

Chemistry and Materials



SciFinder

SciFinder has excellent coverage of the 20th century chemistry literature. You can use it to search the literature by topic, substance or reaction structure.

- Go to SOLO at <https://solo.bodleian.ox.ac.uk/>
- Search for SciFinder, click on **Online access** and follow the link to **CAS Registration** page (sign in using your SSO credentials). Fill in an online registration form, create user name and password.
- Go back to SciFinder and sign in.

SciFinder: References

- A research topic search can help you find literature and substance information related to a particular subject.
- If it is not already selected, choose the **References** search option from the left of the SciFinder search home screen.
- Enter a topic to search. You can use natural language, such as 'Lead contamination in water supply'
- SciFinder will show you a list of the most relevant references (you can choose to load more). You can further refine these by using the **Filter Behavior** options on the left of the screen.
- Try using the Filter Behavior options to view only records from **Conferences**.
- If you open one of the records in your results list by clicking its title, you will see that the records contains a link to **Substance(s)** at the top. These contain extensive information on physical and experimental properties.

SciFinder: Substances (substance properties)

- Return to the SciFinder home page and choose **Substances**
- Click **Draw**. A box into which you can draw a chemical structure will open. We are going to draw the structure of ethanol.

- Make sure that carbon 'C' and single bond is selected in the row of icons underneath the drawing screen. Draw two connected carbon atoms on the screen (note that symbols for carbon and hydrogen are not shown as you draw). Click on the oxygen 'O' button and add an oxygen atom to one end of the molecule you have drawn.
- Click **OK**.
- The structure you've drawn will now be displayed in search box. Click on the **Search** icon.
- After a few seconds, you will be shown chemical substances related to your search structure. Again you can use the **Filter Behavior** options on the left to further narrow down your search results.

Reaxys

Reaxys covers research information in **organic, inorganic and organometallic chemistry** dating as far back as 1771. Discover chemical structures, properties and synthesis reactions; find relevant chemistry literature, or check availability for purchasing. You can open Reaxys by searching SOLO for Reaxys and clicking on the green view online link. **Select Institutional Login** and search for Oxford. Sign in with your SSO ID.

Reaxys: Quick Search

You can use the quick search to look up a natural language enquiry such as 'boiling point of acetone'. An initial selection of results will be shown, to display a results set click on the **View Results** button for the results set you are interested in viewing.

Reaxys: Structure search

- Reset the search by clicking **New** and then click on the **Draw** button which is just underneath the main search box. We are going to draw the structure of 'hydrogen cyanide'.
- From the right hand element selection bar, click the carbon 'C' symbol and add this to the drawing panel. Add a nitrogen atom close to the carbon in the same way.

- On the left hand bond selection bar, click on the symbol for a single covalent bond. From the menu that pops out, choose the triple bond symbol. Drag this triple bond symbol between the nitrogen and carbon to connect the two.
- Click **Transfer to Query** at the bottom right of the drawing window. Now you can click the **Find** button.
- From the results, click the **View Results** button in the **Substances** section. You should now find results to access publications, reactions and substance information related to hydrogen cyanide.

Reaxys: Reactions Synthesis Planner

- Reset your search again. This time do a quick search for 'aspirin'.
- Next to the **Substances** set of results, click the **View Results** button.
- The top hit in your results should now show the chemical structure of aspirin. Beneath the structure diagram, find the icon that looks like this –
- This icon allows you to access the **synthesis planner**. Click the icon and from the options that appear, select **Create synthesis plans**.
- Reaxys will show you a synthesis plan for aspirin. More detailed information and links to the literature is shown at the bottom of the screen. Options at the top of the screen allow you to save and export the displayed synthesis plan.