

## 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.

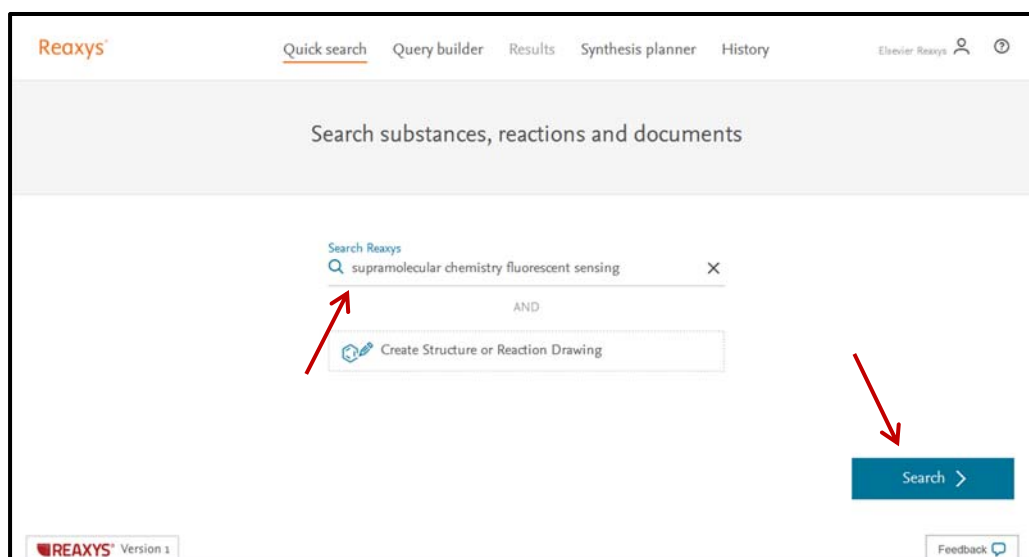
In the workflows we show examples that include:

- 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

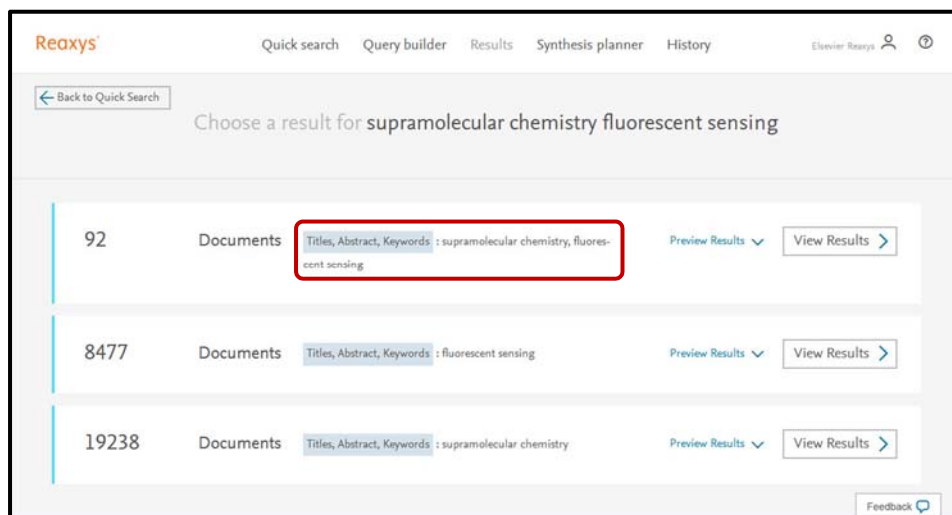
Fluorescent molecular sensors can be applied in many disciplines, including medical diagnostics, physiological imaging, biochemical and chemical analysis or monitoring systems. In this case I would like to know more about published literature on the topic “supramolecular chemistry fluorescent sensing” 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 **Search** (or press **Enter** on your keyboard)

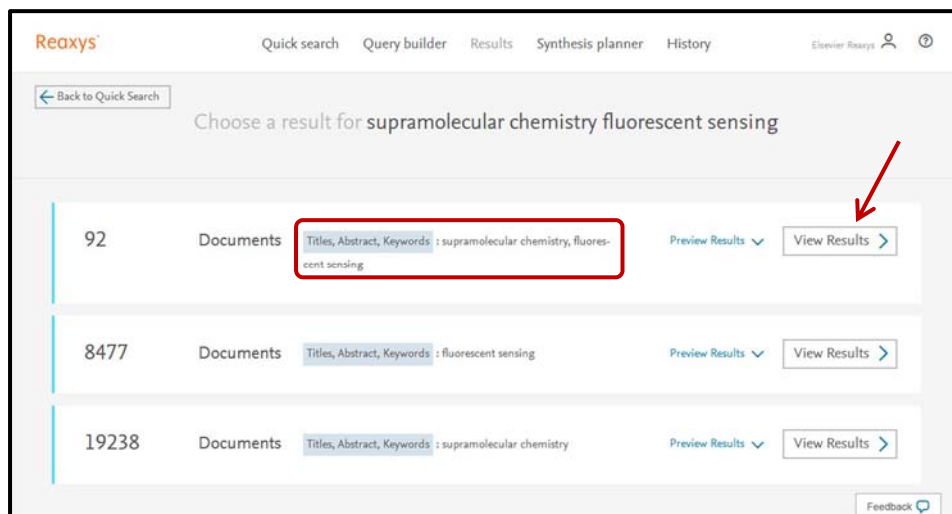


Reaxys analyzes the query input and returns three result sets in a Results Preview:

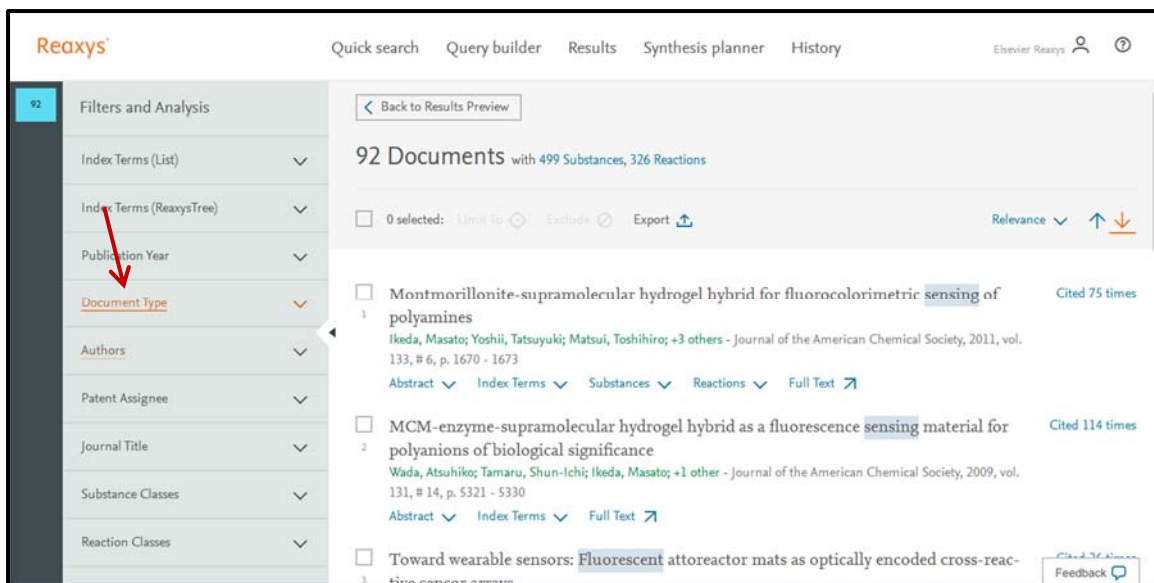
- The first set is the result of a query that considers all query terms, while the second and third sets search for parts of the query.
- From the list of result sets you can now select the one which best fits your needs, without reformulating your query.



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

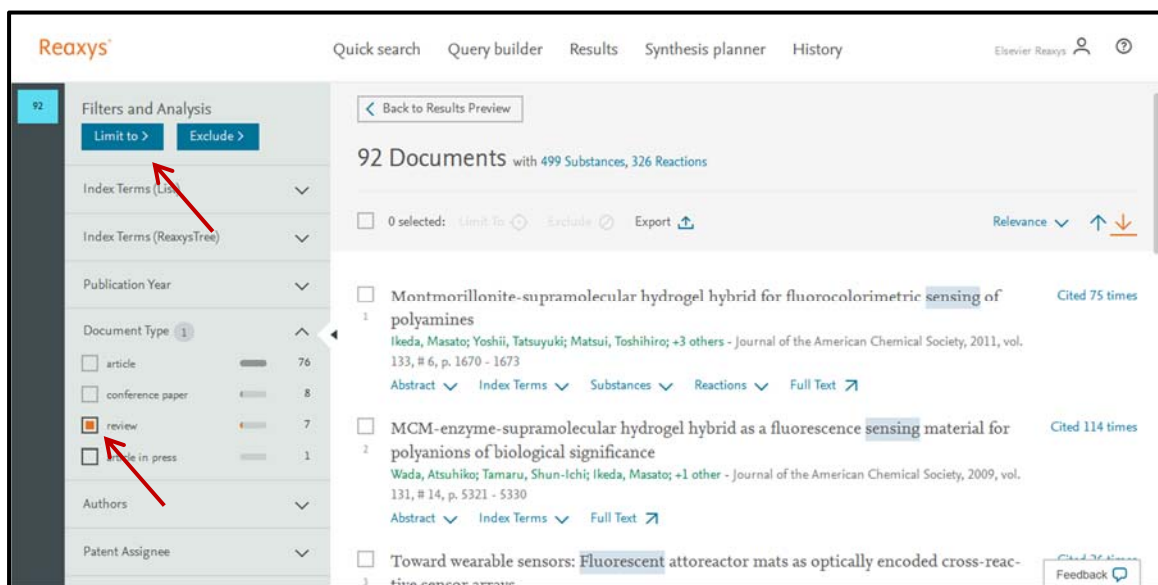


3. In the Filters and Analysis Panel, expand **Document Type**



4. In the *Document Type* filter, notice there are seven *review* articles

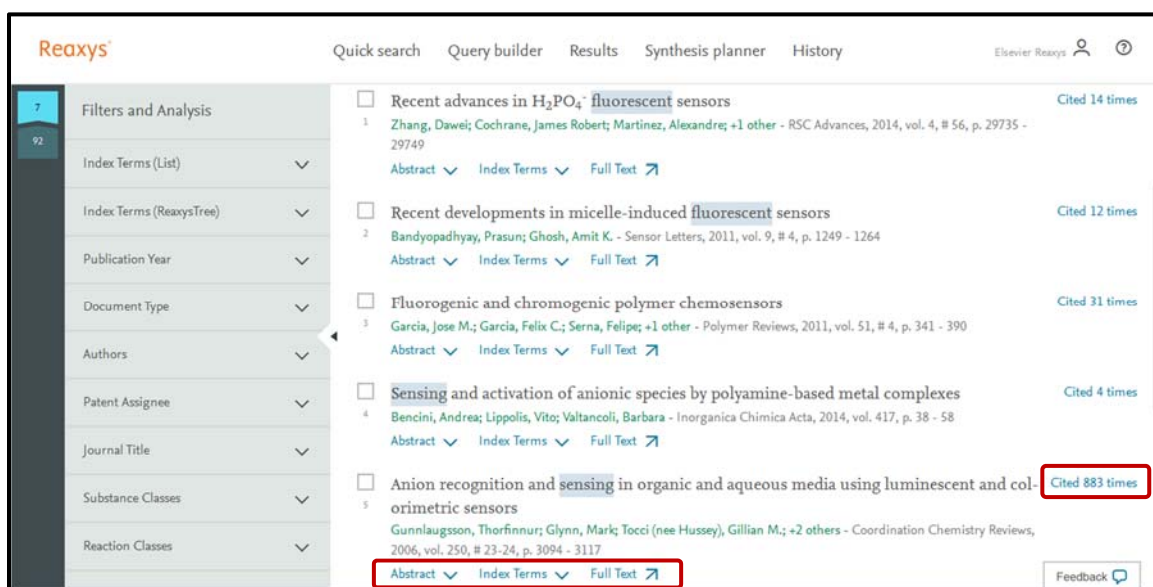
- a. Check the box for **review**
- b. Click **Limit to**



Scrolling down, 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 '*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: Substances, Reactions, Front Page Information.



The screenshot shows the Reaxys search results interface. On the left is a sidebar with filters and analysis options. The main content area displays a list of search results. The fifth result is highlighted with a red box around its citation count and action links.

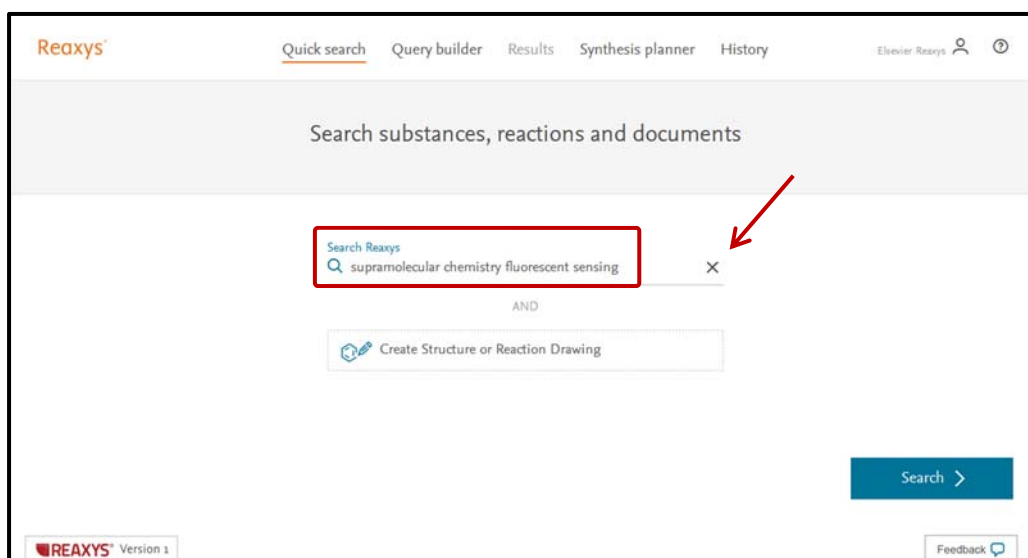
Search Results	Cited # times
Recent advances in H <sub>2</sub> PO <sub>4</sub> <sup>-</sup> fluorescent sensors Zhang, Dawei; Cochrane, James Robert; Martinez, Alexandre; +1 other - RSC Advances, 2014, vol. 4, # 56, p. 29735 - 29749	Cited 14 times
Recent developments in micelle-induced fluorescent sensors Bandyopadhyay, Prasun; Ghosh, Amit K. - Sensor Letters, 2011, vol. 9, # 4, p. 1249 - 1264	Cited 12 times
Fluorogenic and chromogenic polymer chemosensors Garcia, Jose M.; Garcia, Felix C.; Serna, Felipe; +1 other - Polymer Reviews, 2011, vol. 51, # 4, p. 341 - 390	Cited 31 times
Sensing and activation of anionic species by polyamine-based metal complexes Bencini, Andrea; Lippolis, Vito; Valtancoli, Barbara - Inorganica Chimica Acta, 2014, vol. 417, p. 38 - 58	Cited 4 times
Anion recognition and sensing in organic and aqueous media using luminescent and colorimetric sensors Gunnlaugsson, Thorfinnur; Glynn, Mark; Tocci (nee Hussey), Gillian M.; +2 others - Coordination Chemistry Reviews, 2006, vol. 250, # 23-24, p. 3094 - 3117	Cited 883 times

## ❖ Total Synthesis of Taxol

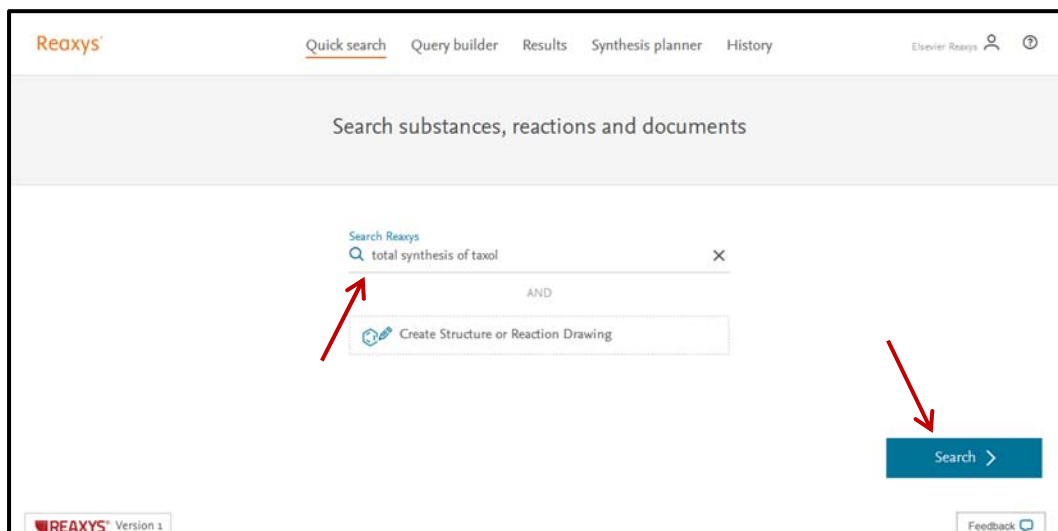
Taxol is a complex molecule used as a drug to treat ovarian, breast, lung, pancreatic and other cancers. Its total synthesis is challenging, but nevertheless very interesting to learn. What is known about the total synthesis of taxol and who worked on it and when?

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**

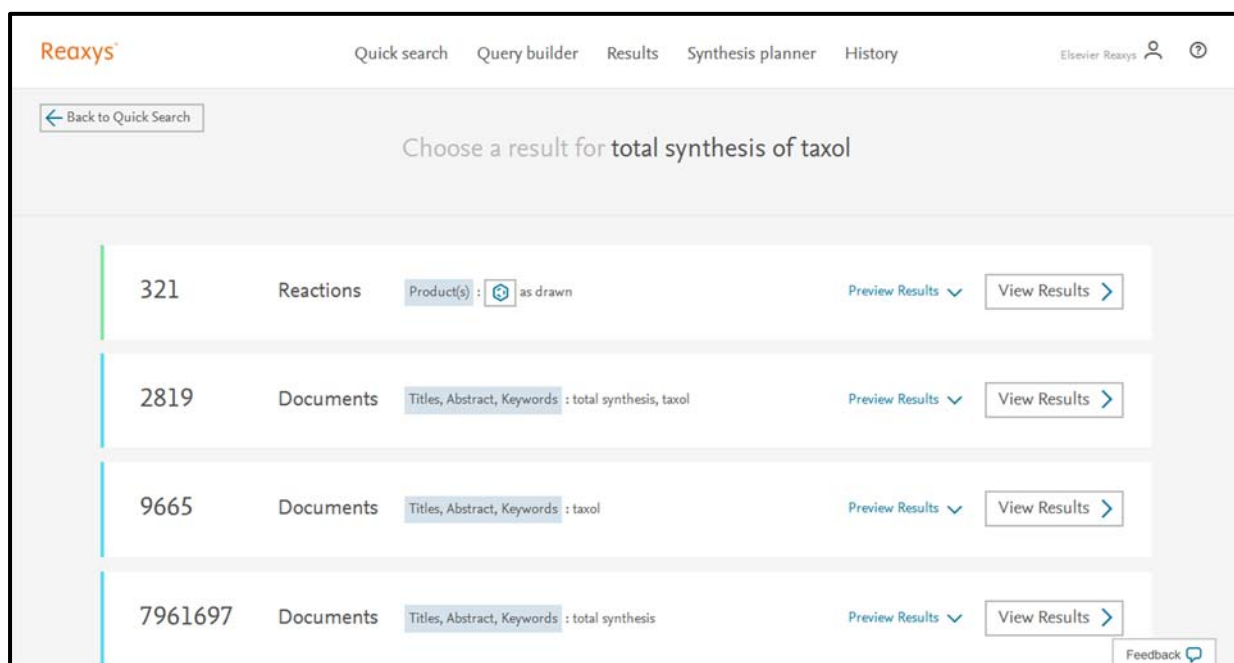


2. Click the **Search Reaxys** field and type **total synthesis of taxol**
  - a. Click **Search** (or press **Enter** on your keyboard)



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.



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

Reaxys Quick search Query builder Results Synthesis planner History Elsevier Reaxys

Back to Quick Search

Choose a result for total synthesis of taxol

321	Reactions	Product(s) :  as drawn	Preview Results	View Results >
2819	Documents	Titles, Abstract, Keywords : total synthesis, taxol	Preview Results	View Results >
9665	Documents	Titles, Abstract, Keywords : taxol	Preview Results	View Results >
7961697	Documents	Titles, Abstract, Keywords : total synthesis	Preview Results	View Results >

Feedback

- In the Filters and Analysis Panel, expand **Authors**

Reaxys Quick search Query builder Results Synthesis planner History Elsevier Reaxys

2,819 Filters and Analysis

Index Terms (List) Index Terms (ReaxysTree) Publication Year Document Type **Authors** Patent Assignee Journal Title Substance Classes Reaction Classes

Back to Results Preview

2,819 Documents with 15,320 Substances, 45,221 Reactions

0 selected: Limit To Exclude Export

Relevance

1 Preparation of monoclonal antibody against taxol and establishment of ELISA detection method  
Zhao, Kai; Sun, Li-Xin; Sun, Yu-Shi; +1 other - Chinese Journal of New Drugs, 2012, vol. 21, # 4, p. 436 - 442  
Abstract Index Terms Full Text Cited 2 times

2 Preparation and physiochemical 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

3 Taxol synthesis  
Xue, Tianhan - Scientist, 1995, vol. 9, # 18  
Full Text

Modified taxols, 6. Preparation of water-soluble prodrugs of taxol

Feedback



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

5. In the *Authors* filter:
  - a. Check the box for *nicolaou*
  - b. Click **Limit to**

The screenshot shows the Reaxys interface with 2,819 documents. The 'Filters and Analysis' sidebar is open to the 'Authors' filter, where 'nicolaou' is selected. A red arrow points to the 'Limit to' button. The main results list shows three documents related to taxol synthesis.

Author	Count
croteau, rodney	34
<b>nicolaou</b>	25
georg	23
chen	23
yuan, ying-jin	20

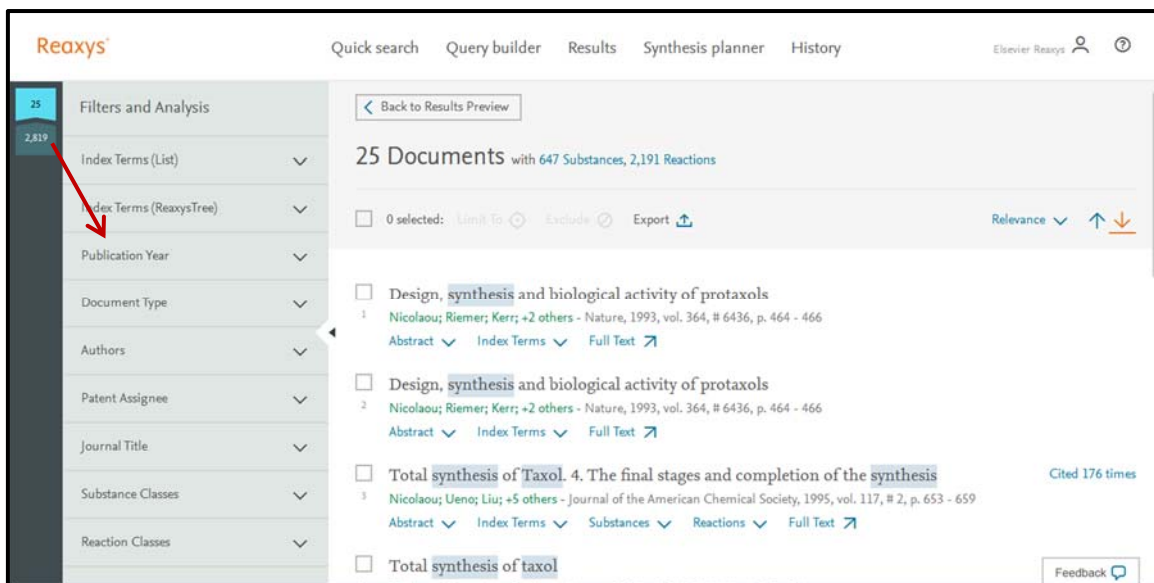
The Results list is now filtered to the Documents by **Nicolaou**

The screenshot shows the Reaxys interface with the results filtered to 25 documents by Nicolaou. The 'Filters and Analysis' sidebar is open to the 'Authors' filter, where 'nicolaou' is selected. The main results list shows three documents related to taxol synthesis.

Author	Count
nicolaou	25



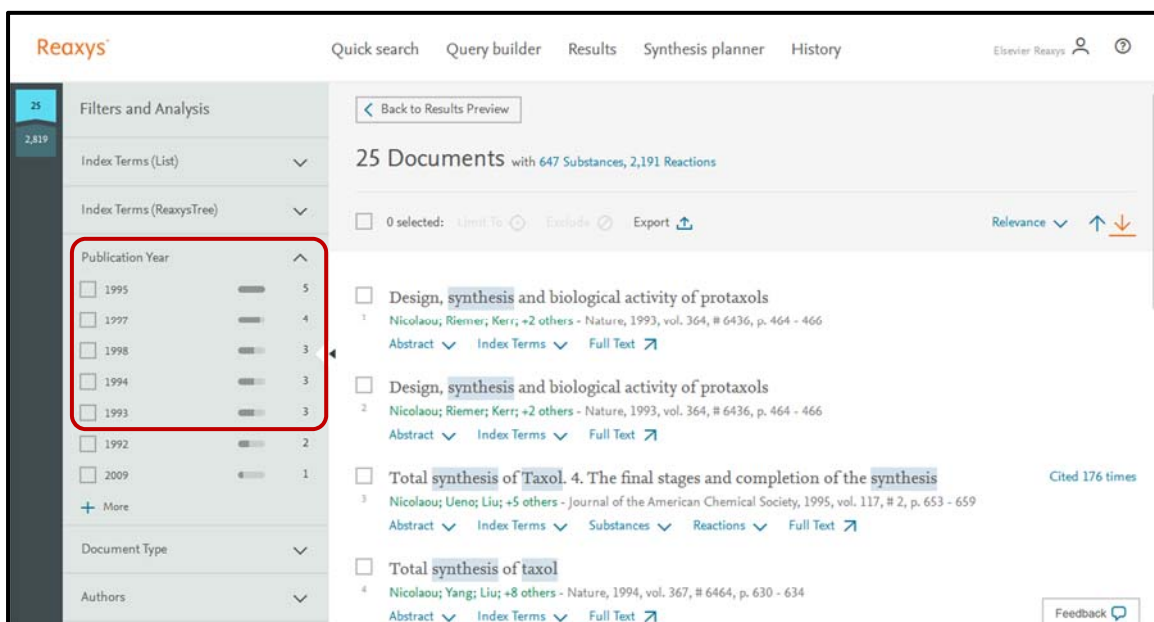
6. Expand **Publication Year**



The screenshot shows the Reaxys search interface. On the left, the 'Filters and Analysis' sidebar is open, with 'Publication Year' selected. A red arrow points to the '25' count next to the 'Publication Year' filter. The main results area shows '25 Documents with 647 Substances, 2,191 Reactions'. The document list includes:

- Design, synthesis and biological activity of protaxols<sup>1</sup> Nicolaou; Riemer; Kerr; +2 others - Nature, 1993, vol. 364, # 6436, p. 464 - 466
- Design, synthesis and biological activity of protaxols<sup>2</sup> Nicolaou; Riemer; Kerr; +2 others - Nature, 1993, vol. 364, # 6436, p. 464 - 466
- Total synthesis of Taxol. 4. The final stages and completion of the synthesis<sup>3</sup> Nicolaou; Ueno; Liu; +5 others - Journal of the American Chemical Society, 1995, vol. 117, # 2, p. 653 - 659 (Cited 176 times)
- Total synthesis of taxol

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



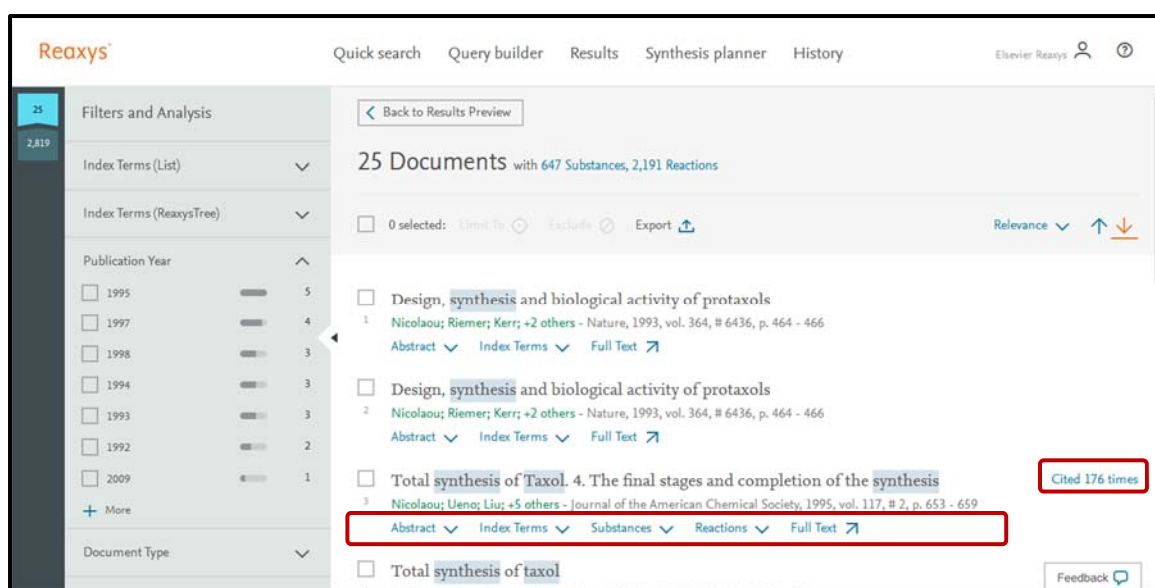
This screenshot shows the 'Publication Year' filter expanded in the sidebar. A red box highlights the years 1993, 1994, 1998, and 1999. The counts for these years are 3, 3, 3, and 5 respectively. The main results area shows the same 25 documents, with the following list:

- Design, synthesis and biological activity of protaxols<sup>1</sup> Nicolaou; Riemer; Kerr; +2 others - Nature, 1993, vol. 364, # 6436, p. 464 - 466
- Design, synthesis and biological activity of protaxols<sup>2</sup> Nicolaou; Riemer; Kerr; +2 others - Nature, 1993, vol. 364, # 6436, p. 464 - 466
- Total synthesis of Taxol. 4. The final stages and completion of the synthesis<sup>3</sup> Nicolaou; Ueno; Liu; +5 others - Journal of the American Chemical Society, 1995, vol. 117, # 2, p. 653 - 659 (Cited 176 times)
- Total synthesis of taxol<sup>4</sup> Nicolaou; Yang; Liu; +8 others - Nature, 1994, vol. 367, # 6464, p. 630 - 634

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 displays the Reaxys search results page for the query 'Total synthesis of Taxol'. The interface includes a sidebar on the left with filters for 'Index Terms (List)', 'Index Terms (ReaxysTree)', 'Publication Year', and 'Document Type'. The main results area shows 25 documents with 647 substances and 2,191 reactions. The third document is highlighted with a red box, showing its title, authors, journal information, and citation count (176 times). The interface also includes a top navigation bar with options like 'Quick search', 'Query builder', 'Results', 'Synthesis planner', and 'History'.