- **MRS Online Proceedings Library:** [http://www.mrs.org/s\\_mrs/sec.asp?CID=1727&DID=38980&SID=1](http://www.mrs.org/s_mrs/sec.asp?CID=1727&DID=38980&SID=1). *MRS Online Proceedings Library* provides access over 20,000 peer-reviewed MRS Proceedings papers from the Spring 2000 meeting to the present.
- **Ullmann's Encyclopedia of Industrial Chemistry:** <http://www.mrw.interscience.wiley.com/emrw/9783527306732/home> This encyclopedia provides full text access to information detailing the science and technology in all areas of industrial chemistry. A tip sheet is available at: <https://library.pnl.gov/tipsheet/ullmann.pdf>

### Industry Codes and Standards

- **Specs & Standards Database:** <http://www.ihserc.com/> This database provides current full-text standards for selected organizations. The Hanford Technical Library subscription includes the American Concrete Institute (ACI) and the American Society for Testing and Materials (ASTM) standards packages. **Desktop access available to PNNL, DOE, Fluor Hanford, and CH2M Hill Hanford Group, Inc.; also available at user stations at HTL.**

**Unless otherwise noted, desktop access to the following resources is available to PNNL and staff on HLAN only; also available at user stations at the Hanford Technical Library.**

**Databases:** <https://library.pnl.gov/databases.asp>

- **Compendex:**

<http://www.engineeringvillage2.org/controller/servlet/Controller?CID=quickSearch&database=COMPENDEX>

*Compendex* contains research information from engineering journals, conferences, and technical reports, covering nuclear technology, chemical and process engineering, materials, aerospace and automotive engineering, electronics and communication, as well as narrower subtopics within all these and other major engineering fields.

- **Corrosion Abstracts** - [http://totem.pnl.gov:2103/ids70/advanced\\_search.php?SID=upjegc77fqakckas96sb6v98p2](http://totem.pnl.gov:2103/ids70/advanced_search.php?SID=upjegc77fqakckas96sb6v98p2)  
*Corrosion Abstracts* provides citations and abstracts for materials in the area of corrosion science and engineering. Topics covered include testing, corrosion characteristics, preventive measures, and materials construction and performance.
- **Knovel Online Books** <http://www.knovel.com/knovel2/library/default.jsp> This full-text database includes over 650 book titles and new information is added monthly. A few examples of the books accessible from the Knovel site include:

<i>Aluminum Alloy Database</i>	<i>Properties of Complex Inorganic Solids</i>
<i>Encyclopedia of Smart Materials, Volumes 1-2</i>	<i>Titanium</i>
<i>Fundamentals of Metal-Matrix Composites</i>	<i>Uhlig's Corrosion Handbook (2nd Edition)</i>
- **METADEX:** [http://totem.pnl.gov:2077/ids70/advanced\\_search.php?SID=9hki5gm4rmd5eo8o4hbiidcfo3](http://totem.pnl.gov:2077/ids70/advanced_search.php?SID=9hki5gm4rmd5eo8o4hbiidcfo3) *METADEX* contains information on metals and alloys; their properties, manufacturing, applications, and development and includes citations and abstracts from over 2,000 journals, plus patents, dissertations, government reports, conference proceedings. Coverage from 1966-2004.
- **NTIS - National Technical Information Service** - <http://www.engineeringvillage2.org/controller/servlet/Controller?CID=quickSearch&database=4> *NTIS* includes citations and abstracts for US government-sponsored research worldwide scientific and technical in reports, journal articles, data files, computer programs and audio visual products from Federal sources.
- **Polymers: A Properties Database:** <http://www.polymersdatabase.com/> This reference source includes data on applications of commercial products, general information, stability, synonyms, properties, references, and more.
- **Web of Science:** <http://isiknowledge.com/wos> *Web of Science* is a multidisciplinary database covering all fields of engineering and materials science. **Desktop access to PNNL staff only.**

Tip sheets for the above resources are available at: <https://library.pnl.gov/tipsheet/index.asp>

**Technical Reports:** <https://library.pnl.gov/resourcebysubject.asp?subjectid=56>

Many government reports are available electronically and some of the most useful DOE report sites are listed on this site. The Hanford Technical Library houses over 800,000 government technical reports available in hard copy and on microfiche. Most of these reports are not listed in the library catalog. Contact the Information Desk (509/372-7430) to inquire about individual reports or for help locating report literature.

The following resources are publicly available databases and can be accessed via desktop from office or home:

- **DOE Energy Citations Database** <http://www.osti.gov/energycitations/> This site provides access to DOE publicly available citations from 1948 through the present, with links to some full-text materials.

**Internet Resources:**

- **Materials Safety Data Sheets (MSDS):** <http://jrm.phys.ksu.edu//Safety/msds.html> This site, hosted by Kansas State University, provides links to various sources for MSDS.
- **Nanotechweb:** <http://www.nanotechweb.org/> This site, hosted by the Institute of Physics (IoP) provides links to nanotechnology news, products, jobs and events. There are also links to highlights from the journal, *Nanotechnology*. HTL subscribes to this journal, so full text of articles is also available at this site.