

KingDraw APP

Chemical Structure Formula Editor

V2.3.0

User Guide

April 15, 2020

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I. Overview

1.1 KingDraw Introduction

KingDraw APP is a professional IOS&Android chemical structural formula editor designed specifically for scientists, scholars and students in field of chemistry.

Highlights:

- The current version supports intelligent gesture drawing, clearing up, 3D modeling, inter-conversion between name and structure, structure searching, chemical properties analysis, built-in groups to meet the requirement of drawing structures rapidly;
- KingDraw supports multi-terminal synchronization by one ID and one click sync in cell phone, Pad and PC to meet the requirement of drawing in different situations;
- KingDraw supports file format conversion with ChemDraw and other major chemical structure drawing software; KingDraw can save files easily as several formats (mol, cdx, SMILES, etc.) that commonly used in structure drawing software and supports ACS1996 and many other drawing standards.
- All features in phone, pad and PC version are forever free.

KingDraw records all your inspiration, just spray it!

Adhering to the target of creating professional structure editor and the vision of establishing one-stop working station for chemists, KingDraw will try best to make efforts for chemistry.

1.2 Technical Support

If you have any problem with the software, get help in the following ways:

- Check the using help in the main interface of KingDraw>"Help" menu.
- Submit your question online in the main interface of KingDraw>"Feedback" menu. We will respond as soon as possible.
- Add the WeChat of KingDraw customer service assistant (qyjzcs) to get information.



The WeChat ID QR code of KingDraw customer service assistant

- Join KingDraw's QQ technical exchange group (Group ID: 709524531).
- Send E-mail to our mailbox pa@kingagroot.com.

If you want to know more recent news of KingDraw, try the following ways:



KingDraw WeChat Official Account QR code

- Visit our official website www.kingdraw.cn to get the latest informational updates.
- Follow our Wechat Official Account “KingDraw” to get informed about new updates.
KingDraw Wechat Official Account QR code
- Follow our Weibo account “KingDraw 清笔” on www.weibo.com to check the latest updated information.
- Follow “@KingDraw_chem” on Twitter.
- Follow “KingDraw” page on FaceBook.

1.3 Document terms and Format Description

In order to give users a better understanding of the document content, the terms and formats in the document have been standardized:

- ⚠ Warning: means important information that alerts the user to possible problems with incorrect operation.
- 📄 Supplementary note: used to supplement the body content of the explanatory document.

1.4 Trouble Removal

If the software has any abnormal problem during use, such as flashback, unable to open or save files, please follow the steps below to troubleshoot your app.

1. Confirm that the "get permission" pop-up prompt is allowed when the app is opened.
 - ⚠ KingDraw APP has to save files locally on your phone and supports open files locally, therefore we have to get the permission of visiting files in your device.
1. Confirm that you have installed the latest version
 - 📄 If you are not sure, get the latest version through the following ways:
 - Visit KingDraw’s official website www.kingdraw.cn to get the latest version.
 - Go to the App Store on your phone and search KingDraw to get the latest version. Such as Google Play, Huawei APPGallery, Xiaomi APPStore, MyAPP, etc.
2. Contact customer service

If the above methods cannot solve the abnormal problem, please contact customer service for consultation and solution. For details, please refer to “[1.2 Technical Support](#)”.

II. Getting start

2.1 Download and Installation of Software

To make it easier for users to download and use KingDraw APP, we offer a variety of download channels:

- **Follow our Wechat official account**

1. Open WeChat and select "Contacts"
2. Click "Official Account" and click the "+" mark in the top right corner and enter the interface of "Add Contacts".
3. Search "KingDraw Structure Editor" and follow the official account.
4. Click "Download APP" and skip to download interface to download the APP.

You can also follow the official account of "KingDraw Structure Editor" on WeChat by directly scanning the QR code below.



WeChat official account QR code of KingDraw

- **Visit the official website**

1. Visit KingDraw's official website www.kingdraw.cn by PC.
2. Click "Download Software" and enter software download interface.



Website download

The download of Android version, IOS version and pc version are available on the website.

- **Download from various App markets**

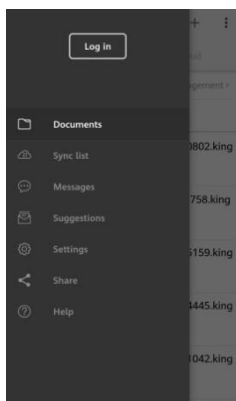
KingDraw mobile phone version currently supports direct download in app markets such as MyAPP, Xiaomi, Baidu, Huawei, 360, GooglePlay, APPStore, etc.



Download from GooglePlay

2.2 KingDraw Main Interface Introduction

After the app is opened, the system will enter the main interface. The functions of the main interface mainly include other common functions except drawing board.



Main interface

The functions of the main interface mainly include:

- **Log in/Register**

KingDraw supports local storage. If you need to use cloud storage, multi-end synchronization and other functions, please register as a member by mobile phone number first.

- **Documents**

“Documents” is the core of the entire software. Structure drawing, cloud storage, file retrieval and other functions are concentrated here.

- **Sync List**

When cloud-storing or reading cloud files in batch, the storage and reading progress will be displayed in real time.

- **Messages**

Used to view system messages such as the latest announcements sent by the platform.

- **Suggestions**

If you find any problem or have good suggestions when using KingDraw, please send it to us via “Suggestions”. We will respond as soon as possible and the response will be displayed in the “Suggestions”.

- **Settings**


In the “settings”, some basic content configuration and modification features are provided.

- **Share**

You can share “KingDraw APP” installation program as a link with your friends via the “Share” menu.

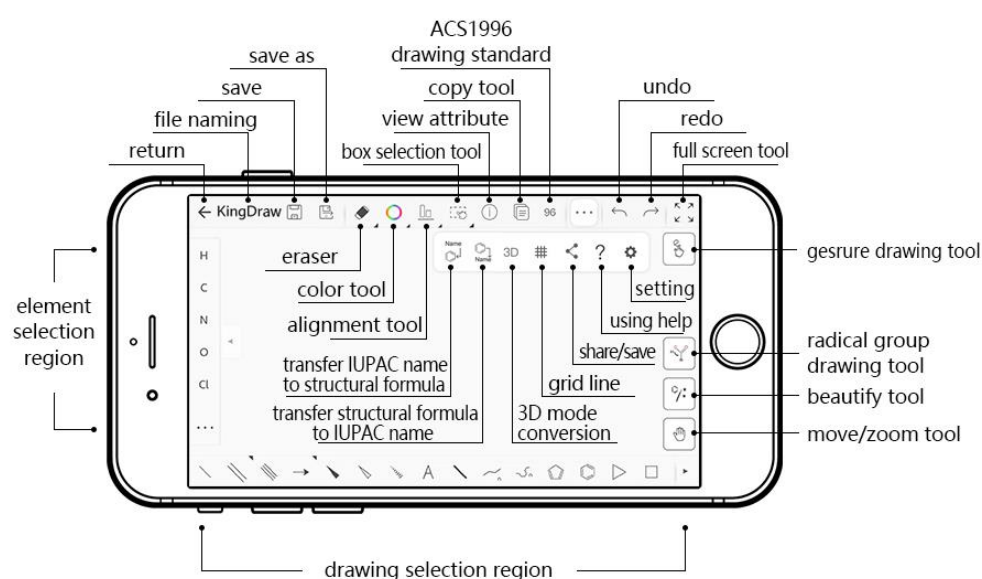
- **Help**

Enter “Help” menu to check help documents related to the APP.

 You can also get help through other ways. For details, please refer to “[1.2 Technical Support](#)”.

2.3 KingDraw Drawing Board Introduction









The drawing board integrated all the structure drawing functions of KingDraw APP.















The drawing board is divided into four functional areas: up, down, left and right.

- **Upper functional area**






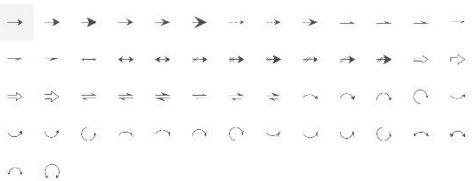


The upper functional area mainly includes common functions used in drawing:

















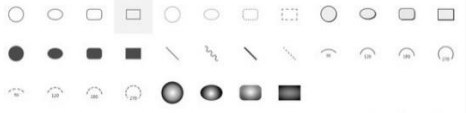


icon	name	description
←	Return	Close the current drawing board page and return to the main interface>“My File”
	File naming	Modify the current file name
	Save	Save the drawn content on the drawing board
	Save as	Save as the drawn content on the drawing board
	Eraser	  Erase the contents on the drawing board, long press to switch to the "Clear" tool
	Color tool	Set up the color of the drawing content on the drawing board, long press to set the color
	Alignment tool	Set up the alignment on the drawing board, such as aligning content, top, bottom, etc., long press to

		select multiple alignments. 
	Marquee tool	Selecting the content on the drawing board, long press to switch to the "lasso" tool. 
	View properties	View the structure properties on the drawing board
	Copy tool	Copy/paste the selected structural formula
96	ACS1996 drawing standard	One-key switch to "ACS1996 drawing standard" format
	Convert IUPAC name to structure	Convert IUPAC name to structure
	Convert structure to IUPAC name	Convert structure to IUPAC name
3D	3D model	Convert the structural formula in the drawing board into 3D ball-and-stick model
#	Crosshair	Add crosshair in the drawing board
	Share/save button	Share with friends or save to the photo album
?	Using help	Check using help of KingDraw APP
	Setting	Set up general functions of the drawing board
	Undo	Undo current operation
	Redo	Redo undid operation
	Full screen tool	Click to enter or exit full screen

● Drawing selection area

The drawing selection area mainly includes several structural formula drawing elements:

Icon	Name	Description
	Single bond	
	Double bond	Long press to switch multiple double bond styles 
	Triple bond	
	Arrow tool	Long press to switch multiple arrow styles 
	Solid wedged bond	
	Hollow wedged bond	






	Hashed wedged bond	
	Text tool	
	Bold single bond	
	Long-chain tool	
	Folded loop-chain tool	
	Cyclopentadiene ring template	
	Benzene ring template	
	Cyclopropane template	
	Cyclobutane template	
	Cyclopentane template	
	Cyclohexane template	
	Cycloheptane template	
	Cyclooctane template	
	Electric charge tool	Long press to switch positive and negative charges 
	Flow chart tool	Long press to switch multiple flow chart tools 
	Bracket tool	


- **Element selection area**

The element selection area contains all in the periodic table of elements, meeting basic structure drawing requirements.

- **Right side functional area**

The right-side functional area includes 4 fast operation tools, as follows:

icon	name	description
	KDpedia	Search chemical information
	Gesture drawing tool	Draw structure by gestures
	Group drawing tool	Provide common group selecting function and user-defined group drawing function
	Clean up tool	Cleaning up structures intelligently, support repeatedly cleaning up
	Move/zoom tool	Move or zoom the drawing board

 Icons with a triangle indicate more functions can be switched or used by long press.



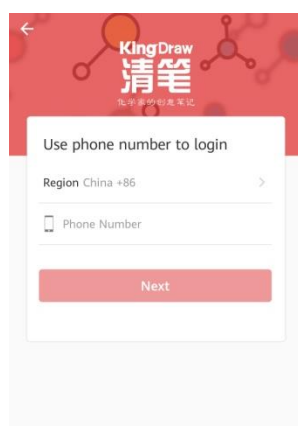
III. Users Interface Functions

3.1 Log in/register function introduction

KingDraw APP provides cloud storage function. If you need to store your files in the cloud, please register as a member by phone number.

● Register

1. Click the “log in” button in the menu bar of KingDraw main interface to enter the “log in” interface.
2. Select area code of country or region, enter phone number and click next step.
3. If you are a new user, you will be taken to the "registration" interface.
4. The platform will send a verification code SMS to the phone number you entered.
5. Enter the received SMS verification code into the verification code input box and set the password. After the setting is completed, click “register” to complete registration.



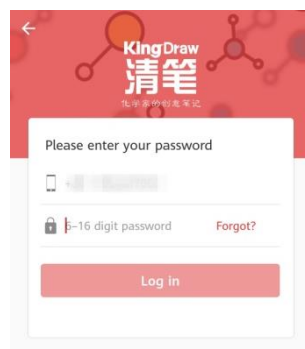
Enter phone number



Register

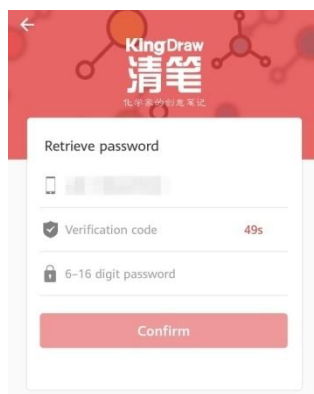
● Log in

1. Click the “log in” button in the menu bar of KingDraw main interface to enter the “log in” interface.
2. Select the country or region code, enter phone number and click “next”.
3. If you are an old user, you will be taken to the "log in" interface.
4. Enter your password and click log in to complete login.



● Reset password

1. If you forget the password, click “forget password” in the login interface to enter the “forget password” interface.
2. The platform will send a verification code SMS to the phone number you entered.
3. Enter the received SMS verification code into the verification code input box and reset the password. Click the “OK” button and the password is successfully modified.



retrieve password

- ☰ When logging in and registering, the default country or region code of the mobile phone is "86" in China. Therefore, if your mobile phone number is in other district, please modify it manually, otherwise you will not be able to receive the SMS verification code.

3.2 Suggestions and Messages Function Introduction

● Suggestions

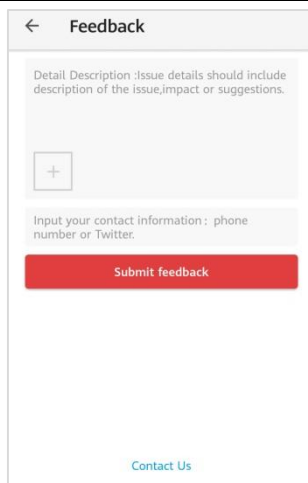
If you find a problem or have good suggestions when using KingDraw, please send it to us via “Suggestions”. We will respond as soon as possible and the response will be displayed in the “Suggestions”.

Send “Suggestions”

1. Click “Suggestions k” menu to enter the “Suggestions” interface.
2. Click “Feedback” button in the top right corner to enter “Feedback” interface.
3. Enter the following contents:

Enter content	Description	Enter requirement
Feedback	Enter feedback suggestions	
Picture	Upload related pictures	Non-mandatory. Upload at most 6 pictures.
Contact	Fill in effective contacts, such as phone number, WeChat, QQ, Twitter, FaceBook, etc..	Non-mandatory

1. Click “submit feedback” button to complete feedback submitting.



My feedback

1. Click “Contact us” below the interface of “My Feedback” to view more contacts.

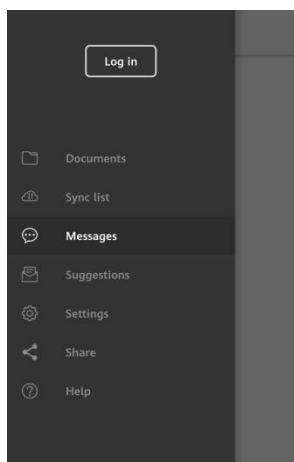
View response

1. If the customer service responds to your feedback, the “Feedback” menu will have a red dot prompt.
2. Click “Feedback” menu to enter “Feedback” interface.
3. If there’s unread message, the top left corner of the menu will display red corner mark.
4. Click the “Feedback” list item to enter the “Details” interface and view the response of the customer service.

● Messages

Users can view KingDraw update announcements, events, and more in the “Messages” menu.

1. When there is a new message, the “Messages” menu displays red bubble and indicates how many unread messages are available.
2. Click “Messages” menu to enter “Message Center List” interface and view messages in tabular lists.
3. Click the messages in the “Message Center List” to view the details of the message.



Message center

- The information content of the message includes the title, the release time and the message content. The message content includes text, image and link. Clicking on the link will access the content of the page displayed by the link through the browser within the app.

3.3 Settings Function Introduction

The “Settings” menu contains 4 sub-lists, including “Account and security”, “Language”, “Document Settings” and “About KingDraw”.

- **Account and Security**

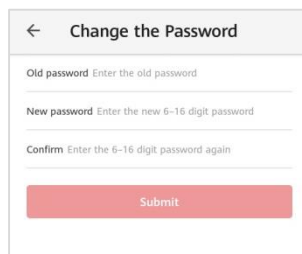
The menu of “Account and Security” includes 2 sub-lists, e.g. “Change the password” and “Close account”.

Change password

- Click “change the password” menu to enter the change password interface.
- Enter the following contents:

Enter content	Description	Enter requirement
Old password	Enter the password of current login account	Password with 6-16 digits, English letters, numbers and underline are available
New password	Enter new password	Password with 6-16 digits, English letters, numbers and underline are available
Confirm password	Re-enter the new password	Password with 6-16 digits, English letters, numbers and underline are available

- Click “Submit” button to complete change password operation.



“change the password” page

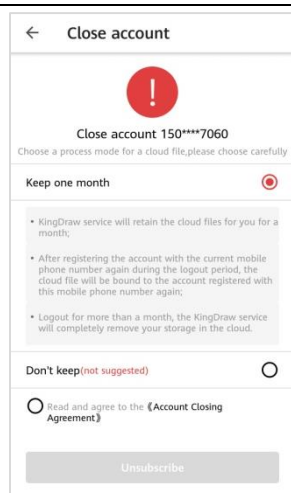
Close account

If you need to log out of the current login account, enter the "Close Account" menu and the system provides two logout options:

Plan A: Save cloud files for 30 days. If register account again with the current phone number within 30 days, the cloud files will be connected again with the account.

Plan B: Logout the account without saving cloud files.

Confirm the logout mode and select “Read and agree to the Account Cancellation Agreement”, then click “Unsubscribe” to complete account cancellation.



Logout account

● Language

The current version of KingDraw supports language switch between Chinese and English. The switch method is as follows:

1. Click “Language” menu to enter the “Language” switch interface.
2. Select the language to be switched.
3. Click “done” button to save the current setting.



Language

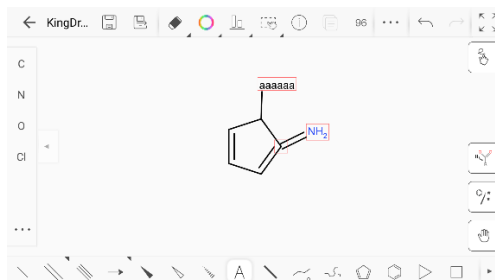
☰ KingDraw provides 3 kinds of switching mode:

1. Auto: switch language type according to the current setup of system language.
2. Chinese (Simplified): set up the current display language to simplified Chinese.
3. English: set up the current display language to English.

● Document settings

Proof function

When the proof function is turned on, the system will check the correctness of the structural drawing and the place where the verification result is wrong will be prompted by red box.



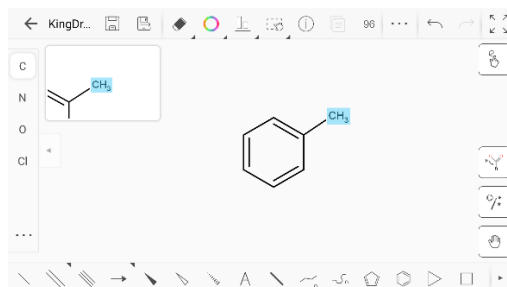
A schematic diagram of validation error

☰ The following conditions will default to verify exceptions.

1. Electron imbalance between bond and bond, bond and atom.

Zoomer function

After the zoomer function is turned on, when you draw structures in the drawing board, the drawing area will be partially magnified in the upper left corner to facilitate drawing details.



A schematic diagram of magnifier

Drawing template

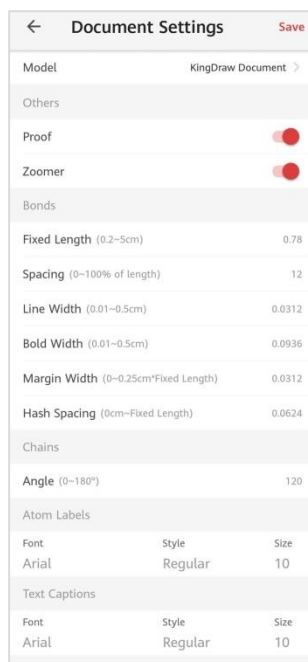
KingDraw provides 3 drawing templates as follows:

template name	description
KingDraw Document	KingDraw system default drawing mode
ACS Document 1996	Match the ACS Document 1996 drawing mode
User-defined Document	User-defined drawing mode

Different template has different drawing style. Among them, “KingDraw Document” and “ACS Document 1996” are system default drawing style and can not be modified. If you want to set up your own drawing style, select “User-defined Document”. The drawing styles are as follows:

item	name	description	limit
Bonds	Fixed Length	bond length	0.2~5cm
	Spacing	space between multi-bonds	0~100% of length
	Line Width	roughness of common bonds	0.01~0.5cm
	Bold Width	roughness of bold bonds	0.01~0.5cm
	Margin Width	space between text on the bond and the bond	0~0.25cm*Fixed Length
	Hash Spacing	space between virtual wedge bond dotted lines	0cm~Fixed Length
Chains	Angle	default bond angle	0~180°
Atom Labels	Font	default font of atom	Arial, Times New Roman, Symbol
	Style	default style of atom	Regular, Bold, Italic, Bold Italic
	Size	default font size of atom	5~36
Text	Font	default font of text	Arial, Times New Roman, Symbol

Captions	Style	default style of text	Regular, Bold, Italic, Bold Italic
	Size	default font size of text	5~36



Drawing setting

After the setup is completed, click “Save” button to save the content of drawing settings.

- **About KingDraw**

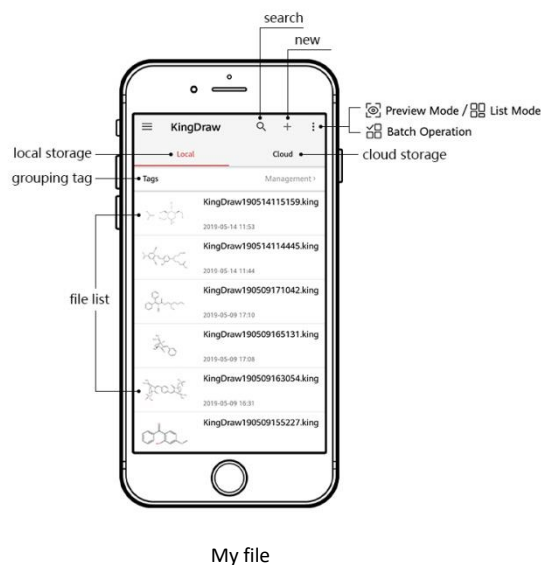
Our service agreement and contact information are in here. If KingDraw meets your using requirements, please click "go to score", give us a good review and recommend it to your friends.

- **Logout**

If you want to logout the current account you logged in, click “Logout” to exit.

3.4 Documents Function Introduction

The “Documents” menu is the center of the whole software, where the structure drawing, cloud storage, file searching and many other functions are concentrated.



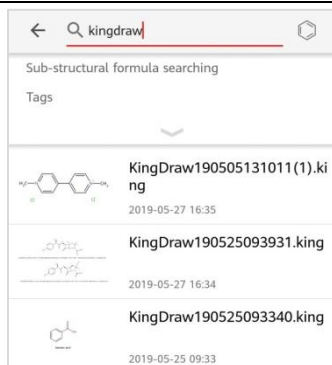
It includes the following contents:

- **Search**
Using the “File searching” function, users can rapidly search and locate to saved files by three searching methods: “name”, “sub-structure retrieval” and “grouping”.
- **New**
Create a new drawing board.
- **Preview mode**
Switch the browsing mode of the file list
- **Batch operation**
Proceed batch operation to the file list contents
- **Local/cloud storage**
Switch local/cloud storage list
- **Grouping tag**
Manage group tags and screen files by grouping tag
- **File list**
Show saved files by listing

3.5 File Searching Function Introduction

Users can rapidly search and locate saved files by “Searching” function. KingDraw provides 3 methods for searching saved structures, as follows:

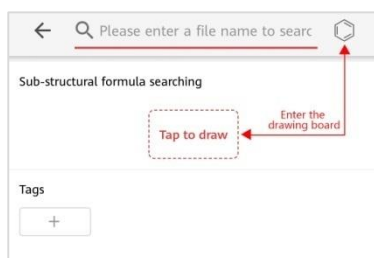
- **Search by file name**
 1. Click “Search” button to enter to the “Search” interface.
 2. Enter file name in the search box and click “Search” button.
 3. KingDraw will display all the files that meet the searching condition in the list box.



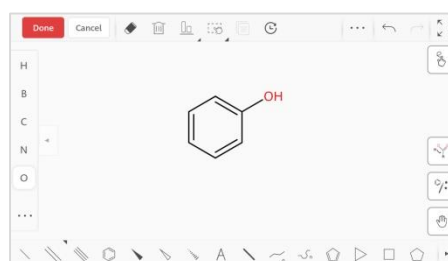
Search by file name

● **Search by sub-structure**

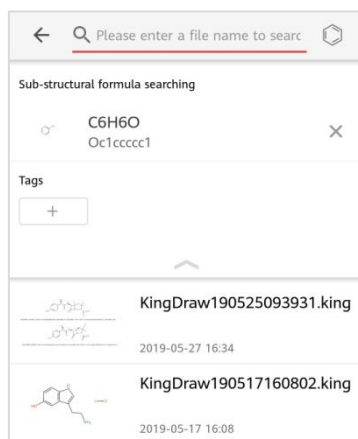
1. Click “Tap to draw” button to enter the drawing board.
2. Draw the structure that needs to be retrieved.
3. Click “Done” button and the system will display all the files containing the above structure in the list box.



Structural formula query



drawing board



Search result

☰ In the “structure query” interface, click  or  in the top right corner to enter the drawing board.

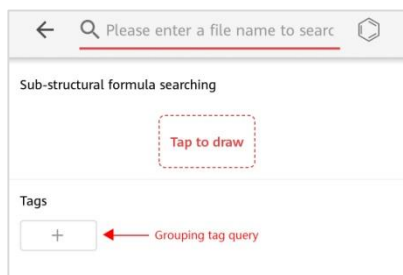
☰ In the “drawing board” interface, click “search history information” button to directly find the structures you have inquired.

● **Search by grouping tag**

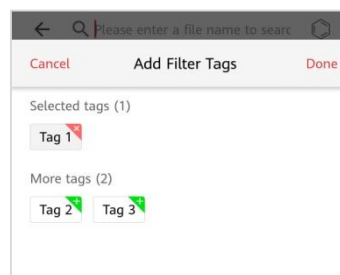
1. Click “grouping tag” button to enter the “add filter tags” interface.
2. Select the tag selected as screening condition in the “more tags” interface and put it into

“selected tag”.

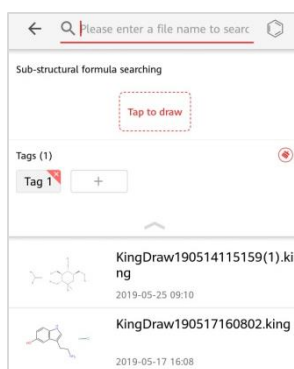
3. Click “done” button and the system will display the selected grouping files in the list box.



Grouping tag query




Add filter tag



Search result

In the “add filter tags” interface, click the tag in “more tags” to put it into “selected tag”. Click the tag in “selected tag” to put it back to “more tags”. KingDraw supports simultaneously selecting multiple tags and the system will take the union of multiple tags as screening condition.

In the “search result” interface, click the tag in the grouping tag to clear the search conditions of the tag. Click button to continue adding screening conditions. Click  button to empty screening conditions.

3.6 New Drawing Board and Browsing Mode Switching Function

Introduction

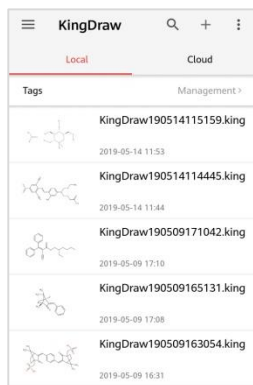
- **New drawing board**

Click “New” button to create a blank drawing board and open a new journey of structure drawing.

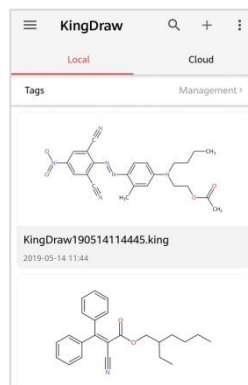
The main interface of KingDraw is vertical layout while the drawing board interface is horizontal layout. Therefore, after entering the drawing board interface, the mobile phone interface will be adjusted vertically, please adjust the direction of your phone.

- **Switch browsing mode**

Click the “preview mode/list mode” switching button to switch between the 2 list display forms.



List mode



Preview mode

3.7 File List Function Introduction

The file list is arranged in reverse order of modification time, showing the file name, modification time, and thumbnail of each file. The file list is divided into two parts: "local" list and "cloud" list.

● Local list

Click the file in the file list to enter the drawing board and edit the file.

Long press on the file in the "local" list to pop up a menu with menu contents including:

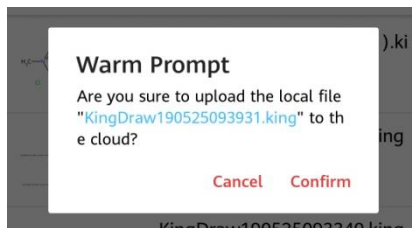


Local list pop-up menu

Upload

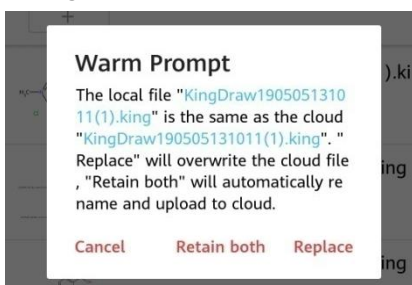
Select "upload" to upload files to the cloud. It is suggested to store files in the cloud to avoid losing files.

- ☰ If the file is uploaded to the cloud for the first time, an upload prompt will pop up as follows. Click the "Confirm" button and the file will be uploaded to the cloud.



Upload prompt

If the file has been uploaded to the cloud and uploaded again, the upload prompt will pop up as follows. Click the "Retain both" button, the file will be uploaded to the cloud but the existing file will not be overwritten. Clicking the "Replace" button will upload the file to the cloud and overwrite the existing file.



Upload prompt

Save to album

Select "Save to Album" and the file will be saved as an image to your phone's photo album.

Save as

Select "Save as" to modify file name or save the file to another format. Currently, KingDraw supports save as the following formats: .king, .mol, .mol v3000, .cdx and .png.

Store files to a different format may result to content loss. For details, please see "4.1 Return/Save/Save as Function Introduction".

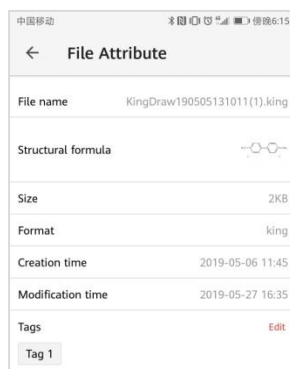
Share file

Select "share file" to share the file with friends by a link. Friends can check file contents through the link and directly open it in KingDraw APP.

For specific "file sharing" methods, see "4.12 Share/Save Tool Function Introduction".

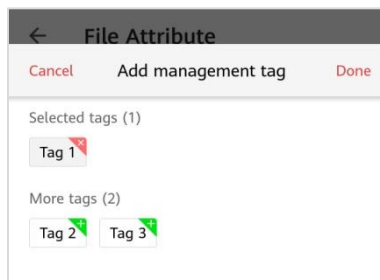
File attribute

1. Select "file attribute" to check file name, structure, size, format, creation time, modification time, etc..



File attribute

1. Click “group tag edit” to enter the “add management tag” interface to add or change the file tag.



Add management tag

Re-name

Select “Re-name” to change current file name.



Re-name

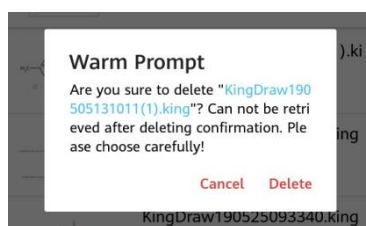
- ☰ The name length should be within 50 characters.
- ☰ The changed name should be different with the existing one.

Copy

Select “copy” to get a copy of the file.

Delete

Select “delete” and the delete prompt will pop up as follows. Click the "delete" button to delete the file.

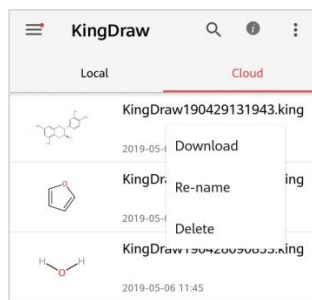


Delete prompt

- ☰ Deleted file can not be retrieved. Please use the delete function with caution!

“Cloud” list

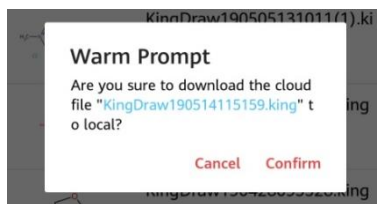
Click the file in the “cloud” list will pop up a menu with menu contents including:



● Download to local

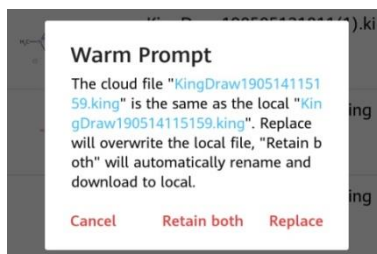
Select "download to local" to download cloud file to "local" list.

- ☰ If the file does not exist in the "local" list, the download prompt will pop up as follows. Click the "Confirm" button and the file will be downloaded to the local.



Download prompt

- ☰ If the file already exists in the "local" list, the download prompt as follows will pop up when downloading. Click the "Retain both" button, the file will be downloaded to the local but the existing file will not be overwritten. Click the "Replace" button to download the file locally and overwrite the existing file.



Download prompt

● Re-name

Select "Re-name" to change current file name.



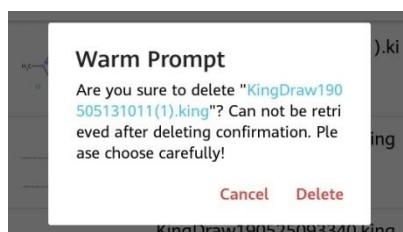
Re-name

- ☰ The name length should be within 50 characters.
- ☰ The changed name should be different with the existing one.

● Delete

Select "delete" button and the delete prompt will pop up as follows. Click the "delete" button to

delete the file.



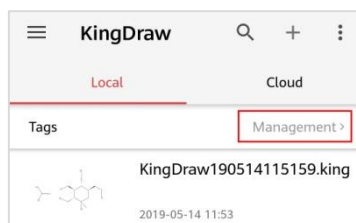
Delete prompt

3.8 Grouping Tag Function Introduction

Users can conveniently classify and manage existing files through grouping tags and can quickly query and locate corresponding files through grouping tags.

- **Manage grouping tag**

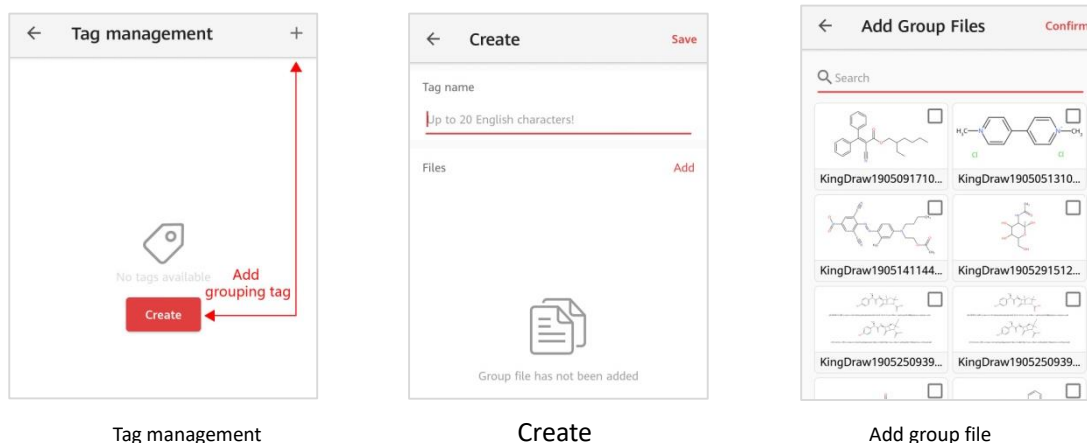
Users can add, modify and delete grouping tags.



Entrance of grouping tag management

Add grouping tag

1. Click “management” button to enter the “tag management” interface.
2. If no grouping tag ever created, the “Create” button will be displayed. Click “Create” button to enter the “Create” interface. If you have created a tag, click the “+” mark in the upper right corner to enter the “Create” interface.
3. Enter the name of the tag in the “Create” interface. Click “add group file” to enter “new group file” interface. It supports searching and multi-selection when adding new grouping files.
4. After completing selection, click the “Confirm” button in the upper right corner to return to the “Create” interface and add the selected file to grouping files.
5. Click the “save” button in the upper right corner of the “Create” interface to complete the new tag operation.



Tag management

Create

Add group file

- In the "Create" interface, the file name can not be empty and cannot be duplicated with an existing tag.
- The grouping file can not be empty.

Modify/delete grouping tag

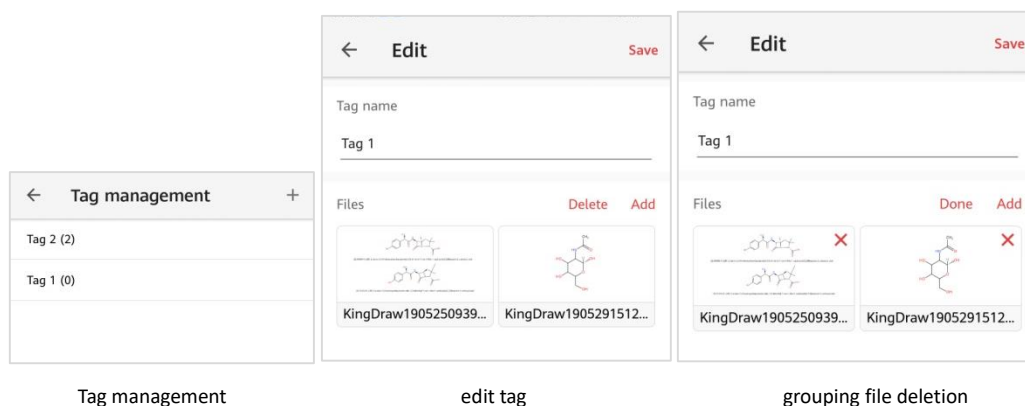
- Click "management" button to enter the "tag management" interface.
- Click the tag that need to be modified and enter "Edit" interface.
- Modify the tag content:

Modify tag name

Click the "add" button to enter the "Add group files" interface to add grouping files.

Click the "delete" button and the grouping files will become deletable. After deleting grouping files, click the "done" button to save deletion operation.

- Click the "save" button in the upper right corner of "Edit" to complete tag modification.



Tag management

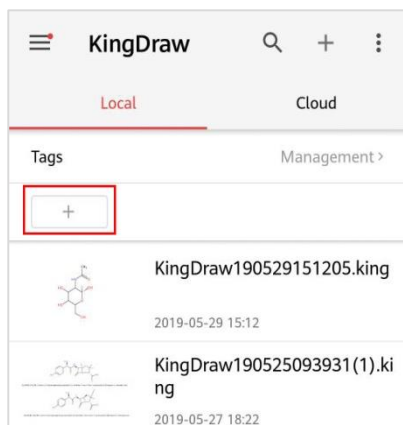
edit tag

grouping file deletion

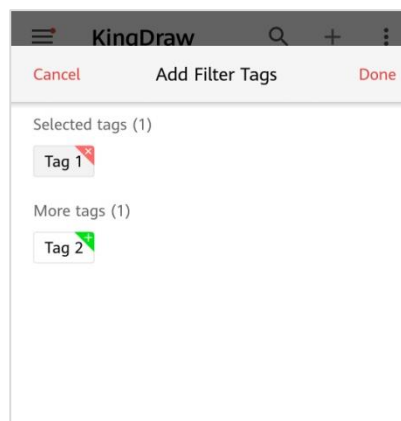
- In the "Edit" interface, the file name can not be empty and cannot be duplicated with an existing tag.
- The grouping file can not be empty.

● Search file by grouping tag

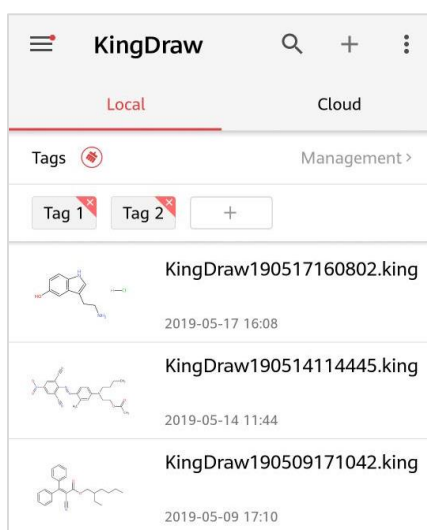
- In the "My Files" interface, drop down the list page or click on the group label text to display the "Group Label Query" button.
- Click the button to enter the "add filter tags" interface.
- In the "more tags", select the tag you want to use as a filter and place it in the "selected tags".
- Click the "done" button and the selected grouping files will be displayed in list box.




My file






Add filter tags



Search result

 In the "add filter tag" interface, click the tag in "more tags" to put the tag into the "selected tag". Click the tag in "selected tag" to put the tag back to "more tags". KingDraw allows multiple tags to be selected at the same time and the system takes the union of multiple tags as filter condition.

 In the "search results" interface, click the tag in the grouping tags to clear the filter condition for that tag. Click the "" button to continue adding filter conditions. Click the "" button and the system will clear the filter conditions.

3.9 Batch Operation Function Introduction



By batch operation, users can delete files in batch and upload/download local and cloud files in batch.

- **Delete files in batch**

1. Select local or cloud tags and click “batch operation”.
 2. Select files that need to be deleted.
 3. Click the “delete” button and the system will pop-up deletion prompt.
 4. After confirming that the operation is correct, click “delete” to complete deletion.
- **Upload local files to the cloud in batch**
 1. Select “local” tag and click “batch operation”.
 2. Select the files that need to be uploaded.
 3. Click the “upload to cloud” button and the system will upload the file to the cloud.
 - **Download to the local from the cloud in batch**
 1. Select “cloud” tag and click “batch operation”.
 2. Select the files that need to be downloaded.
 3. Click the “Download” button and the system will download files from the cloud to the local system.

IV. Drawing Board Functions

4.1 Return/Save/Save as function

Icon	Name	Description
←	Return	Close the present drawing board page, go back to KingDraw’s main interface > “My document”
	Save	Save the contents you have drawn on the board
	Save as	Save as the contents you have drawn on the board

- **Return**

Click “return” button and go back to the drawing board interface. The system will automatically save the contents you have finished on the board.
- **Save**

Click “save” button to save the contents you have drawn on the board.
- **Save as**
 1. Click “save as” button, the save as dialog box will be popped up.
 2. Modify file name and save the present file as other names.
 3. Modify file type and save the file as other formats.

File types KingDraw supports at present, include:






Name	Description
.king	KingDraw’s unique file type
.mol	.mol file format, file missing may occur

.mol v3000	.mol v3000 file format, file missing may occur
.cdx	ChemDraw file format, file missing may occur
.png	portable network graphics format, cannot open or edit by KingDraw
.jpg	more common drawing formats, cannot open or edit by KingDraw

Except for .king, files saved as all the above formats may lose some elements. The specific lost elements are as follows:

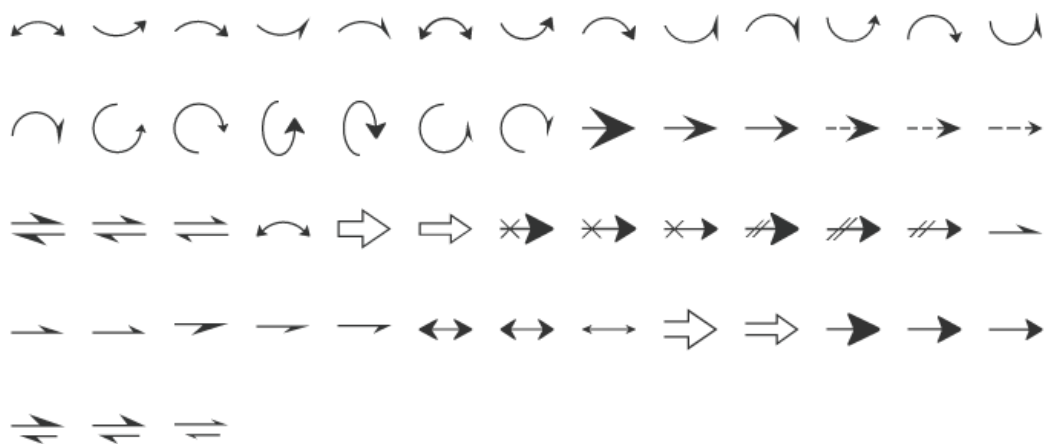
.king save as .mol or .mol v3000

mol is compatible with the great majority of mainstream structural formula editors, however, it is incompatible with some diagrams. When transferring “king” to “mol”, some elements may be lost. Details see the table below:

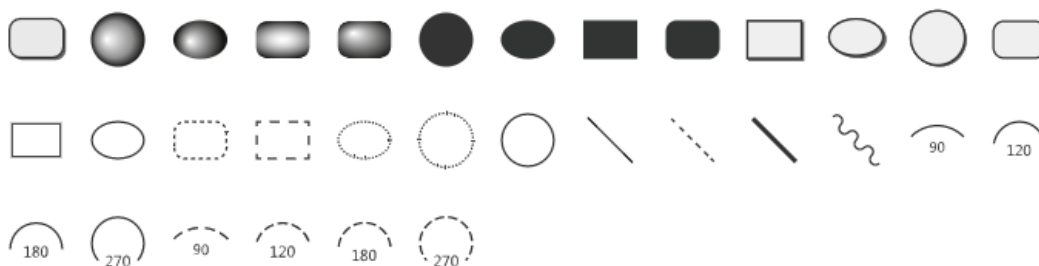
	Bracket tool		Arrow tool
	Flow chart tool		Color tool
	Text tool		Hashed bond
	Bold Bond		Hollow wedged bond

Note:

Arrow tool includes:

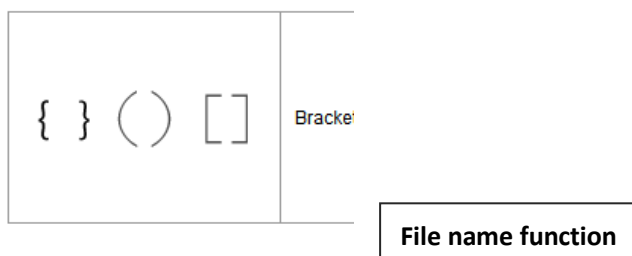


Flow chart tool includes:



.king save as .cdx

.cdx is the special format for ChemDraw. When inter-transferring “king” to “cdx” format file, some elements’ representation form may different from each other. Details see the table below:



.king save as .png

.png is a portable network graphics format. Saving .king as .png is irreversible, so KingDraw cannot open the .png file.

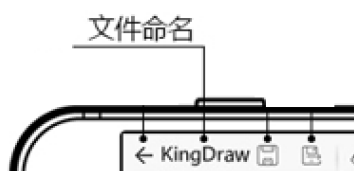
.king save as .jpg

.jpg is a commonly used image format. The drawn structural formula can be saved as a picture with a white background. Saving .king as .jpg is irreversible, so KingDraw cannot open the .jpg file.

⚠ KingDraw’s special format .king can save all the contents and properties on the drawing board. It is suggested to save file as .king without affecting system usage.






4.2 File name function introduction

Change the current file name by naming the input box.



1. Click “naming input box” to pop up the “naming input box” interface.
2. Modify the current file name.



3. Click the “Confirm” button to save file name.

-  The default naming rule for files is KingDraw + year, month, day, hour, minute, second.
-  Modify default file name according to the drawing content is helpful to recognize and find files.
-  The name length should be within 50 characters.
-  The changed name should be different with the existing one.
-  If the modified name is a duplicate of other files name, there will be a prompt and cannot be saved.

4.3 Eraser/ Clear Tool Introduction

The eraser tool can be used to remove atoms and structures drawn on the board.

The Clear tool can be used to delete all the contents on the board with one click.

icon	name	description
	eraser	Erase specified contents on the drawing board.
	Clear tool	Clear all the contents on the drawing board.

● Eraser

Delete in the unit of the smallest drawing element. To delete the whole content, select with the selection tool and then delete with the eraser.

Delete single drawing element

Use eraser to click the element that need to be deleted, for example single bond and text, the element will be directly deleted.

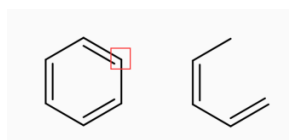
Delete certain single drawing element of the structure

For example, change from double bond to single bond, users can use eraser to click the double bond to change it from double bond to single bond in benzene ring.



Delete the element connecting structure and certain connection point

Use eraser to click the connection point directly.



Delete the whole structure

First use selection tool to select the structure and click eraser to delete.

● Clear tool

1. Click the “Clear” tool.
2. Clear all the contents on the drawing board.

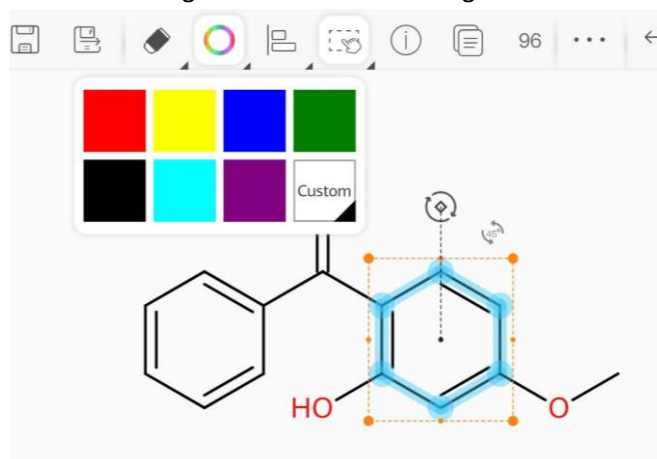
4.4 Color tool using instruction

● Color tool

In order to better distinguish formulas and beautify formula appearances, KingDraw introduced element color picker when drawing chemical structural formulas. Users can modify the color of contents on the drawing board through the “color tool”.

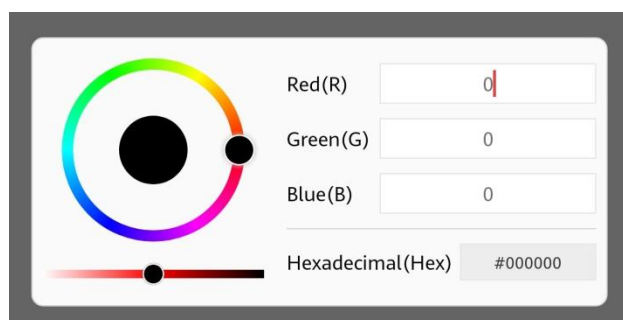
● Long press on the color tool


1. Use selection tool to select the structural formulas that need to change color.
2. Long press on the “color tool”, then the color selection tool will be popped up. Kingdraw provides 7 default colors and 1 custom color.
3. After selecting color, the selected structural formula will be changed to the appointed color, and the default color of drawing board will also be changed to this color.



● Short press on the color tool

1. Use selection tool to select the structural formula that need to change color.
2. Short press on the color tool, the color will be changed to newly set default color.













-  If dissatisfied with the default color, click the “custom” button to adjust the color manually.

4.5 Alignment tool using instruction

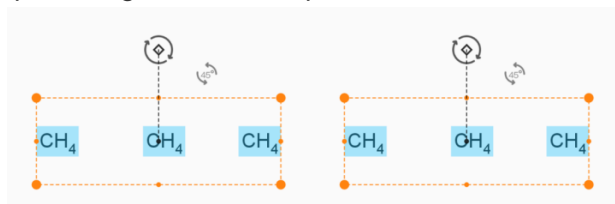
● Alignment tool

Now the “alignment tool” provides 10 kinds of alignment:

Icon	Name
	Left alignment
	Bottom alignment
	Right alignment
	Top alignment
	Vertical center
	Horizontal center
	Bring to front
	Send to back
	Horizontal mirror flip
	Vertical mirror flip

● Long press on the alignment tool

1. Use the selection tool to select the structural formula that needs to adjust the alignment.
2. Long press on the “alignment tool”, the setup interface of alignment and hierarchical relationship will be popped up.
3. Select the appropriate alignment to complete the modification.



● Short press on the alignment tool

1. Use selection tool to select the structural formula that needs to adjust alignment.
2. Short press on the “alignment tool”, the default alignment will be adjusted automatically.

4.6 Selection tool using instruction

Users can rapidly select the structural formula in the drawing board by “selection tool”.

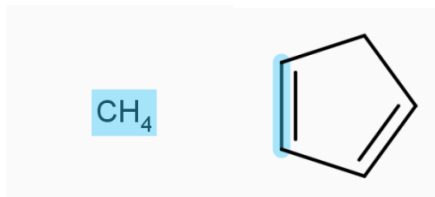
Long press on the “marquee tool”, the “marquee tool” and the “lasso tool” can be easily transferred to each other.

● Marquee tool

Rectangle selection method:

Select single atoms or structure

1. Select rectangle selection tool.
2. Press the blank area of the drawing board, slide to form marquee box.
3. The elements boxed in the marquee tool will be all selected.



Select several elements or structural formulas

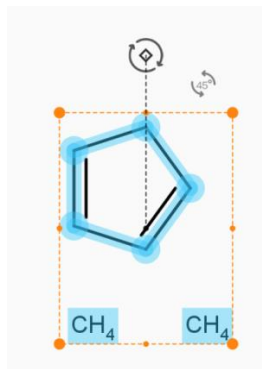
1. Select marquee tool.
2. Press the blank area of the drawing board, slide to form rectangle box.
3. The elements boxed in the marquee tool will be all selected.


Clicking selection method:

1. Select marquee tool.
2. Click the elements that need to be selected successively.
3. Once clicked the elements will be selected in turn.

Long press selection method:

Long press on a single element of the structural formula for 1 second, the whole structural formula will be selected.



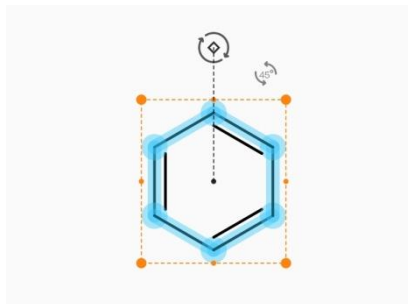
-  If the structural formulas overlap, long press selection method will help you to select the upper one.

Adjust the location of structural formula

1. Use marquee tool to box the structural formula.
2. Hold the inner area of the selection rectangle and drag, the location of the selected structural formula will be changed.

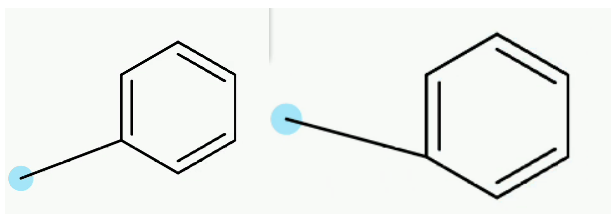
Adjust the size of structural formula

1. Use marquee tool to box structural formula, the selection rectangle and 8 adjust handles will appear.
2. Drag the handles to adjust the length, width and uniform scale of the structure.



Adjust bond length or bond angle

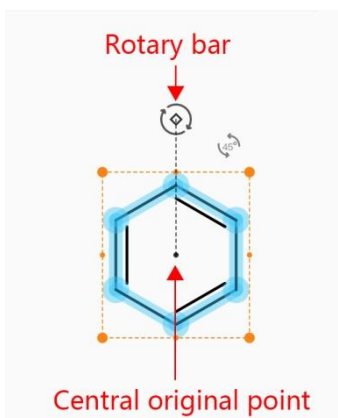
1. Use marquee box tool to click and select a bond.
2. Drag one side and the length and angle of the bond will be changed with the other side as the center.




Rotate structural formula

◆ Rotation based on the center original point

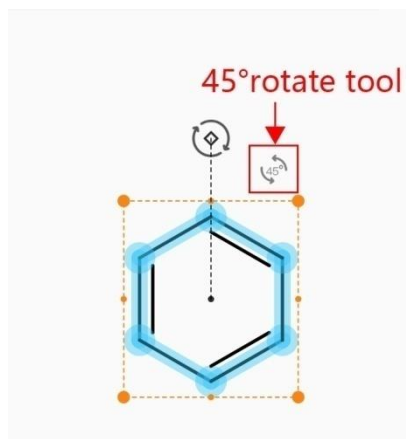
1. Use marquee tool to box the structural formula.
2. Adjust the rotary bar, then the structure can be rotated based on the central original point.



-  If you don't want to rotate based on the center point, you can drag the original point to your desired location.

◆ Rapidly rotate structural formula by 45° :

1. Use marquee tool to box the structural formula.
2. Press the 45° rotate tool to rotate the structural formula.
3. The structural formula will be rotated with an interval of 45°



- **Lasso tool**

The usage of the lasso tool is the same as the marquee tool. It is mainly used in the circumstance that several structural formulas are too closed to each other that the marquee tool cannot be used.

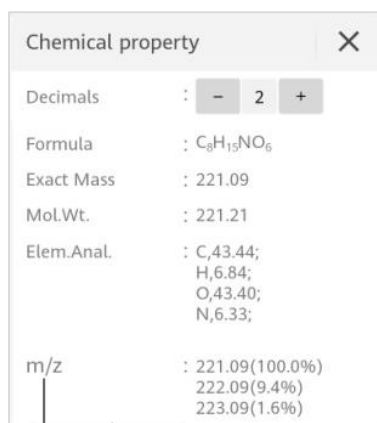
4.7 Chemical Property Tool Introduction

Users can query the chemical property of the drawn structure through the “chemical property tool”.

icon	name	description
ⓘ	Chemical property	View the chemical property of the structure drawn on the board.

The chemical property include:

name	description
Decimals	Adjust the number of decimal places displayed
Formula	Chemical structure
Exact Mass	Precise molecular weight
Mol.Wt.	Molecular weight
Elem.Anal.	Element analysis result
m/z	Mass-to-charge ratio in the mass spectrum




Chemical property

- **Query the chemical property of all the structures on the drawing board**

1. Select none of the structures on the drawing board.
2. Click the “chemical property” tool to pop up the “chemical property” interface, the compound property of all the structures will be displayed.


- **Query the chemical property of certain structure on the drawing board**

1. Use the “selection tool” to select certain or several structures.
2. Click the “chemical property” tool to pop up the “chemical property” interface, the compound property of selected structure(s) will be displayed.


 KingDraw can automatically recognize the element, bond, ring, long chain, folded loop chain, electric charge, radical group as effective chemical property.


4.8 Copy Tool Introduction

Users use the “copy tool” to copy/paste selected structure(s).

icon	name	description
	copy tool	Copy/paste the selected structure(s)

1. Use the “selection tool” to select the structure to be copied, either a single structure or multi-structures.
2. Click the “copy tool” and KingDraw will prompt that the copy is successful.
3. Click on the position you want to paste in the drawing board and the structure will be pasted to that location.



 Support repeated copy. After the copy is complete, users can repeat the copy by clicking the drawing board multiple times.

 The copy function supports cross-file copy:

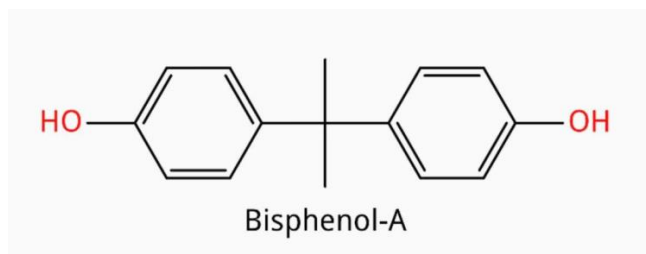
1. Copy a structure in file A;
2. Return to file list and create a new file or open another file B;
3. Click on the drawing board, then the structure copied from file A will be pasted to the drawing board of file B.


4.9 IUPAC Conversion Tool Introduction

Users can use the “IUPAC conversion tool” to directly add the corresponding chemical structural formula of IUPAC name to the drawing board.

icon	name	description
	Conversion from IUPAC name to structure	Convert IUPAC name to structure
	Conversion from structure to IUPAC name	Convert structure to IUPAC name

● Conversion from IUPAC name to structure




1. Click the “IUPAC conversion tool”, the “IUPAC name input box” will pop up.
 2. Enter IUPAC name and click the “OK” button.
 3. KingDraw will add the corresponding structure and name to the drawing board.
-  If there is no corresponding structure, the system will prompt “conversion failed”. Please note that when entering the name, correct characters such as "-" and spaces are needed.

● Conversion from structure to IUPAC name

1. Use selection tool to select the structure to be converted.
2. Click the “Conversion from structure to IUPAC name” button.
3. The converted name will be displayed under the structure.

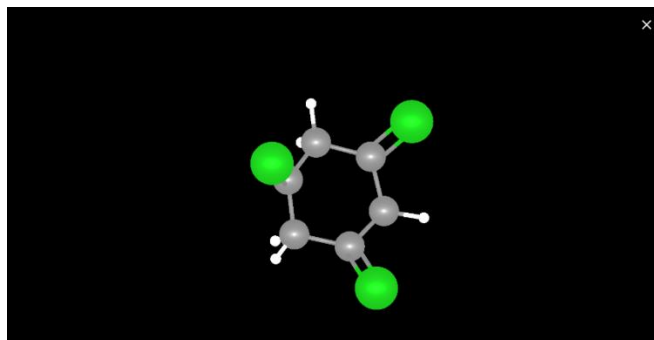
4.10 3D Mode Conversion Tool Introduction

Users use the “3D mode conversion tool” to convert structure to 3D ball-and-stick model.

icon	name	description
	3D mode conversion	Convert the structure on the drawing board to 3D ball-and-stick model.

1. Click the “3D mode conversion” button to enter the 3D ball-and-stick model structure display interface.
2. Use different gestures to slide the interface up and down, left and right to achieve multi-dimensional rotation effect of the 3D model.

3. The system provides 3 display styles, which are ball-and-stick model, stick-and-stick model and space-filling model.



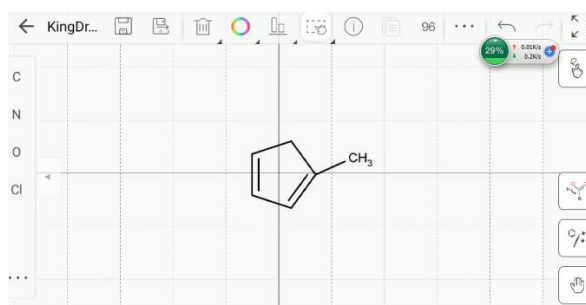
Grid line

4.11 Crosshair tool using instruction

Users can use “crosshair tool” to assist in aligning structural formulas.

icon	Name	Description
#	Crosshair	Add grid ruler line on the drawing board.

1. Click “crosshairs tool”.
2. Gridlines with an interval of 1cm will be formed on the drawing board, lines passing the central points are full ones, while others are dotted ones.



4.12 Share/Save Tool Introduction

Users can use the “share/save tool” to convert the drawn content to a share link and send it to others or store it locally.

icon	name	description
↩	Share/save button	Share the drawn content with friends or save to photo album.

- **Save to photo album**

1. Click the “share/save tool”.
2. Click “save to the album”.

3. The image will be stored in your system album by default

- **Share with friends**



1. Click the “share/save tool”.

2. Click “share with others” and share the file with others.


3. The shared person can directly view the shared structure through the share link and one-click opening is supported via KingDraw.

4.13 Single File Drawing Format Setting and 96 Format Rapid Conversion





Users can quickly modify the current file drawing format by the “setting tool”. Users can also use the “ACS1996 drawing standard tool” to quickly shift the ACS1996 drawing standard format.

icon	name	description
	setting	Set up the general functions of drawing board.
	ACS1996 drawing standard	Shift the “ACS1996 drawing standard” format by one click

As for the detail use direction of the “setting tool”, please refer to [“3.3 Setting function introduction”](#).

 Use the “setting tool” in the drawing board and the modified content is only effect in the current board.

4.14 Help Document/Undo/Redo/Full Screen Tool Introduction

icon	name	description
	Help document	Check KingDraw APP help document
	Undo	Undo the current operation
	Redo	Redo the undone operation
	Full screen tool	Click to enter or exit full screen

- **Help document**

Users can check the relative help directions of KingDraw APP by the “help document tool”.

- **Undo**

Users can undo the drawn content in the last step by using this tool, at most those saved after entering the drawing board.

- **Redo**

Users can reproduce the undone content of the previous step by using this tool.

- **Full screen tool**

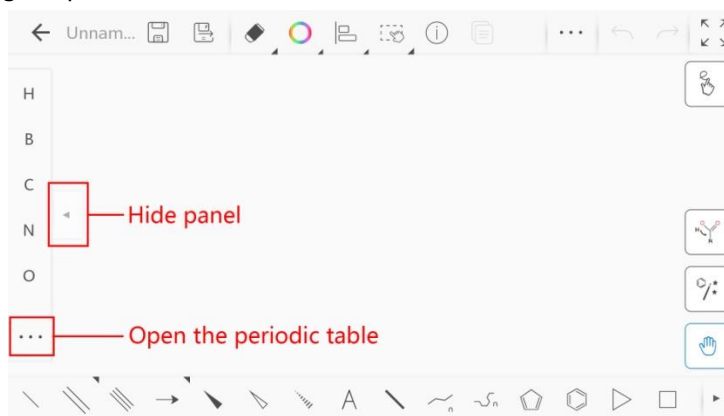
Users can shift to the full screen state by the “full screen tool”, so as to check the drawn content with maximum view.

 The full screen mode supports only viewing but not modification. Users can adjust the

display position by swiping finger left and right and zoom the drawing board by pinching.

4.15 Periodic Table Introduction

Users can select common elements from the atom selection area in the left. The system supports opening the periodic table to select elements.




The atom selection area in the left

● Use common elements

1. Click the common elements in the left.
2. Click a suitable setting position in the drawing board, either on the bond or the blank area.

● Use uncommon elements

1. Click the list “...” in the left and enter the periodic table of elements.
2. Click the element to be added in the drawing board.
3. Click a suitable setting position in the drawing board.

 If the display of periodic table of elements is incomplete, users can view the whole content by swiping left and right.

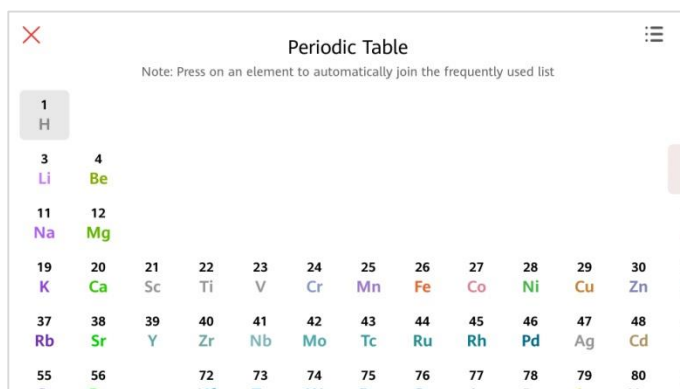
● Add common elements

KingDraw supports setting other elements in the periodic table of elements as common elements.

1. Click the list “...” in the left and enter the periodic table of elements.
2. Find out the element to be added into the common list. Long press for 1 second and the system will set it as common element.

● Delete common element

1. Click the list “...” in the left and enter the periodic table of elements.
2. Select the common element that needs to be set. Long press for 1 second and the system will set it as uncommon element.

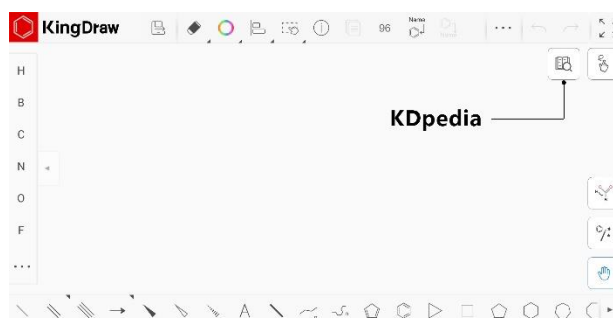


Periodic table of elements.

- ☰ Click “☰” to contract the left panel.
- ☰ The system will auto trim the H atom of elements according to the setting position. If the auto trimmed atom is not what you want, select the element by text tool and modify it to what you want to show.
- ☰ Atoms appear in their chemically neutral form. For example, carbon appears as CH4 and hydrogen appears as H2.

4.16 KDpedia Introduction

The KDpedia is in the upper right corner of the KingDraw APP drawing board. It supports selection to query, and also tap to search.



KDpedia contains 150 million compound data, supports detailed compound information query, and 7.5 million compound information is related to suppliers worldwide, which is convenient for query and purchase.

- **Query compound information by structure**


To use the structure to query compound information, just use the [selection tool] on the drawing board to select it, and then click the [KDpedia] button. The information page will show the result.

- **Search compounds in KDpedia**

Click on the [KDpedia] button on the right side of the drawing board to enter the search interface. We can search by name, IUPAC name, molecular formula, CAS number, InChI Key, CID, SMILES, etc.





















4.17 Gesture Drawing Tool Introduction

Users can quickly draw chemical structures by the “gesture drawing tool” to improve drawing efficiency.

icon	name	description
	gesture drawing tool	Draw structures by gestures

Currently, KingDraw supports various drawing gestures and operating gestures. Details are as follows:

- **Drawing gestures**

icon	name	corresponding gesture
	single bond	
	double bond	
	triple bond	
	benzene ring	
	cyclohexane	
	Hashed wedged bond	
	Blackbody wedged bond	
Cl	Cl atom	
C	C atom	
S	S atom	
Br	Br atom	
O	O atom	
N	N atom	

Upgrading operation

1. When drawing an element by gesture, directly connect it to an existing element.

If you want to add an S element to a single button, draw an S at the end of the single button by gesture, then it will be directly connected to the single button.

If you want to add a single bond to the benzene ring, draw a single bond at the endpoint where you need to add. Then the single button can be directly connected to the benzene ring.

2. Modify existing element

Draw elements by gestures on an element, then the original one will be replaced.

If the drawing gesture is a single bond and is drawn on an existing single bond, then it will be replaced with a double bond.

If the drawing gesture is a double bond and is drawn on an existing double bond, then the double bond style will be modified.

If the drawing gesture is a ring and draw on a bond, then a cyclic structure will be drawn on the basis of the bond.

Operating gesture

Two finger translation: move the board.

One finger double-clicking: locate to the middle of the board and reset scaling.


Two finger pinching: zoom the canvas.

Swipe down quickly on the right of the drawing board: open the list of the periodic table of elements.

Swipe up quickly on the right of the drawing board: open the list of frequently-used groups.

4.18 Group Drawing Tool Introduction

Users can select common groups by the “group drawing tool”. If the common groups provided are insufficient, users can also create groups freely.

icon	name	description
	Group drawing tool	Provide common group selecting function and user-defined group drawing function

● Use direction for groups

1. Click the “group drawing tool” on the right to open the “common group” interface.
2. Click the group you want to be selected.
3. Click the desired setting position on the drawing board where the group will be generated automatically.

Click “more” to enter the “group query” interface to view more groups.

Click “fast search” to quickly search groups by name.

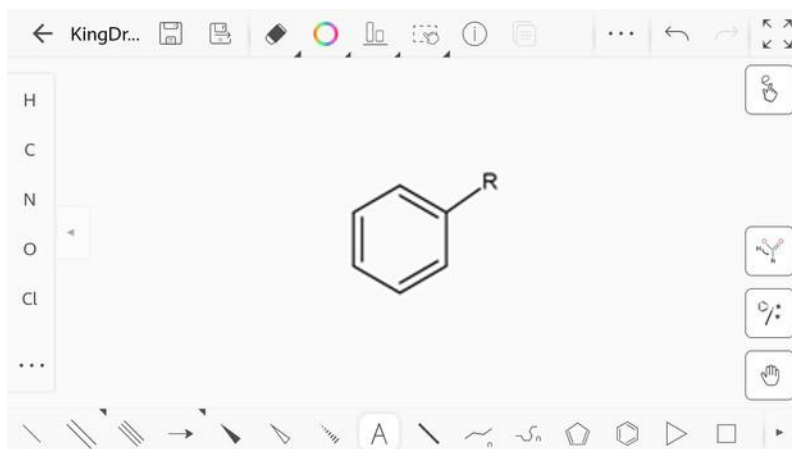
● Method of adding new groups

If the current existing groups do not meet the drawing requirements, you can customize the adding group.

1. Click the “group drawing tool”.
2. Click “more” to enter the “group query” interface.
3. Click the “+” on the up-right corner to enter the group drawing board.
4. Draw the desired group.
5. Set up the group name.
6. Click the “save” button and the group drawn will be displayed on the interface of “group

query”.

- When drawing a group, if it needs to be connected to other structures, mark the connected endpoints with "R".



● Group editing method

In the “group query” interface, the group(s) covered by red color is/are “common group(s)”.

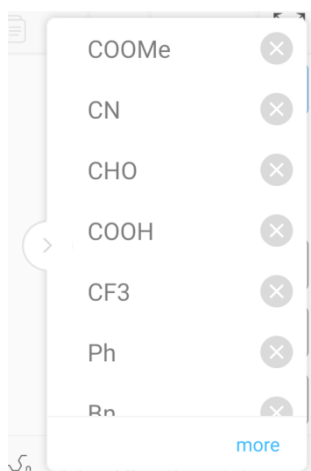
1. Long press on the “common group” to pop up the list and select “cancel common” to cancel the group from the frequently used list. Similarly, you can also uncheck the "common group" by

clicking the button in the upper right corner and clicking "✕" after the group.

2. Long press on the “uncommon group” to pop up the list and select “set as common” to set the group as a common one.

3. Long press on “group” and select “edit” in the popup list to edit the group.






















4. Long press on “group” and select “delete” in the popup list to delete the group.



Common groups

Common Groups


Quick search

 COOMe	 CN	 CHO	 COOH	 CF3	 Ph	 Bn
 Boc	 NO2	 COOEt	 COCH3	 Me	 OMe	 Cbz
 Ms	 Fmoc	 Tos	 TFA	 PMB	 Et	 OEt

Group query

4.19 Clean up Tool Introduction

Users can use the “Clean up tool” to beautify structure(s).

icon	name	description
	Clean up tool	Clean up structure(s) by one click and support multiple beatification.

- **All cleaning up**

1. Click the “Clean up tool” under the premise of not selecting any structure.
2. Clean up all the structures on KingDraw’s drawing board.

- **Local cleaning up**


1. Use selection tool to select the structure to be cleaned up.
2. Click the “Clean up tool”.
3. The selected structure will be cleaned up.

- **Multiple cleaning up**

“Clean up tool” supports multiple cleaning up to the same structure in different forms.

If the current effect is not sufficient, users can click this tool again to clean up the structure once again.

4.20 Move/Zoom Tool Introduction

icon	name	description
	Move/zoom tool	Move or zoom the drawing board

- **Overall Movement of the drawing board**

1. Select the “move/zoom tool”.
2. Press the drawing board and move up & down, left & right, then the drawing board will be

moved along.

- **Overall Zooming of the drawing board**








1. Select the “move/zoom tool”.
2. Two-finger pinch to zoom in and out the whole drawing board.

- **Return to central point and reset the scaling.**

1. Select the “move/zoom tool”.
2. Double click the drawing board.
3. The drawing board will be located to the central position and the scaling will be reset.















4.21 Bond Use Direction Introduction

KingDraw now supports multiple chemical bonds, including:

icon	name
	Single Bond
	Double Bond
	Triple Bond
	Wedged Bond
	Hollow Wedged Bond
	Hashed Wedged Bond
	Bold Bond

Among them, double bond has many different types:



Icon	Name
	Double Bond
	Bold Double Bond
	Dashed Double Bond
	Any Bond
	Single or Aromatic Bond
	Double Either Bond
	Double or Aromatic Bond
	Single or Double Bond
	Hashed Bond
	Dashed Bond
	Ion Bond
	Hydrogen Bond
	Dative Bond
	Wavy Bond

- **Single drawing bond**

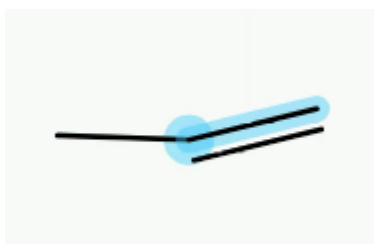
Take drawing single bond as example:

1. Select single bond.
2. Press on the drawing board and a single bond will appear.
3. Slide up and down to change the bond angle.

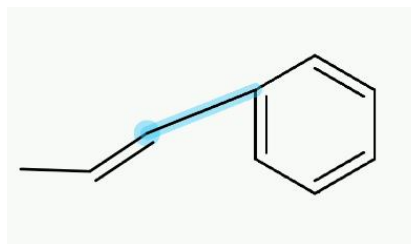
- **Add bond on an existing structure**

Take adding a double bond on a single bond as example:

1. Select double bond.
2. Press on one side of single bond to generate a double bond a connected with the single bond.
3. Slide up and down to change the double bond angle.
4. Correlate with other points to change the double bond length.



Add double bond on a single bond



Correlate the new single bond with other points to change the length automatically

☰ If the existing structure is not aligned during the operation causing the bond not associated with the structure, use the selection tool to select the bond and then reconnect them by moving.

☰ When draw a structure with various bonds, it defaults as generating simple hydrocarbons.

- **Change bond angle and bond length**

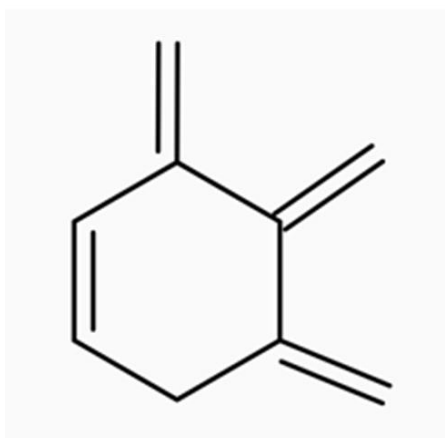
Refer to [“4.6 Selection Tool Introduction”](#) - [“Adjust bond length and bond angle”](#).

- **Single and double bond switching**

Use single bond to click on the existing single or double bond to switch between single bond and double bond.











- **Change double bond demo mode**

Use double bond to click on the existing double bond to switch the demo mode of the double bond. There are 3 demo modes in total:



4.22 Ring Use Direction Introduction

Currently KingDraw APP supports the following rings:

icon	name
	Cyclopentadiene ring template
	benzene ring template
	Cyclopropane template
	Cyclobutane template
	Cyclopentane template
	Cyclohexane template
	Cycloheptane template
	Cyclooctane template
	Chair Cyclohexane
	Chair Cyclohexane

- **Single drawing ring**

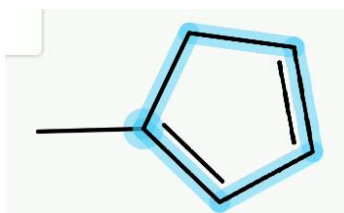
Take benzene ring as example, if you need to draw a benzene ring,

1. Select benzene ring.
2. Press on the drawing board and a benzene ring will appear.
3. Slide up and down to change the angle of the benzene.

- **Add ring on an existing structure**

Take adding a benzene ring on a single bond as example:


1. Select benzene ring.
2. Press on an endpoint of one side of the single bond to generate a benzene ring connected with the single bond.
3. Slide up and down to change the angle of benzene ring.



- ☰ If the existing structure is not aligned during the operation causing the ring not associated with the structure, use the selection tool to select the ring and then reconnect them by moving.


4.23 Long Chain Tool Use Direction Introduction

The “long chain tool” can be used to continuously draw multiple single bonds.

icon	name
	Long chain tool


1. Select the “long chain tool”.
2. Press on the drawing board to form a long chain.
3. Slide up and down to change the demo form of the long chain and the number of single bonds on it.



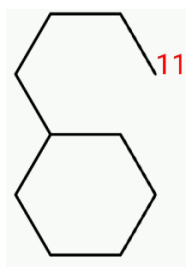
 The number on the chain represent the number of C rather than the number of chains.

4.24 Folding Loop Chain Tool Use Direction Introduction

The folding loop chain tool can be used to draw multiple single bonds thus to form different rings.

icon	name
	Folding loop chain tool

1. Select the “folding loop chain tool”.
2. Press on the drawing board to continuously draw single bonds by adjusting directions and thus to form rings.

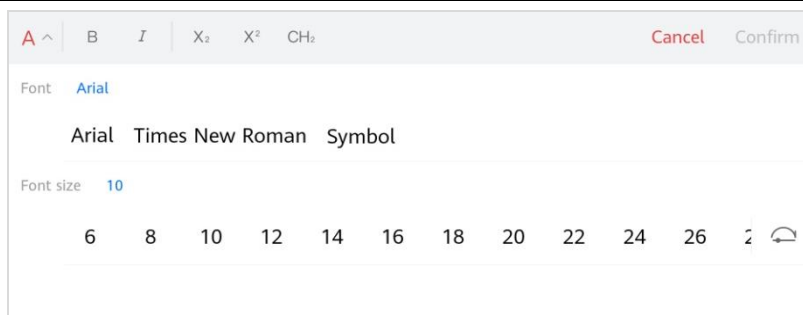


4.25 Text tool using instruction

Text tool

Use text tool to write characters on the drawing board. It supports modifying superscript and subscript writing, font, font size and font color.

● Textbox introduction



The character modification functions it supports are as follows:


Content Modification	Description
Bold	Change the selected text style to “bold”
Italic	Change the selected text style to “italic”
Subscript writing	Change the selected figure to subscript style
Superscript writing	Change the selected figure to superscript style
Subscript auto-recognition	Recognize figures as subscripts automatically
Font modification	Arial, Times New Roman, Symbol Modify the font of characters and currently supports three kinds of font: Arial, Times New Roman, Symbol
Font size modification	Change the font size of characters and currently supports No.5-36 font sizes


● **Basic copywriting functions**

1. Select “A” text tool, click on the drawing board and the text input box will be popped up.
2. Input text, click save to end the operation.

● **Modify elements**


1. Select “A” text tool.
2. Click on the elements that need to be modified.
3. Modify in the text modification box.
4. Complete modification and click save to end the operation.

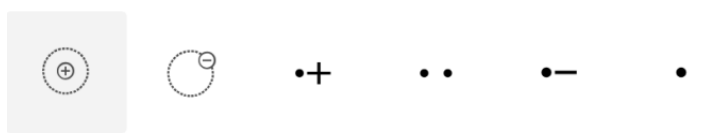
 Monatomic system that directly added or modified by text tool can recognize its chemical properties automatically.

 The font size and color of default text is related to the selected “drawing template”.

4.26 Electronic Charge Use Direction Introduction

Electronic charge tool can be used to add or cut electronic charges for elements.

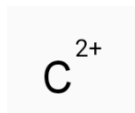
icon	name
	charge tool



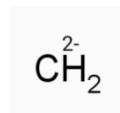
Icon	Name
⊕	Positive Charge
⊖	Negative Charge
•+	Radical Cation
••	Lone Pair
•-	Radical Anion
•	Radical

Add Charge

1. Select the “electronic charge tool”.
2. Click the element that need to add positive and negative charges, a positive and negative charge will be added on it.
3. Click multiple times to add more positive and negative charges continuously.



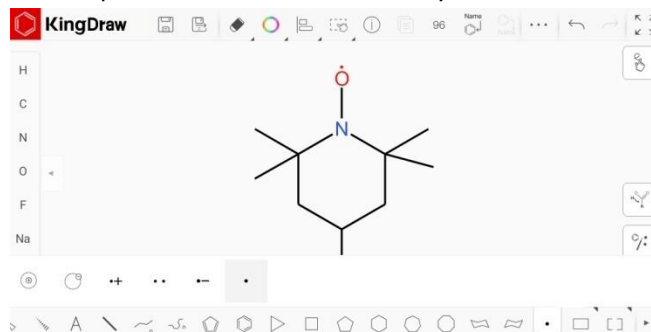
An example of positive charge



An example of negative charge

Add Radicals / Lone Pair

After selecting the Radicals / Lone Pair, click on the element to be added, and a radical will be added to the element. Multiple clicks can add continuously.



Free spin charge /radical

Charges and radicals support the free rotation function, you can rotate around the element when adding, changing the adding position.

- Currently, adding charges and radicals directly to text, parentheses, arrows and groups is not supported.

4.27 Arrow, Flow Chart and Bracket Tool Use Instruction

Introduction

KingDraw provides abundant arrow, flow chart and bracket tool, which can be directly displayed

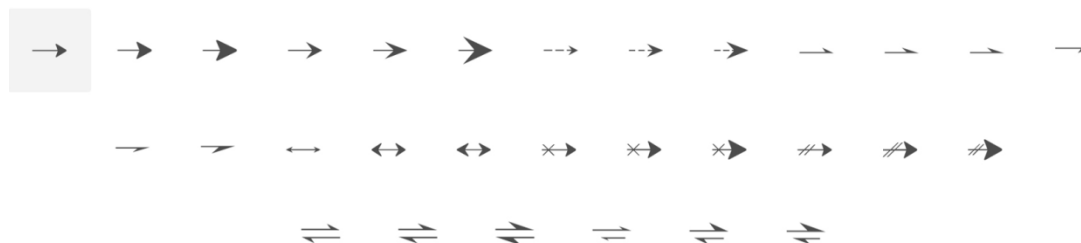
in the drawing board after selected and conveniently changed in size or angle by dragging.

- **Arrow tool**

You can use the arrow tool to express the transformation from reactant to resultant and the stream of electrons. Use the "box selection tool" to change the arrow length.

KingDraw currently provides 3 kinds of arrows, e.g. solid arrow, hollow arrow and curved arrow.

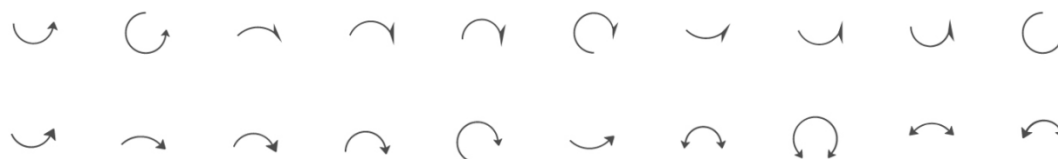
Solid arrow



Hollow arrow

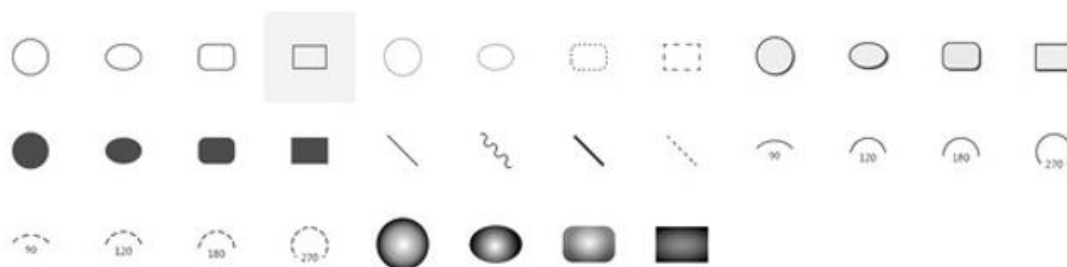


Curved arrow



- **Flow chart tool**

The flow chart tool includes various kinds of hollow model, solid model, graph, angle simulated diagram, 3D figure, etc. to facilitate rapid drawing.



- **Bracket tool**

The bracket tool includes square bracket, parenthesis and brace.

