

Literature Searching

Reaxys is one of the largest document repositories in chemical science and provides various different means to find literature on chemistry related topics. This document showcases two examples for searching documents and chemical information in Reaxys.

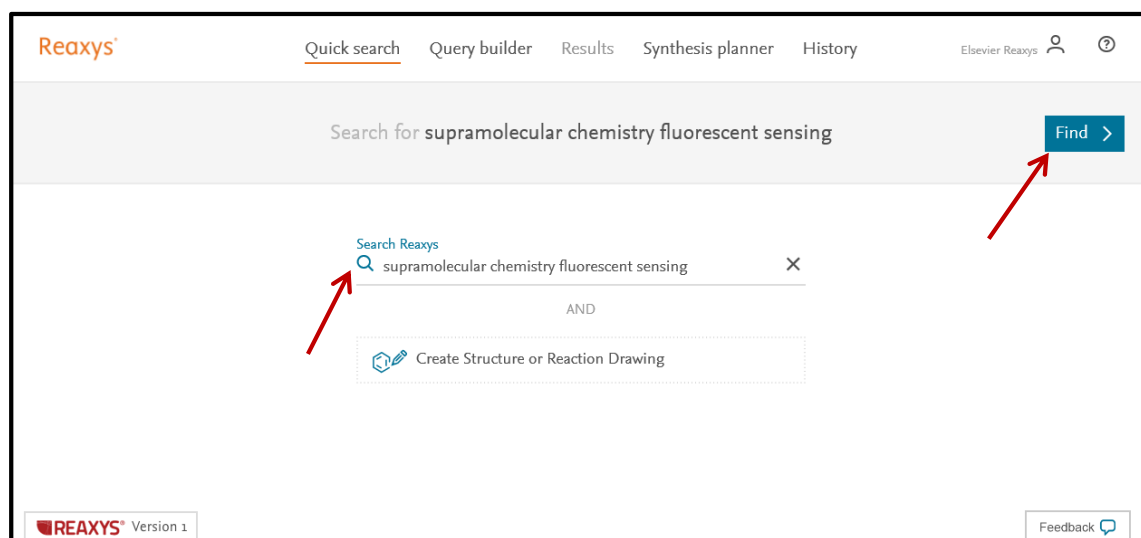
In the workflows we show examples that include:

- How to use the Quick search feature
- How to work with and interpret the results preview
- How to narrow initial answers using various filter options
- How to get to citing articles via Scopus

❖ Finding documents discussing fluorescent sensors

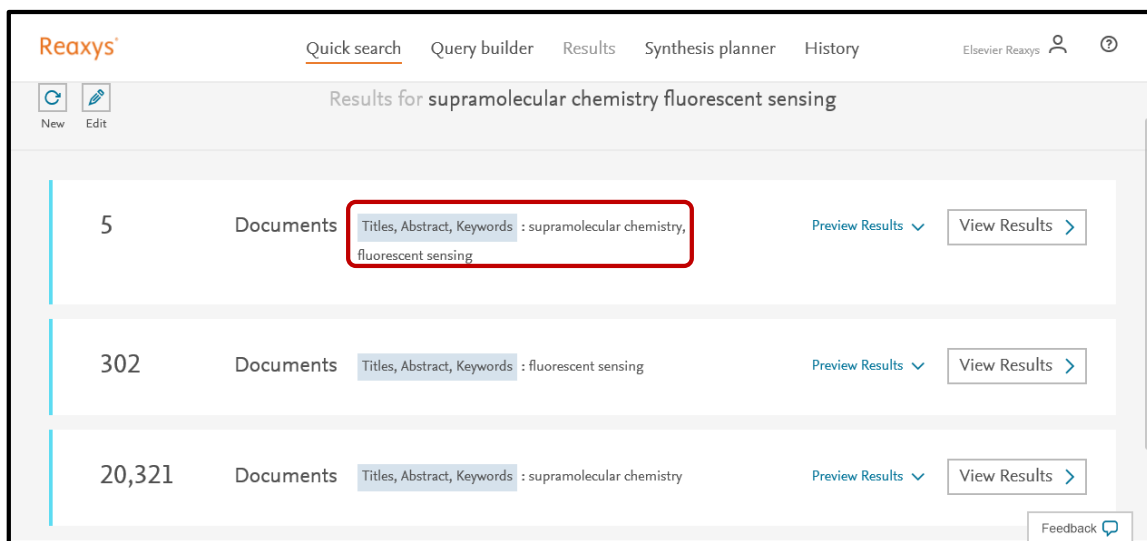
Fluorescent molecular sensors can be applied in many disciplines, including medical diagnostics, physiological imaging, biochemical and chemical analysis or monitoring systems. In this case I would like to know more about published literature on the topic “supramolecular chemistry fluorescent sensing” and to see whether there is a review article of interest to me.

1. On the Reaxys home page click the **Search Reaxys** field and type **supramolecular chemistry fluorescent sensing**
 - a. Click **Find** (or press **Enter** on your keyboard)



Reaxys analyzes the query input and returns three result sets in a Results Preview:

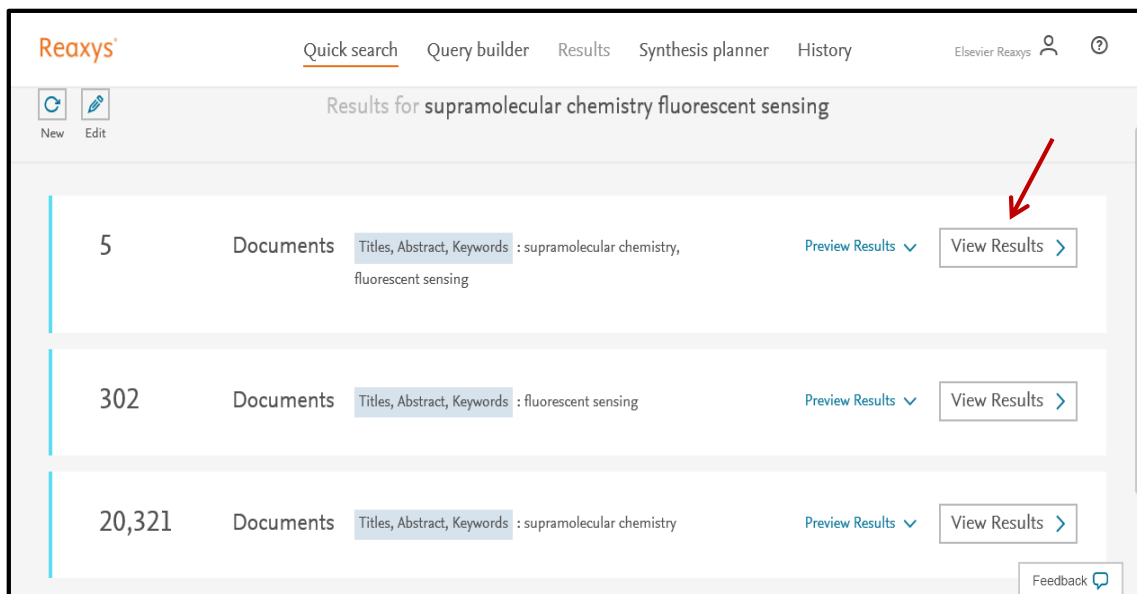
- The first set is the result of a query that considers all query terms, while the second and third sets search for parts of the query.
- From the list of result sets you can now select the one which best fits your needs, without reformulating your query.



The screenshot shows the Reaxys interface with the search query 'supramolecular chemistry fluorescent sensing'. The results are displayed in three rows:

Number of Documents	Search Criteria	Preview Results	View Results
5	Titles, Abstract, Keywords : supramolecular chemistry, fluorescent sensing	Preview Results	View Results
302	Titles, Abstract, Keywords : fluorescent sensing	Preview Results	View Results
20,321	Titles, Abstract, Keywords : supramolecular chemistry	Preview Results	View Results

2. Click **View Results** for the first set of results to retrieve the documents for *supramolecular chemistry* and *fluorescent sensing*:

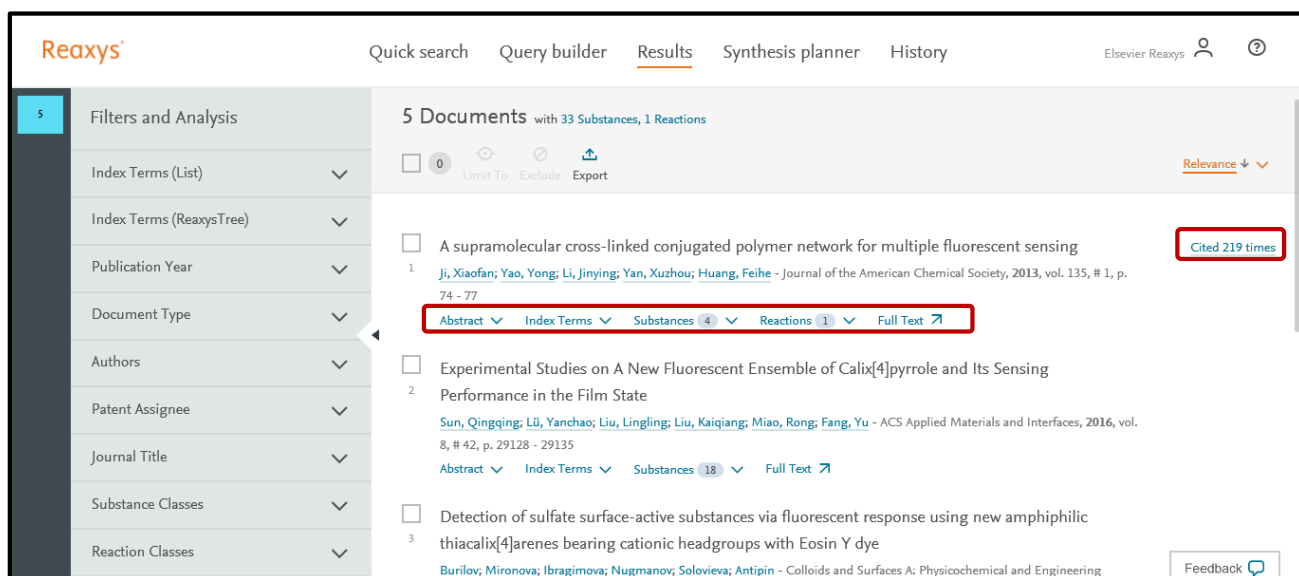


This screenshot is identical to the previous one, but with a red arrow pointing to the 'View Results' button for the first result set (5 documents).

One of the reviews is cited many times and looks interesting to me.

- Click '*Cited # times*' to open Scopus with the documents that cite this article.
- Click '*Abstract*' to view the document's abstract.
- Click '*Index Terms*' to view the *index terms* that were assigned to this article.
- Click '*Substances*' to view substances that are indexed from the document.
- Click '*Reactions*' to view reactions that are indexed from the document.
- Click '*Full Text*' will direct you to the publisher's website for viewing the full text article.

Please Note: depending on the article or patent, further options may be presented such as Front Page Information.



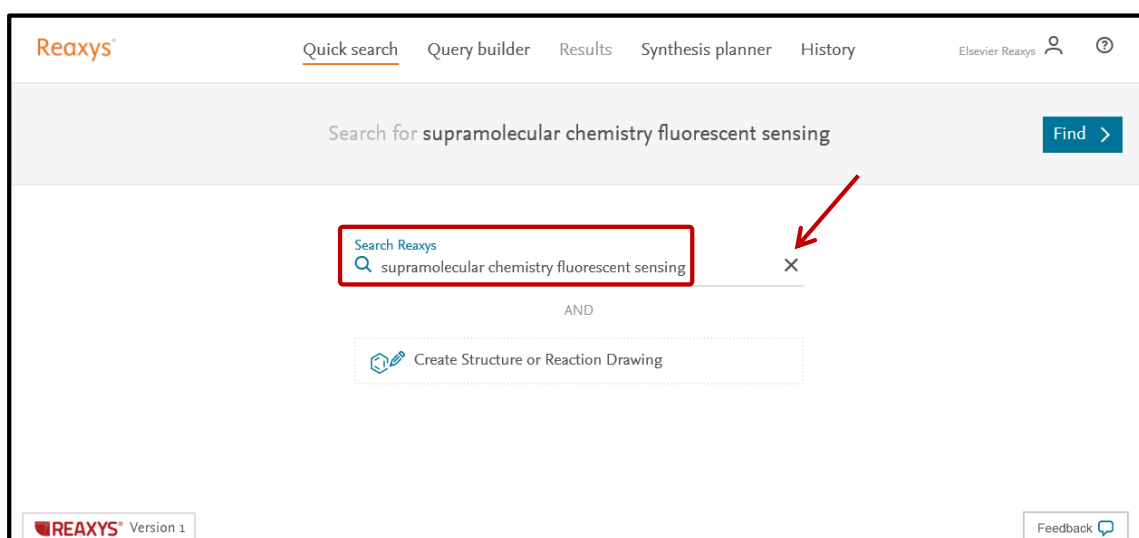
The screenshot shows the Reaxys search results page. The top navigation bar includes 'Quick search', 'Query builder', 'Results', 'Synthesis planner', and 'History'. The left sidebar contains 'Filters and Analysis' with various filter options like 'Index Terms (List)', 'Publication Year', and 'Document Type'. The main content area displays '5 Documents with 33 Substances, 1 Reactions'. The first document is 'A supramolecular cross-linked conjugated polymer network for multiple fluorescent sensing' by Ji, Xiaofan; Yao, Yong; Li, Jinying; Yan, Xuzhou; Huang, Feihe, published in the Journal of the American Chemical Society in 2013. It is cited 219 times. Below the title are links for 'Abstract', 'Index Terms', 'Substances' (4), 'Reactions' (1), and 'Full Text'. The second document is 'Experimental Studies on A New Fluorescent Ensemble of Calix[4]pyrrole and Its Sensing Performance in the Film State' by Sun, Qingqing; Li, Yanchao; Liu, Lingling; Liu, Kaiqiang; Miao, Rong; Fang, Yu, published in ACS Applied Materials and Interfaces in 2016. It has 18 substances indexed. The third document is 'Detection of sulfate surface-active substances via fluorescent response using new amphiphilic thiacalix[4]arenes bearing cationic headgroups with Eosin Y dye' by Burilov, Mironova; Ibragimova; Nugmanov; Solovieva; Antipin, published in Colloids and Surfaces A: Physicochemical and Engineering Sciences.

❖ Total Synthesis of Taxol

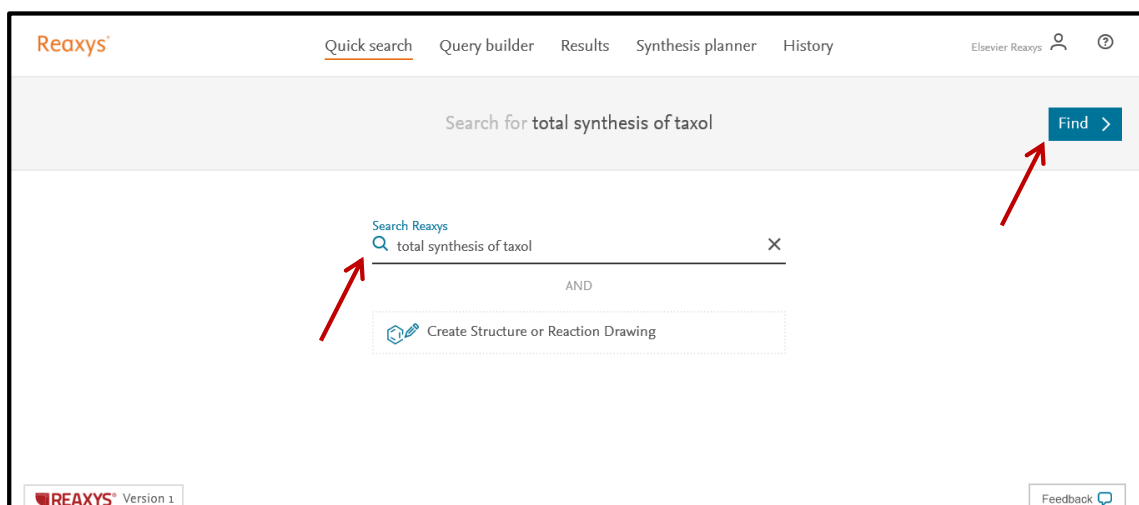
Taxol is a complex molecule used as a drug to treat ovarian, breast, lung, pancreatic and other cancers. Its total synthesis is challenging, but nevertheless very interesting to learn. What is known about the total synthesis of taxol and who worked on it and when?

You can start to answer questions like this in Reaxys either through Reaction Records (draw the structure of taxol and specify the substance be a product), or through Substance Records (find the Substance Record for taxol and browse through the preparations listed), or through Document Records (where simple keyword searches relating to substances/reactions can directly give important records). In this case, we shall illustrate how to approach this question through Document Records.

1. Click **Quick search** to return to Reaxys' home page
 - a. If necessary, clear the *Search Reaxys* field by clicking the **x**

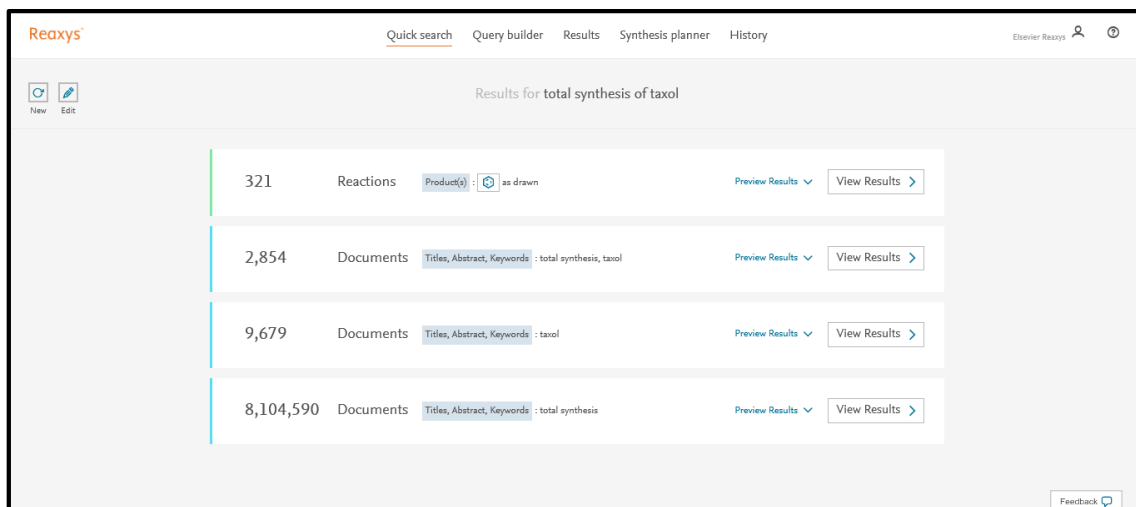


2. Click the **Search Reaxys** field and type **total synthesis of taxol**
 - a. Click **Find** (or press **Enter** on your keyboard)



Reaxys analyzes the query input and returns four result sets in a Results Preview:

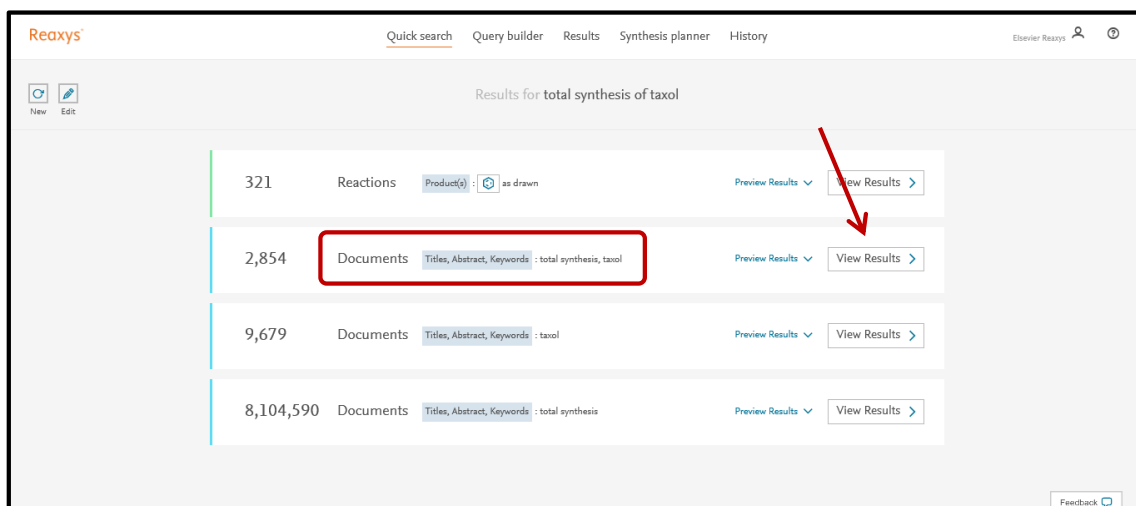
- The first results set, *Reactions*, is the result of looking at reaction records.
- The three Documents sets are results of looking at document records with a different combination of the original search terms.
- From the list of result sets you can now select the one which best fits your needs, without reformulating your query.



The screenshot shows the Reaxys interface with the search query 'total synthesis of taxol'. The results are displayed in a list format:

Count	Category	Search Criteria	Preview Results	View Results
321	Reactions	Product(a) : as drawn	Preview Results	View Results
2,854	Documents	Titles, Abstract, Keywords : total synthesis, taxol	Preview Results	View Results
9,679	Documents	Titles, Abstract, Keywords : taxol	Preview Results	View Results
8,104,590	Documents	Titles, Abstract, Keywords : total synthesis	Preview Results	View Results

3. Click **View Results** for the second set of results to retrieve documents that discuss *total synthesis* and *taxol*.



This screenshot is identical to the previous one, but it highlights the 'View Results' button for the second result set (2,854 Documents) with a red box and a red arrow pointing to it.

4. The results are displayed

Reaxys Quick search Query builder Results Synthesis planner History Elsevier Reaxys

2,854 Filters and Analysis

2,854 Documents with 15,722 Substances, 45,973 Reactions

0 Limit To Exclude Export Relevance ↓

- Preparation of monoclonal antibody against taxol and establishment of ELISA detection method
Zhao, Kai; Sun, Li-Xin; Sun, Yu-Shi; Zhou, Dong-Po - Chinese Journal of New Drugs, 2012, vol. 21, # 4, p. 436 - 442
Abstract Index Terms Full Text
- Preparation and physicochemical property of control-released PLGA microspheres containing taxol
Li, Yan-Yan; Li, Li-Xin; Sun, Zhi-Hui - Chinese Journal of Biologicals, 2007, vol. 20, # 5, p. 365 - 368
Abstract Index Terms Full Text
- Taxol synthesis
Xue, Tianhan - Scientist, 1995, vol. 9, # 18
Full Text
- Modified taxols, 6. Preparation of water-soluble prodrugs of taxol
Zhao; Kingston; Crosswell - Journal of Natural Products (Lloydia), 1991, vol. 54, # 6, p. 1607 - 1611

5. In the Filters and Analysis Panel, expand **Authors**

Reaxys Quick search Query builder Results Synthesis planner History Elsevier Reaxys

2,854 Filters and Analysis

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0 Limit To Exclude Export Relevance ↓

Authors

- Preparation of monoclonal antibody against taxol and establishment of ELISA detection method
Zhao, Kai; Sun, Li-Xin; Sun, Yu-Shi; Zhou, Dong-Po - Chinese Journal of New Drugs, 2012, vol. 21, # 4, p. 436 - 442
Abstract Index Terms Full Text
- Preparation and physicochemical property of control-released PLGA microspheres containing taxol
Li, Yan-Yan; Li, Li-Xin; Sun, Zhi-Hui - Chinese Journal of Biologicals, 2007, vol. 20, # 5, p. 365 - 368
Abstract Index Terms Full Text
- Taxol synthesis
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Full Text
- Modified taxols, 6. Preparation of water-soluble prodrugs of taxol
Zhao; Kingston; Crosswell - Journal of Natural Products (Lloydia), 1991, vol. 54, # 6, p. 1607 - 1611

By looking at the author filter I see that Nicolaou is one of the top publishing authors on this topic.

- In the **Authors** filter:
 - Check the box for **nicolaou**
 - Click **Limit to**

Reaxys Quick search Query builder Results Synthesis planner History Elsevier Reaxys

2,854 Filters and Analysis

2,854 Documents with 15,722 Substances, 45,973 Reactions

0 Limit To Exclude Export Relevance ↓

Authors 1

nicolaou 25

croteau, rodney 34

liu 23

georg 23

chen 23

Limit to > Exclude >

- Preparation of monoclonal antibody against taxol and establishment of ELISA detection method
Zhao, Kai; Sun, Li-Xin; Sun, Yu-Shi; Zhou, Dong-Po - Chinese Journal of New Drugs, 2012, vol. 21, # 4, p. 436 - 442
Abstract Index Terms Full Text
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Full Text
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Zhao; Kingston; Crosswell - Journal of Natural Products (Lloydia), 1991, vol. 54, # 6, p. 1607 - 1611

The Results list is now filtered to the Documents by **Nicolaou**

The screenshot shows the Reaxys interface with the search results filtered to 25 documents by Nicolaou. A red box highlights the summary '25 Documents with 647 Substances, 2,191 Reactions'. The results list includes:

- 1. Design, synthesis and biological activity of protaxols. Nicolaou, Riemer, Kerr, Rideout, Wrasidlo - Nature, 1993, vol. 364, # 6436, p. 464 - 466
- 2. Design, synthesis and biological activity of protaxols. Nicolaou, Riemer, Kerr, Rideout, Wrasidlo - Nature, 1993, vol. 364, # 6436, p. 464 - 466
- 3. Total synthesis of Taxol. 4. The final stages and completion of the synthesis. Nicolaou, Ueno, Liu, Nantermet, Yang, Renaud, Paulvannan, Chadha - Journal of the American Chemical Society, 1995, vol. 117, # 2, p. 653 - 659
- 4. Total synthesis of taxol

7. Expand **Publication Year**

The screenshot shows the Reaxys interface with the 'Publication Year' filter expanded in the left sidebar. A red arrow points to the 'Publication Year' filter. The results list remains the same as in the previous screenshot.

It shows that most of the work by Nicolaou was done between 1993 and 1998:

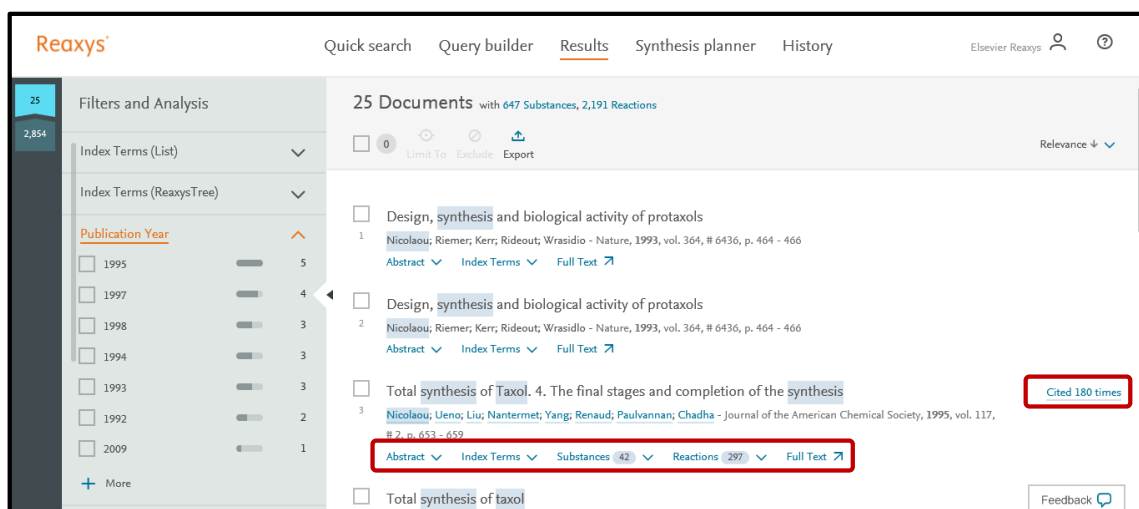
The screenshot shows the Reaxys interface with the 'Publication Year' filter expanded to show counts for 1993-1998. A red box highlights the counts for these years:

Year	Count
1995	5
1997	4
1998	3
1994	3
1993	3
1992	2
2009	1

One of the reviews is cited many times and looks interesting to me. This is a good starting document to evaluate the **total synthesis of taxol**:

- Click 'Cited # times' to open Scopus with the documents that cite this article.
- Click 'Abstract' to view the document's abstract.
- Click 'Index Terms' to view the index terms that were assigned to this article.
- Click 'Substances' to view substances that are indexed from the document.
- Click 'Reactions' to view reactions that are indexed from the document.
- Click 'Full Text' will direct you to the publisher's website for viewing the full text article.

Please Note: depending on the article or patent, further options may be presented including Front Page Information.



The screenshot shows the Reaxys search results interface. On the left, there is a 'Filters and Analysis' sidebar with a 'Publication Year' filter set to 1995. The main area displays '25 Documents with 647 Substances, 2,191 Reactions'. The third document is highlighted with a red box and contains the following information:

- Title:** Total synthesis of Taxol. 4. The final stages and completion of the synthesis
- Authors:** Nicolaou; Ueno; Liu; Nantermet; Yang; Renaud; Paulvannan; Chadha
- Journal:** Journal of the American Chemical Society, 1995, vol. 117, # 2, p. 653 - 659
- Options:** Abstract, Index Terms, Substances (42), Reactions (297), Full Text
- Citation Count:** Cited 180 times