SciFinder Web

源于化学,超越化学的一站式检索平台

SciFinder Web 培训

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提纲

- 介绍
 - SciFinder Web内容
- SciFinder Web中的检索
 - SciFinder中的文献检索
 - SciFinder中的结构面板使用技巧
 - SciFinder中的物质结果及物质检索方法
 - SciFinder中的反应检索技巧

■ SciFinder Web的注册和常见问题

美国化学文摘社—Chemical Abstract Service

- ACS的分支机构,创立于1907年
- 致力于跟踪、索引并提炼全球化学相关的科技文献信息
- 最先创立了纸本《化学文摘》

Chemical Abstracts TM

■ 总部位于俄亥俄州的哥伦布市



- 1300名员工,精通50多种语言。
- 关注索引上万种期刊和63家专利
- 客户覆盖全球1900所高校、500 强公司以及所有主要的专利局。

SciFinder Web中的几个主要数据库

CAS REGISTRYSM

- >7300万有机无机物质
- >6400生物序列

每天更新约12000新物质

物质报道文献,回溯到1802年

物质信息包含了大量的实验数据,预测数据,以及物质标签和谱图

CASREACT®

>6700万单步和多步反应

>1400万物质合成制备信息

源自专利和期刊文献

每天更新

反应回溯到1840年

CAS Databases

CAplusSM

- >3800万专利和期刊信息
- >10000种期刊的覆盖
- 63个专利发行机构

每天更新3000条记录

文献回溯到19世纪初

引文信息回溯到1997年之前,超过3亿条引文信息

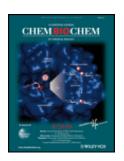
MARPART®

>99.6万专利中的有机,有机金属结构

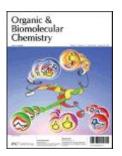
回溯至1961年

每天更新(60-75篇专利引文,以及150-200个Markush结构)

CAplusSM 涵盖了上万种期刊及63个专利发行机构专利

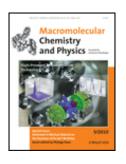


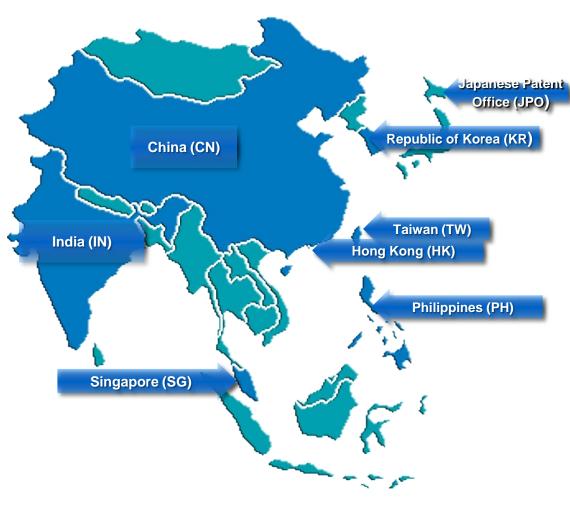




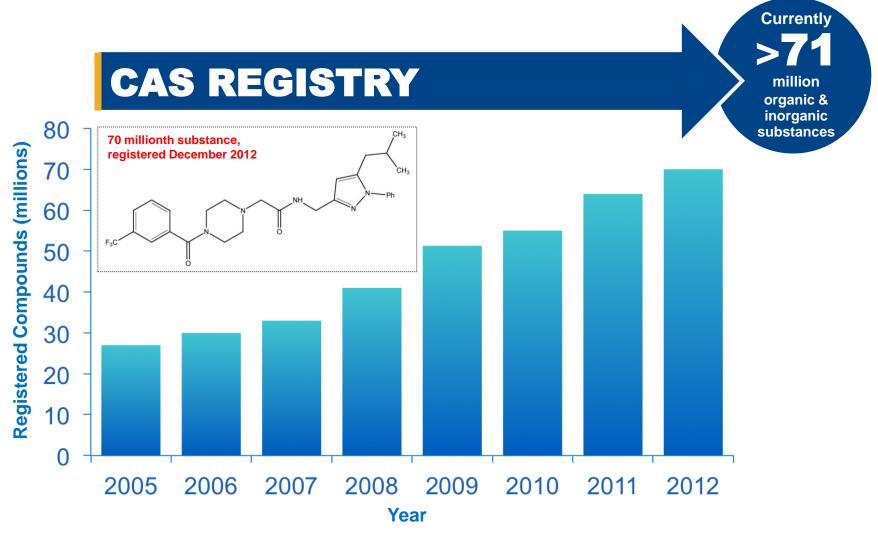




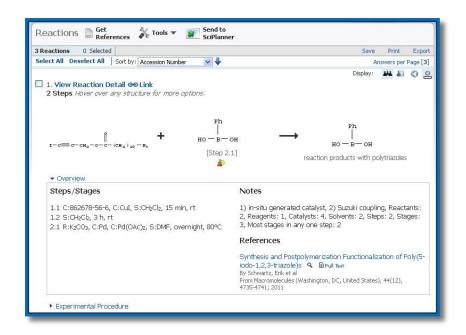




CAS Registry 是世界上最大的化学物质数据库



CASREACT® 是检索化学反应最权威的来源



CASREACT是世界上最大的,更新速度最快的反应数据库

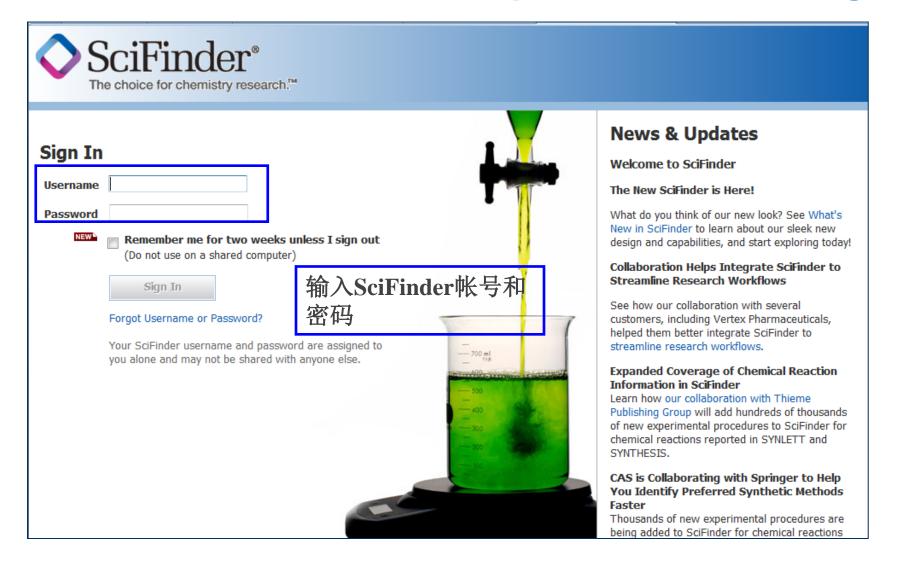
- >5100万 单步和多步反应
- >1360万物质合成制备信息
- 源自专利和期刊
- 可回溯到1840年
- 每天更新

提纲

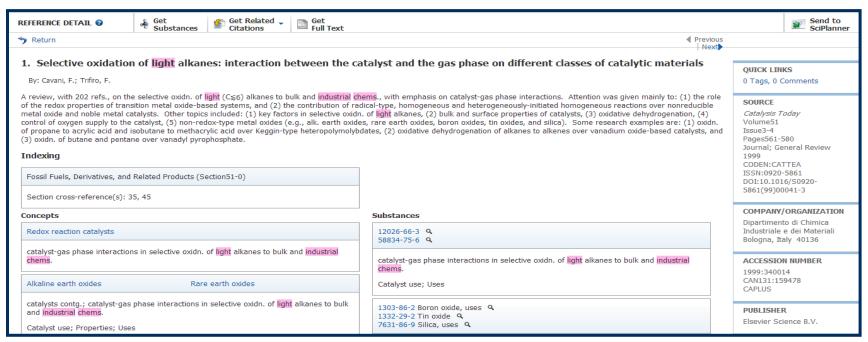
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SciFinder Web登陆界面—http://scifinder.cas.org



SciFinder中的文献记录



Citations Bielanski, A; Oxygen in Catalysis 1991 Haber, J; ACS Symp Series 1996, 638, 20 Q Oyama, S; ACS Symp Series 1996, 638, 2 Q Lee, J; Catal Rev-Sci Eng 1988, 30, 249 Q Kung, H; Adv Catal 1994, 40, 1 Q Vedrine, J; Catal Today 1997, 33, 3 Q Vedrine, J; Catal Today 1996, 32, 115 Q Busca, G; Catal Today 1996, 32, 133 Q Cavani, F; Catalysis 1994, 11, 246 Q Albonetti, S; Catal Rev-Sci Eng 1996, 38, 413 Q Sokolovskii, V; Catal Rev-Sci Eng 1990, 32, 1 Q Delmon, B; Catalysts in Petroleum Refining and Petrochemical Industries 1995 1996 Burch, R; J Mol Catal A 1995, 100, 13 Q Schmidt, L; Chem Eng Sci 1994, 49, 3981 Q Kung, H; ACS Symp Series 1993, 523, 387 Trifiro, F; Selective Partial Oxidation of Hydrocarbons and Related Oxidations 1994 Trifiro, F; Oxidative dehydrogenation and alternative dehydrogenation processes 1993 Cavani, F; Catal Today 1995, 24, 307 Q

- 一篇完整的文献界面包括:
- 1. 题录信息
- 2. 摘要信息
- 3. 文献中重要的概念
- 4. 文献中重要的物质
- 5. 书目信息
- 6. 获得文献中的物质,反应,引 文等
- 7. 文献中的引文信息

SciFinder中的文献检索方法

功能方面

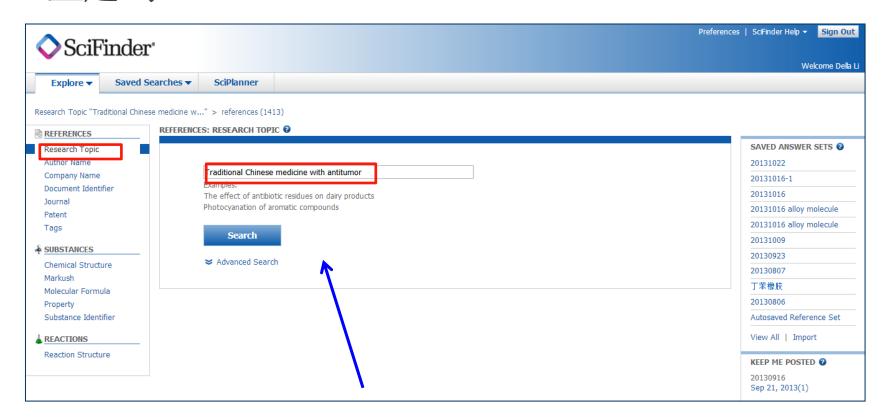
- 主题检索
- 作者名检索
- 机构名检索
- 文献标示符检索
- 从物质,反应获得文献

检索方法推荐

- 关注某特定领域的文献——主题检索
- 关注某科研人员的文献——-作者名检索

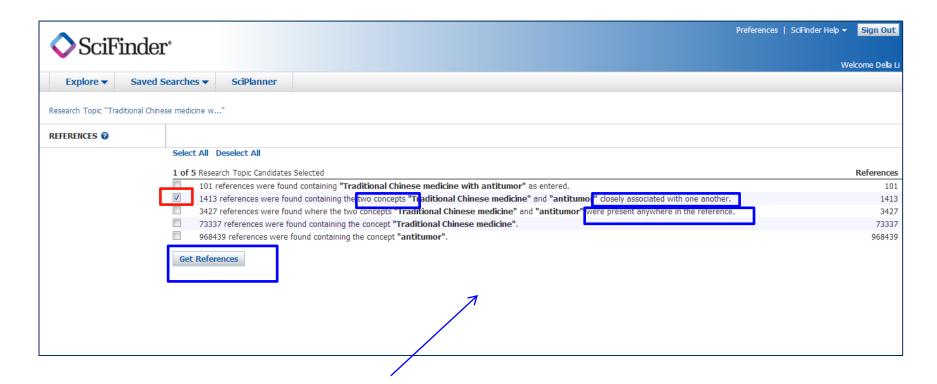
SciFinder中的主题检索

主题词: Traditional Chinese medicine with antitumor



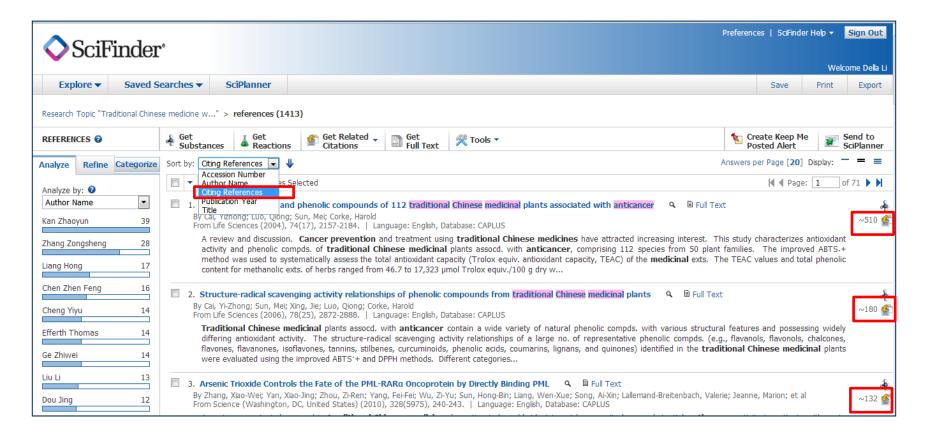
术语之间最好用英文的介词如 of, with, beyond, in, on, as 等连接; 最多输入 5 个术语, 2~3个左右最好

SciFinder中的候选选项



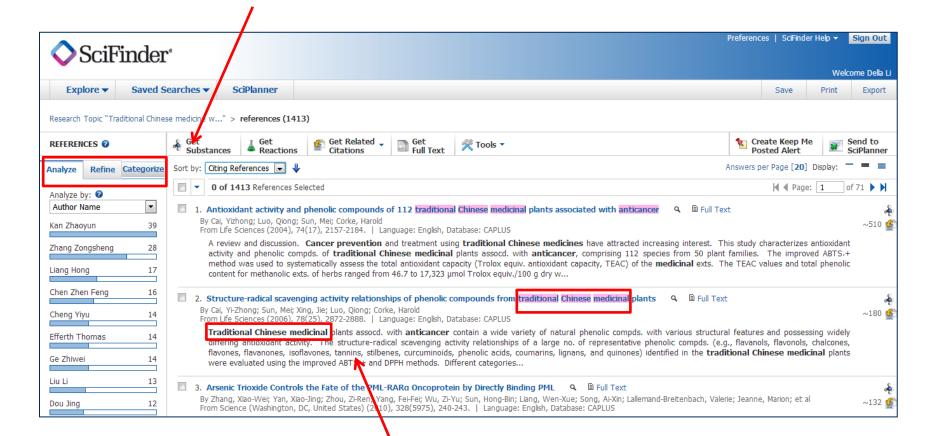
关键词拼写上的变化及同义词都会会被检索到 通常,第二项有"concept"和"closely associated with one another"的选项是更好的选择

SciFinder中的引文排序



选择sort by里的citing reference 可以获得被引用次数最多的文献

SciFinder中的文献筛选工具

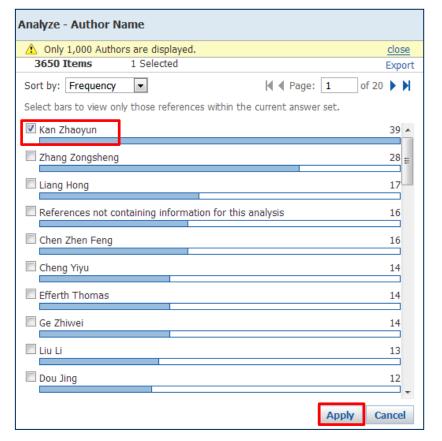


关键词高亮显示

Analyse-作者姓名分析

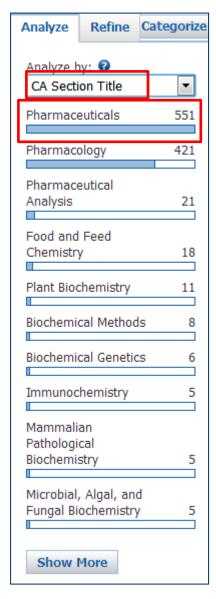


Kan Zhaoyun在此领域发表了39篇文献



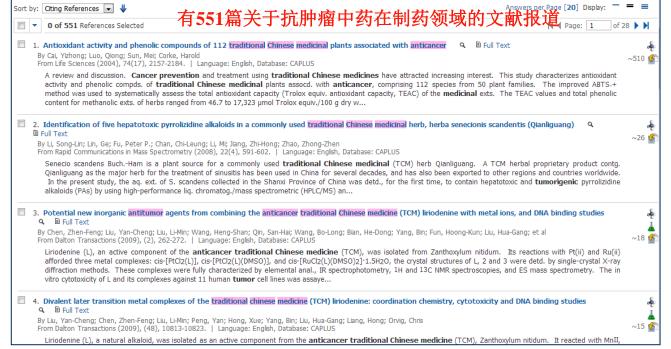
点击Apply获 得相应作者的 文献

Analyse-CA Section Title分析

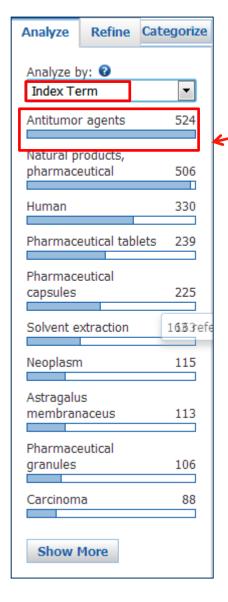


CA Section Title帮助分析主要的应用领域

抗肿瘤中药主要应用的领域有:制药,药理,药物分析,食品和饲料化学等等



Analyse-索引词分析



Index Term帮助分析文献中出现的重要内容

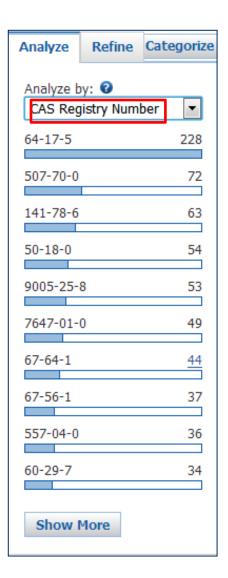
直接点击感兴趣的内容获得相应文献



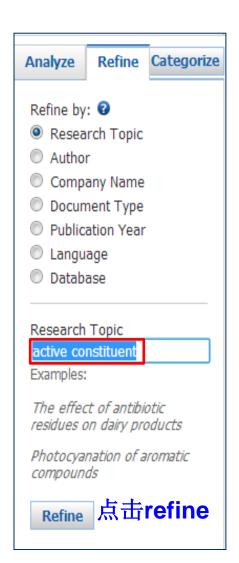
Analyse-机构名称,期刊名称,CAS No分析





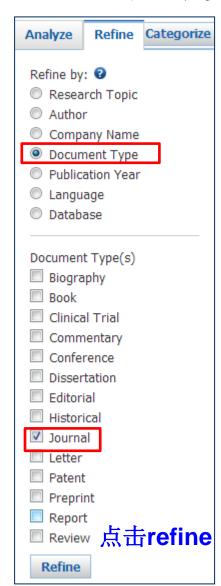


Refine-主题词限定



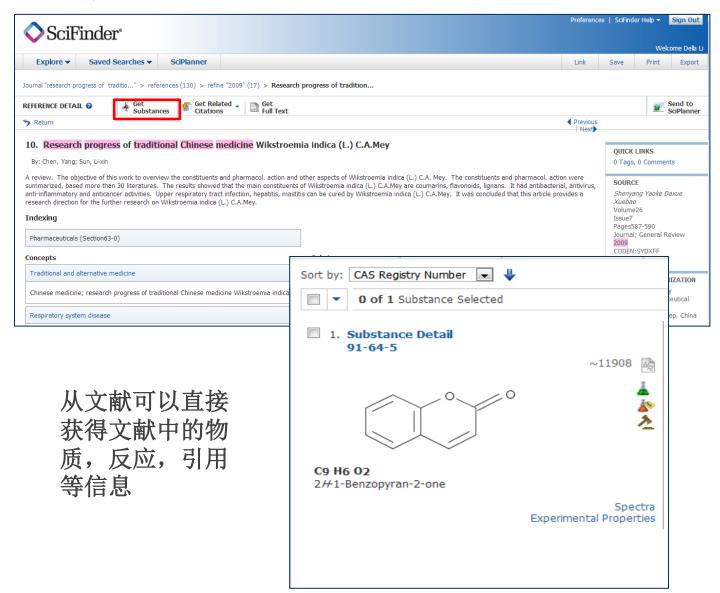


Refine-文献类型限定

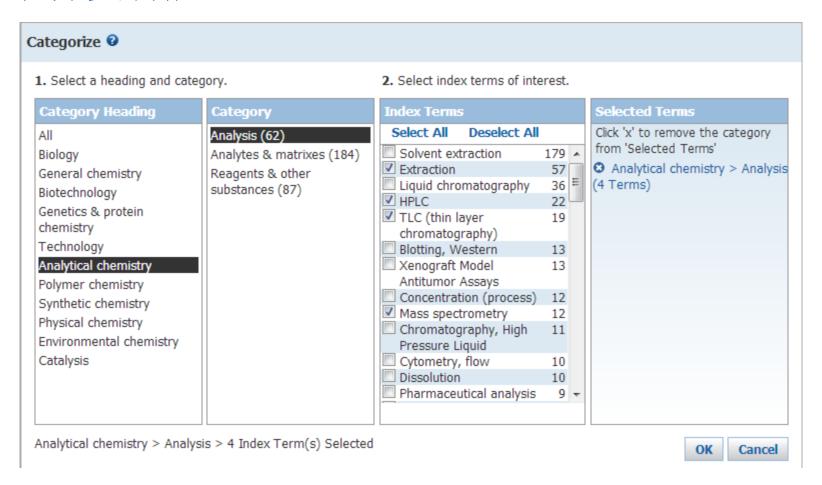




从文献获得物质

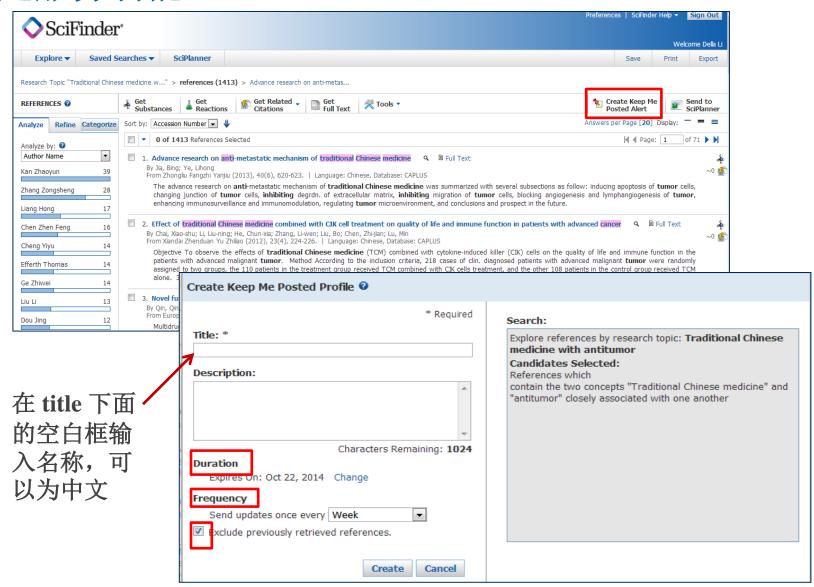


系统分类功能

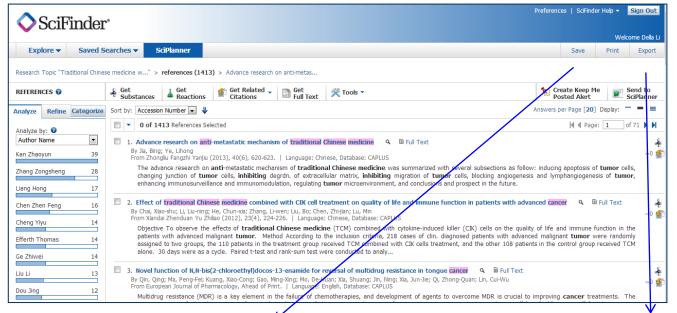


Categorize—基于CAS索引获得更多详细的信息

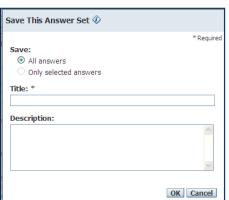
定题服务功能



保存,打印,导出



导出: 将结果保存到 本地电脑



保存: 检索结果保存 到CAS的服务器上

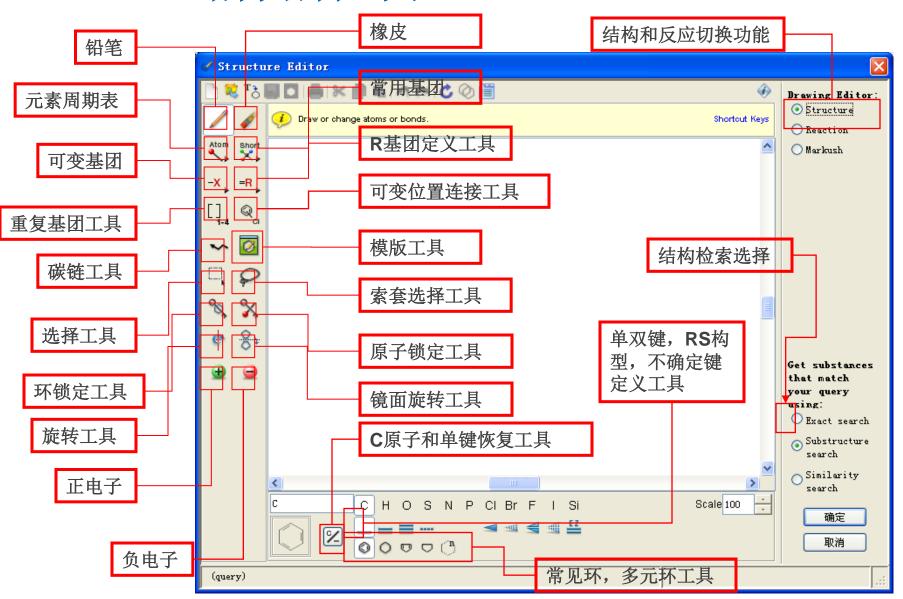


提纲

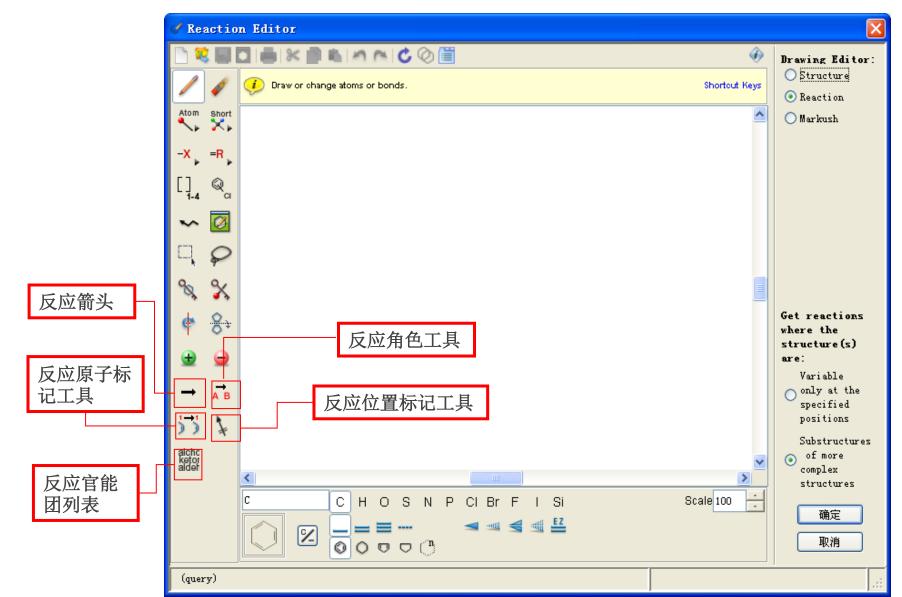
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 - SciFinder中的文献检索
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SciFinder结构绘制工具



SciFinder中的反应定义工具

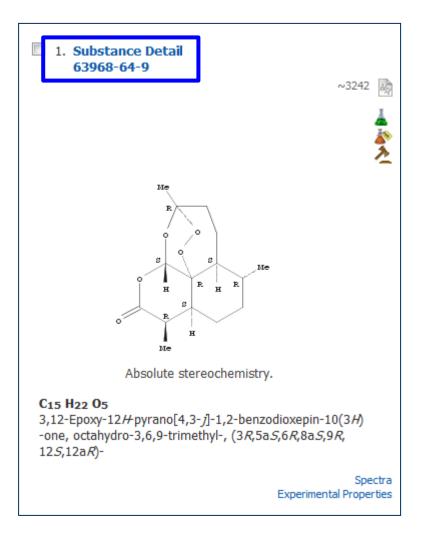


提纲

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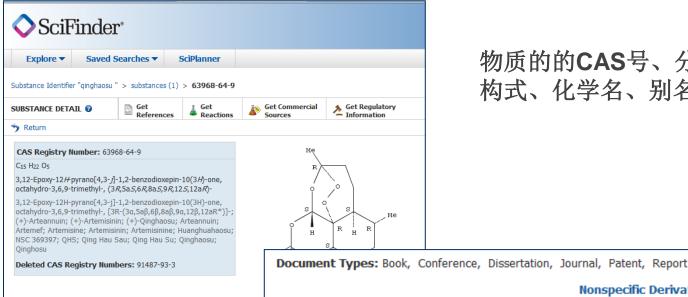
SciFinder中的物质结果界面



一个完整的物质结果 界面包含:

- •物质详情连接
- •文献连接
- •反应连接
- •商品信息连接
- •管制品信息连接
- •谱图连接
- •实验性质连接

Substance Detail—查看物质详细信息

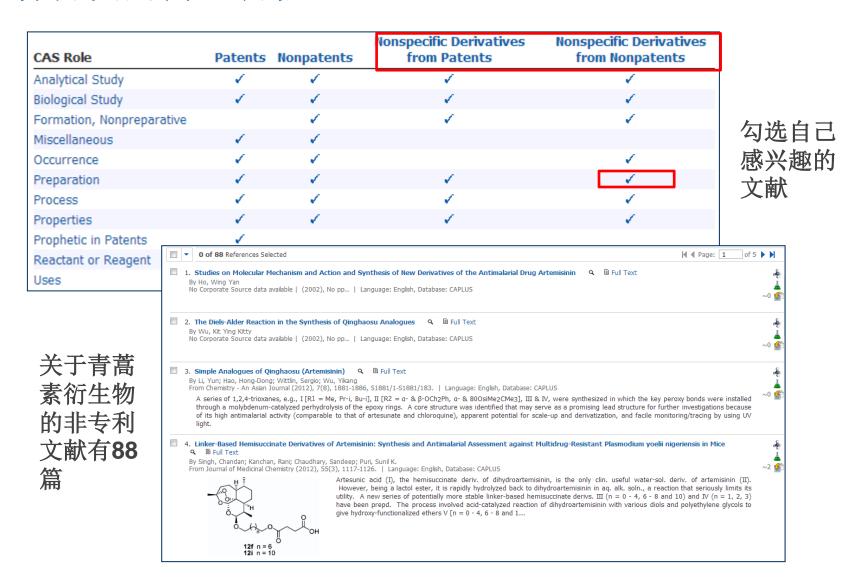


物质的的CAS号、分子式、结 构式、化学名、别名

按照CAS Role分类 的专利、非专利文献 列表。对某类文献感 兴趣,仅需点击交叉 处的 即可方便快捷 地获取。

CAS Role	Patents	Nonpatents	Nonspecific Derivatives from Patents	Nonspecific Derivatives from Nonpatents
Analytical Study	✓	✓	✓	✓
Biological Study	1	€	✓	✓
Formation, Nonpreparative		1	✓	✓
Miscellaneous	1	1		
Occurrence	1	V		✓
Preparation	1	✓	✓	✓
Process	1	1	✓	✓
Properties	1	✓	✓	✓
Prophetic in Patents	1			
Reactant or Reagent	V	✓	✓	✓
Uses	1	1	✓	✓

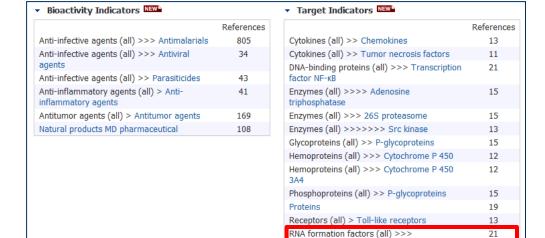
查看物质的衍生物信息



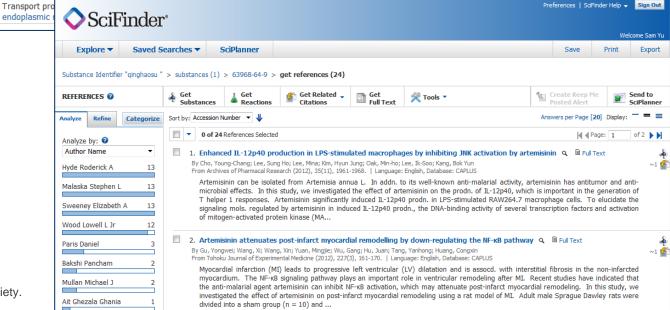
Substance Detail—查看生物活性信息

Transport proteins (all) >> P-glycoproteins

15



物质的生物活性和靶点信息,直接点击,获得相关文献



CAS is a division of the American Chemical Society.

Substance Detail—物质预测性质信息

			Тор
Biological Properties	Value	Condition	Note
Bioconcentration Factor	38.6	pH 1 Temp: 25 °C	(27)
Bioconcentration Factor	38.6	pH 2 Temp: 25 °C	(27)
Bioconcentration Factor	38.6	pH 3 Temp: 25 °C	(27)
Bioconcentration Factor	38.6	pH 4 Temp: 25 °C	(27)
Bioconcentration Factor	38.6	pH 5 Temp: 25 °C	(27)
Bioconcentration Factor	38.6	pH 6 Temp: 25 °C	(27)
Bioconcentration Factor	38.6	pH 7 Temp: 25 °C	(27)
Bioconcentration Factor	38.6	pH 8 Temp: 25 °C	(27)
Bioconcentration Factor	38.6	pH 9 Temp: 25 °C	(27)
Bioconcentration Factor	38.6	pH 10 Temp: 25 °C	(27)

Chemical Properties	Value	Condition	Note Note
KUC	476	pH 1 Temp: 25 °C	(27)
Кос	476	pH 2 Temp: 25 °C	(27)
Кос	476	pH 3 Temp: 25 °C	(27)
Кос	476	pH 4 Temp: 25 °C	(27)
Кос	476	pH 5 Temp: 25 °C	(27)
Кос	476	pH 6 Temp: 25 °C	(27)
Кос	476	pH 7 Temp: 25 °C	(27)
Koc	476	pH 8 Temp: 25 °C	(27)
Кос	476	pH 9 Temp: 25 °C	(27)
Кос	476	pH 10 Temp: 25 °C	(27)
logD	2.39	pH 1 Temp: 25 °C	(27)
logD	2.39	pH 2 Temp: 25 °C	(27)
logD	2.39	pH 3 Temp: 25 °C	(27)
logD	2.39	pH 4 Temp: 25 °C	(27)
logD	2.39	pH 5 Temp: 25 °C	(27)
logD	2.39	pH 6 Temp: 25 °C	(27)
logD	2.39	pH 7 Temp: 25 °C	(27)
logD	2.39	pH 8 Temp: 25 °C	(27)
logD	2.39	pH 9 Temp: 25 °C	(27)
logD	2.39	pH 10 Temp: 25 °C	(27)
logP	2.391±0.772	Temp: 25 °C	(27)
Mass Intrinsic Solubility	Sparingly Soluble (0.16 g/L)	Temp: 25 °C	(27)
Mass Solubility	Sparingly Soluble (0.16 g/L)	pH 1 Temp: 25 °C	(27)
Mass Solubility	Sparingly Soluble (0.16 g/L)	pH 2 Temp: 25 °C	(27)
Mass Solubility	Sparingly Soluble (0.16 g/L)	pH 3 Temp: 25 °C	(27)
Mass Solubility	Sparingly Soluble (0.16 g/L)	pH 4 Temp: 25 °C	(27)

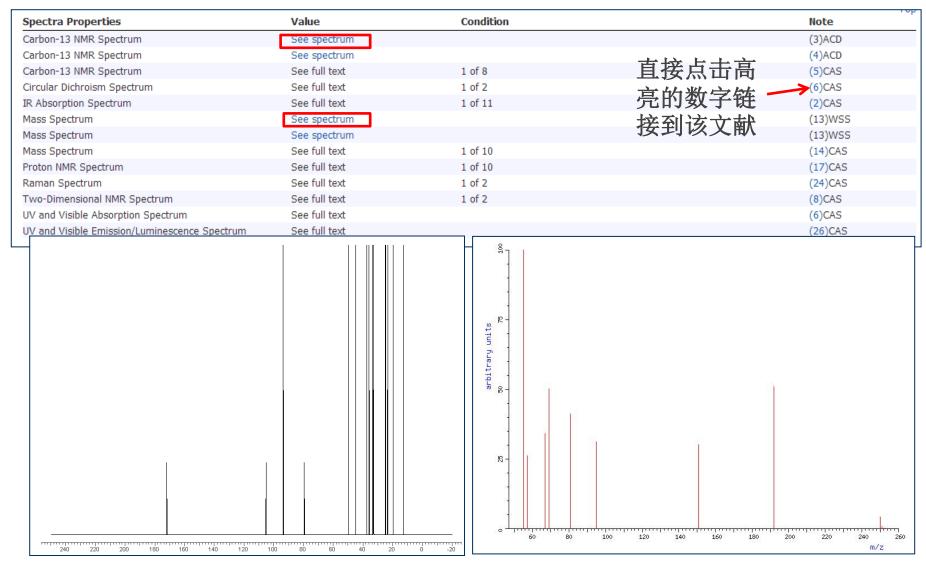
Molar Solubility	Sparingly Soluble (5.7E-4 mol/L)	Unbuffered Water pH 7.00 Temp: 25 °C	(27)	
Molecular Weight	282.33		(27)	
Vapor Pressure	2.76E-6 Torr	Temp: 25 °C	(27)	
				Тор
Density Properties	Value	Condition	Note	тор
Density	1.24±0.1 g/cm3	Temp: 20 °C Press: 760 Torr	(27)	
Molar Volume	226.4±5.0 cm3/mol	Temp: 20 °C Press: 760 Torr	(27)	
1				T
Lipinski and Related Properties	Value	Condition	Note	Тор
Freely Rotatable Bonds	0		(27)	
H Acceptors	5		(27)	
H Donors	0		(27)	
H Donor/Acceptor Sum	5		(27)	
logP	2.391±0.772	Temp: 25 °C	(27)	
Molecular Weight	282.33		(27)	
				Тор
Spectra Properties	Value	Condition	Note	
Carbon-13 NMK Spectrum	See spectrum		(28)	
Proton NMR Spectrum	See spectrum		(28)	
				Тор
Structure-related Properties	Value	Condition	Note	
Polar Surface Area	54.0 A2		(27)	
				Тор
Thermal Properties	Value	Condition	Note	ТОР
Boiling Point	389.9±42.0 °C	Press: 760 Torr	(27)	
Enthalpy of Vaporization	63.93±3.0 kJ/mol	Press: 760 Torr	(27)	
Flash Point	172.0±27.9 °C		(27)	

Substance Detail—物质实验性质信息

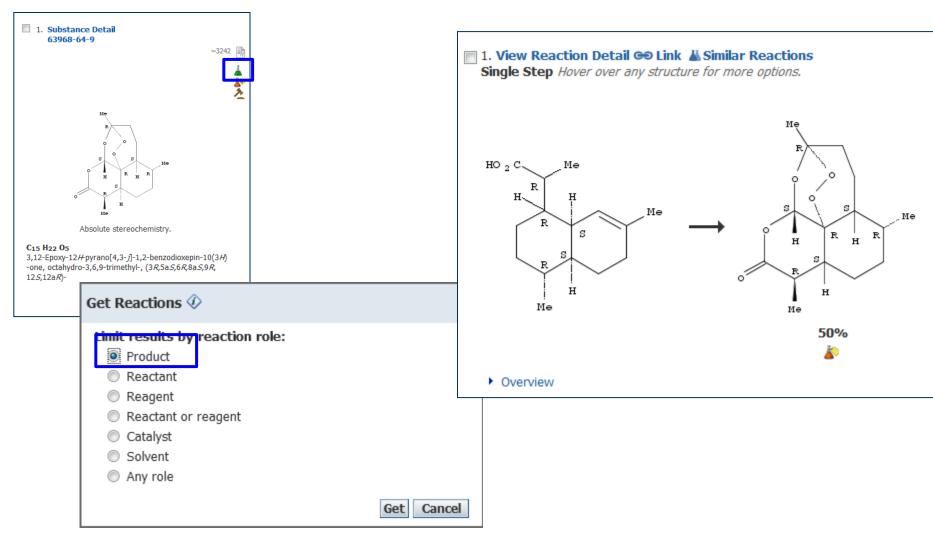
Biological Properties	Value	Condition	Note	Тор
ADME (Absorption, Distribution, Metabolism, Excretion)	See full text	Colldicion	(1)CAS	
Half-Life (Biological)	See full text	1 of 2	(1)CAS	
Median Lethal Dose(LD50)	5576 mg/kg	Organism: rat Route: oral	(15)APC	
Median Lethal Dose(LD50)	5105 mg/kg	Organism: mouse Route: oral	(15)APC	
Median Lethal Dose(LD50)	2800 mg/kg	Organism: mouse Route: intramuscular	(15)APC	
Median Lethal Dose(LD50)	2571 mg/kg	Organism: rat Route: intramuscular	(15)APC	
Median Lethal Dose(LD50)	1558 mg/kg	Organism: rat Route: Intraperitoneal	(15)APC	
Minimum Inhibitory Concentration	See full text	1 of 2	(20)CAS	
,,,			()	
charded Barretter	No.	Constitution		Тор
Chemical Properties	Value	Condition	Note	Тор
IONIZACION FOLENCIAI	See full text		(2)CAS	Тор
IONIZACION FOLENCIAI		Condition 1 of 2		Тор
Ionization Potential	See full text		(2)CAS	Тор
logP Molecular Electric Dipole Moment	See full text See full text		(2)CAS (12)CAS	Тор
logP Molecular Electric Dipole Moment	See full text See full text See full text	1 of 2	(2)CAS (12)CAS (21)CAS	
logP Molecular Electric Dipole Moment Solubility	See full text See full text See full text	1 of 2	(2)CAS (12)CAS (21)CAS	Тор
logP Molecular Electric Dipole Moment Solubility Density Properties	See full text	1 of 2 1 of 9	(2)CAS (12)CAS (21)CAS (7)CAS	
Chemical Properties IONIZATION POTENTIAN IOSP Molecular Electric Dipole Moment Solubility Density Properties Density	See full text Value	1 of 2 1 of 9	(2)CAS (12)CAS (21)CAS (7)CAS	
logP Molecular Electric Dipole Moment Solubility Density Properties	See full text Value	1 of 2 1 of 9	(2)CAS (12)CAS (21)CAS (7)CAS	Тор

Density Properties	Value	Condition	Note	
Density	1.300 g/cm3		(7)CAS	
Flow and Diffusion Properties	Value	Condition	Note	Тор
Diffusion Coefficient	See full text		(8)CAS	
Lipinski and Related Properties	Value	Condition	Note	Тор
logP	See full text	1 of 2	(12)CAS	
Optical and Scattering Properties	Value	Condition	Note	Тор
Optical Rotatory Power	+87.9 °	Solv: 1,4-dioxane (123-91-1); Wavlen: 589.3 nm	(22)CAS	
Optical Rotatory Power	+75-+78 °	Conc: 1.0 g/100mL; Solv: ethanol (64-17-5); Wavlen: 589.3 nm; Temp: 20 °C	(16)CAS	
Optical Rotatory Power	+68.2 °	Conc: 0.97 g/100mL; Solv: chloroform (67-66-3); Temp: 25 °C	(18)IC	
Optical Rotatory Power	+67.6 °	Conc: 1.75 g/100mL; Solv: chloroform (67-66-3); Wavlen: 589.3 nm; Temp: 25 °C	(17)CAS	
Optical Rotatory Power	+66.6 °	Conc: 1.57 g/100mL; Solv: chloroform (67-66-3); Wavlen: 589.3 nm; Temp: 24 °C	(17)CAS	
Optical Rotatory Power	+66.3 °	Conc: 1.64 g/100mL; Solv: chloroform (67-66-3); Wavlen: 589.3 nm; Temp: 17 °C	(15)APC	
Optical Rotatory Power	+61 °	Conc: 0.2 g/100mL; Solv: chloroform (67-66-3); Wavlen: 589.3 nm; Temp: 24 °C; Len: 1 dm	(5)CAS	

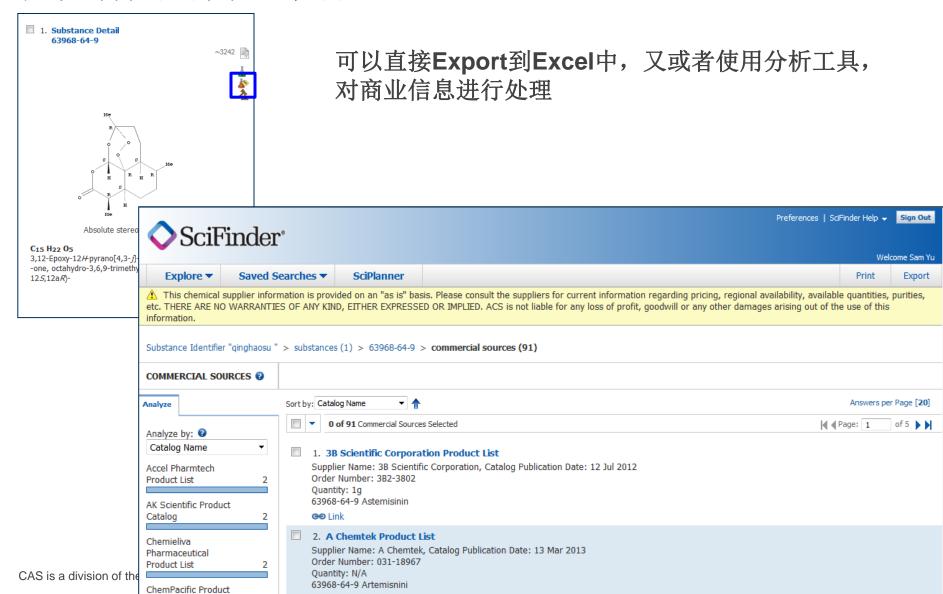
Substance Detail—查看实验谱图信息



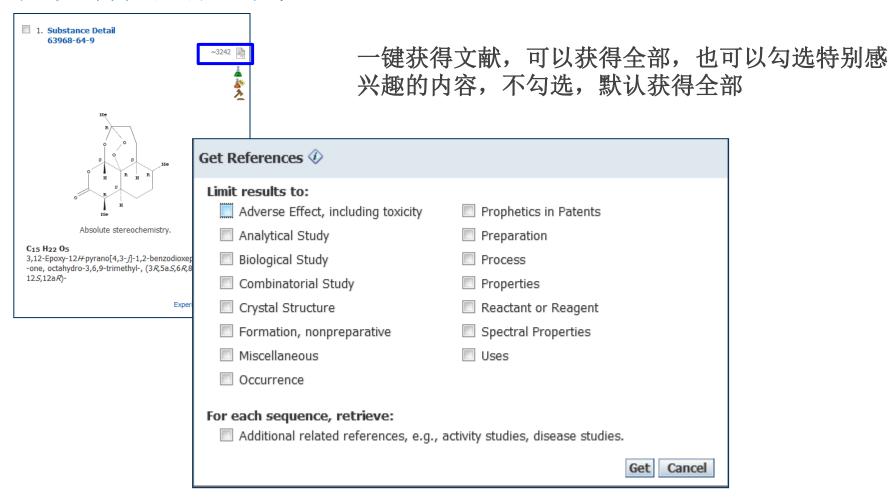
物质有关的反应



物质有关的商业来源



物质有关的文献信息

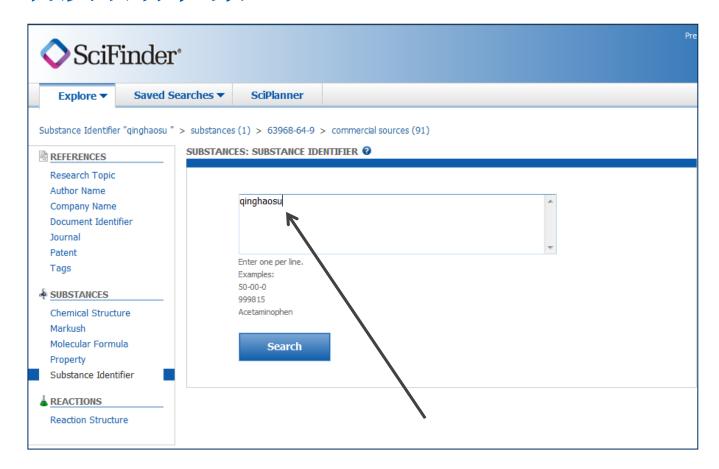


SciFinder中的物质检索方法

- 功能方面
 - 物质名称, CAS No
 - 分子式
 - 结构式
 - 理化性质
- 推荐的物质检索功能
 - 有机物,天然产物及衍生物
 - 无机物
 - 高分子化合物

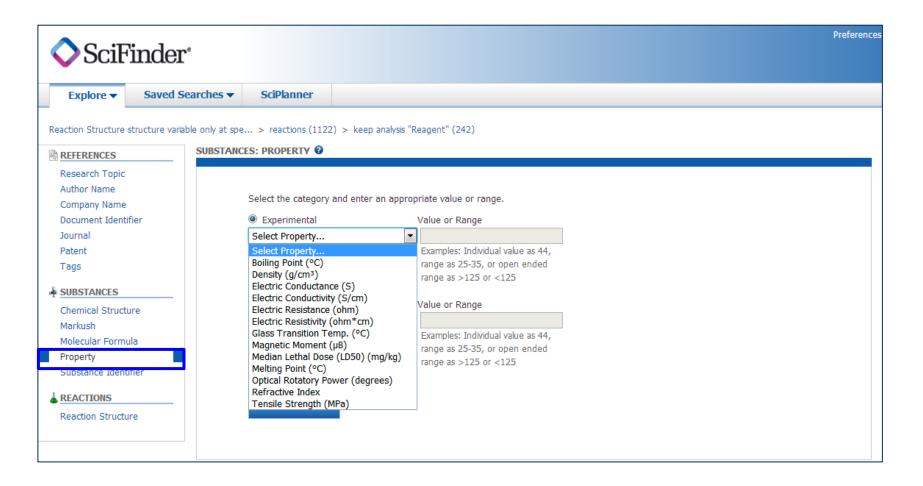
- ---结构比较方便
- ---分子式比较方便
- ---首先分子式, 其次结构

物质名称检索

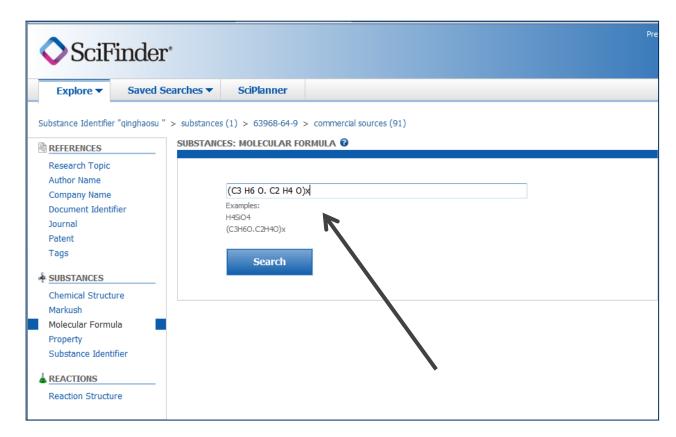


直接输入物质的名称,CAS No,俗名,都能检索,一次最多检索25个物质,用换行换开

理化性质检索



分子式检索



分子式的检索,根据hill排序规则书写,C,H写在前面,其他元素按照字母顺序写

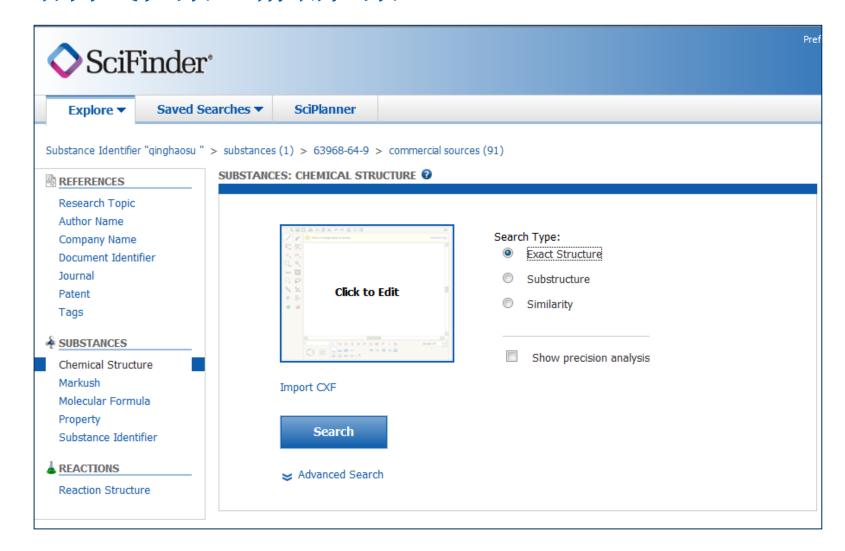
分子式检索

- 多组分物质
 - 包含盐,水合物,合金,混合物等
 - 用"」"将不同组分点开

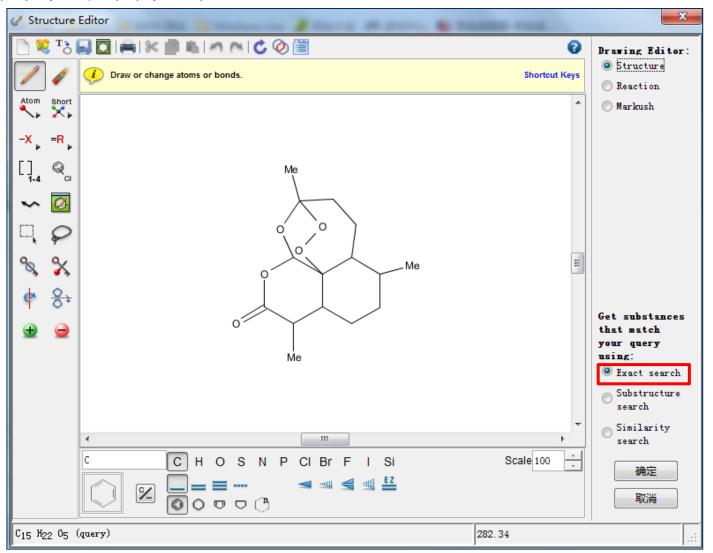
Hill排序

- 单一组分物质
 - 对于不含C的物质,按照字母顺序排序
 - 对于含C的物质, CH写在前面, 其他的按照字母顺序排列
 - 相邻的两个元素之间必须有区分号,即数字或者空格,倘若数字为1,那么可以用空格来区分
 - 区分大小写
- 多组分物质
 - 每一组分必须遵照单一组分物质的分子式来书写。
 - 不同组分之间的排序按照各组分的首元素的字母顺序排序,但是含C组分的一定排在不含C的组分前面。
 - 倘若不同组分的首元素相同,则看元素数量多少,数量多的排在前面,若元素数量一样,则按次元素的顺序排列。

结构式检索—精确检索

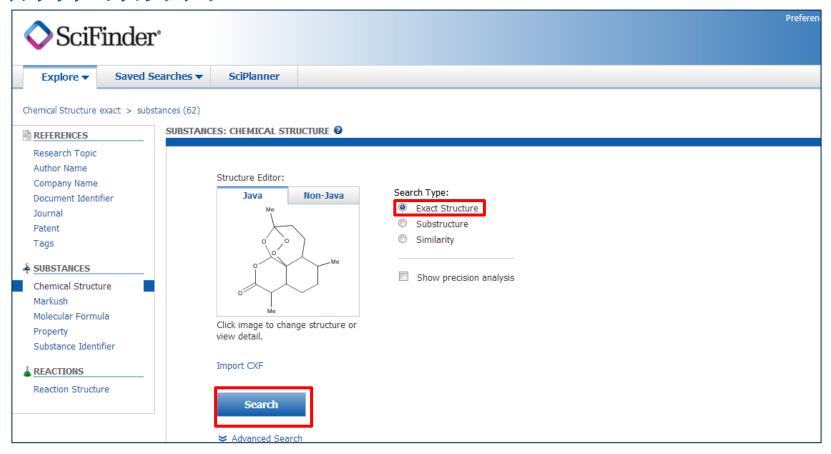


青蒿素结构检索



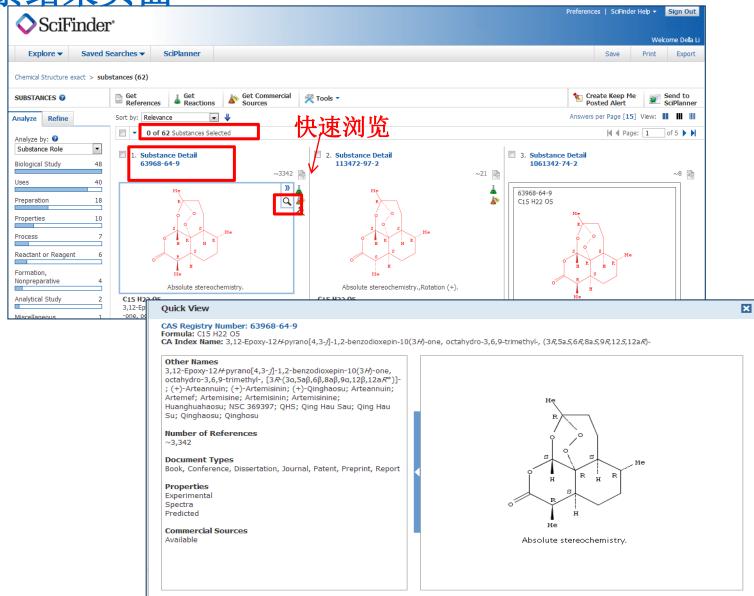
精确结构结 构检索

结构检索界面

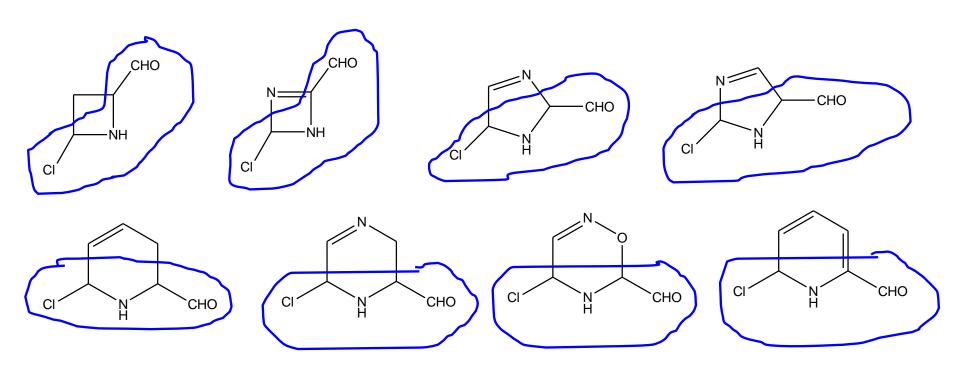


与已绘制的结构完全相同的物质: 同位素化合物, 配位化合物, 单体组成的聚合物, 离子化合物, 异构体, 互变异构体

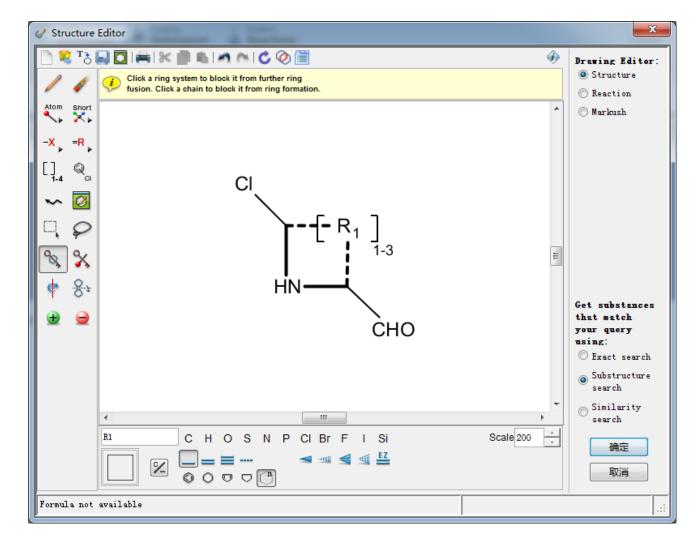
检索结果页面



我想获得以下的一系列物质

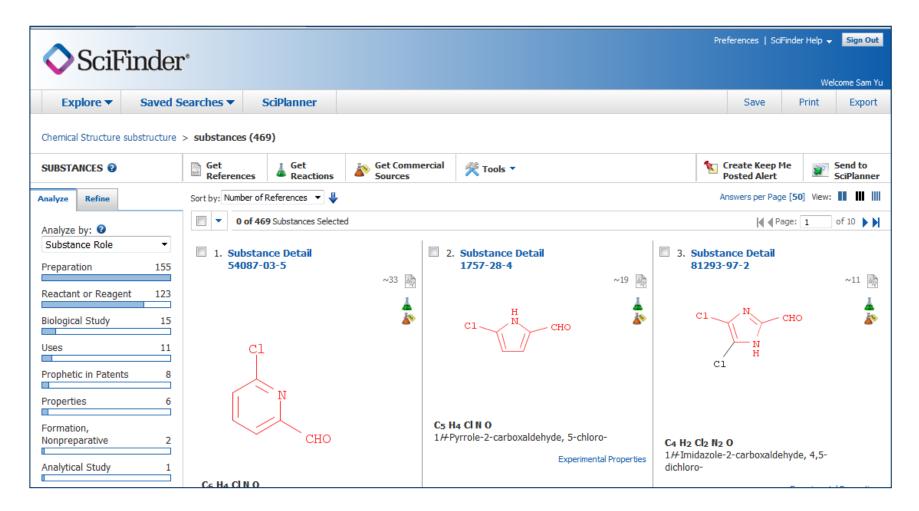


结构定义



用亚结构检索获得所有的物质

亚结构检索结果

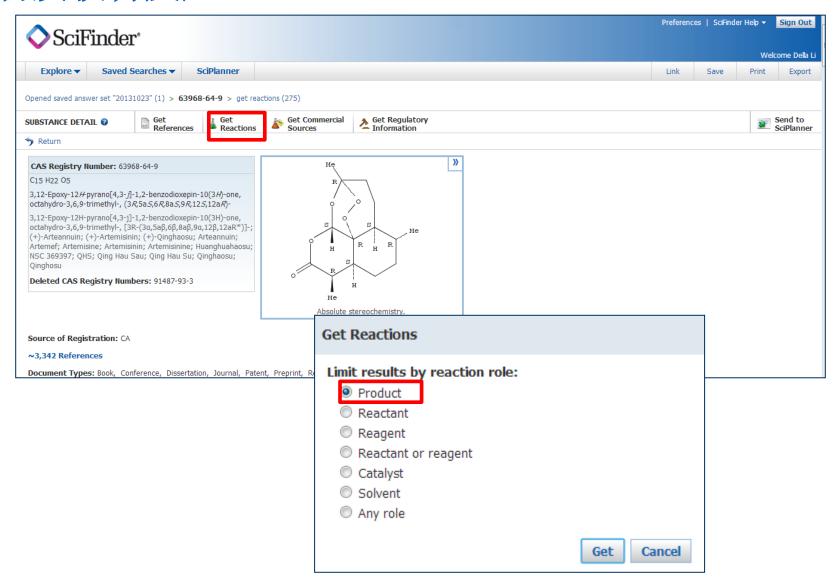


提纲

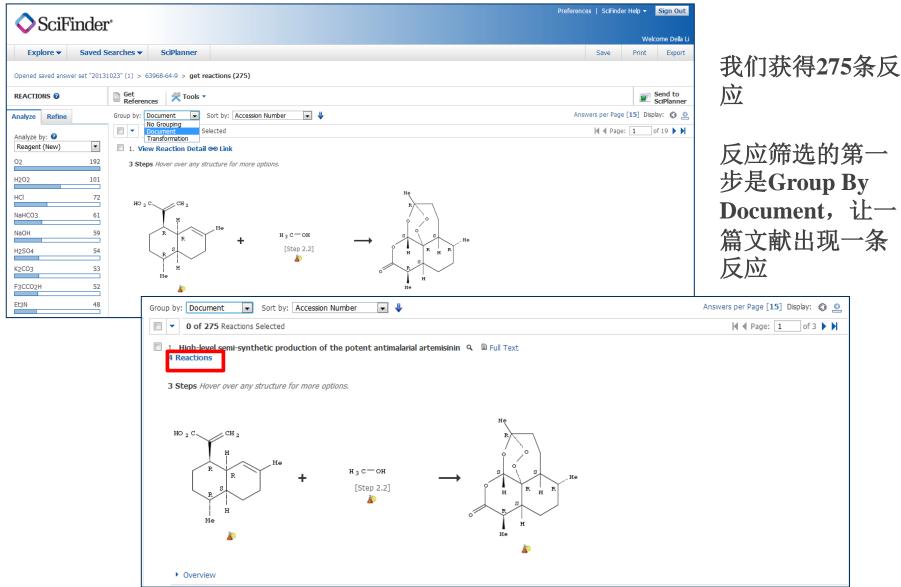
- 介绍
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- SciFinder Web中的检索
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 - SciFinder中的反应检索技巧

■ SciFinder Web的注册和常见问题

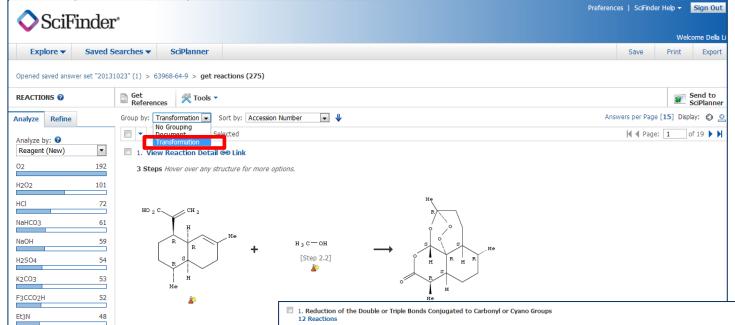
从物质获得反应



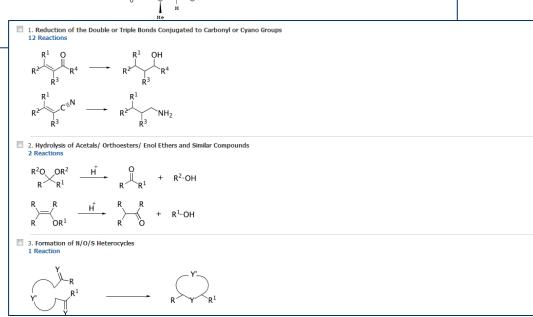
按照文献出处分类显示



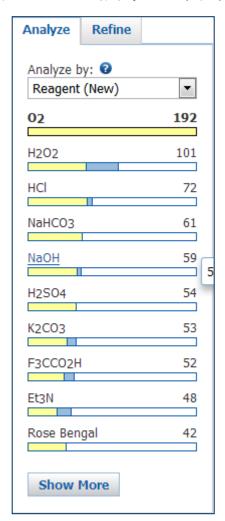
按照反应类型分类显示



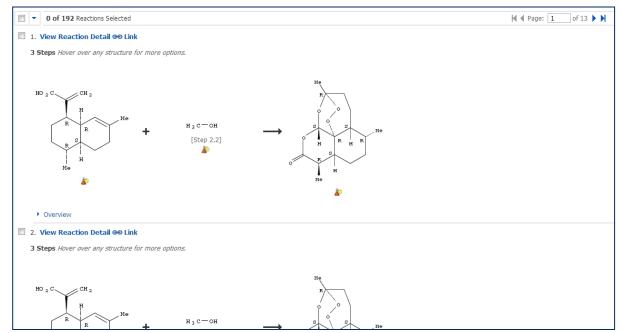
Transformation 帮助我们判断大部分的研究人员采用哪种合成方法



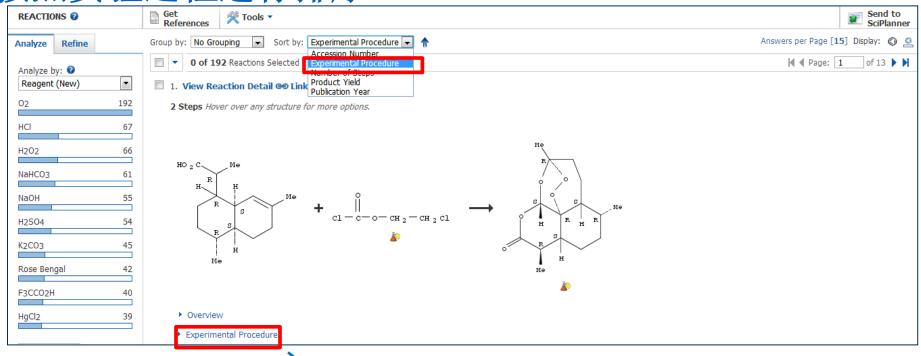
按照试剂进行分析



有192篇文献都用的是02这个试剂



按照实验过程进行排序



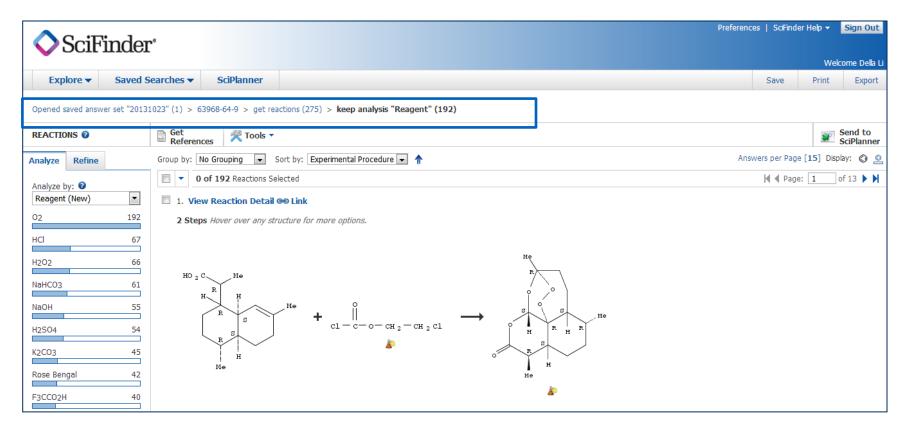
Step 1

Example 10: synthesis of (3R)-dihydroarteannuin B acid, 2-chloroethyl mixed carbonate 3.04 g (0.021 mol) of 2-chloroethyl chloroformate are added dropwise within 5 min. to a stirred solution of 5.01 g (0.021 mol) of DHAA and 4.04 g (0.029 mol) of K2CO3 in 25 mL of dichloromethane in an ice bath. After addition, stirring is continued for 20-30 min. The mixture is then washed twice with water (2 x 100 mL) and dried over MgSO4. The solution is then concentrated to dryness at reduced pressure and 6.78 g of an oily residue are obtained (crude yield = 93.5 %). The product can be used as such.

Step 2

General/Typical Procedure: **Example 11: synthesis of artemisinin** An amount of 4 g of the dihydroartemisinic acid (DHAA) derivative of formula (I) or (Ia) prepared in examples 1 to 10 above (1 eq.), 0.01 eq. of tetraphenylporphyrin and 80 mL of methylene chloride are introduced at 20°C in a clean 0.2 liter reactor. The mixture is then cooled down to -10°C and air or oxygen is bubbled through the mixture (40-50 mL/min.) under stirring at 300-400 rpm. After 30 min., trifluoroacetic acid (TFA, 0.5 eq.) is added and a halogen lamp is switched on. The mixture is stirred overnight (~19h) at -10°C and then warmed up to 10°C (60 min.) and stirred at 10°C during 60 min. The mixture is then warmed up to 20°C in about 60 min. and then the air introduction is stopped, the lamp switched off and the mixture stirred at 20°C during 2h. Then, the reaction mixture is treated by addition of 20 mL of water then 20 mL of a solution of aqueous saturated NaHCO3. The resulting mixture was then left for decantation and the two layers were separated. The organic layer is then loaded back in the vessel and washed again by addition of 20 mL of water then 20 mL of a solution of aqueous saturated NaHCO3. After decantation and layers separation, the organic layer is washed with 20 ml of water. After decantation, the organic layer is then concentrated under progressive vacuum at 30°C using a rotary evaporator. The dry product crystallizes at room temperature. Then 12 mL of n-heptane are added and the mixture is stirred during 1 h at 20°C. The reaction mixture is then filtrated under Buchner funnel (n°3). The wet solid is then washed first with 8 mL and then with 12 mL of n-heptane. The wet solid is then dried under vacuum at 40°C overnight (~15h). Crude artemisinin is obtained with good titrated yield (62% ti/ti). If desired, an additional recrystallization step in an ethanol/water mixture (70/30) can be performed on the solid product precipitated in n-heptane. Product name: artemisinin Yield: 54.9%

导航条



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■ SciFinder Web的注册和常见问题

SciFinder Web的注册和登陆

SciFinder Web的系统要求

Windows用户支持IE 7.x或者FireFox 2.x

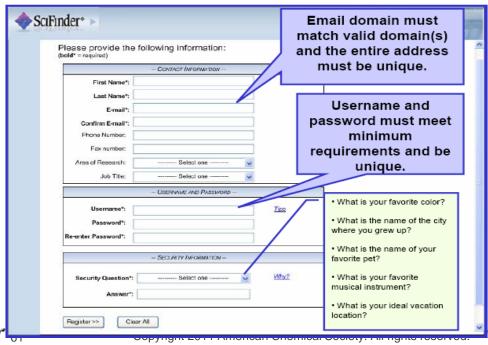
Mac 用户支持 Firefox 和 Safari

Java 安装(初次使用结构时自动安装,建议安装Java 6)

在图书馆相关页面上找到SciFinder Web注册用的网址

点击URL创建SciFinder Web账号





设置用户名及密码注意事项

用户名:

必须是唯一的,且包含 5-15 个字符。它可以只包含字母或字母组合、数字和/或以下特殊字符:

- (破折号)

_ (下划线)

. (句点)

@ (表示"at"的符号)

密码:

必须包含 7-15 个字符,并且至少包含三个以下字符:

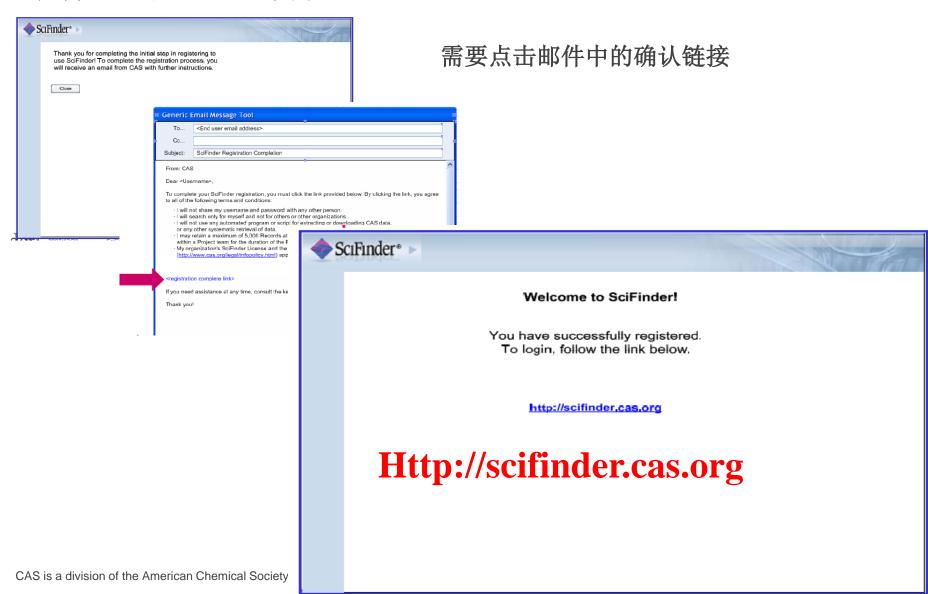
字母 混合的大小写字母

数字 非字母数字的字符(例如@、#、%、&、*)

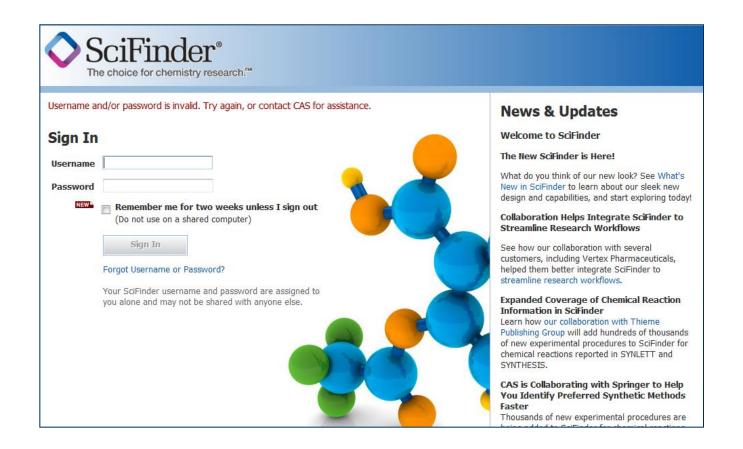
密码设置小技巧:

- 1: 不要和账号中有重复的字符
- 2: 密码格式最好是abc@123

对新ID的Email确认



SciFinder Web 常见问题



账号或密码错误,请在username处填写,截图,并与图书馆联系

SciFinder Web 常见问题

任何需要反馈给图书馆的问题,都请点击测试IP地址的链接

http://www.cas.org/cgi-bin/casip



Your IP address comes across to CAS as: 210.32.9.45

将页面截图下来,一并发给图书馆

SciFinder Web网络在线资源平台

www.igroup.com.cn/cas



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网络培训:不定期的网络专题培训

SciFinder Web使用注意事项

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- 严禁账号分享
- 严禁将账号用于非学术研究

Comprehensive Content

Sophisticated Analysis

Unprecedented Results



Thank You

李虹

SciFinder 培训专员

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Tel:010-82335058-807