

STN[®]

Sources and techniques for basic citation searching on STN

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STN



STN is available through FIZ Karlsruhe, Germany
and Chemical Abstracts Service, U.S.A.

Agenda

- The principles of citations
- Databases with citation information on STN
- Everyday searching
 - Easy quest reference searching
 - Impact of publications
 - Competitor analysis
 - Identify key patents
- Summary

patent Non-patent

What is a citation? (Patent)

- Reference to a previous work (prior art) that is considered relevant to current patent application in hand (patent or non-patent)
- Location of citations: front (e.g. US) or back (e.g. EP)
- Premise for patent citation searching:
 - patent document cites an **earlier publication** 
 - patent document is cited by a **subsequent publication** 
 - This patent document and the earlier and/or subsequent publications are related by subject matter
- Sources of citation: applicant, examiner, opposition, third party

US granted patents: cited references on front page

(12) **United States Patent**
Palmer

(10) I
(45) I

Inventor citations

Examiner citations (*)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/991,018**

(22) Filed: **Nov. 16, 2001**

(51) Int. Cl.⁷ **F16K 25/00**

(52) U.S. Cl. **251/186; 251/191; 251/264; 251/357**

(58) **Field of Search** 251/176, 186, 251/191, 264, 357

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,574,054	A	11/1951	Miller	
2,839,265	A	* 6/1958	Hobbs	251/191
2,918,078	A	12/1959	Cummings	
3,211,418	A	10/1965	Lohr	
3,211,419	A	* 10/1965	Lohr	251/191
3,612,479	A	* 10/1971	Smith, Jr.	251/191
3,804,365	A	* 4/1974	Fetterolf et al.	251/186
4,073,308	A	* 2/1978	Stith, Jr.	251/191
4,815,698	A	* 3/1989	Palmer	251/176

ABSTRACT

An adaptor is for a rising disc valve which has a handle for rotating a stem in a housing bore having a shoulder and which displaces a disc valve member which seals against a frusto-conical housing seat spaced from the shoulder. A stack of Belleville-steel springs is between the disc member and the ring seal. An interface ring is between the springs and the ring seal. As the disc member is seated in its valve seat, a ring at the attachment member abuts the shoulder. The attachment member can no longer axially displace and compressively loads the springs as the disc member is further axially displaced to the valve closed state. The compressive load on the ring seal expands the seal radially outwardly against the housing bore and radially inwardly against the piston shank.

16 Claims, 5 Drawing Sheets

EP patents: citations appear in Search Report of published applications

(19)  **Europäisches Patentamt**
European Patent Office
Office européen des brevets

(11) **EP 0 786 399 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3: 01.10.1997 Bulletin 1997/40 (51) Int. Cl.⁶: **B62M 23/02**

(43) Date of publication A2: 30.07.1997 Bulletin 1997/31

(21) Application number: 97101373.5
 (22) Date of filing: 29.01.1997

(84) Designated Contracting States: DE DK ES FR GB IT NL (72) Inventor: Miyata, Syoichiro Iwata-shi, Shizuoka-ken (JP)

(30) Priority: 29.01.1996 JP 12973/96 (74) Representative: Grünecker, Kinkeldey, Stockmair & Schwannhüssler Anwaltssozietät

(71) Applicant: YAMAHA HATELUDOMU KAKUSHIKU KAISHA

EP 0 786 399 A3

European Patent Office EUROPEAN SEARCH REPORT Application Number **EP 97 10 1373**

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.4)
X	EP 0 590 674 A (YAMAHA) * column 6, line 56 - column 7, line 8 * ---	1-3, 13-15	B62M23/02
X	US 4 062 421 A (WEBER) * the whole document * ---	1,13	
A	PATENT ABSTRACTS OF JAPAN vol. 096, no. 003, 29 March 1996 & JP 07 309283 A (YAMAHA MOTOR CO LTD), 28 November 1995, * abstract * ---	1-3, 13-15	TECHNICAL FIELDS SEARCHED (Int.Cl.4) B62M
A	PATENT ABSTRACTS OF JAPAN vol. 095, no. 009, 31 October 1995 & JP 07 143603 A (AQUEOUS RES:KK), 2 June 1995, * abstract * ---	1,13	
A	PATENT ABSTRACTS OF JAPAN vol. 095, no. 011, 26 December 1995 & JP 07 196070 A (RIKEN CORP), 1 August 1995, * abstract * ---	1,13	
A	EP 0 569 954 A (YAMAHA MOTOR CO LTD) * the whole document * ---	1,13	

The present search report has been drawn up for all claims

Place of search: THE HAGUE Date of completion of the search: 8 August 1997 Examiner: Denicolai, G

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	EP 0 590 674 A (YAMAHA) * column 6, line 56 - column 7, line 8 * ---	1-3, 13-15
X	US 4 062 421 A (WEBER) * the whole document *	1,13

Examiner citations

Applicants citations follow afterwards, but are not necessarily complete.

EP 0 786 399

FIGURE 1

Printed by Hans Stern 030 Business Services 2.14.142.4

What is a citation? (non-patent)

- Non patent: reference to a source that is mentioned in the publication
- Cited document: a patent or a non-patent publication, e.g. a scientific journal article
- Who cites: the author
- Location of citations: typically at the end of publications

Scientific journal article: citation example

PAPER

www.rsc.org/pccp | Physical Chemistry Chemical Physics

Quantum-mechanical wavepacket propagation in a sparse, adaptive basis of interpolating Gaussians with collocation

J. Sielk,^a H. F. von Horsten,^a F. Krüger,^b R. Schneider^b and B. Hartke^{a*}

Received 19
First published
DOI: 10.10

We present
[B. Hartke,
representat
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improve me
was implem
calculating
three-dimer
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arbitrary sy
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wavepacket

I. Intro

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adapted pr
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coupled de
quantum w
freedom⁴⁻⁶

^aInstitut für
Oligolement
E-mail: har
^bInstitut für
MA 8-1, St

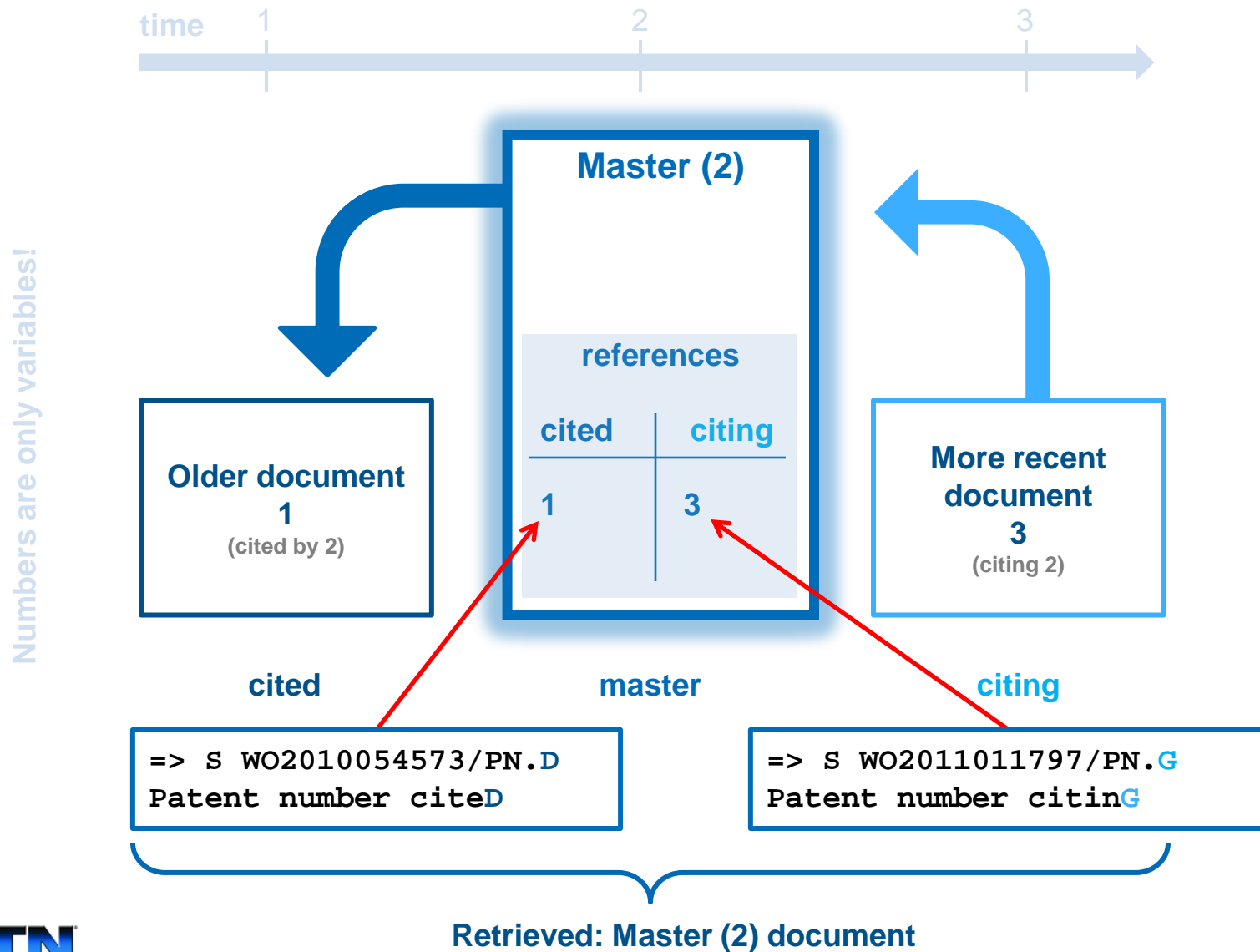
This journal

References



- 1 H. D. Meyer, U. Manthe and L. S. Cederbaum, *Chem. Phys. Lett.*, 1990, **165**, 73.
- 2 A. D. Hammerich, R. Kosloff and M. A. Ratner, *Chem. Phys. Lett.*, 1990, **171**, 97.
- 3 H.-D. Meyer and G. A. Worth, *Theor. Chem. Acc.*, 2003, **109**, 251.
- 4 F. Huarte-Larrañaga and U. Manthe, *J. Chem. Phys.*, 2000, **113**, 5115.
- 5 O. Vendrell, F. Gatti, D. Lauvergnat and H.-D. Meyer, *J. Chem. Phys.*, 2007, **127**, 184302.
- 6 O. Vendrell, F. Gatti and H.-D. Meyer, *J. Chem. Phys.*, 2007, **127**, 184303.
- 7 H. Wang and M. Thoss, *J. Chem. Phys.*, 2003, **119**, 1289.
- 8 M. Thoss and H. Wang, *Chem. Phys.*, 2006, **322**, 210.
- 9 R. Kosloff, *Dynamics of molecules and chemical reactions*, Marcel Dekker Inc., New York, 1996, ch. 5, p. 185.
- 10 L. R. Petthey and R. E. Wyatt, *Chem. Phys. Lett.*, 2006, **424**, 443.
- 11 L. R. Petthey and R. E. Wyatt, *Int. J. Quantum Chem.*, 2007, **107**, 1566.
- 12 M. Ben-Nun and T. J. Martinez, *J. Chem. Phys.*, 2000, **112**, 6113.
- 13 D. Lauvergnat, E. Baloitcha, G. Dive and M. Desouter-Lecomte, *Chem. Phys.*, 2006, **306**, 500.
- 14 G. D. Billing, *The Quantum Classical Theory*, Oxford University Press, Oxford, 2003.
- 15 P. Puzari, B. Sarkar and S. Adhikari, *J. Chem. Phys.*, 2004, **121**, 707.
- 16 R. E. Wyatt, *J. Chem. Phys.*, 2002, **117**, 9569.
- 17 Y. Goldfarb, I. Degani and D. J. Tannor, *J. Chem. Phys.*, 2006, **125**, 231103.
- 18 Y. Goldfarb and D. J. Tannor, *J. Chem. Phys.*, 2007, **127**, 161101.
- 19 S. S. Iyengar and J. Jakowski, *J. Chem. Phys.*, 2005, **122**, 114105.
- 20 V. Gradinaru, *Computing*, 2007, **80**, 1.
- 21 D. T. Colbert and W. H. Miller, *J. Chem. Phys.*, 1992, **96**, 1982.
- 22 R. Dawes and T. Carrington, Jr, *J. Chem. Phys.*, 2004, **121**, 726.
- 23 Z. Bacic and J. C. Light, *J. Chem. Phys.*, 1986, **85**, 4594.
- 24 R. Dawes and T. Carrington, Jr, *J. Chem. Phys.*, 2005, **122**, 134101.
- 25 R. Dawes and T. Carrington, Jr, *J. Chem. Phys.*, 2006, **124**, 054102.
- 26 B. Hartke, *Phys. Chem. Chem. Phys.*, 2006, **8**, 3627.
- 27 D. A. McCormack, *J. Chem. Phys.*, 2006, **124**, 204101.
- 28 D. Lauvergnat and A. Nauts, *J. Chem. Phys.*, 2002, **116**, 8560.
- 29 C. Leforestier, R. H. Bisseling, C. Cerjan, M. D. Feit, R. Friesner, A. Guldberg, A. Hammerich, G. Jolicard, W. Karrlein, H.-D. Meyer, N. Lipkin, O. Roncero and R. Kosloff, *J. Comput. Phys.*, 1991, **94**, 59.
- 30 I. P. Hamilton and J. C. Light, *J. Chem. Phys.*, 1986, **84**, 306.
- 31 V. Maz'ya and G. Schmidt, *IMA J. Num. Anal.*, 1996, **16**, 13.
- 32 V. Maz'ya and G. Schmidt, *Approximate Approximations*, AMS, 2007.
- 33 V. Maz'ya and G. Schmidt, *Appl. Comp. Harm. Anal.*, 1999, **6**, 287.
- 34 S. Mallat, *A wavelet tour of signal processing*, Academic Press, London, 2nd edn, 1999.
- 35 R. A. Friesner, *J. Chem. Phys.*, 1986, **85**, 1462.
- 36 W. Yang and A. C. Peet, *Chem. Phys. Lett.*, 1988, **153**, 98.
- 37 S. Pissanetsky, *Sparse Matrix Technology*, Academic Press, London, 1984.
- 38 E. Steffen, Master's thesis, University of Kiel, 2008.
- 39 M. R. Brill, F. Gatti, D. Lauvergnat and H.-D. Meyer, *Chem. Phys.*, 2007, **338**, 186.
- 40 B. Podolsky, *Phys. Rev.*, 1928, **32**, 812.
- 41 H. Margenau and G. M. Murphy, *The Mathematics of Physics and Chemistry*, Van Nostrand, Princeton, NJ, 1956.
- 42 A. Nauts and X. Chapuisat, *Mol. Phys.*, 1985, **55**, 1287.
- 43 X. Chapuisat, A. Belafhal and A. Nauts, *J. Mol. Spectrosc.*, 1991, **149**, 274.
- 44 H. F. von Horsten, PhD thesis, University of Kiel, 2008.
- 45 H. F. von Horsten and B. Hartke, *Chem. Phys.*, 2007, **338**, 160.
- 46 H. F. von Horsten, G. Rauhut and B. Hartke, *J. Phys. Chem. A*, 2006, **110**, 13014.
- 47 D. Kosloff and R. Kosloff, *J. Comput. Phys.*, 1983, **52**, 35.
- 48 M. D. Feit, J. A. Fleck, Jr and A. Steiger, *J. Comput. Phys.*, 1982, **47**, 412.
- 49 S. ...
- 50 R. ...
- 51 S. ...
- 52 M. ...
- 53 D. ...
- R. Schinke, *J. Chem. Phys.*, 1992, **97**, 3357.
- 54 D. Manolopoulos, Talk at the "Charles Coulson Summer School in Theoretical Chemistry", Oxford, 1996.
- 55 J.-Y. Ge and J. Z. H. Zhang, *J. Chem. Phys.*, 1998, **108**, 1429.

There is no common standard in non-patent citations.

Concept: Cited and Citing - diagram








Citation information – database overview

Database Subject areas	STN database	Database contains documents from	Documents containing citation information	Cited	Citin
All areas (1974-)	SCISEARCH	Journals, reviews, conference proceedings	Non-patent literature	✓	-
Biomedicine (1946-)	MEDLINE	Journals	Non-patent literature	✓	✓
Chemistry, biochemistry, chemical engineering (1997-)	CAplus	Journals, reviews, conference proceedings, technical reports, patents	US EP WO DE (1997-) GB FR (2003-) CA (2005-) Non-patent literature	✓	✓
All areas (1973-)	DPCI	23 patent authorities	23 patent authorities 	✓	✓
All areas (1947-)	INPAFAMDB	Patents	24 patent authorities 	✓	-
All areas (1975-) Selected technologies (1971-1974)	USPATFULL	Patents	US	✓	-
Chemistry (1950-)	IFIPAT	Patents	US	✓	-
All areas (1978-)	EPFULL	Patents	EP	✓	-
All areas (1968-)	PATDPA	Patents	DE and EP/WO with DE as designated state	✓	-

In general **patents** and **non-patent documents** may contain both, patent and non-patent references!

Reasons to choose 1 of the 5 main sources

STN database		Main characteristics	Patent family based	Citation counter
SCISEARCH		<ul style="list-style-type: none"> • Special Search and display fields • Extensive coverage of journal literature in all technologies 	-	-
MEDLINE		<ul style="list-style-type: none"> • Special Search and display fields • Extensive coverage of journal literature in biomedicine 	-	✓
CAplus		<ul style="list-style-type: none"> • Timeliness and extensive coverage from patents and non-patent literature in the field of chemistry • Citations from basic patent 	✓	✓
DPCI		<ul style="list-style-type: none"> • Special Search and display fields • Very good coverage all technological fields • Citations from all DWPI patent family members per record • Cross reference to DWPI (identical Accession Numbers) 	✓	✓
INPAFAMDB		<ul style="list-style-type: none"> • Large country coverage, level of citation detail • Citations from all family members per record 	✓	-

How does a cited reference table look like?

L4 ANSWER 1 OF 1 SCISEARCH COPYRIGHT (c)
on STN

SciSEARCH entry (shortened)

Table of Cited References (RE)

RE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	ARN PG (RPG)	Referenced Work (RWK)
ALEXOPOULOS H	2004	14	879	CURR BIOL
BODE P M	1984		213	PATTERN FORMATION PR
BRIDGE D M	2000			
BROUN M	2005			
BROWNE E N	1909			
BUTTS T	2008			
CHOURROUT D	2006	442	684	NATURE
DAVID C N	1977			
DING L X	2004			
DOURIS V	2010			
FENG B	2009			
FRAUNE S	2007			
GRIMSON A	2008	455	1193	NATURE
HOBMAYER B	2000			
...
ZACHARIAS H	2004	107	219	ZOOLOGY

/RAU: Cited Referenced Author

/RPY: Cited Referenced Publication Year

/RVL: Cited Referenced Volume of the cited journal

/RPG: Cited Referenced Page (1st page)

/RWK: Cited Referenced Work (journal title)

Agenda

- The principles of citations
- Databases with reference information on STN
- Everyday searching
 - Easy quest reference searching
 - Impact of publications
 - Competitor analysis
 - Identify key patents
- Summary

Automated cited reference searching

=> FILE BIOSIS

Search for the article you are interested in.

=> S KHALTURIN K?/AU AND NATURE/SO AND 2010/PY

L1 1 KHALTURIN K?/AU AND NATURE/SO AND 2010/PY

=> D

L1 ANSWER 1 OF 1 BIOSIS COPYRIGHT (c) 2011 The Thomson Corporation on STN
AN 2010:229495 BIOSIS
TI The dynamic genome of Hydra.
AU Chapman, Jarrod A.; Kirkness, Ewen F.; Simakov, Oleg; Hampson, Steven E.;
Mitros, Therese; Weinmaier, Thomas; Rattei, Thomas; Balasubramanian,
Prakash G.; **Khalturin, Konstantin**; Hemmrich, Georg; Franke, Andre;
David, Charles N.; Rokhsar, Daniel S.; Steele, Robert E. [Reprint Author]
CS Univ Calif Irvine, Ctr Dev Biol, Irvine, CA 92717 USA
dsrokhsar@gmail.com; resteele@uci.edu
SO Nature (London), (MAR 25 2010) Vol. 464, No. 7288, pp. 592-596.
CODEN: NATUAS. ISSN: 0028-0836.

=> SEL CIT

E1 THROUGH E1 ASSIGNED

Automatically bibliographic data is extracted by SEL CIT:

1st author's name / Publication year / Volume / 1st page

CHAPMAN J A, 2010, V464, P592

=> FILE SCISEARCH

=> S E1

Enter Scisearch and search for your E#. Thus your selected information is automatically searched in the cited references field (/RE).

L17 20 "CHAPMAN J A, 2010, V464, P592,?"/RE

Display cited reference

=> D RE

Display the cited references (RE)

L1 ANSWER 1 OF 20 SCISEARCH COPYRIGHT (c) 2011 The Thomson Corporation on STN

RE

The arrow (<-->) indicates the hit term, which is the Nature article of Mr K. Khalturin et al.

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	ARN PG (RPG)	Referenced Work (RWK)	
ALTSCHUL S F	1997	25	3389	NUCLEIC ACIDS RES	
CHAPMAN J A	2010	464	592	NATURE	<-->
CHEN J	1994		526	MAIZE HDB	
WRIGHT C F	2004	17	443	PROTEIN ENG DES SEL	

=> D HIT

Display only the searched cited reference (HIT)

L1 ANSWER 1 OF 20 SCISEARCH COPYRIGHT (c) 2011 The Thomson Corporation on STN

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	ARN PG (RPG)	Referenced Work (RWK)
CHAPMAN J A	2010	464	592	NATURE

Manual cited reference searching

=> S KHALTURIN K?/RAU

L1 114 KHALTURIN K?/RAU

We are looking for the cited author Konstantin Khalturin in the referenced author field (**/RAU**).

=> D BIB HIT

L1 ANSWER 1 OF 114 SCISEARCH COPYRIGHT
on STN

A search in /RAU retrieves only cited records where Konstantin Khalturin is the first author.

AN 2011:386456 SCISEARCH [Full-text](#)

Displaying a citing article with BIB HIT...

GA The Genuine Article (R) Number: BTB75

TI CNIDARIAN IMMUNITY: A Tale of Two Barriers

AU Augustin, Rene; Bosch, Thomas C. G. (Reprint)

CS Univ Kiel, Inst Zool, D-24098 Kiel, Germany (Reprint)

E-mail: tbosch@zoologie.uni-kiel.de

CYA Germany

SO INVERTEBRATE IMMUNITY, (2010) Vol. 708, pp. 1-16. ISSN: 0065-2598.

PB SPRINGER-VERLAG BERLIN, HEIDELBERGER PLATZ 3, D-14197 BERLIN, GERMANY.

DT Article; Journal

LA English

REC Reference Count: 76

ED Entered STN: 24 Mar 2011

Last Updated on STN: 24 Mar 2011

...indicates the hit reference.

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	ARN PG (RPG)	Referenced Work (RWK)
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KHALTURIN K	2009	25	404	TRENDS GENET
KHALTURIN K	2004	41	1077	MOL IMMUNOL

Cited reference searching

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=> FILE SCISEARCH MEDLINE EMBASE BIOSIS CAPLUS
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=> S KHALTURIN K?/AU
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L2          21 FILE SCISEARCH
L3          22 FILE MEDLINE
L4          25 FILE EMBASE
L5          20 FILE BIOSIS
L6          26 FILE CAPLUS
```

We are looking for author Konstantin Khalturin in author field (/AU) in many databases

```
TOTAL FOR ALL FILES
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L7          114 KHALTURIN K?/AU
```

After DUPLICATE REMOVE, 32 records of the author "Konstantin Khalturin" are identified

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=> DUP REM L7
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L8          32 DUP REM L7 (82 DUPLICATES REMOVED)
           ANSWERS '1-21' FROM FILE SCISEARCH
           ANSWERS '22-24' FROM FILE MEDLINE
           ANSWER '25' FROM FILE EMBASE
           ANSWER '26' FROM FILE BIOSIS
           ANSWERS '27-32' FROM FILE CAPLUS
```

Transfer citation

=> FILE SCISEARCH MEDLINE CAPLUS

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L9          TRANSFER L8 1- CIT :          39 TERMS
L10         251 FILE SCISEARCH
L11         42 FILE MEDLINE
L12        225 FILE CAPLUS
TOTAL FOR ALL FILES
L13        518 L9
```

=> S KHALTURIN K?/RAU

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L14         114 FILE SCISEARCH
L15          15 FILE MEDLINE
L16        105 FILE CAPLUS
TOTAL FOR ALL FILES
L17        234 KHALTURIN K?/RAU
```

=> S L13 OR L17

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TOTAL FOR ALL FILES
L21         519 L13 OR L17
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=> DUP REM L21

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L22         304 DUP REM L21 (215 DUPLICATES REMOVED)
           ANSWERS '1-251' FROM FILE SCISEARCH
           ANSWERS '252-258' FROM FILE MEDLINE
           ANSWERS '259-304' FROM FILE CAPLUS
```

Enter in the 3 bibliographic databases which contain citations

Automatically bibliographic data is extracted by **TRA nsfer CIT ation**:

```
1 AUGUSTIN R, 2006, V296, P62,?/RE
2 BOSCH T C G, 2002, V70, P140,?/RE
3 BOSCH T C G, 2002, V80, P1670,?/RE ...
```

Transfer citation

=> ANA L22 1- HIT RE

L23 ANALYZE L22 1- RE HIT : 44 TERMS

Statistical analysis (ANALyze) to identify the most cited record

=> D 1-

L23 ANALYZE L22 1- RE HIT : 44 TERMS

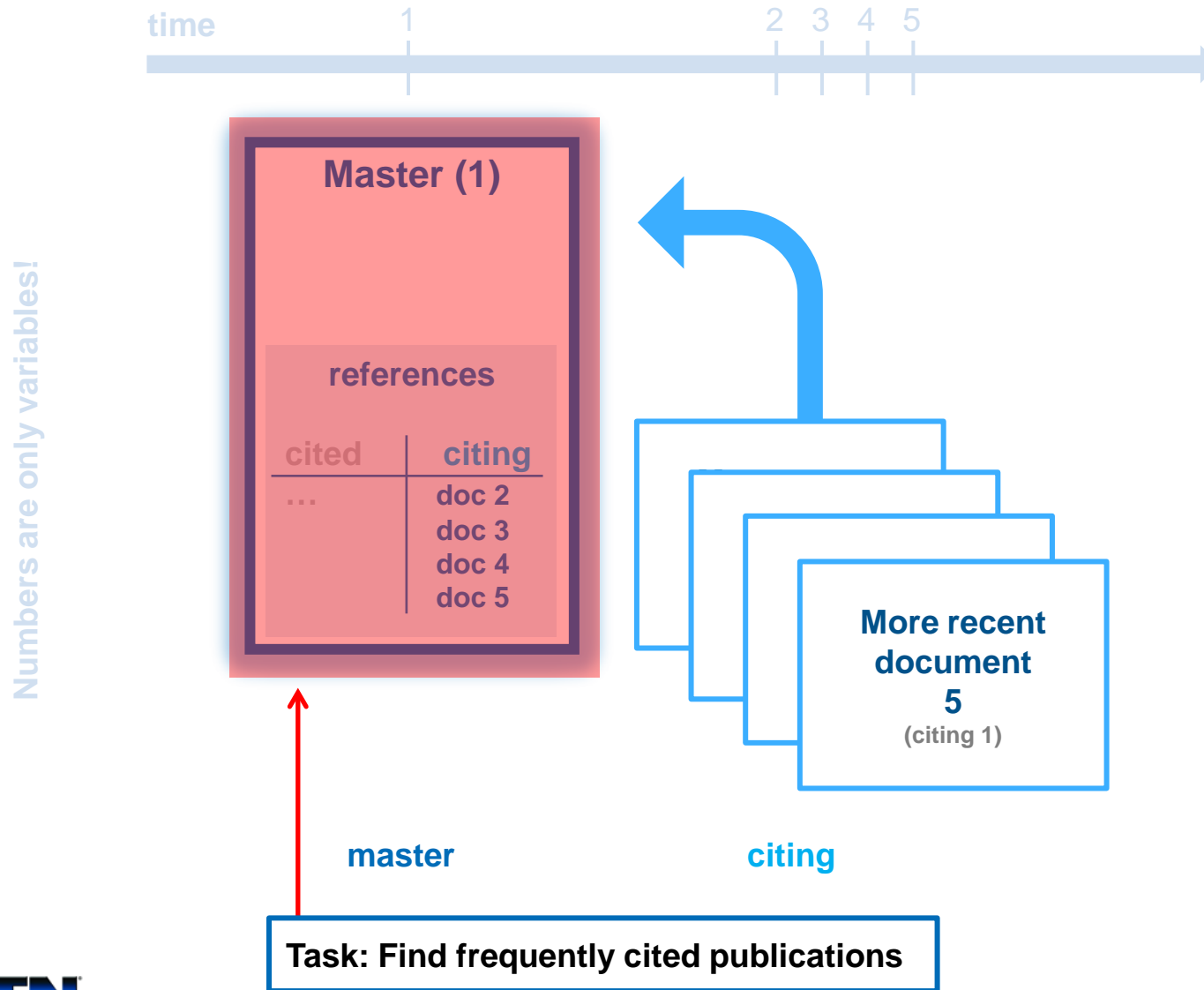
TERM # # OCC # DOC % DOC RE

TERM #	# OCC	# DOC	% DOC	RE
1	73	73	24.01	MILLER D J, 2007, V8, PR59, GENOME BIOL
2	46	46	15.13	KHALTURIN K, 2003, V100, P622, P NATL ACAD SCI USA
3	46	46	15.13	WITTLIEB J, 2006, V103, P6208, P NATL ACAD SCI USA
4	29	29	9.54	KHALTURIN K, 2007, V309, P32, DEV BIOL
5	27	27	8.88	AUGUSTIN R, 2006, V296, P62, DEV BIOL
6	23	23	7.57	BOSCH T C G, 2002, V80, P1670, CAN J ZOOL
7	23	23	7.57	CHAPMAN J A, 2010, V464, P592, NATURE
8	23	23	7.57	KHALTURIN K, 2004, V41, P1077, MOL IMMUNOL
9	19	19	6.25	KHALTURIN K, 2009, V25, P404, TRENDS GENET
10	12	12	3.95	THOMSEN S, 2004, V121, P195, MECH DEVELOP

Agenda

- The principles of citations
- Databases with reference information on STN
- Everyday searching
 - Easy quest reference searching
 - **Impact of publications**
 - Competitor analysis
 - Identify key patents
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Concept: Impactful publication → many citings



Citing information in CPlus to limit answer set to most impactful publications

Search fields

OS Citing References Count (**OSC.G**) – number of citing references

Date Last Cited (**UPOS.G**) – date last citing reference entered STN

OS Citing References (**OS.G**) – citing reference accession numbers
(not sortable)

Display formats:

OSG – displays OSC.G, UPOS.G, and OS.G (up to 50 accession numbers = ANs)

OSG.MAX – displays OSC.G, UPOS.G, and OS.G (up to 10 ANs)

OS.GMAX – displays OS.G (up to 1020 accession numbers)

Search for documents that are cited more than 100 times

=> FILE REGISTRY

=> S (GOLD OR PLATINUM OR OSMIUM OR RHODIUM OR SILVER)/CN

L1 5 (GOLD OR PLATINUM OR OSMIUM OR RHODIUM OR SILVER)/CN

=> FILE CAPLUS

=> S L1/NANO

L2 13711 L1/NANO
(L1 (L) NANO/RL)

Restrict the search to documents which are cited more than 100 times and exclude reviews.

OSC.G = number of citing references

=> S L2 AND OSC.G>100 NOT REVIEW/DT

L3 119 L2 AND OSC.G>100 NOT REVIEW/DT

=> SORT OSC.G D L3 1-

PROCESSING COMPLETED FOR L3

L4 119 SORT L3 1- OSC.G D

Sort your answer set according to the number of citings (descending) to obtain the most impactful publications in the first answer numbers.

And the most impactful publication is...

=> D L4 1

L4 ANSWER 1 OF 119 CAPLUS COPYRIGHT 2010 ACS on STN
AN 2001:442933 CAPLUS
DN 135:187312
TI Room-temperature ultraviolet nanowire nanolasers
AU Huang, Michael H.; Mao, Samuel; Feick, Henning; Yan, Haoquan; Wu, Yiyi; Kind, Hannes; Weber, Eicke; Russo, Richard; Yang, Peidong
CS Department of Chemistry, University of California, Berkeley, CA.

OS.G allows you to access citing documents by clicking the linked CPlus accession number.

3782 > 3741

Note that there are multiple occurrences of identical references within some publications.

DI Journal
LA English
OSC.G 3741 THERE ARE 3741 CAPLUS RECORDS THAT CITE THIS RECORD (3782 CITINGS)

UPOS.G Date last citing reference entered STN: 21 Aug 2009
OS.G [CAPLUS 2009:811781](#); [2009:811776](#); [2009:811721](#); [2009:741481](#);

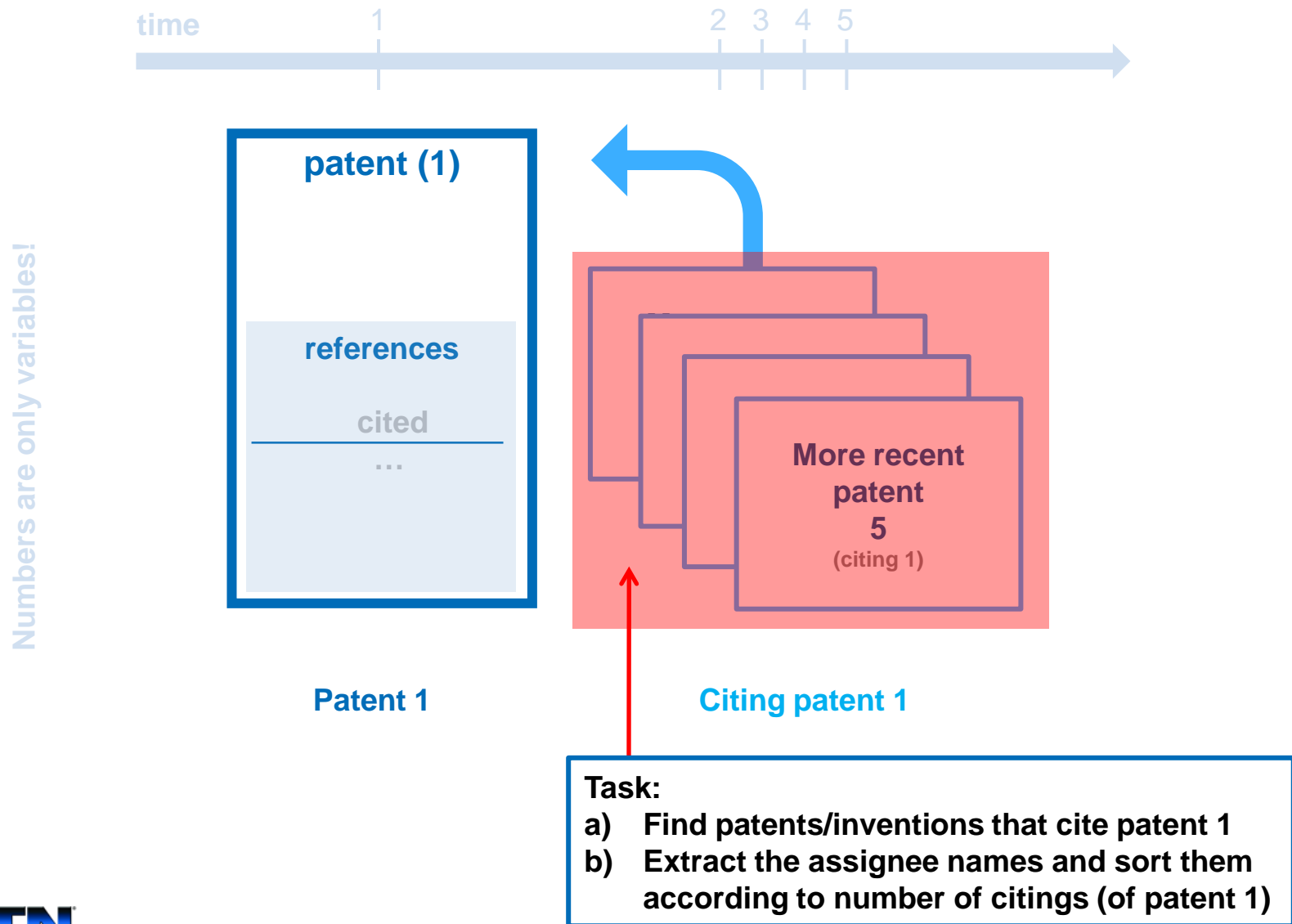
o o o o

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

Agenda

- The principles of citations
- Databases with reference information on STN
- Everyday searching
 - Easy quest reference searching
 - Impact of publications
 - **Competitor analysis**
 - Identify key patents
- Summary

Concept: Competitor analysis → many citings



Study competitors by analyzing patent citations

Search Question:

The company QIAGEN is interested if any competitors have published inventions very close to their technology.

Use specific features of the INPAFAMDB database to find competitors with strongly related technologies.

Identifying potential competitors of QIAGEN

=> FIL INPAFAMDB

=> S QIAGEN/PASS

299 QIAGEN/PA

298 QIAGEN/PAS

241 QIAGEN/LSPA

L1 366 QIAGEN/PASS

(QIAGEN/PA,PAS,LSPA)

Company search for Qiagen in the assignee super search field (**/PASS**).

=> TRANSFER L1 PN 1- /RPN

L2 TRANSFER L1 1- PN : 2499 TERMS

L3 1836 L2/RPN

TRANSFER publication numbers (PN) to the referenced publication number field **/RPN**.

=> S L3 NOT QIAGEN/PA,PAS

299 QIAGEN/PA

298 QIAGEN/PAS

L4 1701 L3 NOT QIAGEN/PA,PAS

Exclude self-citations.

=> S L3(S)X/CAT NOT QIAGEN/PA,PAS

1761407 X/CAT

430 L28(S)X/CAT

299 QIAGEN/PA

298 QIAGEN/PAS

L5 372 L3(S)X/CAT NOT QIAGEN

Option: Use (**S**) proximity to refine the QIAGEN cited patent numbers (**/RPN**) with an "X" search report category (**/CAT**). Again, exclude self-citations.

Identifying potential competitors of QIAGEN

=> D BRIEF PIRE

A good display format is BRIEF PIRE:

- a) Short overview of content and bibliography +
- b) Cited references

L5 ANSWER 1 OF 372 INPAFAMDB

AN 40288182 INPAFAMDB EDF 20101104 EWF 201044 UPFB 20110120 UWF 201103

TI Kartusche und Betriebsverfahren fuer Reagenzien eines
Biosensorsystems.

- CARTRIDGE AND OPERATING METHOD FOR REAGENTS OF A BIOSENSOR SYSTEM.
- CARTOUCHE ET PROCEDE DE FONCTIONNEMENT POUR DES REACTIFS D'UN SYSTEME BIOCAPTEUR.

INS BARLAG HEIKE, DE; OSTERMAIER JOCHEN, DE

PAS SIEMENS AG, DE

- BARLAG HEIKE, DE; OSTERMAIER JOCHEN, DE

IPCI C12M0001-34 [I,A]; G01N0033-18 [I,A]; G01N0033-50 [I,A];
B01J0004-02 [I,A]; B01J0019-00 [I,A]; B01L0003-00 [I,A];
B41J0002-175 [I,A]; C12M0001-18 [I,A]

EPC G01N0033-50; B01L0003-00D2; B01L0003-00D4; B01L0099-00G2; B41J0002-
175C2;

B41J0002-175C3

AB (WO 2010124895 A1)

Cartridge (10) for providing reagents for a biosensor system, comprising at least two containers (11-17), the at least partially open upper sides of which are each sealed by a foil (22) in an airtight and ...

Identifying potential competitors of QIAGEN

...

PATENT FAMILY INFORMATION INPAFAMDB

```
+----- Publications -----+  
DE 102009019650      A1 20101104  
WO 2010124895      A1 20101104
```

```
+----- Applications -----+  
DE 2009-102009019650 A 20090430  
WO 2010-EP52969      W 20100309
```

```
+----- Priorities -----+  
DE 2009-102009019650 A 20090430
```

1 priority, 2 applications, 2 publications

Patent family information

- a) Publications
- b) Applications
- c) Priorities

Identifying potential competitors of QIAGEN

Member 1

...
PI DE 102009019650 A1 20101104
REP US 6337053 B1 20020108 (SEA, pat)
PREC SYSTEM SCIENCE CO LTD, JP
US 20090042280 A1 20090212 (SEA, pat)
GENEOHM SCIENCES INC
US 20060177344 A1 20060810 (SEA, pat)
OUCHI KATSUMI; MITSUMAKI HIROSHI
US 20020031842 A1 20020314 (SEA, pat)
REC 4. THERE ARE 4 CITED REFERENCES (4 PATENT, 0 NON PATENT) AVAILABLE FOR THIS RECORD.

PI reveals the citing publication (DE application).

The DE patent cites US publications.

All the citations are patent references.

Member 2

PI WO 2010124895 A1 20101104
REP WO 2000056455 A2 20000928 (SEA, pat, Cat: X)
PYROSEQUENCING AB, SE; PIESOLD ALEXANDER JAMES GB; HAGERLID PETER, SE; EHRING HANNO, SE; EKSTROEM BJOERN, SE
WO 2002090995 A2 20021114 (SEA, pat, Cat: X)
AXIS SHIELD ASA, NO; HOLTLUND JOSTEIN, NO; THORSTEIN, NO; JANSON TORE, NO; TOEN HEGGER, NO
LAUVSTAD INGER LISE, NO; COCKBAIN JULIAN, GB
US 5075082 A 19911224 (SEA, pat, Cat: Y)
BECKMAN INSTRUMENTS INC, US
REC 3. THERE ARE 3 CITED REFERENCES (3 PATENT, 0 NON PATENT) AVAILABLE FOR THIS RECORD.

The hit document is a high-relevance X publication.

The WO application cites only patent publications.

1 priority, 2 applications, 2 publications

Identifying potential competitors of QIAGEN

=> ANALYZE L4 1- PAS

L6 ANALYZE L30 1- PAS : 1359 TERMS

=> D DOC 1-15

L6 ANALYZE L30 1- PAS : 1359 TERMS

TERM #	# OCC	# DOC	% DOC PAS	
1	57	11	2.96	APPLERA CORP
2	15	10	2.69	LIFE TECHNOLOGIES CORP
3	38	7	1.88	HOFFMANN LA ROCHE
4	36	7	1.88	INVITROGEN CORP
5	26	7	1.88	ROCHE DIAGNOSTICS
6	18	6	1.61	AGILENT TECHNOLOGI
7	78	5	1.34	BECTON DICKINSON CO
8	61	5	1.34	PROMEGA CORP
9	20	5	1.34	FUJI PHOTO FILM CO LTD
10	12	5	1.34	BENDZKO PETER
11	89	4	1.08	UNIV IOWA RES FOUN
12	79	4	1.08	COLEY PHARM GMBH
13	54	4	1.08	MILLIPORE CORP
14	40	4	1.08	ABBOTT LAB
15	23	4	1.08	CANON KK

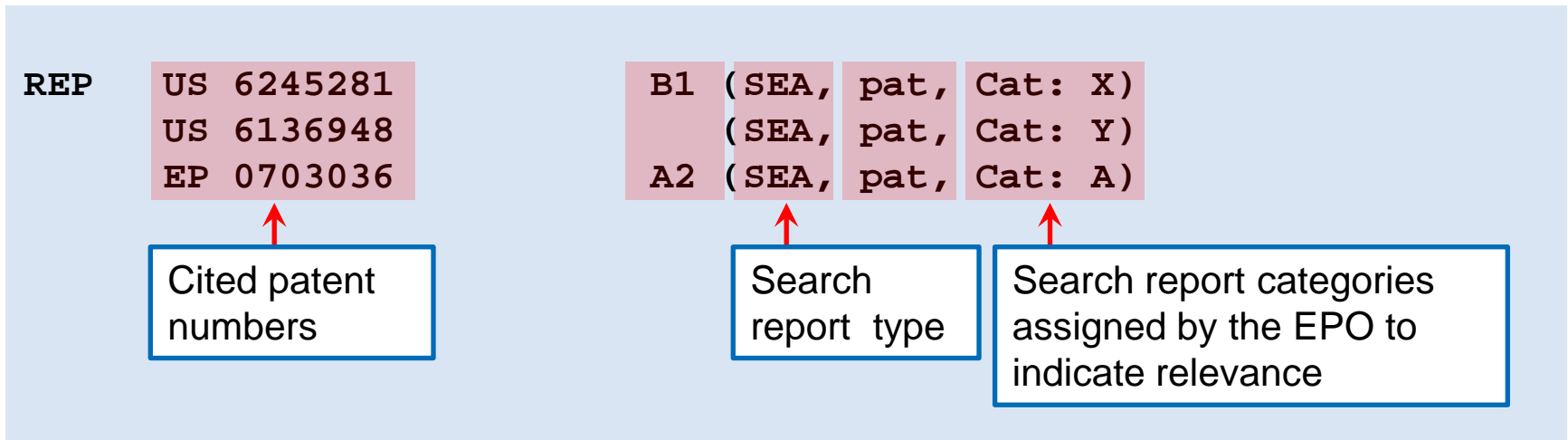
Analyzing the INPAFAMDB patent assignee standardized field (PAS)...

...reveals the main competitors whose patents contain citations of QIAGEN documents.

Please note that we displayed the ANALYZE list according to the number of documents (DOC), not occurrences.

INPAFAMDB: Patent citations sample display

(from EP 1384565)



- Search Report Types **/SRT**
 - **APP, SEA, EXA, OPP, 115, ISR, SUP, CH2**
- Search Report Categories **/CAT**
 - **A D E L O P T X Y**
- Linked with (**S**) proximity operator

Search report category and type

Heading	Symbol	Content
Search report category (ICAT)	A	technological background
	D	document cited in the application
	E	earlier application or patent but published on or after the international filing date
	L	document cited for other reasons
	O	non-written disclosure
	P	intermediate document
	T	theory or principle underlying the invention
	X	particularly relevant if taken alone
	Y	particularly relevant if combined with another document of the same category

Literature citations sample display

(from EP 1384565)

REXP XP002213140 (SEA, Cat: X)
- XP000656866 (SEA, Cat: X)
- XP002213140 (APP)
- XP000656866 (APP)

XP numbers from EPO /REXP

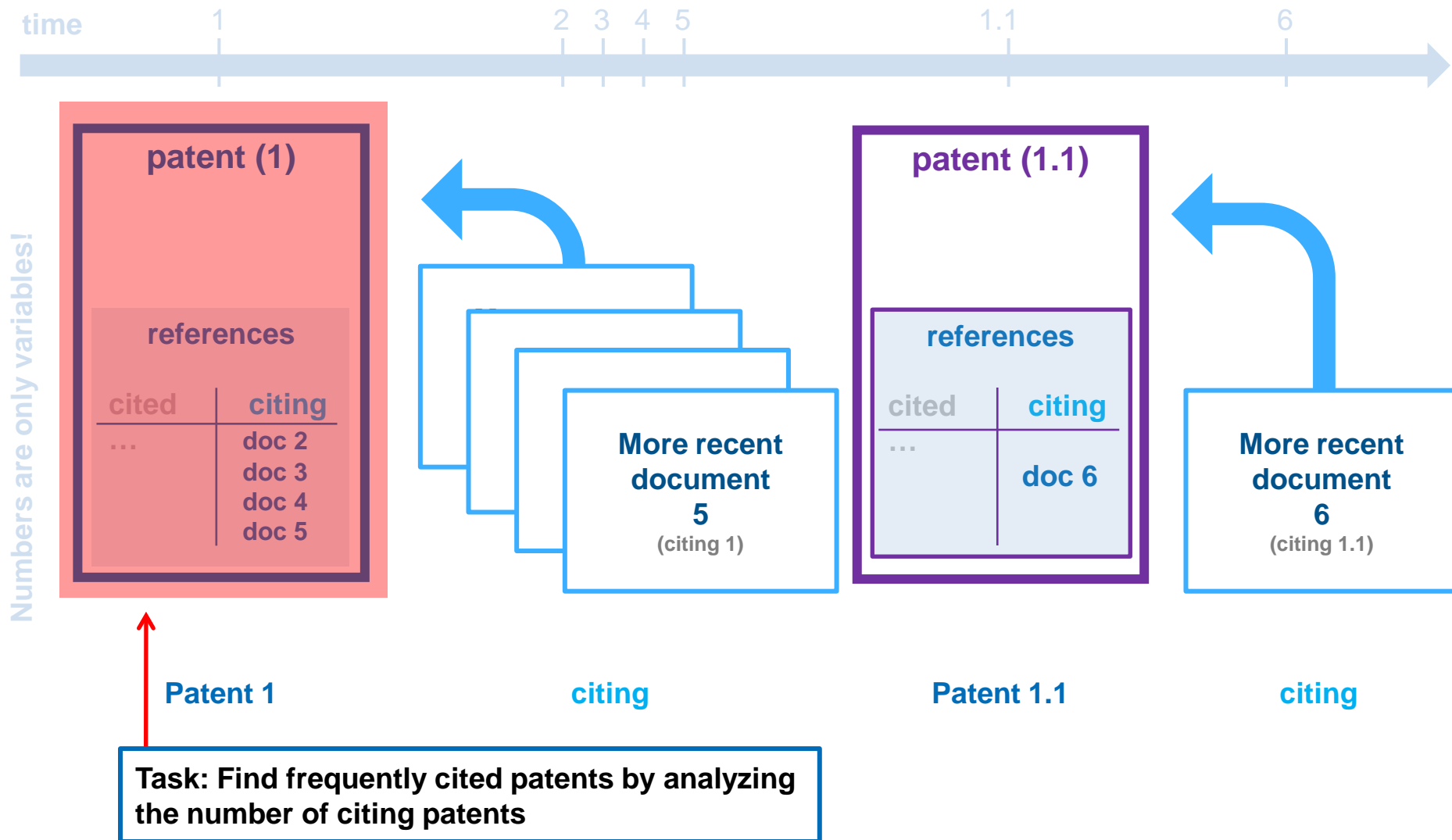
REN KELLER PETER: "Der Stoff, aus dem die Prototypen sind" KUNSTSTOFFE, CARL HANSER VERLAG. MUNCHEN, DE, vol. 89, no. 11, 1 November 1999 (1999-11-01), pages 58-61, XP002213140 ISSN: 0023-5563 (SEA, Cat: X)
- SCHMACHTENBERG E ET AL: "LASERSINTERN VON POLYAMID. LASER-SINTERING OF POLYAMIDE" KUNSTSTOFFE, CARL HANSER VERLAG. MUNCHEN, DE, vol. 87, no. 6, 1 June 1997 (1997-06-01), pages 773-774,776, XP000656866 ISSN: 0023-5563 (SEA, Cat: X)
- Schmachtenberg, E.; Aischer, G.; and Bruing, S., Laser-Sintering of Polyamide, Kunststoffe 87 (1997) 6, pp. 1-4. (APP)
- XP002213140, Mar. 17, 1972, Germany. (APP)
- XP000656866, Feb. 21, 1938, Germany. (APP)
- European Search Report dated Nov. 7, 2003. (APP)

Cited non-patent literature /REN

Agenda

- The principles of citations
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Concept: key patents → many citings



Identifying key patents

Search for related articles:

Which are the key patents of Henkel in the area of detergents/washing?

Note: In this example we use the Other Source Count Citing ([OSC.G](#)) analysis field. The “Other Source” is the citing DWPI Accession Number (AN). OSC.G is therefore the number of citing DWPI ANs – e.g. the number of citing DWPI patent families.

A quick guide: How to identify key patents

1. Subject search

produces L1

=> `FIL WPINDEX`

=> `SEARCH [SUBJECT OF INTEREST]`

2. DPCI Search

produces L2 and L3

=> `FILE DPCI`

=> `TRANSFER L1 1- AN`

3. Analyze

Analyze DPCI answer set and find high OSC.G values; produces L4

=> `ANALYZE L3 1- OSC.G`

=> `D L4 1-`

4. Search impactful patents

Search highly cited patents
produces L5

=> `S (high values)/OSC.G AND L3`

L5 contains the DPCI records for the highly cited patents.

Identifying key patents

=> **FIL WPINDEX**

=> **S (HENKEL/PA OR HENK/PACO) AND C11D/IPC,EPC**

12589 HENKEL/PA
12563 HENK/PACO
(HENK-C/PACO)
64908 C11D/IPC
29862 C11D/EPC

Run a technology search in WPINDEX.

L1 3924 (HENKEL/PA OR HENK/PACO) AND C11D/IPC,EPC

=> **FILE DPCI**

Extraction of Accession Numbers from WPINDEX and searching them in DPCI.

=> **TRANSFER L1 1- AN**

L2 TRANSFER L1 1- AN : 3924 TERMS

L3 3716 L10

ANALYZING the number of patent families citing the Henkel inventions.

=> **ANALYZE L3 1- OSC.G**

L4 ANALYZE L3 1- OSC.G : 87 TERMS

Identifying key patents

=> D L4 1-

L4 ANALYZE L3 1- OSC.G : 87 TERMS

TERM #	# OCC	# DOC	% DOC	OSC.G
--------	-------	-------	-------	-------

1	627	627	16.87	0
2	534	534	14.37	1
3	411	411	11.06	2
4	339	339	9.12	3
...
72	1	1	0.03	214
73	1	1	0.03	221

The most cited invention by Henkel in this area was cited by 221 patent families (221/OSC.G).

***** END OF L12***

Identifying key patents

=> S L3 AND 221/OSC.G

38 221/OSC.G

L5 1 L3 AND 221/OSC.G

Retrieve the Henkel DPCI record with 221 citing patent families (L5).

=> D AN TI PA CTCS

L5 ANSWER 1 OF 1 DPCI COPYRIGHT 2011 THOMSON REUTERS on STN

AN 1974-75753V [197444] DPCI

TI Textile cleaning bath contg alumino silicates - as fine dispersion
functioning as calcium sequestering agents

PA (HENK-C) HENKEL & CIE GMBH; (HENK-C) HENKEL KGAA

CTCS CITATION COUNTERS

...

OSC.G	221	Citing Patent WPI Accession Number Count (total)
OSC.GX	173	Citing Patent WPI Accession Number Count (by exam.)
OSC.GI	53	Citing Patent WPI Accession Number Count (by inv.)
OSC.GO	1	Citing Patent WPI Accession Number Count (in opp. doc.)
OSC.GTH	0	Citing Patent WPI Accession Number Count (third party)
OSC.GUN	7	Citing Patent WPI Accession Number Count (undefined)

The most cited invention by Henkel in this area was cited by 221 patent families (221/OSC.G).

Patent Databases: Citation fields

Search Field	DPCI	INPAFAMDB	CAPLUS
Cited Patent Assignee	PA.D	PAS.D ¹	-
Cited Publication Year	PY.D	PY.D	RPY
Cited Patent Number	PN.D	PN.D	RPN
Cited Reference Count	RE.CNT	-	RE.CNT
Citing Reference Count	OSC.G ²	-	OSC.G
Display Field	DPCI	INPAFAMDB	CAPLUS
Cited patent references	CDP	REP ³	RE
Cited non patent literature	REN	REN	RE
Citing counters	CTCS	-	OSC.G
Citing information	CGP ⁴	-	OSG

¹ Patent Assignee Standardized

² Citing Accession Number Count

³ **PIRE** for a comprehensive overview of patent and its citations

⁴ Citing patent

Non-patent Databases: Citation fields

Search Field	SCISEARCH	CAPLUS
Cited Reference	RE	RE
Cited Referenced Author	RAU	RAU
Cited Referenced Publication Year	RPY	RPY
Cited Referenced Work (publication title)	RWK	RWK
Cited Reference Count	-	RE.CNT
Citing Reference Count	-	OSC.G
Display Field	SCISEARCH	CAPLUS
Table of cited references	RE	RETABLE

Summary

- Citation searching is important to **complete or expand** your search
- **5 key** STN databases for citation searching with unique coverage and powerful retrieval capabilities:
 - Patents Citation Index (DPCI)
 - INPAFAMDB
 - Caplus
 - SCISEARCH
 - MEDLINE
- **Patent and non-patent** citation searchable files

STN[®]

For more information ...

CAS

E-mail: help@cas.org

Support and Training:

www.cas.org

FIZ Karlsruhe

helpdesk@fiz-karlsruhe.de

Support and Training:

www.stn-international.de