

STN[®]

STN[®]: Comprehensive
Citation Searching

Agenda

- Overview
- Citation verification
- Citation searching

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Overview

In this section, you will review

- Terminology commonly used in citation searching
- Applications for this technique
- STN files containing citations and fields used to verify incomplete citations

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Overview

- Citation searching refers to searching
 - Citations from journal articles
 - Examiner citations from patents
- Citation searching generally involves
 - Extracting and searching citations from a paper
 - Converting known references to citation search terms and searching them
 - Evaluating the results of the citation search

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General Applications

- Retrieving a copy of a reference of interest
- Find related prior art
- Evaluating the utility and enablement of an invention
- Determining the relative importance of patents in a company patent portfolio
- Evaluating the importance of research published by an author or research institute
- Identifying what organizations are interested in a certain technology — new markets

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Citation Files

If you are interested in these subject areas (time periods)	And non-patent literature of this type	And/or patents from these organizations	Consider this STN file
Chemistry, biochemistry, chemical engineering (1997–)	Journals, reviews, conference proceedings, technical reports	US EP WO DE (1997–) GB FR (2003–) CA (2005–)	CAplus SM
Science, technology, medicine (1974–)	Journals, reviews, conference proceedings	none	SCISEARCH [®]
Chemical, electrical, mechanical (varies)	none	US (1973–) EP WO (1978–) DE JP GB (1994–)	DPCI

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Citation Files

If you are interested in these subject areas (time periods)	And non-patent literature of this type	And/or patents from these organizations	Consider this STN file
Chemical, electrical, mechanical (1978-), pharmaceutical (1963-), polymers (1966-)	none	EP WO et al	WPINDEX
All areas (1975-), selected technologies (1971-1974)	none	US	USPATFULL
Chemistry (1950-)	none	US	IFIPAT

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Citation Files

If you are interested in these subject areas (time periods)	And non-patent literature of this type	And/or patents from these organizations	Consider this STN file
All areas (1978-)	none	EP	EPFULL
All areas (1968-)	none	DE and EP/WO with DE as a designated state	PATDPA
All areas (1950-)	none	40 authorities	INPADOCDB

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Citation Verification

- Citation verification refers to finding an accurate, complete reference from an abbreviated reference that may appear
 - At the end of journal articles
 - On the front page of patents or listed in reports
 - In a disclosure or other parts of prior art discussions

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Citation Verification

SOURCE

/SO

**S J?/SO AND AMER?/SO AND CHEM?/SO AND 456/SO
AND 1995/SO**

Tips:

- Use very short word stems
- Truncate liberally
- Only use /JT when you are very sure of the exact spelling of the Journal
- Use SOurce field when searching pagination

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Citation Verification

AUTHOR (and INVENTOR)

/AU

S PAULING L?/AU

Tip:

- Use only first initial of the author's first name and truncate

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Citation Verification

CORPORATE SOURCE

/CS

S UNIV?/CS AND VIRG?/SO

Tips:

- Use very short word stems
- Truncate liberally

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Citation Verification

**PATENT NUMBER and/or
APPLICATION NUMBER**

/PATS,APPS

**S EP 260598/PATS,APPS
S AU 1987-78253/PATS,APPS**

Tips:

- Use the “superfields”
- Precede each number with a country code
- No space after comma in /PATS,APPS

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Example

4,233,351	A	11/1980	Okumura et al.	428/116
4,676,877	A	* 6/1987	Castillo et al.	205/74
4,882,014	A	11/1989	Coyle et al.	204/1.5
5,462,647	A	* 10/1995	Bhattacharya et al.	205/74

=> **FILE CAPLUS**

=> **S US4676877/PATS,APPS**

L1 1 US4676877/PATS,APPS

=> **D IBIB**

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Example

FOREIGN PATENT DOCUMENTS

DE 44 08 512 9/1995
DE 44 12 200 6/1996

```
=> FILE CAPLUS WPIDS

=> S DE 4408512/PATS,APPS
L1 2 DE 4408512/PATS,APPS

=> D BIB 1-2
```

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Example

OTHER PUBLICATIONS

Zotti et al. article entitled, "Electrodeposition of Amorphous Fe₂O₃ Films by Reduction of Iron Perchlorate in Acetonitrile" Feb. 1998 J. Electrochem. Soc., vol. 145, No. 2 pp. 385-389.*

```
=> FILE CAPLUS

=> S ZOTTI?/AU AND ELECTRODEPOSITION/TI AND (J? AND
ELECTROCHEM? AND SOC?)/SO AND 145/VL

L1 1 ZOTTI?/AU AND ELECTRODEPOSITION/TI AND. . .

=> D IBIB ABS
```

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Example

Chemical Abstracts Report 110:65662.
Chemical Abstracts Report 114:31881.

```
=> FILE CAPLUS  
  
=> S 110:65662/AN,DN  
L1    1 110:65662/AN,DN  
  
=> D IBIB ABS
```

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Cited Reference Search

In this section, you will

- Learn to use the ANALYZE command to find related art
- Be reminded of how to requalify E-numbered terms “on the fly”

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Identifying Cited References

- Cited references can be used to
 - Find related art
 - Identify important research literature
- Important research is generally heavily cited by authors
 - Frequency of citation can be determined with the ANALYZE command
 - Cited references are then converted to bibliographic search terms to locate the abstracts for those papers

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Find related art

Search Question:

Locate the references that are being cited most frequently in recent publications on combinatorial chemistry.

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Search Strategy

To locate heavily cited research in CAPLUS. . .

- Step 1. Locate publications
- Step 2. Identify highly cited references
- Step 3. Retrieve references
- Step 4. Display results

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Locate publications

```
=> FILE CAPLUS

=> S COMBINATORIAL AND PY.B>2005
      21549 COMBINATORIAL
          5 COMBINATORIALS
      21553 COMBINATORIAL
          (COMBINATORIAL OR COMBINATORIALS)
      799913 PY.B>2000
L1      1320 COMBINATORIAL AND PY.B>2005
```

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Identify cited references

- This is accomplished in 3 steps
 - Extract CAPLUS and MEDLINE® accession numbers (AN's) from all of the answers
 - Display the high-frequency AN's
 - Extract the high-frequency AN's

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Extract numbers and author names

- Use these keywords to extract AN's
 - RAN.CAPLUS to extract Reference Accession Number for CAPLUS
 - RAN.MEDLINE to extract Reference Accession Number for MEDLINE

```
=> ANALYZE L1 1- RAN.CAPLUS RAN.MEDLINE AU
L2      ANALYZE L1 1- RAN.CAPLUS RAN.MEDLINE AU :
      42905 TERMS
```

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Display high-frequency terms

```
=> SET DETAIL ON
=> D L2 OGT10
```

Turn detail on to see appended field code.

```
L2      ANALYZE L1 1- RAN.CAPLUS RAN.MEDLINE AU : 42905 TERMS
TERM #  # OCC  # DOC  % DOC  RAN.CAPLUS RAN.MEDLINE AU
```

TERM #	# OCC	# DOC	% DOC	RAN.CAPLUS	RAN.MEDLINE	AU
1	26	25	1.89	1995:654141/RAN.CAPLUS		
2	22	22	1.67	2004:527815/RAN.CAPLUS		
3	21	21	1.59	1971:34684/RAN.CAPLUS		
4	21	21	1.59	1997:43663/RAN.CAPLUS		
5	18	18	1.36	1992:76/RAN.CAPLUS		
6	18	18	1.36	92049760/RAN.MEDLINE		
7	17	17	1.29	1992:50922/RAN.CAPLUS		
				• • •		
13	14	14	1.06	1990:527668/RAN.CAPLUS		
14	14	14	1.06	1997:702603/RAN.CAPLUS		
15	14	14	1.06	90341767/RAN.MEDLINE		
16	13	13	0.98	SCHUBERT, ULRICH S./AU		
17	13	13	0.98	1992:6946/RAN.CAPLUS		

OGT10 shows occurrence greater than 10 times.

MEDLINE AN.

CAplus AN.

Prolific author.

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Extract high frequency AN's

```
=> SEL 1-15 17-19 21-35
```

```
E1 THROUGH E33 ASSIGNED
```

Select desired accession numbers using the "Term numbers"- 16 & 20 aren't included as they're author names.

Helpful HINT

If the number of terms to be extracted exceeds the SELECT limit, use the ANALYZE command instead of SELECT. There is no additional fee for using ANALYZE to extract terms from an existing ANALYZE list.

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Retrieve references

```
=> FILE HCAPLUS MEDLINE

=> SET DETAIL OFF; SET MSTEPS OFF

=> S E1-E33/AN
L3      24 FILE HCAPLUS
L4      9 FILE MEDLINE

TOTAL FOR ALL FILES
L5      33 ("1995:654141"/RAN.CAPLUS OR 004:527815"/RAN.CAPLUS
        OR "1971:34684"/RAN.CAPLUS OR"1997:43663"/RAN.CAPLUS
        OR "1992:76"/RAN.CAPLUS OR 92049760/RAN.MEDLINE OR
        "1992:50922"/RAN.CAPLUS OR "1999:606632"/RAN.CAPLUS
        OR 92049761/RAN.MEDLINE OR "1997:172496"/RAN.CAPLUS
        ● ● ●
```

Consider HCAplus, since term fees apply to the AN field.

Turn detail off to avoid long posting lists.

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Display results

```
=> D 1 25

L5  ANSWER 1 OF 33 HCAPLUS  COPYRIGHT 2006 ACS on STN
AN  2004:527815 Full-text
DN  141:71002
TI  Combinatorial solid-state chemistry of inorganic materials
AU  Koinuma, Hideomi; Takeuchi, Ichiro
CS  Materials and Structures Laboratory, Tokyo Institute of
    Technology, Midori-ku, Yokohoma, 226-8503, Japan
SO  Nature Materials (2004), 3(7), 429-434
    CODEN: NMAACR; ISSN: 1476-1122
PB  Nature Publishing Group
DT  Journal; General Review
LA  English
RE.CNT 71  THERE ARE 71 CITED REFERENCES AVAILABLE. . .
        ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

Answers from each file are in reverse chronological order, not in frequency of citation order.

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Display results

```
L5 ANSWER 25 OF 33 MEDLINE
AN 2002097944 MEDLINE Full-text
DN PubMed ID: 11828397
TI In situ generation and screening of a dynamic combinatorial
   carbohydrate library against concanavalin A.
AU Ramstrom O; Lehn J M
CS Laboratoire de Chimie Supramoleculaire ISIS - Universite
   Louis Pasteur CNRS 4 rue Blaise Pascal, 67000 Strasbourg,
   France..lehn@chimie.u-strasbg.fr
SO Chembiochem : a European journal of chemical biology, (2000
   Jul 3) Vol. 1, No. 1, pp. 41-8.
   Journal code: 100937360. ISSN: 1439-4227.
CY Germany: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
```

● ● ●

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DUPLICATE REMOVE

```
=> DUP REM L5
```

```
L6          24 DUP REM L5 (9 DUPLICATES REMOVED)
           ANSWERS '1-24' FROM FILE HCAPLUS
```

```
=> D TI SO 2
```

```
L6 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
TI In situ generation and screening of a dynamic combinatorial
   carbohydrate library against concanavalin A
SO ChemBioChem (2000), 1(1), 41-48 Published in: Angew.
   Chem., Int. Ed., 39(13)
   CODEN: CBCHFX; ISSN: 1439-4227
```

All the MEDLINE records
were removed as duplicates
- second record is the same
as 25 above.

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Helpful HINT

To display the records for the cited references in frequency of citation order, search and display each E# separately:

```
=> FILE HCAPLUS MEDLINE
=> S E1/AN; D BIB ABS; S E2/AN; D BIB ABS
L7          1 "1995:654141"/AN
L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:654141 HCAPLUS Full-text
DN 123:214987
TI A combinatorial approach to materials discovery
AU Xiang, X.-D.; Sun, Xiaodong; Briceno, Gabriel;
   Lou, Yulin; Wang, Kai-An; Chang, Hauyee; Wallace-
   Freedman, William G.; Chen, Sung-Wei; Schultz, Peter
CS Molecular Design Inst., Lawrence Berkeley Lab.,
   Berkeley, CA, 94720, USA
SO Science (Washington, D. C.) (1995), 268(5218),
   1738-40 ● ● ●
```

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Citing Reference Searching

In this section, you will

- Learn how to conduct comprehensive patent, journal reference and author citation searches
- Use the TRANSFER, SELECT CIT, and ANALYZE CIT commands to find citing references
- Review the FSORT command to identify patent families

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Locate references citing key patents

- Patent citation searching can be used to
 - Enhance a prior art or patentability search
- Analyze major competitors
 - Monitor a patent portfolio for possible infringement
 - Identify especially important intellectual property based on frequency of citation
- Assist in legal challenges

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Search Challenge

- Different patent family members may be cited in patent documents from different countries
- Two steps are key to comprehensive patent citation searching
 - Identify all patent family members
 - Search all possible databases that might contain that cited reference

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STN Tools

When you want to	Use this STN feature
Locate patent family members	Databases containing patent family information, such as CPlus and WPINDEX
Extract patent numbers for family members and search them as referenced patent numbers	TRANSFER 1- L# PN /RPN
Sort results by invention	FSORT

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Monitor for infringement

Search Question:

Locate references citing US 5237069, a Dow Chemical patent describing heterocyclic borate metal complexes as coordination polymerization catalysts.

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Search Strategy

To locate references citing a key patent. . .

- Step 1. Locate the invention in databases reporting the family members
- Step 2. Extract numbers for family members and search as referenced patent numbers (RPN)
- Step 3. Remove duplicate records
- Step 4. Sort results by invention
- Step 5. Display results

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Locate invention of interest

```
=> FILE CAPLUS WPINDEX
=> SET MSTEPS ON
SET COMMAND COMPLETED
=> S US5237069/PN

L1          1 FILE CAPLUS
L2          1 FILE WPINDEX

TOTAL FOR ALL FILES
L3          2 US5237069/PN
```

SET MSTEPS ON to create
a separate L-number for
each file.

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Identify family members...

=> D 1-2 TI PI

L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS

TI Heterocyclic borate metal complexes as coordination
polymerization catalysts

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 482934	A1	19920429	EP 1991-309855	19911024
EP 482934	B1	19970326		
R: BE, CH, DE, FR, GB, IT, LI, SE				
US 5237069	A	19930817	US 1990-603350	19901026 <--
JP 04305585	A2	19921028	JP 1991-337493	19911023
CA 2054246	AA	19920427	CA 1991-2054246	19911025
AU 9186732	A1	19920430	AU 1991-86732	19911025
CN 1062733	A	19920715	CN 1991-109984	19911026

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...all of them

L3 ANSWER 2 OF 2 WPINDEX (C) 2007 THE THOMSON CORP on STN

TI New pyrazolyl borate metal complexes - are used as catalyst
for preparation of syndiotactic polymers with or without
aluminium cpds..

PI	EP 482934	A	19920429 (199218)*	EN	10p
	R: BE CH DE FR GB IT LI SE				
	AU 9186732	A	19920430 (199226)		C07F019-00
	CA 2054246	A	19920427 (199229)		C07F007-00
	JP 04305585	A	19921028 (199250)	7p	C07F007-28
	CN 1062733	A	19920715 (199313)		C07F005-04
	US 5237069	A	19930817 (199334)	6p	C07D231-10
	<-				
	EP 482934	B1	19970326 (199717)	EN	11p C07F007-00
	R: BE CH DE FR GB IT LI SE				
	DE 69125336	E	19970430 (199723)		C07F007-00

An additional family member is identified in this record.

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Choose sources

Database	Reason for selection
HCAplus	Currency and coverage from both patents and journal literature
DPCI	Country and time coverage
USPATFULL	Currency for US citing patents
EPFULL	Currency for EP citing patents
SCISEARCH	Cited references from journal literature and time coverage

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Extract and search the patent numbers as cited references

```
=> FILE HCAPLUS SCISEARCH DPCI USPATFULL EPFULL
```

```
=> TRANSFER L3 1- PN /RPN
```

```
L4          TRANSFER L3 1- PN :          7 TERMS
```

```
L5          10 FILE HCAPLUS
```

```
L6          14 FILE SCISEARCH
```

```
L7          18 FILE DPCI
```

```
L8           8 FILE USPATFULL
```

```
L9           3 FILE EUROPATFULL
```

```
TOTAL FOR ALL FILES
```

```
L10         53 L4/RPN
```

The TRANSFER PN command appended by /RPN extracts information from one field (PN) and searches it in another field (RPN).

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Remove duplicates

```
=> SET DUPORDER FILE
SET COMMAND COMPLETED

=> DUP REM L10

DUPLICATE IS NOT AVAILABLE IN 'DPCI'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L11
L11          46 DUP REM L10 (7 DUPLICATES REMOVED)
              ANSWERS '1-10' FROM FILE HCAPLUS
              ANSWERS '11-17' FROM FILE SCISEARCH
              ANSWERS '18-35' FROM FILE DPCI
              ANSWERS '36-43' FROM FILE USPATFULL
              ANSWERS '44-46' FROM FILE EPFULL
```

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Sort results by invention

```
=> FSORT L11

SEL L11 1- PN,APPS
L12          SEL L11 1- PN APPS :    320 TERMS
L12          46 FSO L11

              6 Multi-record Families   Answers 1-22
                Family 1                Answers 1-2
                y 2                      Answers 3-6
                y 3                      Answers 7-12
                y 4                      Answers 13-14
                y 5                      Answers 15-19
                Family 6                Answers 20-22
                9 Individual Records    Answers 23-31
                15 Non-patent Records  Answers 32-46
```

Six different invention families are represented in these 22 answers.

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Display one record from each family

```
=> D PFAM=1-6 1 TI
```

```
L13 ANSWER 1 OF 46 HCAPLUS COPYRIGHT 2007 ACS on STN FAMILY 1
TI Manufacturing of 1-hexene by trimerization of ethylene using
organometallic catalysts with neutral multidentate ligands
having a tripod structure
```

```
L13 ANSWER 3 OF 46 DPCI(C)2007 THE THOMSON CORP on STN FAMILY 2
TI Reduced oxidation state transition metal compounds useful as
olefin polymerization catalysts
```

• • •

```
L13 ANSWER 20 OF 46 DPCI (C)2007 THE THOMSON CORP on STN FAMILY
6
```

```
TI Aza borolinyll metal complex as olefin polymerisation
catalysts - prepared by reaction of 2-methyl-1-tert-butyl-
(delta)3-1,2-Aza-boroline and lithium 2,2,6,6-tetra methyl
piperidide.
```

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Or display all records from one family

```
=> D PFAM=2 1-
```

```
YOU HAVE REQUESTED DATA FROM 4 ANSWERS - CONTINUE? Y/(N):Y
```

```
L12 ANSWER 3 OF 46 HCAPLUS COPYRIGHT 2006 ACS on STN FAMILY 2
AN 1999:388201 HCAPLUS Full-text
```

```
DN 131:32260
```

```
TI Reduced oxidation state transition metal compounds useful as
olefin polymerization catalysts
```

```
IN Matsunaga, Phillip T.; Schiffino, Rinaldo S.
```

```
PA Exxon Chemical Patents Inc., USA
```

```
SO PCT Int. Appl., 31 pp.
```

```
DT Patent
```

```
LA English
```

```
FAN.CNT 1
```

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
PI WO 9929739	A1	19990617	WO 1998-US23519	19981103

```
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

The 7 cited references
can also be displayed in
HCAplus with the ALL
format.

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In DPCI, cited patents are in the CDP field

```

L12 ANSWER 4 OF 46 DPCI (C) 2007 THE THOMSON CORP ON STN FAMILY 2
TI Reduced oxidation state transition metal compounds comprise.
PI WO 9929739 A1 19990617 (199933)* EN 31 C08F010-00
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: BR CA CN JP KR MX SG
EP 1037932 A1 20000927 (200048) EN C08F010-00
R: BE DE ES FR GB IT NL SE
BR 9813537 A 20001010 (200055) C08F010-00
KR 2001024474 A 20010326 (200161) C08F010-06
● ● ●
CDP CITED PATENTS UPD: 20020913
-----
CITING PATENT BY CAT CITED PATENT ACCNO
-----
EP 1037932 A N No Citations
EP 1037932 B1 EP 482934 A 1992-142984/18 <--
PA: (DOWC) DOW CHEM CO
IN: NEWMAN, T H
JP 8127610 A 1996-295567/30
PA: (UBEI) UBE IND LTD
● ● ●

```

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The default display in USPATFULL does not include cited patents

```

L12 ANSWER 5 OF 46 USPATFULL FAMILY 2
AN 2002:63995 USPATFULL Full-text
TI Reduced oxidation state transition metal compounds useful
as olefin polymerization catalysts
IN Matsunaga, Phillip T., Houston, TX, United States
Schiffino, Rinaldo S., Kingwood, TX, United States
PA Exxon Mobil Chemical Patents Inc., Houston, TX, United
States (U.S. corporation)
PI US 6362294 B1 20020326
AI US 1997-989295 19971211 (8)
DT Utility
FS GRANTED
LN.CNT 918
INCL INCLM: 526/161.000
● ● ●
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```

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In EPFULL, cited patents are in the REP field

```

L12 ANSWER 6 OF 46 EPFULL COPYRIGHT 2006 EPO/FIZ KA on STN
    FAMILY 2
AN   1998:93020 EPFULL Full-text
    DUPD 19990818 DUPW 199933
TIEN REDUCED OXIDATION STATE TRANSITION METAL COMPOUNDS USEFUL
    AS OLEFIN POLYMERIZATION CATALYSTS.
...
REP  EP 482934          A
    WO 9717379         A
    JP 8127610         A
    US 5519099         A
IPCI C08F0010-00 [I,A]; C08F0004-645 [I,A]
    C08F0010-00 [I,C*]; C08F0004-00 [I,C*]

```

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Cited patent references are displayed in USPATFULL with the REP format

```

=> D REP REN L12 5

L12 ANSWER 5 OF 46 USPATFULL
REP  US 4870042      Sep 1989  502/114.000  Kohara et al.
    US 5312794      May 1994  502/117.000  Kelsey
    US 5374696      Dec 1994
    US 5494874      Feb 1996
    US 5502124      Mar 1996
    US 5504049      Apr 1996
    US 5519099      May 1996
    US 5684098      Nov 1997
    EP 482934       Apr 1992
...
REN  Kime-Hunt et al., Inorg. Chem., 28, 4392-4399, 1989.*
    "Synthesis, Structure, and Olefin Polymerization Activity
    of Vanadium(V) Catalysts Stabilized by Imido and
...

```

The REN format displays
cited non-patent
references.

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Follow hyperlink to automatically display the abstract for a cited reference

```
=> SET SMA ON
SET COMMAND COMPLETED
=> SEL RAN.HCAPLUS(2) L12 1
SmartSELECT INITIATED
New TRANSFER and ANALYZE Commands Now Available
See HELP TRANSFER and HELP ANALYZE for Details
L13      SEL L12 1 2 :      1 TERM
=> SET SMA LOGIN
SET COMMAND COMPLETED
=> FIL HCAPLUS
=> S L13
L14      1 L13
=> D L14 BIB,ABS
L14 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2003 ACS
AN 1992:572275 HCAPLUS Full-text
DN 117:172275
TI Heterocyclic borate metal complexes as coordination
polymerization Catalysts
• • •
```

STN Express® executes this script when the HCAPLUS hyperlink is clicked.

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Evaluate research articles for relevance

- Determine whether it continues to be cited in recent references
- Search Challenge - frequent inconsistencies and errors in journals
 - Misspelled author names, incorrect publication years
 - Missing volume/page numbers
 - Variations in journal titles
- Two steps are key to comprehensive journal citation searching
 - Identify all variations that occur in a database
 - Search all possible databases that might contain that cited reference

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STN Tools

When you want to...	Use this STN feature
Format a citation as a search term	<ul style="list-style-type: none">■ SELECT CIT — when you have few answers from a single-file answer set■ ANALYZE CIT; EDI L# /CIT /RE — when you have more answers than are allowed in SELECT CIT or answers from a multifile answer set
Locate variations on cited reference search term	EXPAND
Eliminate duplicate records from a multi-file cited reference search	DUPLICATE REMOVE

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Evaluate the importance of a research article

Search Question:

How many times has the 1993 paper by A. M. Van der Blik in the Journal of Cell Biology been cited since January 2003?

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Search Strategy

To conduct a comprehensive citation search on a journal article . . .

- Step 1. Locate reference to the article
- Step 2. Convert to citation search term
- Step 3. Identify relevant databases
- Step 4. Locate all variations
- Step 5. Eliminate duplicate records
- Step 6. Display results
- Step 7. (*Option*) Analyze results

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Locate the reference

```
=> FILE CAPLUS

=> S VAN DER BLIEK A?/AU AND 1993/PY

      35 VAN DER BLIEK A?/AU
      678949 1993/PY
L1      1 VAN DER BLIEK A?/AU AND 1993/PY

=> D AU SO

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN
AU van der Blik, Alexander M.; Redelmeier, Thomas E.; Damke,
   Hanna;Tisdale, Ellen J.;Meyerowitz, Elliot M.;Schmid,Sandra
SO Journal of Cell Biology (1993), 122(3), 553-63
   CODEN: JCLBA3; ISSN: 0021-9525
```

STN

58

Convert the reference to a citation search term

- The SELECT CIT command
 - Extracts bibliographic information
 - Arranges the information in the correct order
 - Truncates before the journal title to allow for variations
 - Adds the /RE (cited reference) search field

STN

59

SELECT CIT creates a citation search term

```
=> SEL CIT;D SEL  
  
E1 THROUGH E1 ASSIGNED  
  
E1          1      VANDERBLIEK A M, 1993, V122, P553, ?/RE
```

Note: Spaces in author name are removed in citation term.

Helpful HINT

Search SELECT CIT in STNGUIDE and display the names of the resulting databases to determine if SELECT CIT is available in a database of interest.

STN

60

Identify relevant databases

Database	Reason for selection
CPlus	Extremely current journal coverage, extensive biochemical coverage
SCISEARCH	Extensive subject coverage

STN

61

Use EXPAND to locate citation variations

```
=> FILE ZCAPLUS  
=> SET EXP CONT
```

```
SET COMMAND COMPLETED
```

```
=> E E1
```

```
E2      1      VANDERBLIECK A, 1991, V351, P411, NATURE/RE  
E3      1      VANDERBLIECK N, 1996, V119, P547, A AS/RE  
E4      0 --> VANDERBLIEK A M, 1993, V122, P553, ?/RE  
E5      33     VANDERBLIEK A, 1986, V5, P3201, EMBO J/RE  
E6      1      VANDERBLIEK A, 1986, V52, P165, ADV CANCER RES/RE  
E7      11     VANDERBLIEK A, 1986, V6, P1671, MOL CELL BIOL/RE  
• • •
```

Use SET EXPAND
CONTINUOUS to keep E-
number lists.

Note spelling of name at E2.

STN

62

Continue to EXPAND

E31	9	VANDERBLIEK A, 1991, V3	E33 has an error in the volume. E34 has a page error.
E32	1	VANDERBLIEK A, 1991, V351, P553, NATURE/RE	
E33	2	VANDERBLIEK A, 1993, V12, P553, J CELL BIOL/RE	
E34	1	VANDERBLIEK A, 1993, V122, P552, J CELL BIOL/RE	
E35	274	VANDERBLIEK A, 1993, V122, P553, J CELL BIOL/RE	
E36	4	VANDERBLIEK A, 1993, V122, P553, JOURNAL OF CELL BIOLOGY/RE	

• • •
=> E BACK E2

E50	33	VANDERBLIEK A, 1986, V5, P3201, EMBO J/RE	
E51	1	VANDERBLIECK N, 1996, V119, P547, A AS/RE	
E52	1	--> VANDERBLIECK A, 1991, V351, P411, NATURE/RE	
E53	1	VANDERBLIECK A, 1989, V52, P165, ADV CANCER RES/RE	

Use EXPAND BACK to move "up" the EXPAND list.

STN

63

Check for other spelling variations

=> E BLIEK A, 1993/RE

E74	1	BLIEK A, 1991, V351, P411, NATURE/RE
E75	1	BLIEK A, 1992, V25, P101, GEOBIOS/RE
E76	0	--> BLIEK A, 1993/RE
E77	1	BLIEK A, 1993, V122, P553, J CELL BIOL/RE
E78	1	BLIEK A, 1993, V122, P553, JOURNAL OF CELL BIOLOGY/RE

• • •
=> E BLICK A, 1993/RE

E86	1	BLICHTFELDT E, 1996, V26, P2876, EUR J IMMUNOL/RE
E87	1	BLICK A, 1988, V71, P401, GENE/RE
E88	0	--> BLICK A, 1993/RE
E89	3	BLICK A, 1994, V334, P234, PHYS LETT B/RE
E90	1	BLICK A, 1994, V4, P1, PRIB TEKH EKSP/RE

• • •

STN

64

SEARCH the variations

```
=> FILE HCAPLUS
```

```
=> S (E33-E36 OR E59 OR E65 OR E77 OR E78) AND PY>2002
```

```
L2      92 (("VANDERBLIEK A, 1993, V12, P553, J CELL BIOL"/RE OR
           "VANDERBLIEK A, 1993, V122, P552, J CELL BIOL"/RE OR
           "VANDERBLIEK A, 1993, V122, P553, J CELL BIOL"/RE) OR
           "VANDERBLICK A, 1993, V122, P553, J CELL BIOL"/RE OR
           "VANDERBLEIK A, 1993, V122, P553, J CELL BIOL"/RE OR
           "BLIEK A, 1993, V122, P553, JOURNAL OF CELL
           BIOLOGY"/RE) AND PY>2002
```

HCAplus is a good choice if there is a large number of E-numbers to search.

STN

65

EXPAND in additional databases

```
=> FILE SCISEARCH
```

```
=> E E1
```

```
E110      1      VANDERBLIEK A M, 1993, V122, P552, J CELL BIOL/RE
E111     386      VANDERBLIEK A M, 1993, V122, P553, J CELL BIOL/RE
E112      0 --> VANDERBLIEK A M, 1993, V122, P553, ?/RE
E113      1      VANDERBLIEK A M, 1993, V122, P653, J CELL BIOL/RE
E114      1      VANDERBLIEK A M, 1995, V52, P165, ADV CANCER RES/RE
```

• • •

```
=> E BACK E110
```

```
E122      1      VANDERBLIEK A M, 1993, V122, P653, J CELL BIOL/RE
E123     386      VANDERBLIEK A M, 1993, V122, P553, J CELL BIOL/RE
E124      1 --> VANDERBLIEK A M, 1993, V122, P552, J CELL BIOL/RE
E125      4      VANDERBLIEK A M, 1993, V122, P533, J CELL BIOL/RE
E126      1      VANDERBLIEK A M, 1993, IN PRESS J CELL BIOL/RE
```

• • •

E-numbers are available for use in any database.

STN

66

Expand...

```
E162      1  VANDERBLIECK N S, 1996, IN PRESS A A/RE
E163      1  VANDERBLIECK A M, 1993, V123, P553, J CELL
           BIOL/RE
E164      1  VANDERBLICK A, V16, P4841, NUCLEIC ACIDS RES/RE
E165      1  VANDERBLICK A, 1988, V16, P4841, NUCLEIC ACIDS
           RES/RE
```

• • •

=> E BLICK A/RE

```
E170      1  BLICHTFELD H F, 1916, THEORY APPLICATIONS/RE
E171      1  BLICI R H, UNPUB/RE
E172      0 --> BLICK A/RE
E173      1  BLICK A J, 1971, V26, P125, THORAX/RE
E174      1  BLICK A M, 1983, JINR1383153 JOINT I/RE
E175      1  BLICK A M, 1986, IHEP9386 PREPR/RE
E176      1  BLICK A M, 1986, V6, P1671, MOL CELL BIOL/RE
E177      2  BLICK A M, 1994, V334, P234, PHYS LETT B/RE
```

• • •

STN

67

...Expand

=> E BLIEK A/RE 25

```
E182      1  BLIEHFELDT P E R, 1978, V13, P123
           GASTROENT/RE
E183      1  BLIEHORTTOFT M, 1979, V3, P99, WORLD J SURG/RE
E184      0 --> BLIEK A/RE
```

• • •

```
E195      1  BLIEK A V, 1993, V122, P553, J CELL BIOL/RE
E196      1  BLIEK A, 1982, THESIS MIT CAMBRIDGE/RE
E197      1  BLIEK A, 1984, MATH MODELING CONCUR/RE
```

• • •

=> S (E122-E126 OR E163 OR E195) AND PY>2002

```
L3      89 ("VANDERBLIEK A M, 1993, V122, P653, J CELL BIOL"/RE OR "VANDER
           BLIEK A M, 1993, V122, P553, J CELL BIOL"/RE OR "VANDERBLIEK A
           M, 1993, V122, P552, J CELL BIOL"/RE OR "VANDERBLIEK A M, 1993,
           V122, P533, J CELL BIOL"/RE OR "VANDERBLIEK A M, 1993, IN PRESS
           J CELL BIOL"/RE) OR "VANDERBLIECK A M, 1993, V123, P553, J CELL
           BIOL"/RE OR "BLIEK A V, 1993, V122, P553, J CELL BIOL"/RE) AND
           PY>2002
```

STN

68

Remove duplicate records

```
=> SET DUPORDER FILE
SET COMMAND COMPLETED

=> DUP REM L2 L3
```

SET DUPORDER FILE
places the answer set in file
order.

```
L4          99 DUP REM L2 L3 (82 DUPLICATES REMOVED)
            ANSWERS '1-92' FROM FILE HCAPLUS
            ANSWERS '93-99' FROM FILE SCISEARCH
```

STN

69

Display results from HCAplus

```
=> D TI HIT 1 83 93
```

```
L4 ANSWER 1 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE  
1
```

```
TI Bacterial entry into cells: a role for the  
machinery
```

```
SO FEBS Letters (2006), 580(12), 2962-2967
```

```
RE
```

```
(50) van der Bliek, A; J Cell Biol 1993, V122, P553 HCAPLUS
```

Record found in both
databases.

```
L4 ANSWER 83 OF 99 HCAPLUS COPYRIGHT 2006 ACS on STN
```

```
TI Activation of NK cells by an endocytosed receptor for  
soluble
```

```
HLA-G
```

```
SO PLoS Biology (2006), 4(1), 70-86
```

```
URL: http://biology.plosjournals.org/archive/1545-
```

```
7885/4/1/pdf/10.1371_1545-7885_4_1_complete.pdf
```

```
RE
```

```
(62) van der Bliek, A; J Cell Biol 1993, V122, P553 HCAPLUS
```

Record unique to
CAplus.

STN

70

