

# PATENT SEARCHING

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# Patent Searching

Patents are an excellent source of information on particular inventions or chemical processes. Patents can be searched by patent number, inventor, assignee, keywords, classification numbers, etc. SciFinder Scholar allows searching of chemical patents with CAS Registry Numbers. Web of Science (1945+) and SFS (1999+) provide citation searching of patents.

Performing a preliminary patent search, often called a patentability search, first requires a determination of the appropriate class/subclass(es) in The Manual of Classification:

<http://www.uspto.gov/go/classification/>

Once a class/subclass is determined, a corresponding list of existing patents can be generated. A patent search that relies on keyword searching alone will be woefully inadequate. There is no controlled vocabulary for patents, and inventions are described in any number of ways.

The USPTO advanced search page allows class/subclass searching as well as Boolean searching of 25 different fields.

Glossary note: An exemplary claim is defined as the claim published in the Official Gazette. It is usually the first claim.

## ORDERING PATENTS / PATENT FAMILIES

**Placing an order for a patent may appear to be a relatively simple and uncomplicated process, especially if a patent number or Chemical Abstracts accession number is available. However, there are some non-obvious pitfalls.**

The Chemical Abstracts Service routinely abstracts the first publicly available document. This is often a Japanese, German, European or PCT (WO) patent application, which may be the first, in what becomes a family of related patent documents. Chemical Abstracts' definitions follow.

"A patent family is a collection of patent documents concerned with a particular invention. A family member is considered equivalent to the first-abstracted document if the family member and the abstracted document contain only one priority number and that number is common to both documents." Additional information on related or non-priority patents and definitions of the terms: 'Division', 'Continuation-in-part', 'addition', 'continuation', etc." is available (1).

1. Chemical Abstracts Service. Patent Index. Introduction. v.128, 1998 (page 11).  
Patent Information from CAS - <http://www.cas.org/ONLINE/UG/patentmanual.pdf>

**Thus, simply ordering a patent document (especially a patent application), without first checking the family history, may overlook:**

Additional information; an English language equivalent; changes in the patent's legal status; and significant cost (e.g. WO2000058473 to CuraGen has 5,509 pages and 6,400 index terms).

Both SciFinder Scholar and the fee-based World Patent Index (STN/Dialog) provide extensive information on patent families.

# SCIFINDER SCHOLAR (Chemical Abstracts)

CLS WEB PAGE / START MENU / REQUIRES CALTECH ID & POETA ALIAS

SciFinder Scholar includes information on both chemical patents and patent families. Since 1907, Chemical Abstracts has abstracted and indexed over 3M patents worldwide, in all areas of chemistry and chemical engineering. CAS is currently abstracting and indexing over 100K patents each year. Patent titles may be altered to make them more descriptive.

SciFinder Scholar:

- Is an excellent resource for prior art searching (i.e. both articles and patents).
- Can be searched with patent numbers / inventor or assignee names / text words / registry numbers. Then limit search results to Patents.
- Searching for Japanese patent numbers may be problematic:  
<http://www.cas.org/STNEWS/JULAUG01/patent.html>
- Patent information on a chemical substance or invention appears with the bibliographic information for a reference.

Bansleben, Donald A.; Connor, Eric F.; Grubbs, Robert H.; Henderson, Jason I.; Younkin, Todd R.; Nadjadi, Andrew R., Jr. Supported catalysts and olefin polymerization processes utilizing same. PCT Int. Appl. (2000), 59 pp. CODEN: PIXXD2 WO 0056787 A1 20000928 CAN 133:267225 AN 2000:688286 CAPLUS

- Patent Family Information will display, if available, in the bibliographic detail for a reference (Full and Summary formats only).

## Patent Family Information

Patent No.	Kind	Date	Application No.	Da
WO 2000056787	A1	20000928	WO 2000-US3730	20
US 6197715	B1	20010306	US 1999-274377	19

## Priority Application Information

US 1999-274377 19990323

## Publications:

Patent Information from CAS: <http://www.cas.org/ONLINE/UG/patentmanual.pdf>

# US PATENT AND TRADEMARK OFFICE

## USPTO Web Patent Databases

<http://www.uspto.gov/patft/>

Full text searching of U.S. Patents from 1976+ and U.S. Applications from 3/2001+

Patent or classification number searching from 1790+

Requires a special AlternatIFF file format viewer ( <http://www.alternatiff.com/> )

## USPTO - 2001 Catalog: Products and Services

<http://www.uspto.gov/web/navaids/siteindx.htm>

This page provides links to:

Expired Patents.

Patent Classification Concordance (U.S. PC) to (IPC)

Patent Classification Index / ... Manual / ...Definitions, etc.

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## IFI CLAIMS (US PATENTS)

<http://www.chemweb.com/databases/ifi/renderer/display.exe?jcode=ific>

- All chemical patents since 1950
- All utility patents since 1963
- Complete collection of U.S. patents issued from 1971-74, including 96,000 records that are missing from the USPTO online database
- All design and plant patents since December 1976

# EUROPEAN PATENT OFFICE

<http://www.european-patent-office.org/espacenet/info/features.htm>

esp@cnet network

<http://ep.espacenet.com/>

Quick search Keywords/Patent #s/Assignees in the Worldwide Database:

Patents/Applications from over 50 countries (with images). In some cases (e.g. major European countries and US) limited data is available back to 1920.

or search Front Page data in:

Patent Applications in their Original Language from either the EPO or WO/PCT, published in the most recent 24 months. Full document display / facsimile mode.

or search full Front Page data (~1968+) in the Worldwide or Japan Databases:

Patents/Applications ... from over 50 countries (with images) & Japan (abstracts since 1976 and front page images since 1980). In some cases (e.g. US) limited data is available back to 1920.

Limitations & coverage are given under the ? (help) button on < ep.espacenet.com/ > by clicking on "Coverage of the Database". Note: California Inst Techn vs spelled out

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## DEPATISnet (German Patent Office)

<http://www.depatistnet.de/> Beginner's Search / Expert Search / Patent Family Search

Worldwide data ( [http://epart.epo.org/patlib2001/bundesdruckerei\\_e.pdf](http://epart.epo.org/patlib2001/bundesdruckerei_e.pdf) ) are imported into DEPATIS in the original language (e.g. JP abstracts in English, title and abstracts of French documents in French). When searching documents of specific countries, search terms must be in the appropriate language.

Excellent search forms with examples. WW coverage similar to ESP@CENET

# FREE INTERNET PATENT INFORMATION

SERVICE	SFS(CA)	USPTO	IFI Claims	Esp@cenet	DEPATISnet
COVERAGE*	WW(Ch)* 1907+ Family*	US-1976+ 1790+	US-1963+ Ch-1950+	WW/Engl* EP-24 Mo. WO-24 Mo. JP-1980+	DE-1987+ 1877+ WW-1970+ 1920+
SEARCH**	FP-1907+ P# CAS-RN Family*	FT** (P#/C#)**	FP/CL	WW-FP** EP/WO-FP WW-FP JP-FP	FT** (P#)** WW-FP
DISPLAY***	FP Family	FT*** Image***	US FP/CL	EP-Image*** WO-Image WW-Image JP-FP Image	FT*** Image***

CL=Claims C#=Classification Number EP=European Patent FP=Front page (incl. abst.)  
 FT=Full Text JP=Japan P#=Patent Number WO=WIPO/PCT applications

\* - SciFinder Scholar indexes and abstracts worldwide chemical patents since 1907+. SFS gives SFS Patent Family information (~1967+), relating foreign patents to US and other equivalents.

\* - Esp@cenet: Coverage → click ? (left margin) → click on Contents then Coverage.

\*.- DEPATISnet: Coverage → only available in German (under Hilfe ... then ...Allgemeine Hilfe

\*\* - USPTO: 1790 -1975 search only by Patent or [Current] Classification Number. 1976+ Full Text

\*\* - Espacenet: Simple search for WW -- extended search for EP/WO/WW/JP

\*\* - DEPATISnet: DE 1877-1986 search only by Patent number. DE 1987+ Full text -- Also WW

\*\*\* - USPTO displays full text(1976+). Images (1790+) require a "TIFF" viewer (on CLS Workstations)

\*\*\* - ESP@CENET -- FP images from 1920+ for WW / full page images for recent EP/WO

\*\*\* - DEPATISnet displays full text (1987+) and Images (1877+) of German patents. WW images

SciFinder Scholar (CLS Workstation Desktop / Start Menu / Requires Caltech ID for login).

USPTO <http://www.uspto.gov/patft/>

IFI Claims <http://www.chemweb.com/databases/ifi/renderer/display.exe?jcode=ific>

Esp@cenet <http://ep.espacenet.com/>

DEPATISnet <http://www.depatistnet.de/>

## Current Awareness (in print)

### Chemistry & Industry

Reviews of industrial chemistry patents

### Environment International

Patent Abstracts on a wide variety of environmental topics

### IBM Journal of Research and Development

Recent IBM patents

### IEEE Microwave and Wireless Components Letters (SFL)

Abstracts and drawings of recent patents.

### Microporous and Mesoporous Materials (SFL)

'Patents Report' is a selection of worldwide patents, includes abstracts.

### New York Times (MIL-5)

Recent U.S. Patent in each Monday's Business Section, with commentary.

### Waste Management (SFL)

Selected U.S. patents with short abstracts.

## Speciality Databases (free online)

DNA Patent Database <http://208.201.146.119/>

DOE Patent Databases <http://www.osti.gov/waisgate/gchome2.html>

## Current Awareness (free online)

Patent Alert (US Patents) <http://www.patentalert.com/>

For other patents, go in on a regular basis and put in a date / date range and keywords, codes, assignee, inventor, etc. Alerts cannot be "set up" to run automatically on these services:

Esp@cenet <http://ec.espacenet.com/espacenet/>

World Intellectual Property Organization – PCT Gazette <http://pctgazette.wipo.int/>

The results of searches run on the "free" internet services vs the commercial online services can vary dramatically. Searches on the "free" websites can be more time consuming and less comprehensive than a search on a commercial service.

# Current Awareness (fee-based services)

The cost of fee-based online services can vary by annual subscription fee, number of records retrieved, how often the searches are run, number of records printed, connect time, etc. Saved searches can be set up on these services and results can be delivered automatically via email, each day, week or month.

The results of patents searches on fee-based services are generally fast, efficient and comprehensive. Commercial databases have in-depth detailed indexing which enables the professional searcher to find patents that are related to a specific technology.

Fee based services (supplemental indexing/title augmentation/etc.) include:

World Patent Index (Dialog/STN) 1963+ <http://www.derwent.com>

MicroPatent e-alerts [http://www.micropat.com/0/new\\_alerts9809.html](http://www.micropat.com/0/new_alerts9809.html)

## Additional Reading

Grubb, Philip W. "Patents for chemicals, pharmaceuticals, and biotechnology.  
3d ed., 1999. MIL-9 T211 G78 1999

Knight, H. J. "Patent Strategy for Researchers and Research Managers.  
2nd ed., 2001 SFL KF3120.Z9 K58 2001

Patents and Trade Secrets / [Patents, Literature](#)  
Encyclopedia of Chemical Technology  
<http://www.mrw.interscience.wiley.com/kirk/>

Cogen, J.M. "Technical Disclosures; Advanced Tactics".  
Chemical Innovation, 2001, 31(7), 33-38.  
<http://pubs.acs.org/subscribe/journals/cinnov/31/i07/html/07cogen.html>

STN News. "Searching for Technical Disclosures". STNews, 2001, 17(4), 9.  
<http://www.cas.org/STNEWS/JULAUG01/julaug01.pdf>

Fitzgerald, Marc C. "A patent miner's story".  
Chemical Innovation, 2000, 30, 54-55.  
<http://acsinfo.acs.org/subscribe/journals/cinnov/30/i11/html/11inet.html>

Felton, M.J. "A Call for Bounty Hunters". Modern Drug Discovery, 2001, 4(3), 57-58/.  
<http://pubs.acs.org/subscribe/journals/mdd/v04/i03/html/03patents.html>

# PATENTS / STANDARDS - Caltech Web Page

<http://library.caltech.edu/collections/chemistry.htm>

Bounty Quest (Rewards for Knowledge)

Chemical Abstracts Service. Patent Information from CAS (Print Version QD 8 A5 1996)

Chemical Patents Plus (All US Patents, Full Text (1975+) with CAS Indexing for chemical patents). Free searching, with registration. Free display of patent titles (augmented) and abstracts and CAS Registry Numbers (CASRN).

Depatisnet (German Patent Images 1877+ and Full text 1987+) - Deutschen Patent- und Markenamt. Free searching of worldwide patent documents (~1970+), with links to images (~1920+) when available. See Esp@cenet

Depatisnet Information Service (description / Facsimile Archives content / search examples)

Derwent

American/British Spelling Dictionary

Glossary of Patent Terms

Esp@cenet Network (recent EP and WO Patent Applications, plus worldwide applications with English title/abstract and images). Free searching of worldwide patent documents (~1970+), with links to images (~1920+) when available.

Coverage details are given: about the esp@cenet network/contents/worldwide publications/coverage.

European Patent Office - links to EPIDOS NEWS, esp@cenet, Official Journal EPO.

Get-the-Patent (software for downloading patent images)

IFI Claims/U.S. Patent Database (Chemical 1950+, Utility 1963+, Design & Plant 1976+)

Free searching of U.S. Patents (with augmented titles, assignee name standardization, updated classifications, etc.)

Japan Patent Office

English Language Machine Translation of Patents

Industrial Property Digital Library

Patent Abstracts of Japan(PAJ)News

Markush Structure Searching - PIUG Workshop

Comprehensive Handout (pdf)

Presentation Slides (pdf)

MicroPatent

Patent Alert (free SDI updates for U.S. patents)

Patent Cafe (Invention, Business, Tech, Law)

Patent Cafe Magazine

Patent Information Users Group PIUG

PIUG Archive

Patent Searching on the Web (Comprehensive Site Listing)

Patent Searching: Tutorial and Guide (UT Austin)

Patent Watch (Chemical Innovation)

PatSee (software for downloading patent pages)

Pretty Strange Patents

SciFinder Scholar (CAplus) 1907+

Patent Coverage in Chemical Abstracts

Patent Files on STN (fee based)

Searching Japanese Patent Numbers

STANDARDS

ASSIST (100,000 DoD Specifications and Standards)

Beuth Verlag (DIN and ISO Standards, VDI Guidelines, DVS-M/R, ASTM Standards)

DAPS (DoD - Index of Specifications and Standards)

Global Engineering Documents - (Commercial source for International and National Standards, Specifications, etc.)

NSSN: A National Resource for Global Standards (commercial service providing free searching)

Techstreet (Commercial source for Standards, Technical Books, Materials Data)

Standards include: ASNI, ASTM, ASME, API, IEEE, ISO

Materials Data include: composition, properties, processing characteristics, etc.

World Standards Services Network

SurfIP (free multifile searching of patents & technical data)

UK Patent Office ([Copyright](#), [Designs](#), [Patents and Trade Marks](#))

Five Hundred Years of Patents

USPTO (U.S. Patent and Trademark Office) Full-text patents 1976+, Patent images 1790+, Applications 3/2001+

Patent ... Databases

Site Index

Wacky Patent of the Month

WIPO (World Intellectual Property Organization) Patent Applications (WO) see Espacenet

Xerox Disclosure Journal (1997-1998) [ LIB ANNEX [ax14u] has: v.1 (1976) - v.21 (1996)]

