

Get started

MolDraw Docs · LabCanvas · 5 pages · moldraw.com/docs/

Introduction to MolDraw

Short answer: MolDraw is a free chemical structure editor that runs in your browser. You can draw molecules and reactions, view them in 3D, and export figures for papers and slides.

What you can do with MolDraw

- Draw molecules, rings and reactions on an open canvas.
- Turn a name, SMILES or CAS number into a structure.
- See the formula, weight and name of what you draw.
- Rotate your molecule in 3D.
- Export PNG, SVG, PDF, MOL, CDXML and more.
- Add plugins for NMR, ChEMBL data and more.

Do you need an account

You do not need an account to draw. Your work saves in your browser. Sign in when you want plugins, Community posts or cloud features.

Where to start

- 1 Open the MolDraw editor.
- 2 Follow Draw your first structure.
- 3 Learn the keyboard shortcuts to work faster.

TIP

Every page has a short answer at the top. Read that first if you are in a hurry.

Questions and answers

Is MolDraw free?

Does MolDraw work offline?

Which browsers work?

Source: <https://www.moldraw.com/docs/get-started/what-is-moldraw-free-online-chemical-structure-editor/>

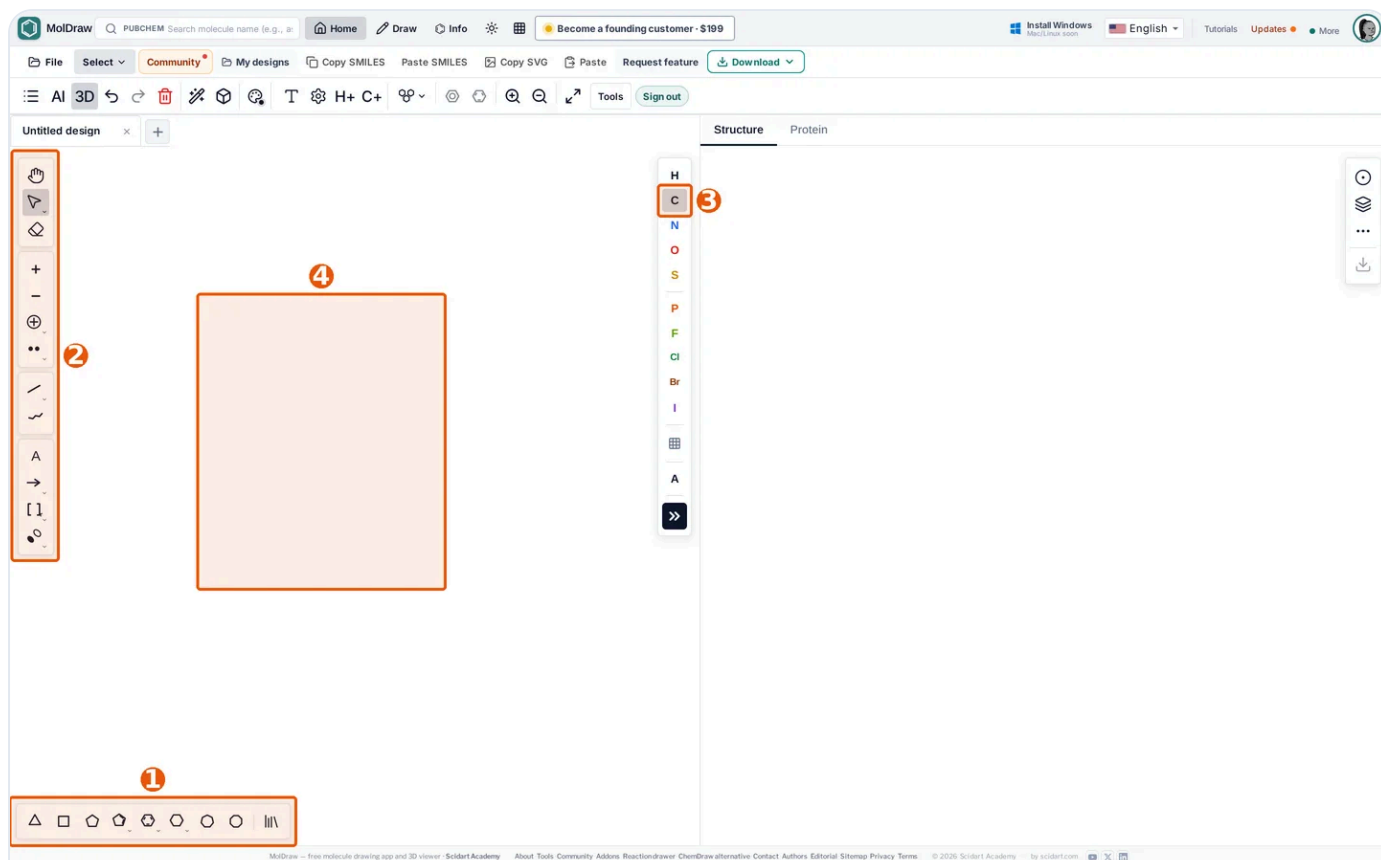
Draw your first structure

Short answer: Click the benzene ring, click the canvas, add a bond, then place an oxygen. Click Clean up and open Info to see the name, formula and weight. This guide draws phenol in six steps.

Before you start

Open the MolDraw editor. You do not need to sign in. If the canvas has a drawing, click **Clear canvas** (the red bin) first.

The parts of the screen



The main parts of the screen. 1 Ring bar. 2 Left tool rail. 3 Atom palette. 4 Canvas.

Step by step

1

Pick the benzene ring. In the ring bar at the bottom left, click the benzene button.

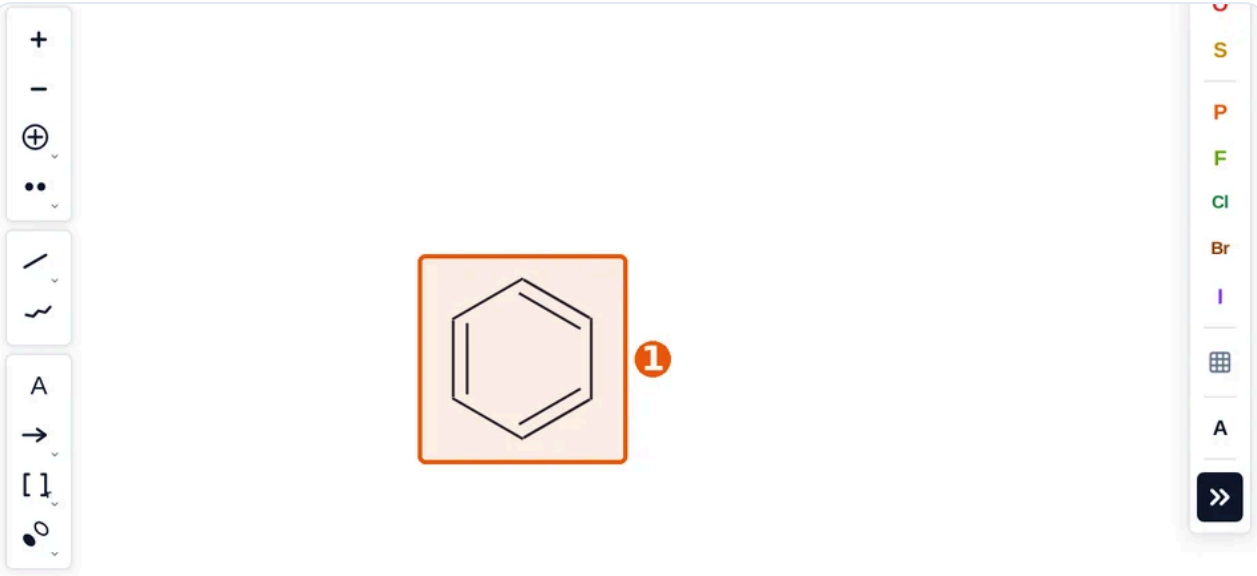


The screenshot shows the 'ring bar' at the bottom left of the MolDraw interface. It contains icons for various polygons: a triangle, square, pentagon, hexagon, heptagon, and octagon. The hexagon icon, which represents a benzene ring, is highlighted with an orange square and a red circle containing the number '1'. Below the ring bar, a status bar displays the text 'MolDraw — free molecule drawing app and 3D viewer · Scidart Academy · About · Tools · Community · Addons · Reactiondrawer · ChemD'.

The benzene button in the ring bar.

2

Place the ring. Click once on an empty part of the canvas. A benzene ring appears where you click.

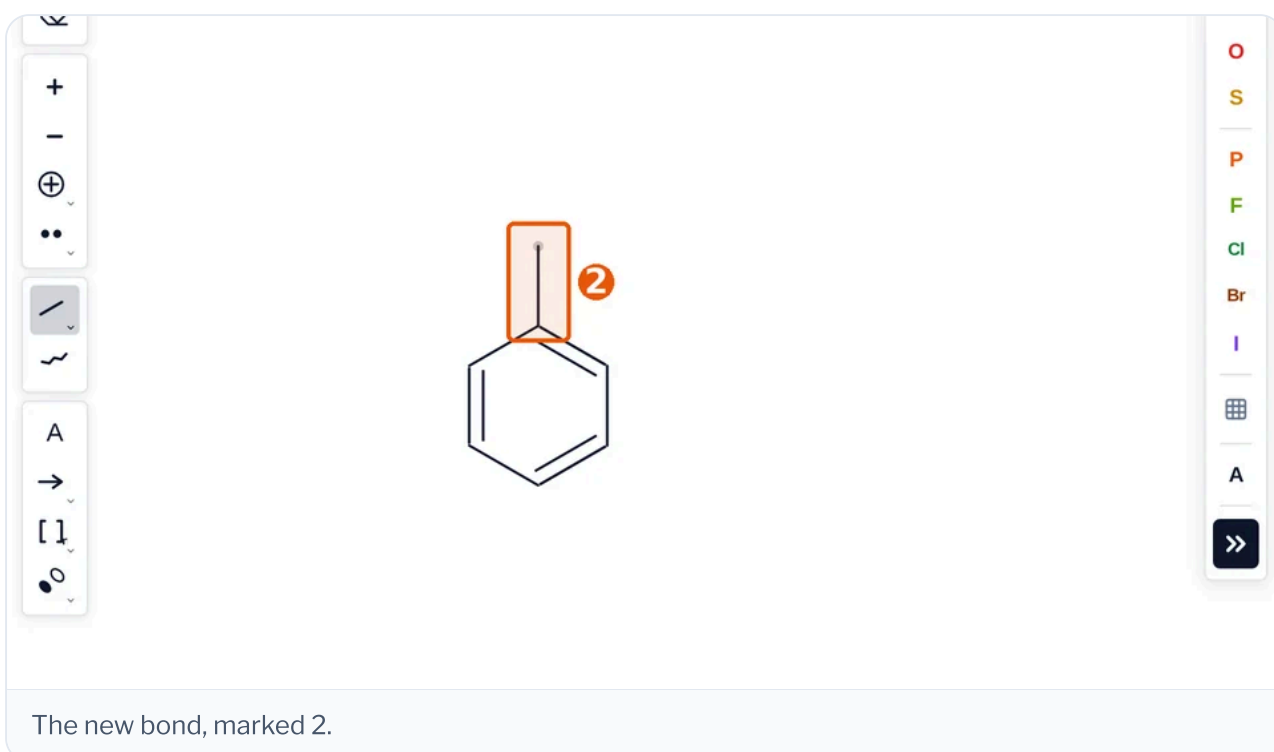
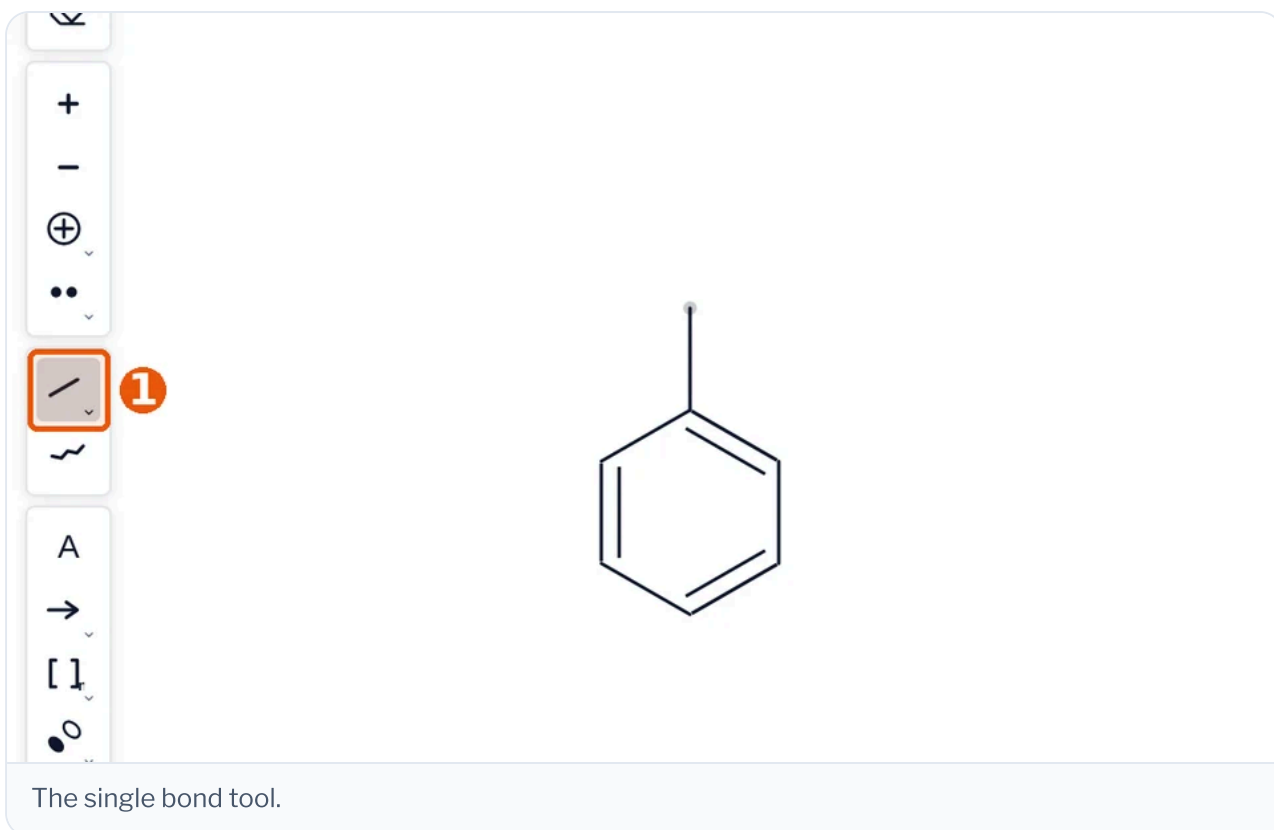


The screenshot shows the main drawing canvas of MolDraw. On the left side, there are vertical toolbars containing icons for adding (+), subtracting (-), and other chemical structures. On the right side, there is a vertical toolbar with element symbols (S, P, F, Cl, Br, I) and a grid icon. In the center of the canvas, a benzene ring (a hexagon with an inscribed circle) is placed. The ring is highlighted with an orange square and a red circle containing the number '1'.

Your ring on the canvas.

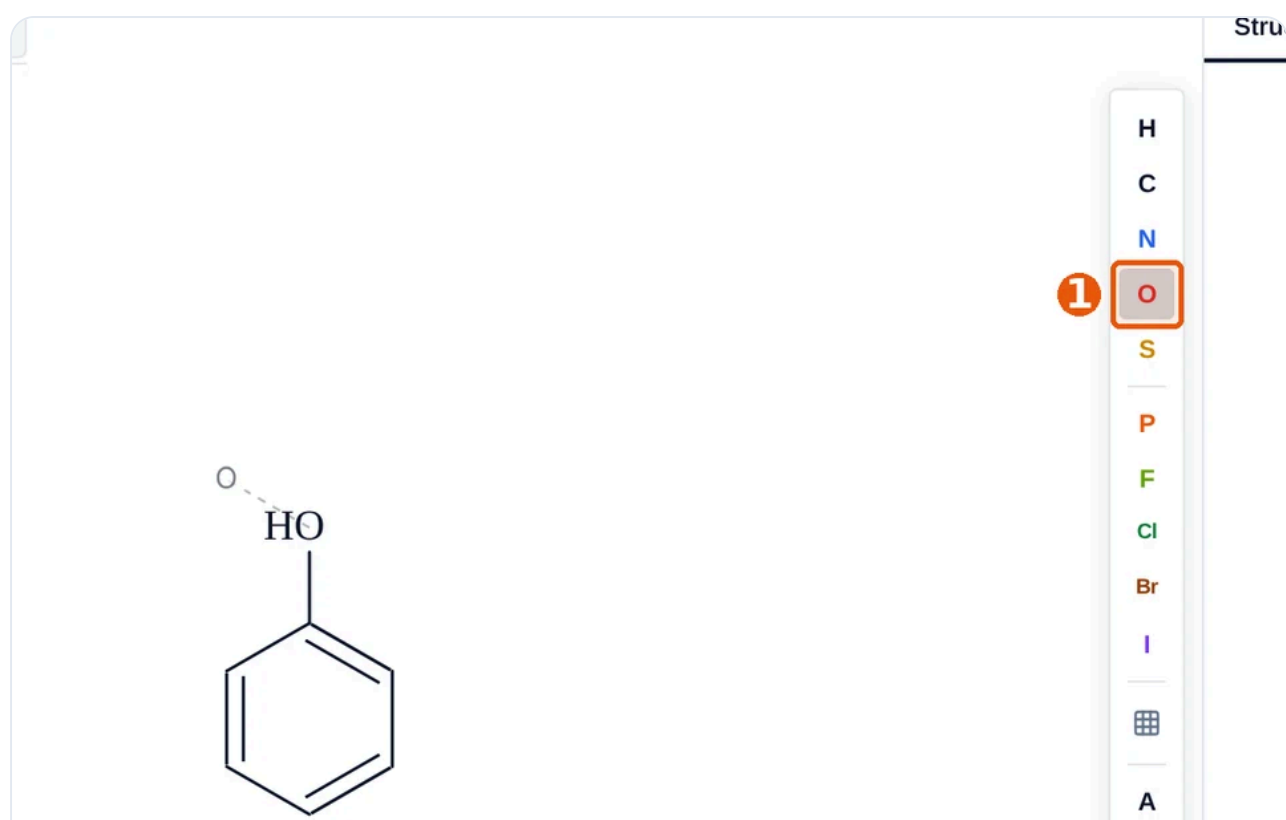
3

Add a bond. Click the single bond tool in the left rail. Then click the top atom of the ring. A new bond grows from that atom.

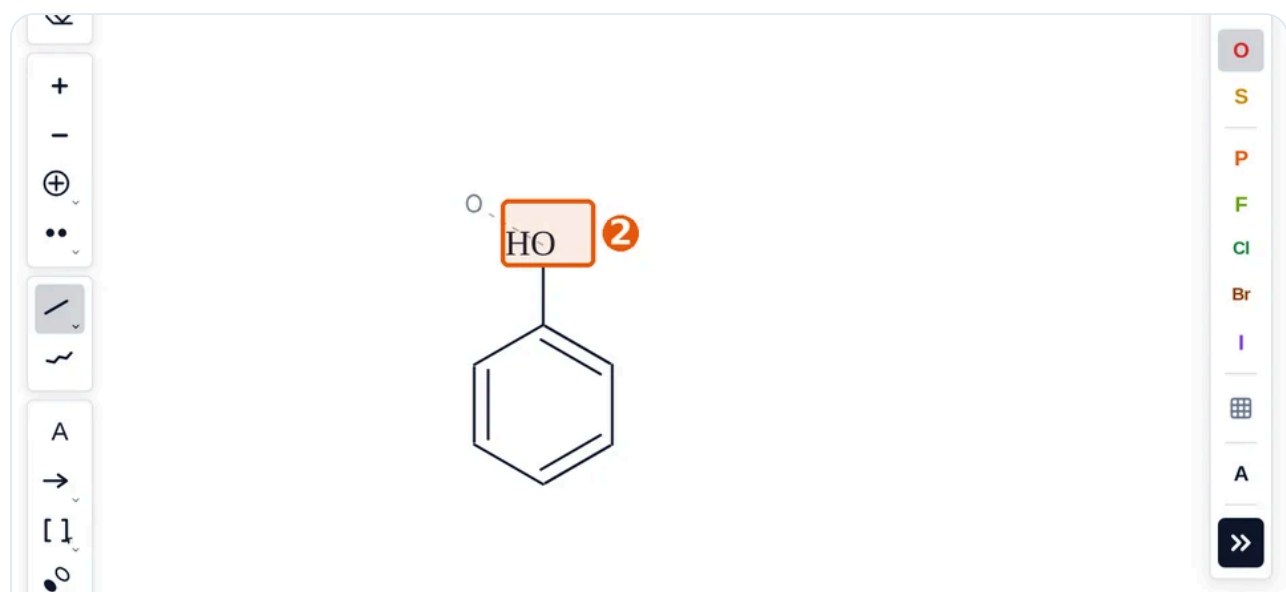


4

Make it an oxygen. Click **O** in the atom palette. Then click the free end of the new bond. The end turns into OH.

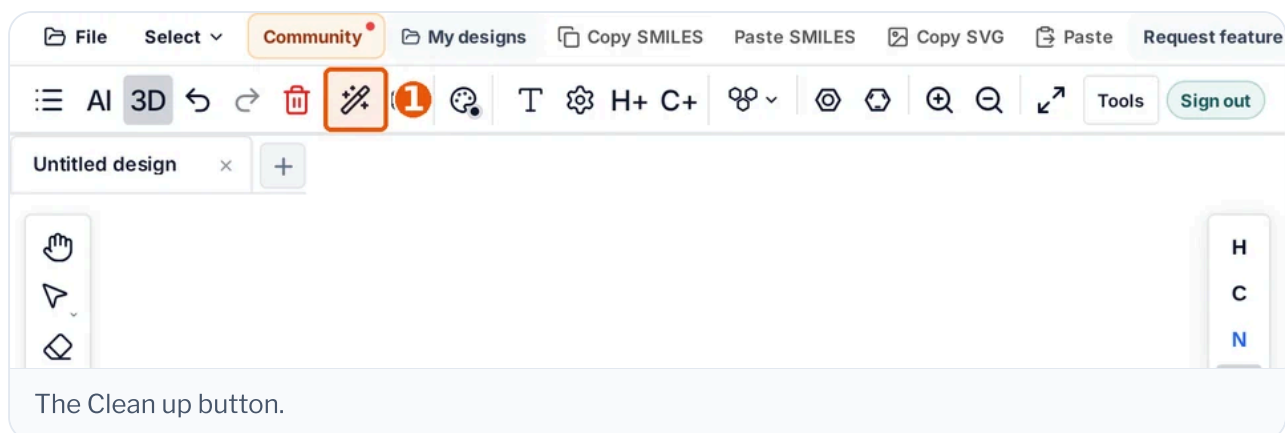


The O button in the atom palette.



The OH group is now on the ring.

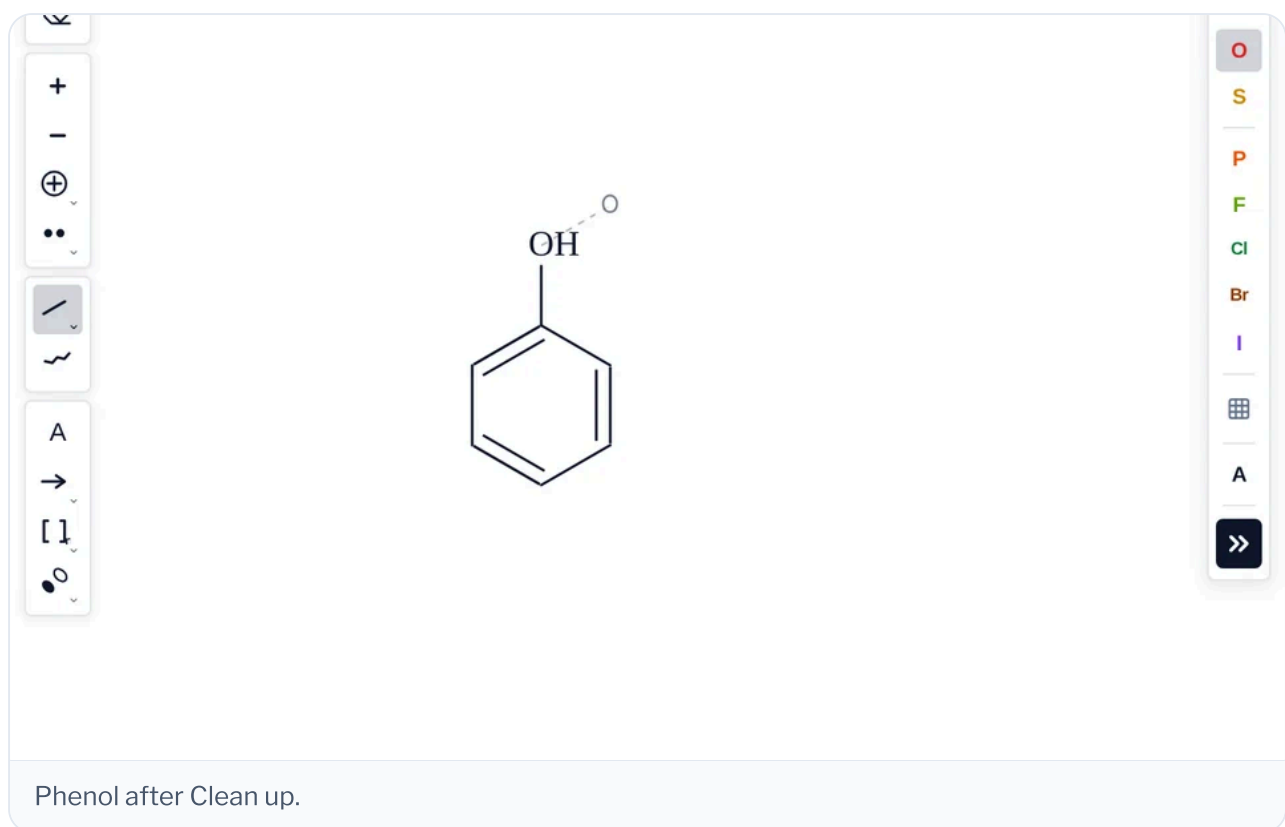
Tidy the drawing. Click **Clean up** in the tools row. MolDraw fixes bond lengths and angles.



The screenshot shows the MolDraw software interface. The top toolbar contains various icons for file operations, editing, and visualization. The 'Clean up' icon, which depicts a pair of scissors, is highlighted with an orange square. Below the toolbar, the main workspace is empty, and a vertical element menu on the right lists atoms: H, C, and N.

Untitled design × +

The Clean up button.



6

Check what you drew. Press **Ctrl** + **A** to select all. Click **Info** at the top. The panel shows the name, formula and weight.

The screenshot displays the MolDraw web application interface. The main workspace shows a 2D chemical structure of phenol (a benzene ring with an -OH group). The interface includes a top navigation bar with tabs like Home, Draw, and Info (highlighted with a red box and labeled '1'). Below the navigation bar is a toolbar with various drawing tools. On the right side, there is a 'Molecule Details' panel (highlighted with a red box and labeled '2') that provides information about the selected molecule, phenol. The panel includes fields for Name, Formula, MW, and a 'More Details' section with various chemical identifiers and properties. A 3D ball-and-stick model of phenol is also visible on the right. The bottom of the interface shows a status bar with copyright information.

Molecule Details Panel:

MOLECULE DETAILS	
phenol	
Formula	C ₆ H ₆ O
MW	94.11 g/mol
▼ MORE DETAILS	
IUPAC	phenol
SMILES	OC1=CC=CC=C1
> INCHI	
InChI=1S/C ₆ H ₆ O/c7-6-4-2-1-3-5-6/h1-5...	
INDIGO (OFFLINE)	
Formula	C ₆ H ₆ O
Exact mass	94.0419
logP	1.392
pKa	9.431
MR	28.107
Composition	C 76.57 H 6.43 O 17.98

1 Info. 2 Molecule details. 3 Copy SMILES. 4 Download.

The details panel for phenol.

MOLECULE DETAILS	
phenol	
Formula	C ₆ H ₆ O
MW	94.11 g/mol
▼ MORE DETAILS	
IUPAC	phenol
SMILES	<chem>OC1=CC=CC=C1</chem>
> INCHI	
InChI=1S/C6H6O/c7-6-4-2-1-3-5-6/h1-5...	
INDIGO (OFFLINE)	
Formula	C6 H6 O
Exact mass	94.0419
logP	1.392
pKa	9.431
MR	28.107
Composition	C 76.57 H 6.43 O 17.00

Save or share your structure

- Your drawing saves in this browser by itself. Find it later in **My designs**.
- Click **Copy SMILES** to copy the structure as text.
- Click **Download** to save a PNG, SVG, PDF or MOL file. See Download and file formats.

NOTE

The 3D panel on the right updates as you draw. Drag it to rotate the molecule. See 3D viewer.

Faster ways to do the same thing

- Type a name like *phenol* in the search box at the top. MolDraw draws it for you.
- Paste a SMILES such as Oc1ccccc1 with **Paste SMILES**.
- With nothing selected, press **0** to set oxygen as the atom to place.

WARNING

Clean up moves atoms. If you placed things by hand on purpose, press **Ctrl** + **Z** to undo it.

Questions and answers

How do I draw a benzene ring in MolDraw?

How do I change a carbon to oxygen?

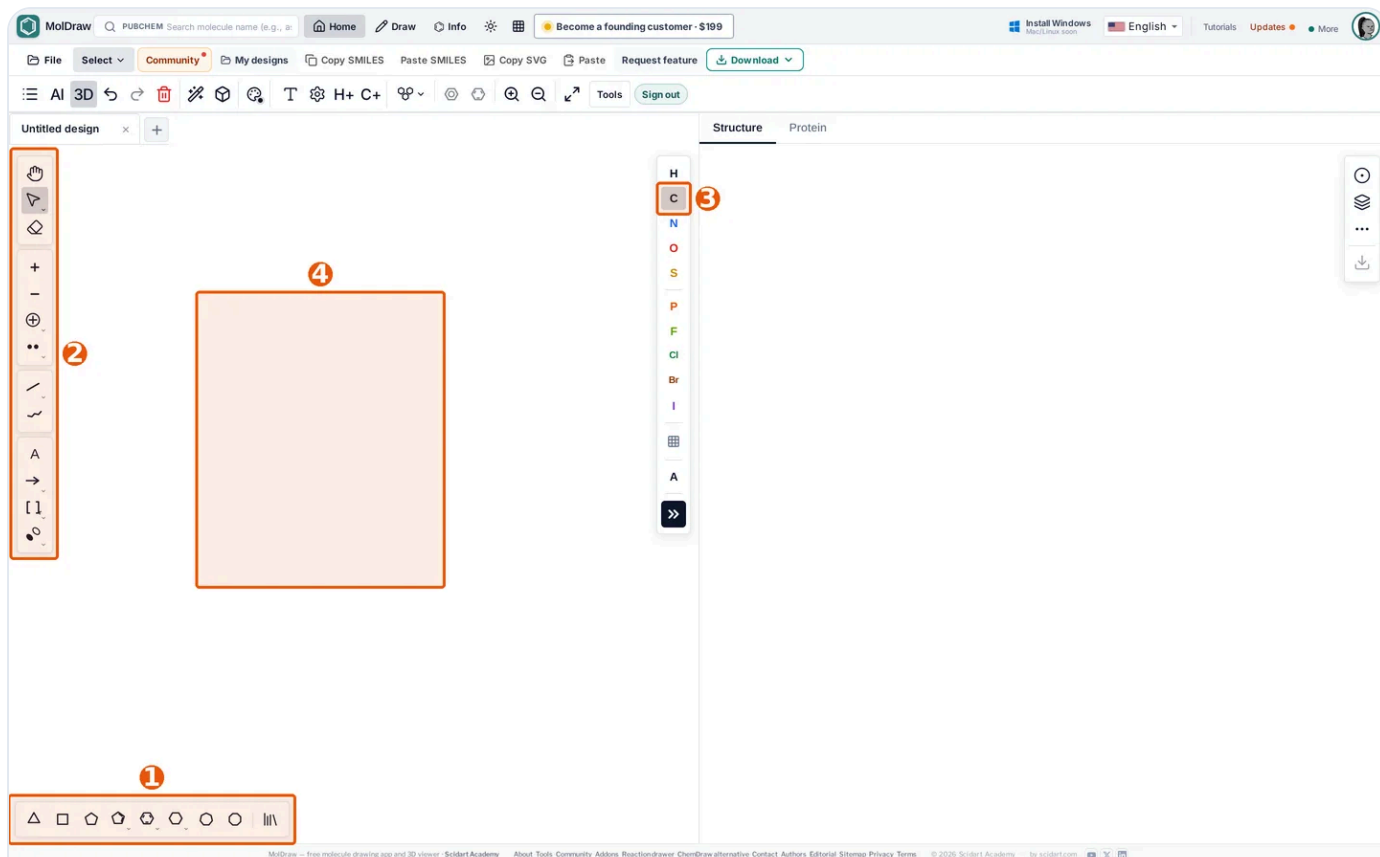
How do I see the name of my structure?

Do I need to save?

Source: <https://www.moldraw.com/docs/get-started/how-to-draw-your-first-chemical-structure-in-moldraw/>

The MolDraw screen

Short answer: The screen has a top bar, a tools row, a left tool rail, an atom palette, a ring bar and the canvas. A 3D panel sits on the right.



1 Ring bar. 2 Left tool rail. 3 Atom palette. 4 Canvas.

Top bar

The top bar has **My designs**, the search box, and the **Home**, **Draw** and **Info** tabs. It also has the language menu, Updates and your account.

Editor row

This row holds **File**, **Select**, **Community**, **Copy SMILES**, **Paste SMILES**, **Copy SVG**, **Paste** and **Download**.

Ribbons

Home, Draw and Style are ribbons. Only one is open at a time.

- **Home** has Clean up, hydrogens, 3D Clean Up, aromatize and zoom.
- **Draw** has the pencil, shapes, images and glassware.
- **Style** sets font, bond width and the structure look.

Left tool rail

The rail holds the tools you use most. You get select, erase, charges, lone pairs, bonds, chains, atom labels, arrows, brackets and orbitals. A small arrow under a button opens more choices.

Atom palette and ring bar

The atom palette next to the canvas has H, C, N, O, S, P, F, Cl, Br and I. The grid button opens the full periodic table. The ring bar at the bottom has rings from three to eight atoms and the Library.

Canvas and 3D panel

The canvas has no edges. Pan with the hand tool or by holding **Space** and dragging. The 3D panel shows your molecule in 3D. Hide it with the **3D** button.

Questions and answers

How do I hide the 3D panel?

Where is the periodic table?

Source: <https://www.moldraw.com/docs/get-started/moldraw-editor-interface-toolbar-and-panels-explained/>

Save and open your work

Short answer: MolDraw saves your drawing in your browser by itself. Open old drawings from My designs. Use File, Save to keep a .moldraw file on your computer.

Autosave

Every change saves in this browser. You do not need to press save. Your drawings stay on this device.

Open My designs

- 1 Click **My designs** at the top left.
- 2 Click a card to open that drawing.
- 3 Use folders to group your work.

Save a file to your computer

- 1 Click **File**.
- 2 Click **Save**, or press **Ctrl** + **S**.
- 3 MolDraw downloads a **.moldraw** file with everything on the canvas.

Open a file

Click **File**, then **Open**. You can open MolDraw, MOL, CDX and CDXML files.

WARNING

Drawings live in this browser only. If you clear browser data, they are gone. Save a **.moldraw** file for anything important.

Questions and answers

Where are my drawings saved?

Can I open ChemDraw files?

Do I need an account to save?

Source: <https://www.moldraw.com/docs/get-started/how-to-save-and-open-chemical-drawings-in-moldraw/>

Keyboard shortcuts

Short answer: Press ? in the editor to see every shortcut. The most used are Ctrl+Z to undo, Ctrl+C to copy, 1, 2 and 3 for bond types, and letters like O or N to pick an element.

On a Mac, use ⌘ where this page says Ctrl. Change any shortcut in **Settings, Shortcuts**.

Editing

Action	Keys
Cancel edit / clear selection / close menus	Esc
Erase selected object	Delete or Backspace
Undo	Ctrl Z
Redo	Ctrl Y or Ctrl Shift Z
Select all	Ctrl A
Copy fragment	Ctrl C
Paste fragment	Ctrl V
Save entire canvas (.moldraw)	Ctrl S

Selection (Select menu)

Action	Keys
Deselect	Ctrl Shift A
Invert selection	Ctrl Shift I
Select connected	Ctrl Shift C
Grow selection	Ctrl Shift G
Same as selection	Ctrl Shift S
Select all rings	Ctrl Shift R

Action	Keys
Select heteroatoms	Ctrl Shift H
Chain atoms	Alt Shift C
Longest path	Alt Shift L
Side chains	Alt Shift S
All 5-rings	Alt Shift 5
All 6-rings	Alt Shift 6
Aromatic atoms	Alt Shift A
Charged atoms	Alt Shift Q
Wedge / dash atoms	Alt Shift W
CIP R / S centers	Alt Shift R
Aliases / R-groups	Alt Shift G
Bonds in selection	Alt Shift B
All bonds	Ctrl Alt B
Select tool	V
Lasso select tool	L

Navigation

Action	Keys
Pan canvas (hand tool)	Hand drag
Temporary pan (hold, then drag)	Space drag
Pan	Middle-click drag
Pan vertically	Scroll wheel
Pan horizontally	Shift Scroll
Zoom toward pointer	Ctrl Scroll or ⌘ Scroll

Action	Keys
Zoom in	Ctrl = or Ctrl +
Zoom out	Ctrl -
Reset zoom (100%)	Ctrl 1
Fit all objects	Ctrl 0
Pinch zoom	Two-finger pinch
Two-finger pan	Two-finger drag
Touch pan on empty canvas	Touch drag

Tools

Action	Keys
Single bond	1
Double bond	2
Triple bond	3
Benzene ring	B
Select tool	V
Lasso select tool	L
Open this shortcuts panel	? or Shift /

Atom labels (placement element when no atom selected)

Action	Keys
Carbon	C
Nitrogen	N
Oxygen	O
Sulfur	S

Action	Keys
Phosphorus	P
Fluorine	F
Hydrogen	H
Chlorine	Shift C
Bromine	Shift B
Iodine	I

Type-to-rename (one atom selected)

Action	Keys
Open inline label editor seeded with letter	A to Z
Multi-char symbols (Cl, Si, Br): keep typing	C + l
Abbreviations (Me, Et, Ph, Boc, OMe, NH ₂ , ...)	type group
Accept suggestion	Tab or Enter
Commit current text	Enter
Cancel	Esc
Quick rename (select tool)	Double-click atom

3D Structure Perspective

Action	Keys
3D Clean Up (canvas pose: then drag to rotate)	Ctrl Shift D or ⌘ Shift D
Perspective tool / toggle depth shading	Alt D

Modifiers & canvas

Action	Keys
Select entire connected molecule (atom or bond)	Ctrl click or ⌘ click
Add / toggle atom or bond in selection	Shift click
Esc priority: alias editor → deselect text → deselect arrow → clear atoms → close menu → select tool	Esc
Select tool on empty canvas: drag rectangle (marquee); Shift+drag for lasso	Shift drag
Rebind shortcuts in Settings → Shortcuts	Settings
Undo / redo / copy / paste use Ctrl on Windows/Linux or ⌘ on macOS	Ctrl

TIP

Shortcuts do not fire while you type in a text box or label.

Questions and answers

How do I see all shortcuts in the app?

Can I change shortcuts?

Source: <https://www.moldraw.com/docs/get-started/moldraw-keyboard-shortcuts-list/>