



# Comparing and Combining First-Level and Value-Add Patent Data

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THOMSON REUTERS

# Agenda

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- Overview of patent search types
  - using full-text and value-add databases
    - advantages and disadvantages
- Case study
- Summary & conclusions

## Patent search options - Full text databases

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- Advantages
  - Comprehensive search of the entire document or specific parts, e.g. claims
  - Large backfiles available
  - Data loaded quickly following patent publication
  - Low cost or no cost
- Disadvantages
  - May be overloaded with results
  - Relevancy could be low
  - Specialized indexing & structure searching not available
- Other factors - multiple languages, patent families...

## Patent search options - value add databases

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- Advantages

- critical information extracted & presented
- data in standard format
- higher relevancy searches
- details all in English
- patent families compiled
- search via deep indexing & structure searching

- Disadvantages

- higher cost
- time delay from publication to loading
- extra step to find the original patent

## Patent search options - which to choose

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- Many factors
  - expertise of the searcher
  - budget
  - type of search request, e.g. freedom-to-operate
- Traditionally difficult to combine the two approaches
  - results from different sources require de-duplication
  - requires a good understanding of patent families
- So what's the current situation?

## Case Study

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- Subject - patents for magnetic nano-structures used in drug delivery
  - many uses possible, e.g.
    - to deliver chemotherapy drugs directly to cancer cells
    - tracking movement of molecules towards a target site
    - to remove pathogens e.g. viruses from blood

## Case study

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- Objectives

- compare what's available from full-text and value add databases
- can they be successfully combined in a single search?

- Searches run on Thomson Innovation

- provides full text searching for US, WO, EP, DE, FR, GB
- Japanese full-text Machine Assisted Translations additionally available
- value-add data via *Derwent World Patents Index (DWPI)*
  - 41 authorities covered; specially written titles, abstracts & indexing
- Literature and business databases also available

## Case study

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- Three searches will be run
  - #1 full-text patents only
  - #2 *Derwent World Patents Index (DWPI)* only
  - #3 full text and *DWPI* combined in a single search



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- Search #1 - Full text

Patent Search

Choose search option

### Patent Search

Select Search Style:  Fielded  Publication Number  Expert

Collections to Search: All

Select Collections

Enhanced Patent Data - DWPI

Patent Collections

#### Full Text

- US Granted
- US Applications
- WIPO Applications
- European Granted
- European Applications
- British Applications
- German Utility Models
- German Granted
- German Applications
- French Applications
- Japanese Granted
- Japanese Applications

Japanese Granted  
Japanese Applications

Also search DWPI fields for selected collections

Include full text Japanese Machine Assisted Translations

### Search Criteria

Text Fields  ?

AND  ?

AND  ?

AND  ? From:  To:

Queries are not case sensitive — this includes operators, fields,

## Search terms

Text Fields  ? (\*NANO\* NEAR4 \*MAGNETIC\*) SAME (DELIVER\* OR ADMINIST\* OR TARGET\* OR LOCAT\* OR SITE OR RELEAS\*)

*(printer AND scanner)*

AND  Any IPC  ? A61K  *B65H002912 \ (A61K39205 O.*

AND  Assignee/Applicant  ?  *Fanuc Ltd \ Sony \ XI NING*

AND  Publication Date  ? From: 2000-01-01 To:

*A61K = IPC for medical preparations*

Refine Search 654 records found out of 22931491 records searched (Display Limit 30000)

Filter Results 654 results produced from full text + JP MAT search

### Patent Result Set

http://www.thomsoninnovation.com - Thomson Innovation - Mozilla Firefox

#### Display and Sort Options

Select the fields you want displayed on your result set

<input type="checkbox"/> Relevancy	<input type="checkbox"/> DWPI Drawing	<input checked="" type="checkbox"/> Title	<input type="checkbox"/> DWPI Title
<input type="checkbox"/> Abstract	<input checked="" type="checkbox"/> Assignee/Applicant	<input type="checkbox"/> DWPI Assignee	<input checked="" type="checkbox"/> Publication Number
<input checked="" type="checkbox"/> Publication Date	<input type="checkbox"/> Application Number	<input type="checkbox"/> Application Date	<input type="checkbox"/> Priority Number
<input type="checkbox"/> Priority Date	<input checked="" type="checkbox"/> Current IPC	<input type="checkbox"/> ECLA	<input type="checkbox"/> Main US Class
<input type="checkbox"/> DWPI Main Class	<input type="checkbox"/> DWPI Update	<input type="checkbox"/> Inventor	<input type="checkbox"/> DWPI Accession Number
<input type="checkbox"/> DWPI Assignee Code			

Select icons to display:

- Patent copy
- Notes (work files only)

Sort by: default

Default: 10 records per page

Drawing Size: Thumbnail

**Reduce to one member per patent family**

Preferred document: None  
INPADOC Family  
**Derwent Family**  
Application Number

Collapsing reverts back to normal search results in your preferences if you want this option retained

Default Cancel OK

Done

440 results now displayed as one patent per family (cf 362 Inpadoc families)

Save ▼ | Alerts ▼ | Marked List ▼ | Document Delivery ▼ | Print ▼ | Highlight | E

<input type="checkbox"/>	<input type="checkbox"/>	<b>Publication Number</b>	<b>Assignee/Applicant</b>	<b>Publication Date</b>	
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">US20040086495A1</a>	EUCRO EUROP CONTRACT RES GMBH	2004-05-06	A61K 31/00
		<b>Title:</b> Method for the treatment of arteriosclerosis			
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">US20050171433A1</a>	-	2005-08-04	A61B 5/00
		<b>Title:</b> Multi-functional plasmon-resonant contrast agents for optical coherence tomography			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">WO2007038249A2</a>	UNIV CALIFORNIA	2007-04-05	A61K 49/22
		<b>Title:</b> ULTRASONIC CONCENTRATION OF CARRIER PARTICLES			
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">WO2007116954A2</a>	FUJIFILM CORP	2007-10-18	A61K 49/06
		<b>Title:</b> NANOPARTICLE			
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">US20070048383A1</a>	-	2007-03-01	A61K 9/14
		<b>Title:</b> Self-assembled endovascular structures			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">US6530944B2</a>	RICE UNIVERSITY	2003-03-11	A61K 9/00
		<b>Title:</b> Optically-active nanoparticles for use in therapeutic and diagnostic methods			
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">WO2006086716A2</a>	XCYTE THERAPIES INC	2006-08-17	C12N 5/06
		<b>Title:</b> DONOR LYMPHOCYTE INFUSION OF T CELLS FOR THE TREATMENT OF CANCER			

Displaying 1 - 10 of 440      << 1 2 3 4 5 >> Page 1 of 44

## Sample Inpadoc family – 9 members

### Patent Result Set

Save ▼	Alerts ▼	Marked List ▼	Document Delivery ▼
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">EP1648381A2</a>	TRITON BIOSYSTEMS INC DE10331439A
	<b>Title:</b> MAGNETIC NANOPARTICLE COMPOSITIONS, AND METHODS RELATED THERETO		
<input type="checkbox"/>		<a href="#">EP1409077A2</a>	TRITON BIOSYSTEMS INC US2001307785P
	<b>Title:</b> THERMOTHERAPY VIA TARGETED DELIVERY OF NANOSCALE MAGNETIC PARTICLES		
<input type="checkbox"/>		<a href="#">US20030032995A1</a>	TRITON BIOSYSTEMS INC US2001307785P
	<b>Title:</b> Thermotherapy via targeted delivery of nanoscale magnetic particles		
<input type="checkbox"/>		<a href="#">US20050271745A1</a>	- US2003360561A
	<b>Title:</b> Magnetic nanoparticle compositions, and methods related thereto		
<input type="checkbox"/>		<a href="#">US6997863B2</a>	TRITON BIOSYSTEMS INC US2001307785P
	<b>Title:</b> Thermotherapy via targeted delivery of nanoscale magnetic particles		
<input type="checkbox"/>		<a href="#">WO2003022360A2</a>	TRITON BIOSYSTEMS INC US2001307785P
	<b>Title:</b> THERMOTHERAPY VIA TARGETED DELIVERY OF NANOSCALE MAGNETIC PARTICLES		
<input type="checkbox"/>		<a href="#">WO2003022360A3</a>	TRITON BIOSYSTEMS INC US2001307785P
	<b>Title:</b> THERMOTHERAPY VIA TARGETED DELIVERY OF NANOSCALE MAGNETIC PARTICLES		
<input type="checkbox"/>		<a href="#">WO2005013897A2</a>	TRITON BIOSYSTEMS INC DE10331439A
	<b>Title:</b> MAGNETIC NANOPARTICLE COMPOSITIONS, AND METHODS RELATED THERETO		
<input type="checkbox"/>		<a href="#">WO2005013897A3</a>	TRITON BIOSYSTEMS INC DE10331439A
	<b>Title:</b> MAGNETIC NANOPARTICLE COMPOSITIONS, AND METHODS RELATED THERETO		

## Sample Derwent family – 3 members

Patent Result Set					
Save ▼		Alerts ▼	Marked List ▼	Document Delivery ▼	Print ▼
<input type="checkbox"/>	<input type="checkbox"/>	Publication Number	Assignee/Applicant	Priority Number	
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">EP1648381A2</a>	TRITON BIOSYSTEMS INC	DE10331439A	
		<b>Title:</b> MAGNETIC NANOPARTICLE COMPOSITIONS, AND METHODS RELATED THERETO			
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">WO2005013897A2</a>	TRITON BIOSYSTEMS INC	DE10331439A	
		<b>Title:</b> MAGNETIC NANOPARTICLE COMPOSITIONS, AND METHODS RELATED THERETO			
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">US20050271745A1</a>	-	US2003360561A	
		<b>Title:</b> Magnetic nanoparticle compositions, and methods related thereto			

- 
- Search #2 - *DWPI*



Select Collections

Enhanced Patent Data - DWPI

Patent Collections by A

### Search Criteria

All Text Fields - DWPI

(\*NANO\* NEAR4 \*MAGNETIC\*) SAME (DELIVER\* OR ADMINIST\* OR TARGET\* OR LOCAT\* OR SITE OR RELEAS\*)

((printer AND scanner) NOT inkjet)

X AND Any IPC

A61K

Browse

B65H002912 \ (A61K39205 O

X OR DWPI Class

B

Browse

F01 / D11 / P32

X AND Publication Date

From: 2000-01-01

To:

Add Field

Show All Fields

Display and Sort Options

Queries are not case sensitive – this includes operators, fields, and :

**Click to see the command language**

🔍 Query Previewer View and edit your query or enter a new query

DWPI Class B = pharmaceuticals

🚀 **Query Previewer** *View and edit your query or enter a new query*

```
ALLD=((*NANO* NEAR4 *MAGNETIC*) SAME (DELIVER* OR ADMINIST* OR TARGET* OR  
LOCAT* OR SITE OR RELEAS*)) AND (IC=(A61K) OR DC=(B)) AND DP>=(20000101);
```

**Added brackets to ensure correct search logic**

Run Search

Refine Search

193 records found out of 69122768 records searched (Display Limit 30000)

Filter Results

193 high relevance results produced from DWPI

Patent Result Set

Save | Alerts | Marked List | Document Delivery | Print | Highlight

<input type="checkbox"/>	Publication Number	DWPI Assignee/Applicant	Publication Date	
<input type="checkbox"/>	<a href="#">US7309316B1</a>	FLYNN E R	2007-12-18	A61B 10/00
	<b>DWPI Title:</b> Biopsy sample obtaining method, involves removing rod from cannulae with nanoparticles/disease and obtaining biopsy sample enriched for diseased cells from patient			
<input type="checkbox"/>	<a href="#">US7249604B1</a>	VASMO INC	2007-07-31	A61B 19/00
	<b>DWPI Title:</b> Occluding or controlling blood flow, involves administering magnetic microparticles/nanoparticles/c magnetic field source at desired site near or above path of blood stream			
<input type="checkbox"/>	<a href="#">US20080193559A1</a>	NANO PLASMA CENT CO LTD	2008-08-14	A61K 33/38
	<b>DWPI Title:</b> Pain relief composition for relieving the pain of arthritis comprises paramagnetic silver nanoparticle			
<input type="checkbox"/>	<a href="#">US20080093219A1</a>	UNIV TUFTS	2008-04-24	C07K 2/00
	<b>DWPI Title:</b> New sensor comprising a protein rod body portion, a magnetic particle and an analyte interacting r sample			
<input type="checkbox"/>	<a href="#">US20080075701A1</a>	HONG C R	2008-03-27	A61K 48/00
	<b>DWPI Title:</b> New composition comprise hydrophilic vectors, magnetic nanoparticles, and genetic materials, use molecules into cells using magnetic nanoparticles			

Hit-term highlighting



# Results management + de-duplication

Saved Work << Saved Work - Work Files Saved Work Hel

**Search:** All Content

- Inbox
- Searches & Alerts
- Search Histories
- Watched Records
- Work Files**
- Citation Maps
- Charts
- Personal Folders
- Public Folders
- Deleted Items

**Work Files**

**Search:** All Content    Include Annotations

|

<input type="checkbox"/>	Name	Date Modified ▼	#Records	Options
<input type="checkbox"/>	dwpi unique	2008-10-08	99	
<input type="checkbox"/>	nano DWPI	2008-10-08	193	
<input type="checkbox"/>	nano full text	2008-10-08	654	

*Merge two or more work files or marked lists to create a new one*

Merge selected work files using

**Saved searches can be combined with AND, OR, NOT**

- 
- Search #3 - full-text and *DWPI* together in one search...

🏠 Collections to Search: All

Select Collections

Enhanced Patent Data - DWPI

Patent Collections by

Full Text

- |   |   |   |   |
|---|---|---|---|
| <input checked="" type="checkbox"/> US Granted        | <input checked="" type="checkbox"/> European Granted      | <input checked="" type="checkbox"/> German Utility Models | <input checked="" type="checkbox"/> French Applications   |
| <input checked="" type="checkbox"/> US Applications   | <input checked="" type="checkbox"/> European Applications | <input checked="" type="checkbox"/> German Granted        | <input checked="" type="checkbox"/> Japanese Granted      |
| <input checked="" type="checkbox"/> WIPO Applications | <input checked="" type="checkbox"/> British Applications  | <input checked="" type="checkbox"/> German Applications   | <input checked="" type="checkbox"/> Japanese Applications |

Also search DWPI fields for selected collections

**Repeat search #1 adding DWPI fields**

Search Criteria

Text Fields  ?

*(printer AND scanner)*

AND    B65H002912 \ (A61K39205 O

OR  ?  *(printer AND scanner)*

AND  ? From:  To:

Patent Result Set  
(484 Derwent Families)

484 hits after collapsing by Derwent family

Save ▼ | Alerts ▼ | Marked List ▼ | Document Delivery ▼ | Print ▼ | Highlight | E

<input type="checkbox"/>	<input type="checkbox"/>	<b>Publication Number</b>	<b>Assignee/Applicant</b>	<b>Publication Date</b>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">WO2003072803A2</a>	NANOFrames INC	2003-09-04	B82B 1/00
		<b>Title:</b> NANOSTRUCTURES CONTAINING ANTIBODY ASSEMBLY UNITS			
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">US20050171433A1</a>	-	2005-08-04	A61B 5/00
		<b>Title:</b> Multi-functional plasmon-resonant contrast agents for optical coherence tomography			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">US20050136258A1</a>	-	2005-06-23	B32B 5/16
		<b>Title:</b> Bioconjugated nanostructures, methods of fabrication thereof, and methods of use thereof			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">US20020103517A1</a>	-	2002-08-01	A61K 9/00
		<b>Title:</b> Optically-active nanoparticles for use in therapeutic and diagnostic methods			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">CN1785161A</a>	UNIV ZHONGSHAN	2006-06-14	A61K 9/16
		<b>Title:</b> Magnetic nano-balls carried with cisplatin and its prepn. method			
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">US20070154397A1</a>	IND TECH RES INST	2007-07-05	A61K 49/06
		<b>Title:</b> Thermosensitive nanostructure for hyperthermia treatment			
<input type="checkbox"/>	<input type="checkbox"/>	<a href="#">WO2007097473A1</a>	JAPAN GOVERNMENT	2007-08-30	A61K 49/00
		<b>Title:</b> ORGANIC MAGNETIC NANOCOMPLEX HAVING FUNCTIONAL MOLECULE INTRODUCED THEREIN			

Displaying 1 - 10 of 484

◀ 1 2 3 4 5 ▶▶ Page 1 of 49



## Summary

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Search	Records
1. Full text only	654
..collapsed by INPADOC family	362
..collapsed by Derwent family	440
2. DWPI only	193
..hits unique to DWPI	99
1 and 2 combined	539
3. Single search of full-text + DWPI	484



## Search summary

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- Full text gives the highest number of hits
  - collapsing by INPADOC gives a smaller set than by *DWPI* family
    - *DWPI* has more strict rules for applying family relationship between documents
- *DWPI* gives a smaller set than full-text
  - higher relevance titles and abstracts are searched
- Making separate searches allows more precision
  - can tailor each search with e.g. indexing terms
  - extra combining/de-duplication step required
- A single combined search improves on either separate search, and is more convenient

## Conclusions

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- Important to search both full text and value-add datasets
- Single search approach gives a good result but can be improved by using specialist indexing
- New tools offer the user easier de-duplication and patent family manipulation from disparate sources