



# SciFinder<sup>®</sup>

The choice for chemistry research.<sup>™</sup>

## SciFinder Web使用介绍

李虹

SciFinder培训专员

2015.3

# 提纲

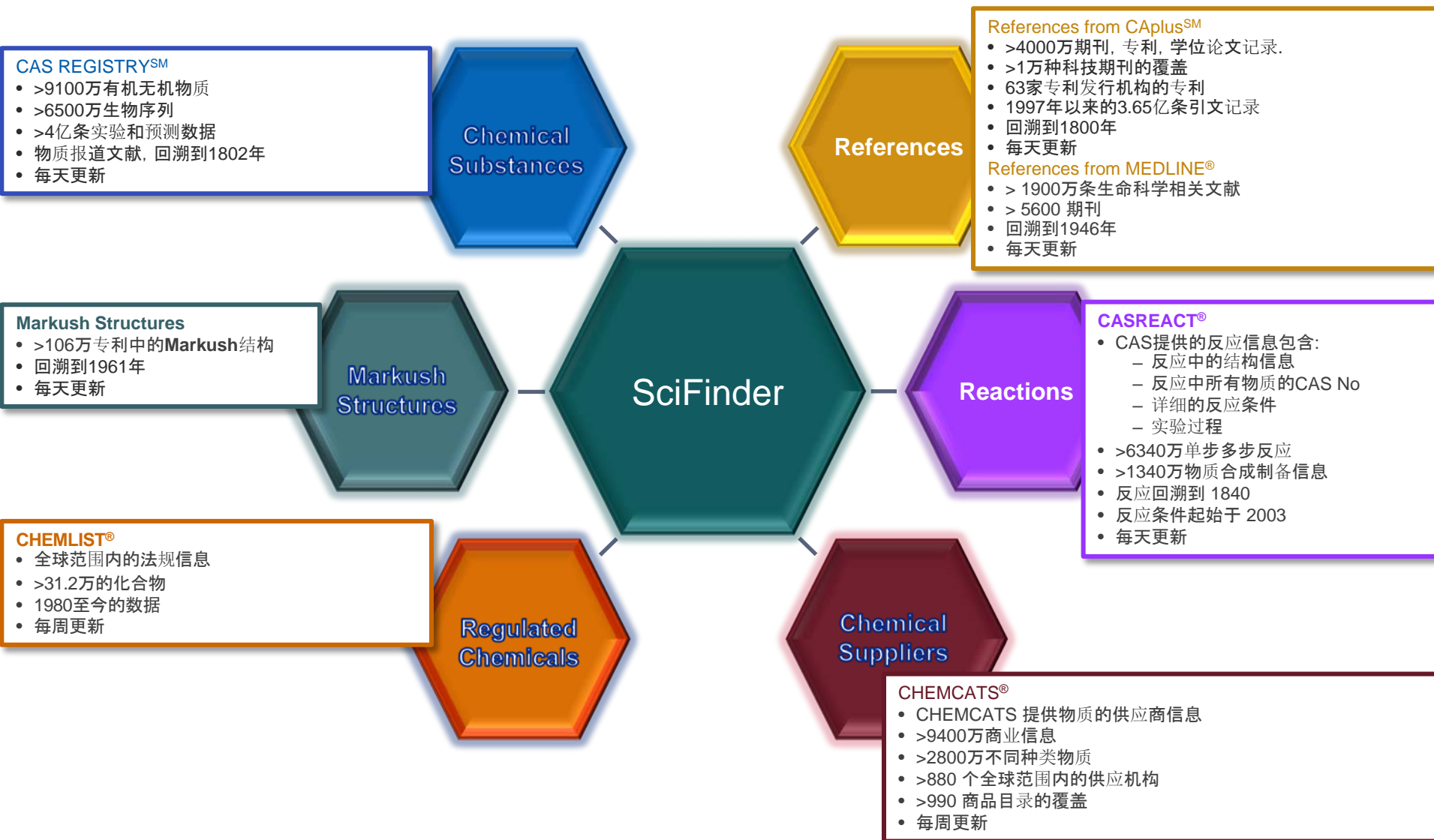
- 介绍
  - SciFinder Web中的内容
- SciFinder Web中的检索和后处理
  - SciFinder Web中的文献记录及主题检索
  - SciFinder Web中的物质结果及物质检索方法
  - SciFinder Web中的反应记录及反应检索
- SciFinder Web的注册

# 美国化学文摘社—Chemical Abstracts Service

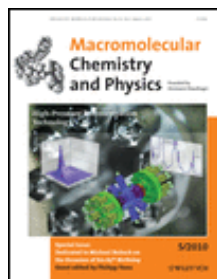
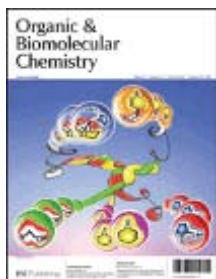
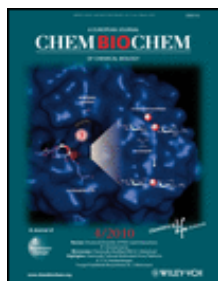
- 创建于1907年
- ACS的分支机构
- 密切关注，索引和提炼着全球化学相关的文献和专利
- 最早创立了《化学文摘》
- 总部坐落于俄亥俄州的哥伦布市



# SciFinder的覆盖内容

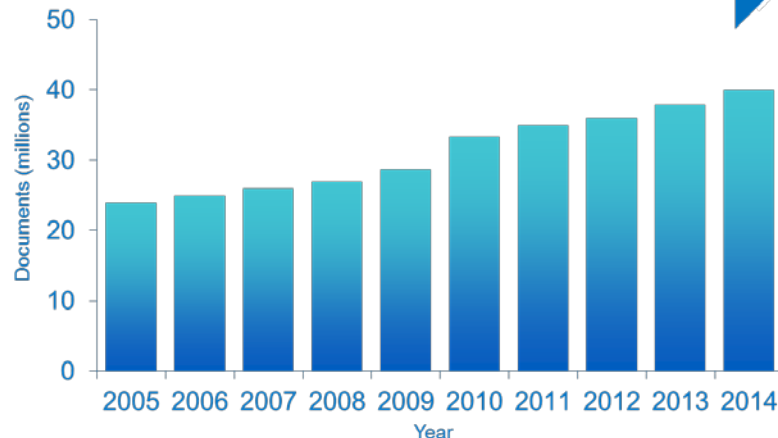


# CAPLUS<sup>SM</sup> 涵盖上万种期刊及63个专利发行机构专利



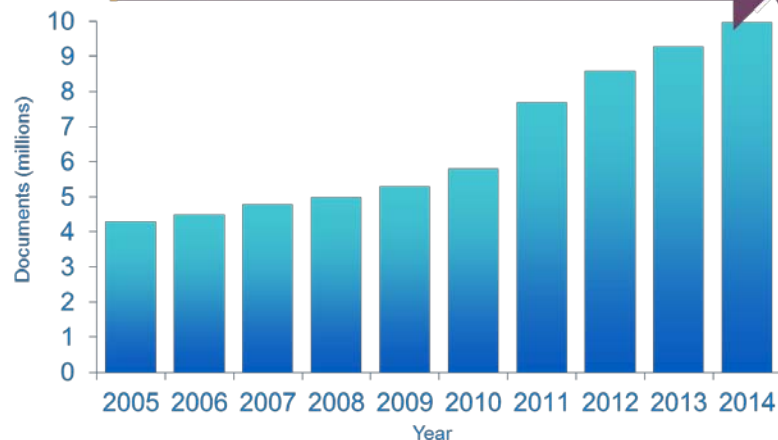
## CAPLUS INDEXED PUBLICATIONS

Currently  
**>40**  
million  
worldwide



## CAPLUS INDEXED PATENTS

Currently  
**>10**  
million  
worldwide



# CAS REGISTRY<sup>SM</sup> 是化学物质信息的“黄金标准”

**SciFinder**

Explore ▾ Saved Searches ▾ SciPlanner

**SUBSTANCES** ?

Get References Get Reactions Get Commercial Sources Tools ▾

Analyze Refine

Analyze by: Bioactivity Indicators

Antidiabetic agents 1

Antifibrotic agents 1

Anti-infective agents (all) 1

Anti-inflammatory agents (all) 1

Antiproliferative agents (all) 1

Antitumor agents (all) 1

Cardiovascular agents (all) 1

Chemosensitizers, pharmaceutical (all) 1

Sort by: CAS Registry Number ▾

0 of 1 Substance Selected

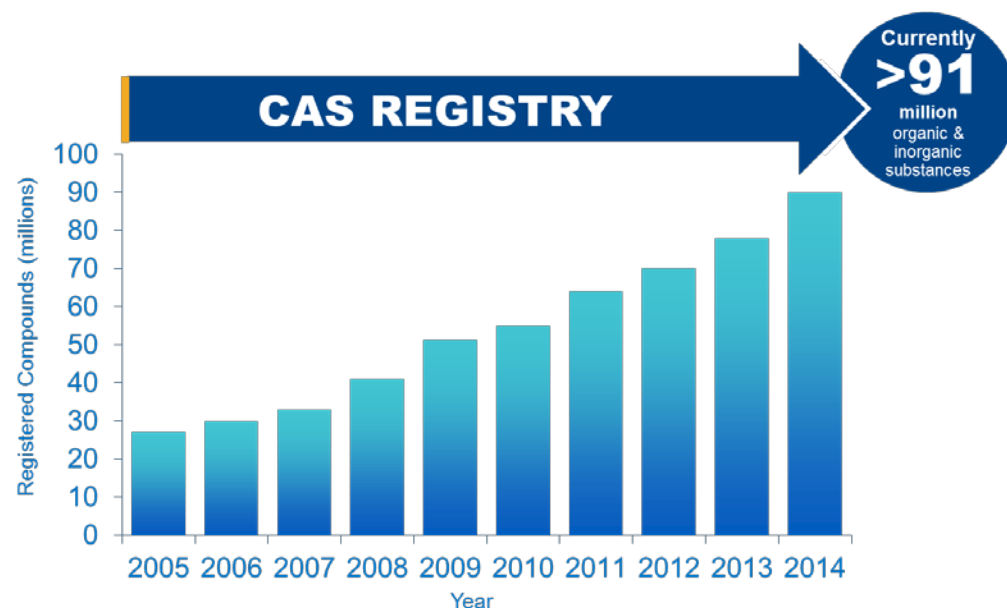
1. 50-18-0

~26818

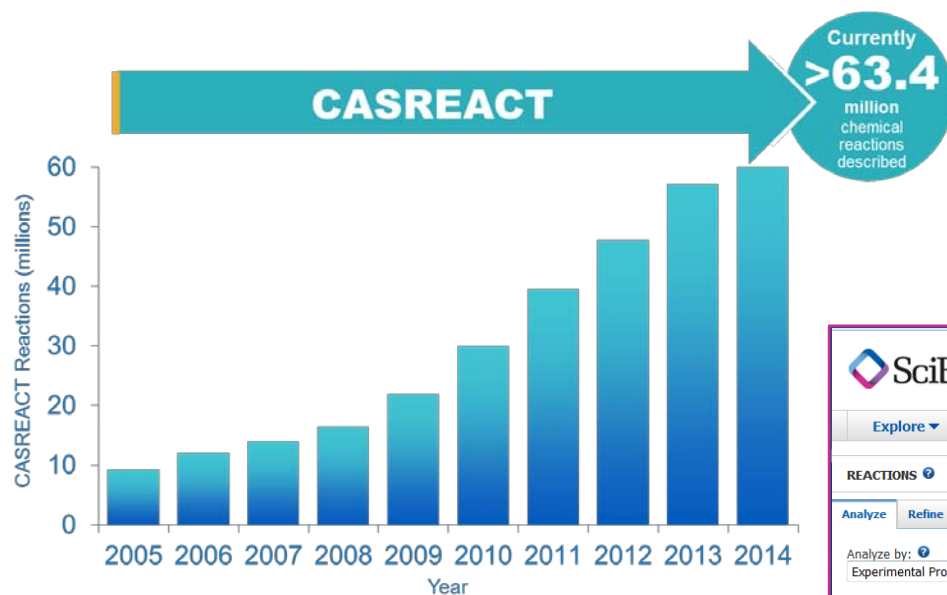
Chemical structure: ClCCN(CCCl)P(=O)(OCCN)OCCN

**C<sub>7</sub>H<sub>15</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>2</sub>P**  
2*H*-1,3,2-Oxazaphosphorin-2-amine, *N,N*-bis(2-chloroethyl)tetrahydro-, 2-oxide

Regulatory Information  
Spectra  
Experimental Properties



# 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

**REACTIONS** | Get References | Tools | Send to SciFinder

Analyze | Refine | Group by: No Grouping | Sort by: Accession Number | 0 of 58 Reactions Selected | Page: 1 of 4

1. [View Reaction Detail](#) | [Link](#) | [Similar Reactions](#)

**Single Step** *Hover over any structure for more options.*

$$\text{HO}-\text{CH}_2-\underset{\text{OH}}{\text{CH}}-\text{CH}_2-\text{OH} \longrightarrow \text{HO}-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{OH}$$

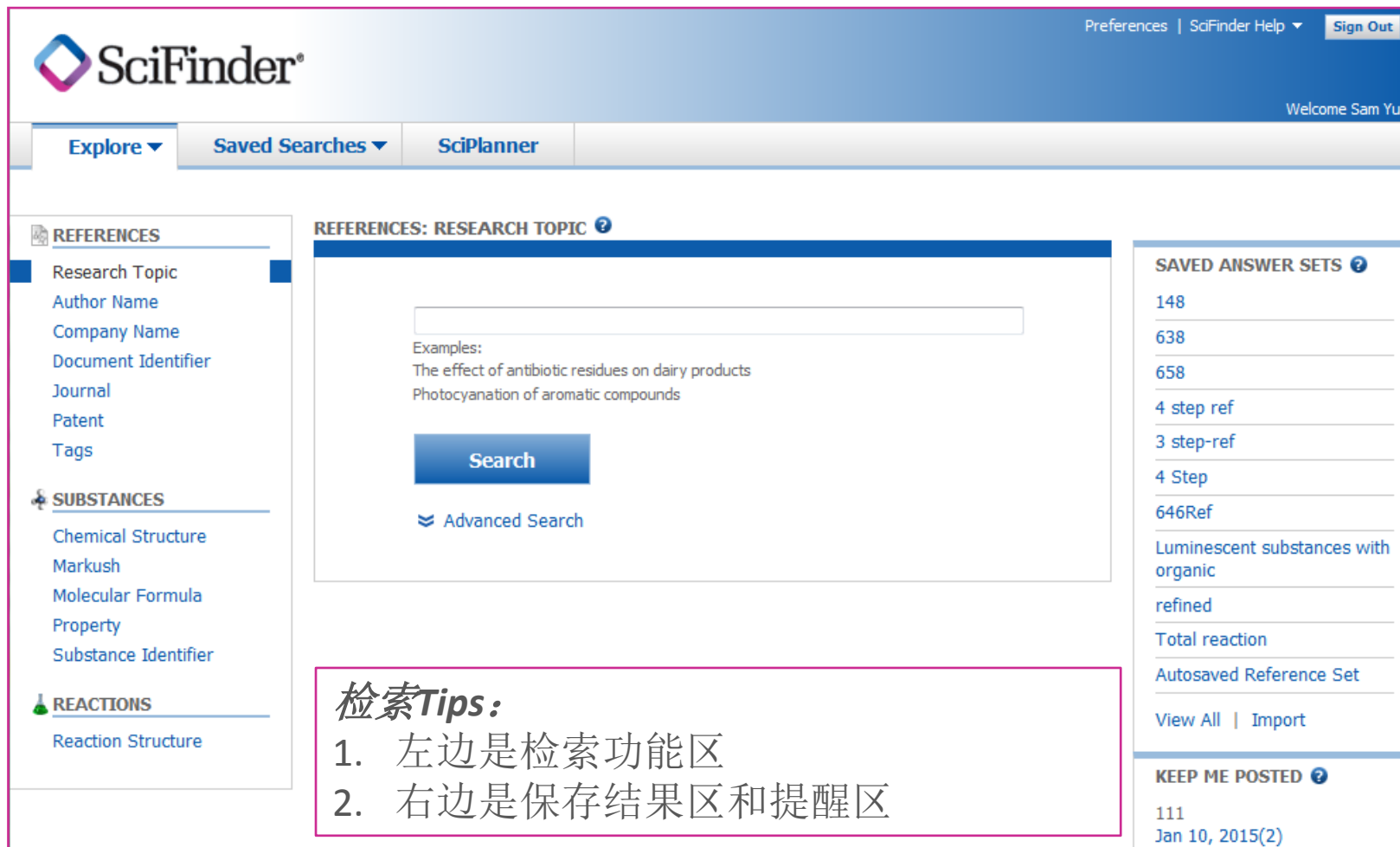
**Overview**

Steps/Stages	Notes
1.1 C:9077-68-3, S:H <sub>2</sub> O, 48 h, rt	regioselective, fermentation, enzymic, biotransformation, whole cells of <i>Lactobacillus</i> sp. cultured from thin stillage expressing glycerol dehydratase used, 90% conversion, Reactants: 1, Catalysts: 1, Solvents: 1, Steps: 1, Stages: 1, Most stages in any one step: 1

**References**

Process for the conversion of glycerol to 1,3-propanediol by novel *Lactobacillus* strains isolated from stillage [Full Text](#)  
By Reaney, Martin J. T. et al  
From PCT Int. Appl., 2012045179, 12 Apr 2012

# SciFinder登录界面 [Http://scifinder.cas.org](http://scifinder.cas.org)



The screenshot shows the SciFinder web interface. At the top, there's a navigation bar with the SciFinder logo, user preferences, help, and a sign-out button. Below this is a secondary navigation bar with tabs for Explore, Saved Searches, and SciPlanner. The main content area is divided into three sections: a left sidebar with navigation links for References, Substances, and Reactions; a central search area with a text input, search button, and examples; and a right sidebar for Saved Answer Sets and a Keep Me Posted section.

**REFERENCES: RESEARCH TOPIC**

Search input field

Examples:  
 The effect of antibiotic residues on dairy products  
 Photocyanation of aromatic compounds

**Search**

[Advanced Search](#)

**SAVED ANSWER SETS**

- 148
- 638
- 658
- 4 step ref
- 3 step-ref
- 4 Step
- 646Ref
- Luminescent substances with organic refined
- Total reaction
- Autosaved Reference Set

[View All](#) | [Import](#)

**KEEP ME POSTED**

- 111
- Jan 10, 2015(2)

**检索Tips:**

1. 左边是检索功能区
2. 右边是保存结果区和提醒区

# SciFinder Web使用浏览器选择建议

- Windows自带的浏览器是最慢的，其他IE核浏览器都比它快
- XP用户不建议使用IE7，IE8浏览器
- Windows 7以上用户建议升级IE到9以上
- Chrome和FireFox浏览器在所有系统上的表现都优于IE及IE核浏览器
- 不建议使用360浏览器检索SciFinder，即使在使用其他浏览器的同时也请关闭360安全卫士

# 提纲

- 介绍
  - SciFinder Web中的内容
- **SciFinder Web中的检索和后处理**
  - SciFinder Web中的文献记录及主题检索
  - SciFinder Web中的物质结果及物质检索方法
  - SciFinder Web中的反应记录及反应检索
- **SciFinder Web的注册**

# SciFinder中的文献记录

REFERENCE DETAIL ?	Get Substances	Get Related Citations	Get Full Text	Send to SciPlanner
--------------------	----------------	-----------------------	---------------	--------------------

Return Previous | Next

## 1. Selective oxidation of **light** alkanes: interaction between the catalyst and the gas phase on different classes of catalytic materials

By: Cavani, F.; Trifiro, F.

A review, with 202 refs., on the selective oxidn. of **light** (C<sub>≤6</sub>) alkanes to bulk and **industrial chems.**, with emphasis on catalyst-gas phase interactions. Attention was given mainly to: (1) the role of the redox properties of transition metal oxide-based systems, and (2) the contribution of radical-type, homogeneous and heterogeneously-initiated homogeneous reactions over nonreducible metal oxide and noble metal catalysts. Other topics included: (1) key factors in selective oxidn. of **light** alkanes, (2) bulk and surface properties of catalysts, (3) oxidative dehydrogenation, (4) control of oxygen supply to the catalyst, (5) non-redox-type metal oxides (e.g., alk. earth oxides, rare earth oxides, boron oxides, tin oxides, and silica). Some research examples are: (1) oxidn. of propane to acrylic acid and isobutane to methacrylic acid over Keggin-type heteropolymolybdates, (2) oxidative dehydrogenation of alkanes to alkenes over vanadium oxide-based catalysts, and (3) oxidn. of butane and pentane over vanadyl pyrophosphate.

### Indexing

Fossil Fuels, Derivatives, and Related Products (Section51-0)
Section cross-reference(s): 35, 45

### Concepts

Redox reaction catalysts
catalyst-gas phase interactions in selective oxidn. of <b>light</b> alkanes to bulk and <b>industrial chems.</b>
Alkaline earth oxides      Rare earth oxides
catalysts contg.; catalyst-gas phase interactions in selective oxidn. of <b>light</b> alkanes to bulk and <b>industrial chems.</b>
Catalyst use; Properties; Uses

### Substances

12026-66-3
58834-75-6
catalyst-gas phase interactions in selective oxidn. of <b>light</b> alkanes to bulk and <b>industrial chems.</b>
Catalyst use; Uses
1303-86-2 Boron oxide, uses
1332-29-2 Tin oxide
7631-86-9 Silica, uses

### QUICK LINKS

0 Tags, 0 Comments

### SOURCE

*Catalysis Today*  
 Volume51  
 Issue3-4  
 Pages561-580  
 Journal; General Review  
 1999  
 CODEN:CATTEA  
 ISSN:0920-5861  
 DOI:10.1016/S0920-5861(99)00041-3

### COMPANY/ORGANIZATION

Dipartimento di Chimica Industriale e dei Materiali  
 Bologna, Italy 40136

### ACCESSION NUMBER

1999:340014  
 CAN131:159478  
 CAPLUS

### PUBLISHER

Elsevier Science B.V.

### Citations

Bielanski, A; Oxygen in Catalysis 1991  
 Haber, J; ACS Symp Series 1996, 638, 20   
 Oyama, S; ACS Symp Series 1996, 638, 2   
 Lee, J; Catal Rev-Sci Eng 1988, 30, 249   
 Kung, H; Adv Catal 1994, 40, 1   
 Vedrine, J; Catal Today 1997, 33, 3   
 Vedrine, J; Catal Today 1996, 32, 115   
 Busca, G; Catal Today 1996, 32, 133   
 Cavani, F; Catalysis 1994, 11, 246   
 Albonetti, S; Catal Rev-Sci Eng 1996, 38, 413   
 Sokolovskii, V; Catal Rev-Sci Eng 1990, 32, 1   
 Delmon, B; Catalysts in Petroleum Refining and Petrochemical Industries 1995 1996  
 Burch, R; J Mol Catal A 1995, 100, 13   
 Schmidt, L; Chem Eng Sci 1994, 49, 3981   
 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

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

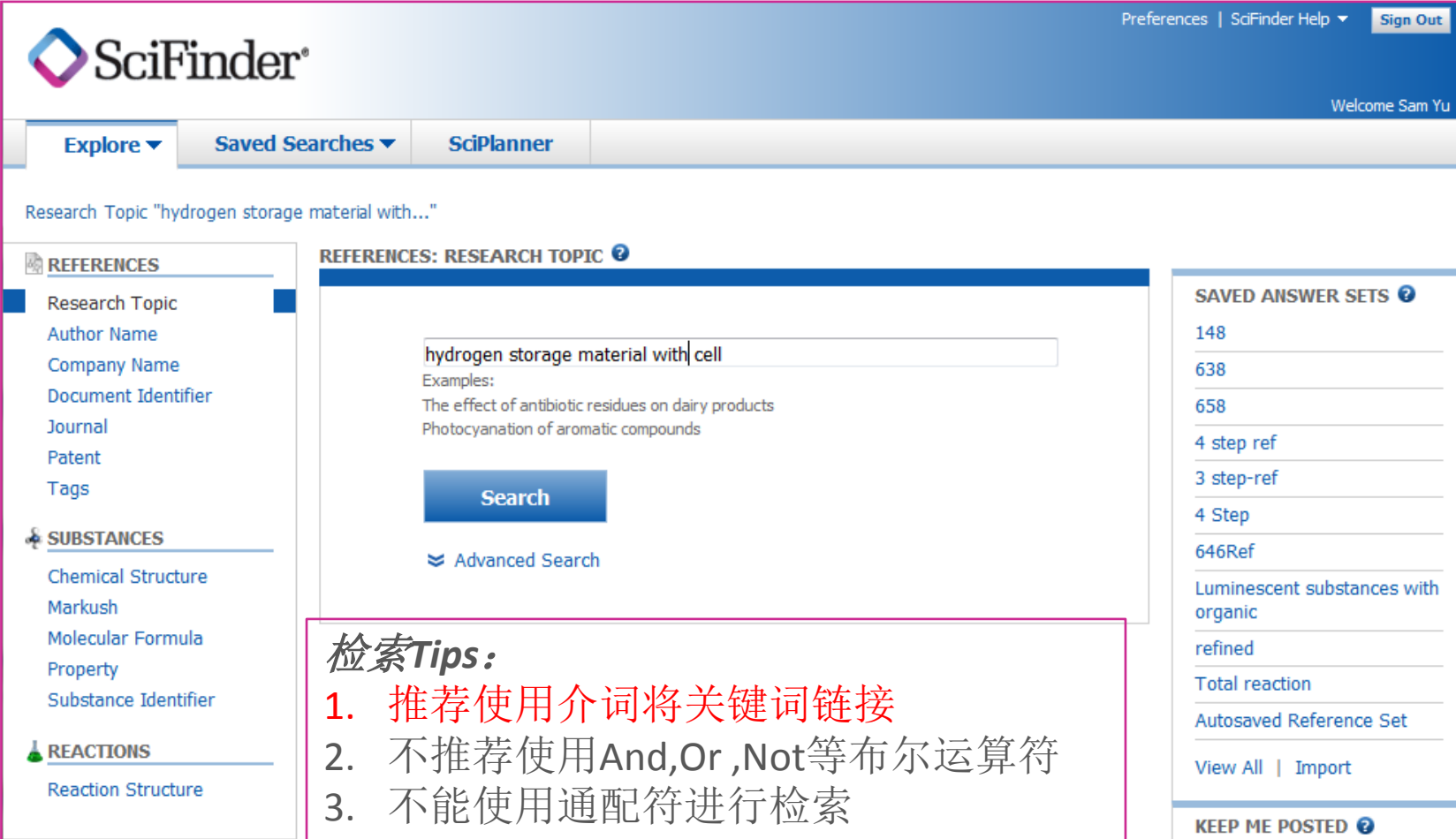
- 主题检索
- 作者名检索
- 机构名检索
- 文献标示符检索
- 从物质，反应获得文献

- 检索方法推荐

- 关注某特定领域的文献——主题检索
- 关注物质有关的文献——先获得物质，再获得文献
- 关注某科研人员的文献——作者名检索

# SciFinder Web中的主题检索

主题： hydrogen storage material with cell(储氢材料在电池方面的应用)

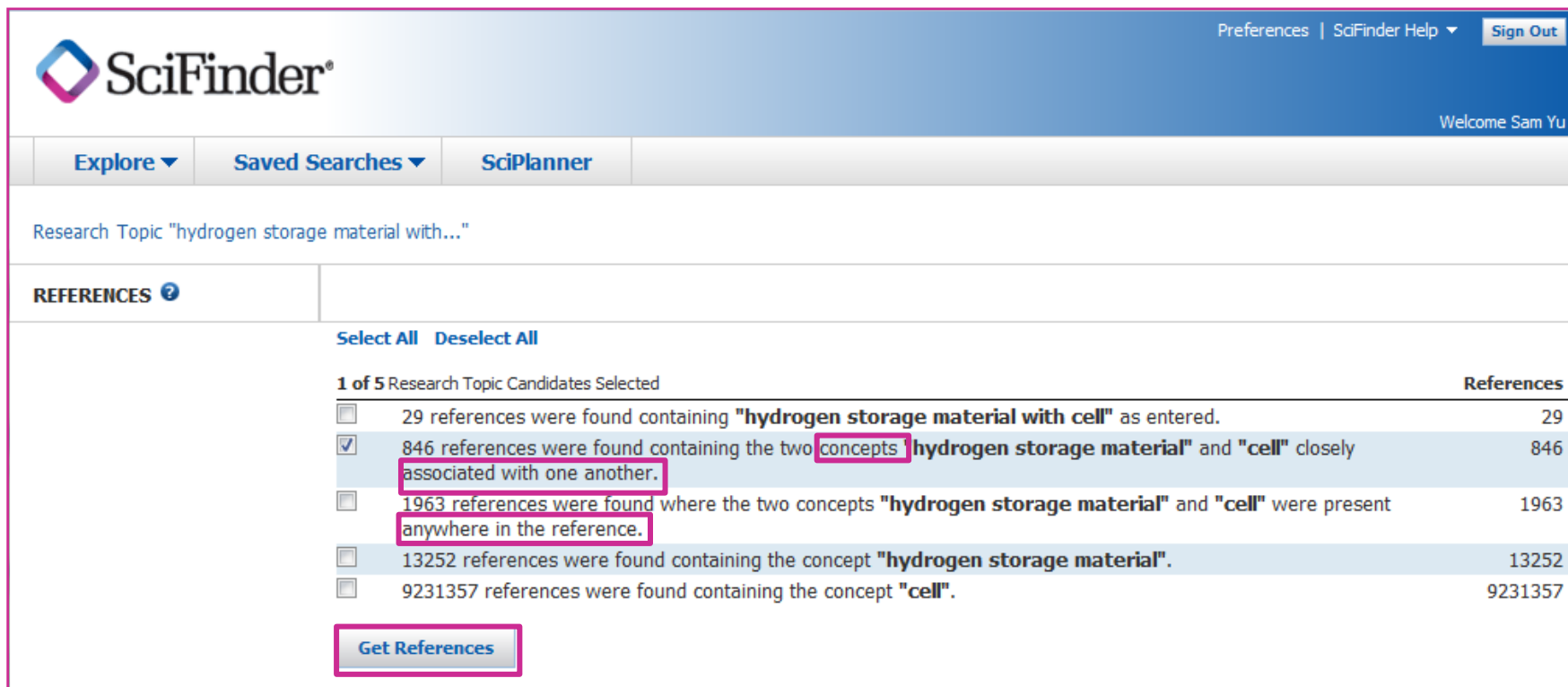


The screenshot shows the SciFinder web interface. At the top, there's a navigation bar with 'Explore', 'Saved Searches', and 'SciPlanner'. The main search area has a text input field containing 'hydrogen storage material with cell'. Below the input field, there are examples of search results: 'The effect of antibiotic residues on dairy products' and 'Photocyanation of aromatic compounds'. A 'Search' button is visible. On the right side, there's a 'SAVED ANSWER SETS' section with a list of saved sets: 148, 638, 658, 4 step ref, 3 step-ref, 4 Step, 646Ref, Luminescent substances with organic, refined, Total reaction, Autosaved Reference Set. At the bottom right, there's a 'KEEP ME POSTED' button.

**检索Tips:**

1. 推荐使用介词将关键词链接
2. 不推荐使用And,Or ,Not等布尔运算符
3. 不能使用通配符进行检索

# 主题检索的候选项



SciFinder®

Preferences | SciFinder Help ▾ Sign Out

Welcome Sam Yu

Explore ▾ Saved Searches ▾ SciPlanner

Research Topic "hydrogen storage material with..."

**REFERENCES** ?

Select All Deselect All

1 of 5 Research Topic Candidates Selected

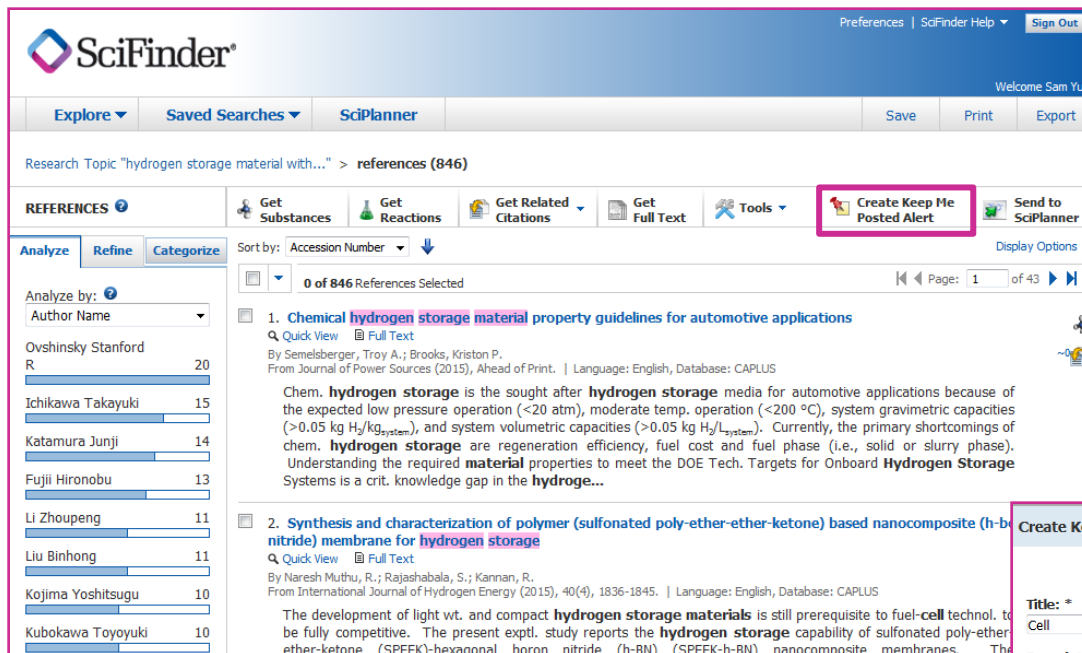
	References
<input type="checkbox"/> 29 references were found containing "hydrogen storage material with cell" as entered.	29
<input checked="" type="checkbox"/> 846 references were found containing the two concepts "hydrogen storage material" and "cell" closely associated with one another.	846
<input type="checkbox"/> 1963 references were found where the two concepts "hydrogen storage material" and "cell" were present anywhere in the reference.	1963
<input type="checkbox"/> 13252 references were found containing the concept "hydrogen storage material".	13252
<input type="checkbox"/> 9231357 references were found containing the concept "cell".	9231357

Get References

## 检索Tips:

1. “Concept”表示做了同意词的扩展
2. “Closely associated with one another”表示同时出现在一个检索字段中
3. “present anywhere in the reference”表示同时出现在一段话中

# SciFinder中的KMP



Research Topic "hydrogen storage material with..." > references (846)

REFERENCES ⓘ

Get Substances Get Reactions Get Related Citations Get Full Text Tools **Create Keep Me Posted Alert** Send to SciPlanner

Analyze Refine Categorize

Analyze by: ⓘ

Author Name

Ovshinsky Stanford 20

Ichikawa Takayuki 15

Katamura Junji 14

Fujii Hironobu 13

Li Zhoupeng 11

Liu Binhong 11

Kojima Yoshitsugu 10

Kubokawa Toyoyuki 10

Sort by: Accession Number

0 of 846 References Selected

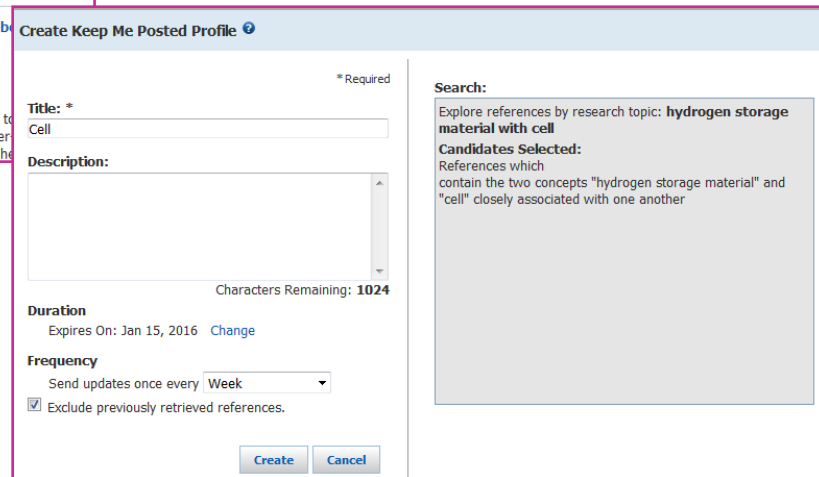
1. **Chemical hydrogen storage material property guidelines for automotive applications**  
 Quick View Full Text  
 By Semelsberger, Troy A.; Brooks, Kriston P.  
 From Journal of Power Sources (2015), Ahead of Print. | Language: English, Database: CAPLUS  
 Chem. **hydrogen storage** is the sought after **hydrogen storage** media for automotive applications because of the expected low pressure operation (<20 atm), moderate temp. operation (<200 °C), system gravimetric capacities (>0.05 kg H<sub>2</sub>/kg<sub>system</sub>), and system volumetric capacities (>0.05 kg H<sub>2</sub>/L<sub>system</sub>). Currently, the primary shortcomings of chem. **hydrogen storage** are regeneration efficiency, fuel cost and fuel phase (i.e., solid or slurry phase). Understanding the required **material** properties to meet the DOE Tech. Targets for Onboard **Hydrogen Storage** Systems is a crit. knowledge gap in the **hydroge...**

2. **Synthesis and characterization of polymer (sulfonated poly-ether-ether-ketone) based nanocomposite (h-b-nitride) membrane for hydrogen storage**  
 Quick View Full Text  
 By Naresh Muthu, R.; Rajashabala, S.; Kannan, R.  
 From International Journal of Hydrogen Energy (2015), 40(4), 1836-1845. | Language: English, Database: CAPLUS  
 The development of light wt. and compact **hydrogen storage materials** is still prerequisite to fuel-cell technol. to be fully competitive. The present exptl. study reports the **hydrogen storage** capability of sulfonated poly-ether-ether-ketone (SPEEK)-hexagonal boron nitride (h-BN) (SPEEK-h-BN) nanocomposite membranes. The

KMP是SciFinder提供的自动提醒功能，能及时将最新资讯，推送到用户的邮箱中

## 检索Tips:

1. 可以根据根据研究的进度，设置定题检索频率，每周，每月
2. 建议将Exclude previously retrieved references前面的勾，勾掉，



Create Keep Me Posted Profile ⓘ

\* Required

Title: \*  
 Cell

Description:  
 Characters Remaining: 1024

Duration  
 Expires On: Jan 15, 2016 Change

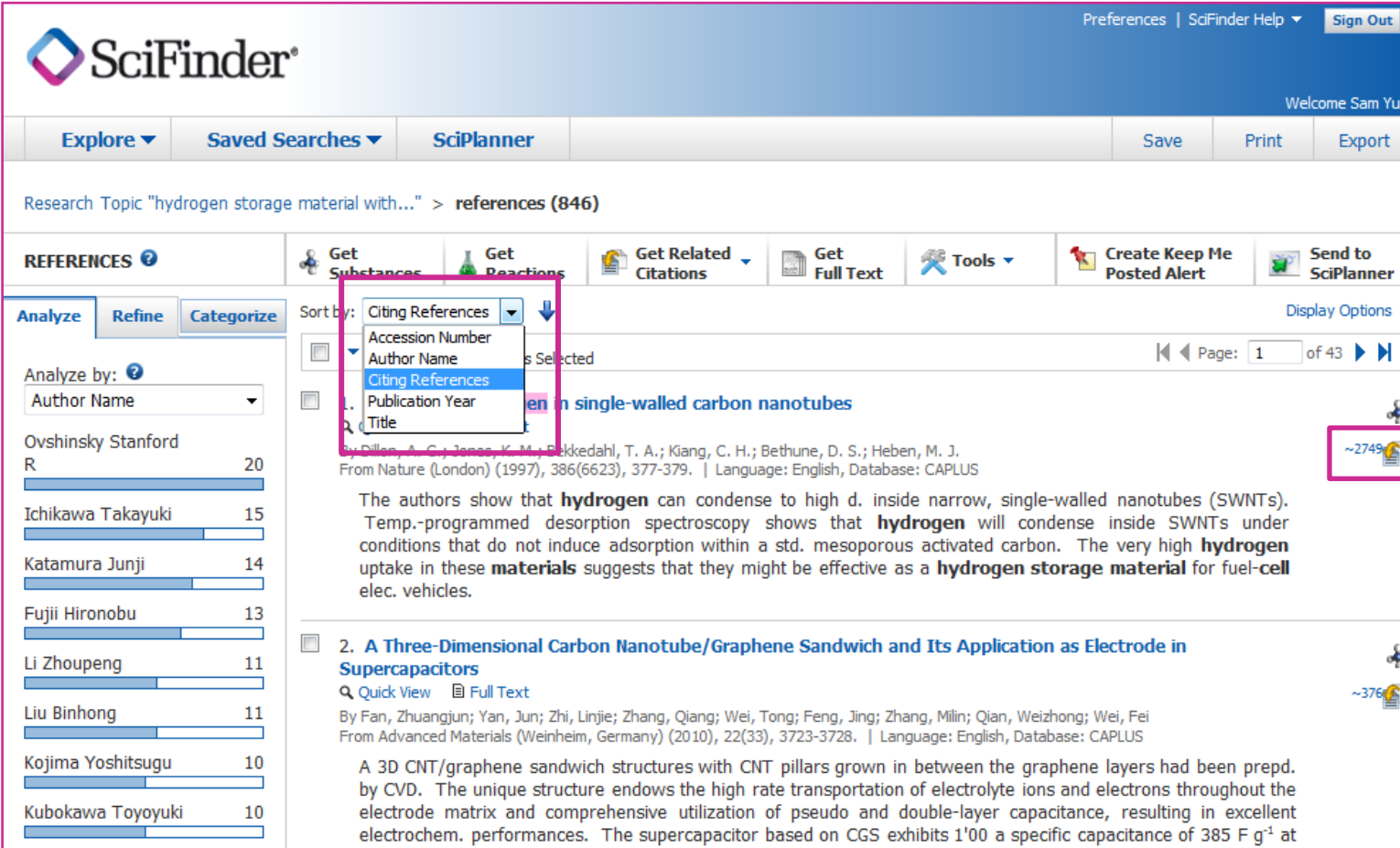
Frequency  
 Send updates once every Week

☒ Exclude previously retrieved references.

Create Cancel

Search:  
 Explore references by research topic: **hydrogen storage material with cell**  
**Candidates Selected:**  
 References which contain the two concepts "hydrogen storage material" and "cell" closely associated with one another

# SciFinder提供的引文排序— Citing Reference



The screenshot displays the SciFinder web interface. At the top, the SciFinder logo and navigation links (Preferences, SciFinder Help, Sign Out) are visible. Below the header, there are tabs for Explore, Saved Searches, and SciPlanner. The main content area shows a search result for "hydrogen storage material with..." with 846 references. A dropdown menu is open, showing the "Sort by:" options: Citing References (selected), Accession Number, Author Name, Citing References (highlighted), Publication Year, and Title. The left sidebar shows a list of authors with their respective counts and bar charts. The main list of references is displayed, with the first entry highlighted. The entry details include the title, authors, journal, year, volume, issue, pages, language, and database. The abstract text is also visible.

Research Topic "hydrogen storage material with..." > references (846)

REFERENCES ?

Get Substances Get Reactions Get Related Citations Get Full Text Tools Create Keep Me Posted Alert Send to SciPlanner

Analyze Refine Categorize

Analyze by: ?  
 Author Name

Sort by: Citing References Accession Number Author Name Citing References Publication Year Title

Display Options

Page: 1 of 43


1. **Hydrogen in single-walled carbon nanotubes**  
 By Dillon, A. C.; Jones, K. M.; Bekkedahl, T. A.; Kiang, C. H.; Bethune, D. S.; Heben, M. J.  
 From Nature (London) (1997), 386(6623), 377-379. | Language: English, Database: CAPLUS

The authors show that **hydrogen** can condense to high d. inside narrow, single-walled nanotubes (SWNTs). Temp.-programmed desorption spectroscopy shows that **hydrogen** will condense inside SWNTs under conditions that do not induce adsorption within a std. mesoporous activated carbon. The very high **hydrogen** uptake in these **materials** suggests that they might be effective as a **hydrogen storage material** for fuel-cell elec. vehicles.

2. **A Three-Dimensional Carbon Nanotube/Graphene Sandwich and Its Application as Electrode in Supercapacitors**  
 Quick View Full Text  
 By Fan, Zhuangjun; Yan, Jun; Zhi, Linjie; Zhang, Qiang; Wei, Tong; Feng, Jing; Zhang, Milin; Qian, Weizhong; Wei, Fei  
 From Advanced Materials (Weinheim, Germany) (2010), 22(33), 3723-3728. | Language: English, Database: CAPLUS

A 3D CNT/graphene sandwich structures with CNT pillars grown in between the graphene layers had been prep'd. by CVD. The unique structure endows the high rate transportation of electrolyte ions and electrons throughout the electrode matrix and comprehensive utilization of pseudo and double-layer capacitance, resulting in excellent electrochem. performances. The supercapacitor based on CGS exhibits 1'00 a specific capacitance of 385 F g<sup>-1</sup> at

# SciFinder 中的文献检索结果



SciFinder®

Preferences | SciFinder Help | Sign Out

Welcome Sam Yu

Explore | Saved Searches | SciPlanner | Save | Print | Export

Research Topic "hydrogen storage material with..." > references (846)

REFERENCES

Analyze | Refine | Categorize

Analyze by: Author Name

Author	Count
Ovshinsky Stanford R	20
Ichikawa Takayuki	15
Katamura Junji	14
Fujii Hironobu	13
Li Zhoupeng	11
Liu Binhong	11
Kojima Yoshitsugu	10
Kubokawa Toyoyuki	10

Sort by: Citing References

0 of 846 References Selected

1. **Storage of hydrogen in single-walled carbon nanotubes**

Quick View | Full Text

By Dillon, A. C.; Jones, K. M.; Bekkedahl, T. A.; Kiang, C. H.; Bethune, D. S.; Heben, M. J.  
 From Nature (London) (1997), 386(6623), 377-379. | Language: English, Database: CAPLUS

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Quick View | Full Text

By Fan, Zhuangjun; Yan, Jun; Zhi, Linjie; Zhang, Qiang; Wei, Tong; Feng, Jing; Zhang, Milin; Qian, Weizhong; Wei, Fei  
 From Advanced Materials (Weinheim, Germany) (2010), 22(33), 3723-3728. | Language: English, Database: CAPLUS

A 3D CNT/graphene sandwich structures with CNT pillars grown in between the graphene layers had been prep. by CVD. The unique structure endows the high rate transportation of electrolyte ions and electrons throughout the electrode matrix and comprehensive utilization of pseudo and double-layer capacitance, resulting in excellent electrochem. performances. The supercapacitor based on CGS exhibits 1'00 a specific capacitance of 385 F g<sup>-1</sup> at

## 检索Tips:

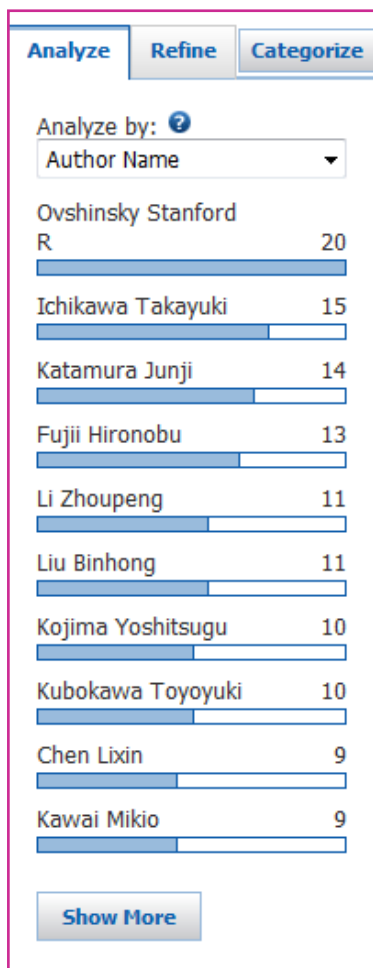
对于大量的文献结果，SciFinder提供：

1. Analyze
2. Refine
3. Categorize

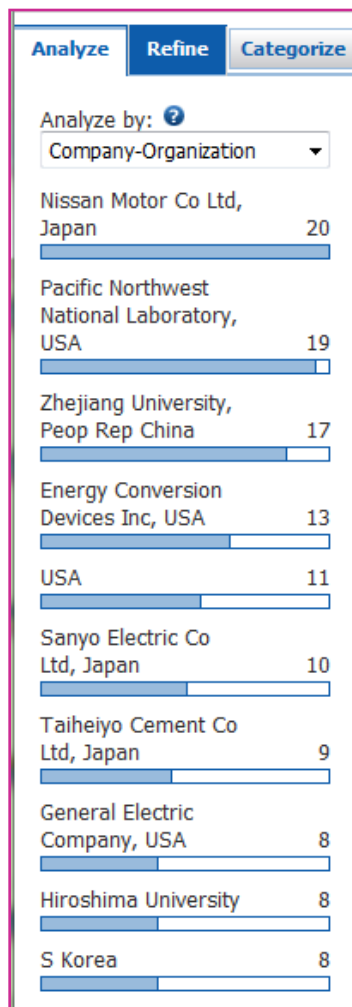
三种文献处理的手段

# SciFinder中的Analyze

领域内主要研究人员，专家



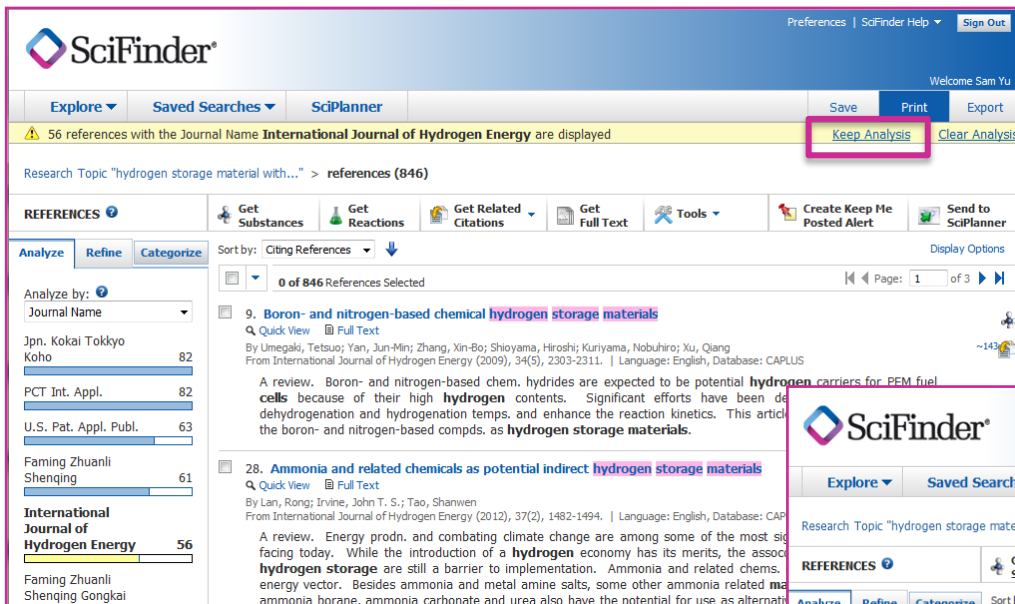
主要研究机构，合作伙伴，竞争对手



主要出版杂志，机构，潜在投稿期刊



# 获得某一本刊的文献



SciFinder®

Preferences | SciFinder Help | Sign Out

Welcome Sam Yu

Explore | Saved Searches | SciPlanner

Save | Print | Export

56 references with the Journal Name **International Journal of Hydrogen Energy** are displayed

Keep Analysis | Clear Analysis

Research Topic "hydrogen storage material with..." > references (846)

REFERENCES

Get Substances | Get Reactions | Get Related Citations | Get Full Text | Tools | Create Keep Me Posted Alert | Send to SciPlanner

Analyze | Refine | Categorize

Sort by: Citing References

0 of 846 References Selected

Analyze by: Journal Name

Jpn. Kokai Tokkyo Koho 82

PCT Int. Appl. 82

U.S. Pat. Appl. Publ. 63

Faming Zhuanli Shengqing 61

International Journal of Hydrogen Energy 56

Faming Zhuanli Shengqing Gongkai

9. **Boron- and nitrogen-based chemical hydrogen storage materials**

Quick View | Full Text

By Umegaki, Tetsuo; Yan, Jun-Min; Zhang, Xin-Bo; Shioyama, Hiroshi; Kuriyama, Nobuhiro; Xu, Qiang

From International Journal of Hydrogen Energy (2009), 34(5), 2303-2311. | Language: English, Database: CAPLUS

A review. Boron- and nitrogen-based chem. hydrides are expected to be potential **hydrogen** carriers for PEM fuel cells because of their high **hydrogen** contents. Significant efforts have been devoted to decrease their dehydrogenation and hydrogenation temps. and enhance the reaction kinetics. This article presents an overview of the boron- and nitrogen-based compds. as **hydrogen storage materials**.

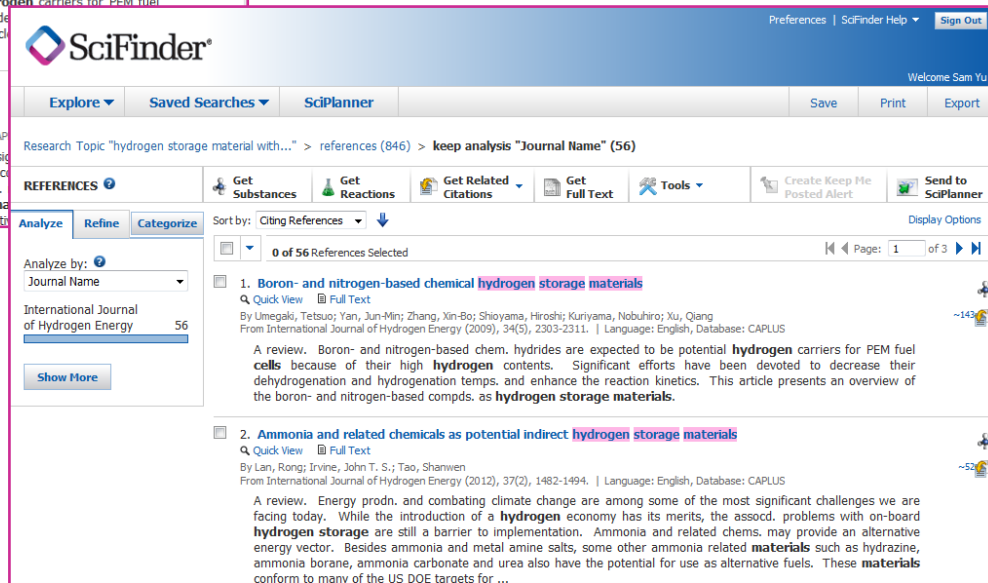
28. **Ammonia and related chemicals as potential indirect hydrogen storage materials**

Quick View | Full Text

By Lan, Rong; Irvine, John T. S.; Tao, Shanwen

From International Journal of Hydrogen Energy (2012), 37(2), 1482-1494. | Language: English, Database: CAPLUS

A review. Energy prodn. and combating climate change are among some of the most significant challenges we are facing today. While the introduction of a **hydrogen** economy has its merits, the assocd. problems with on-board **hydrogen storage** are still a barrier to implementation. Ammonia and related chems. may provide an alternative energy vector. Besides ammonia and metal amine salts, some other ammonia related **materials** such as hydrazine, ammonia borane, ammonia carbonate and urea also have the potential for use as alternative fuels. These **materials** conform to many of the US DOE targets for ...



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International Journal of Hydrogen Energy 56

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1. **Boron- and nitrogen-based chemical hydrogen storage materials**

Quick View | Full Text

By Umegaki, Tetsuo; Yan, Jun-Min; Zhang, Xin-Bo; Shioyama, Hiroshi; Kuriyama, Nobuhiro; Xu, Qiang

From International Journal of Hydrogen Energy (2009), 34(5), 2303-2311. | Language: English, Database: CAPLUS

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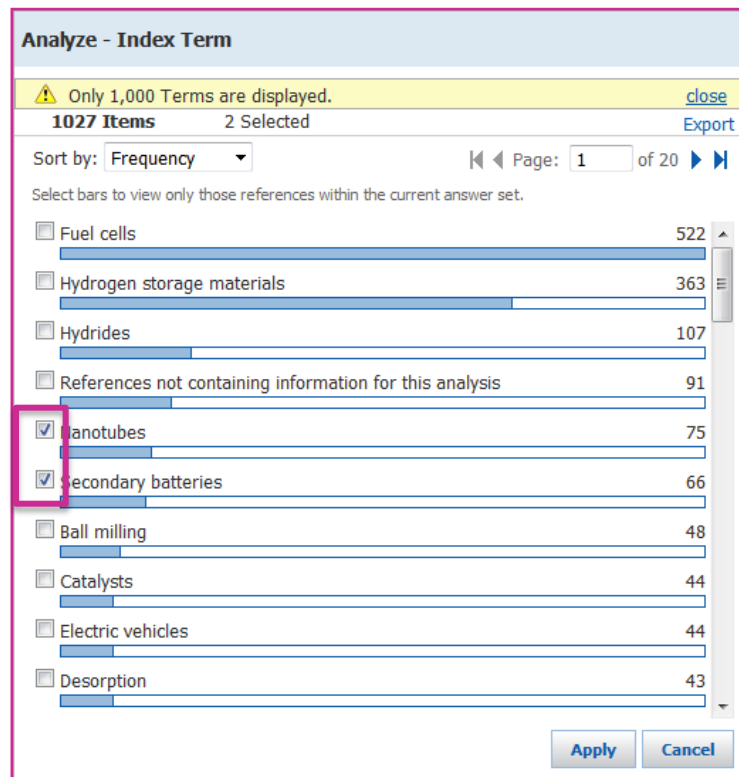
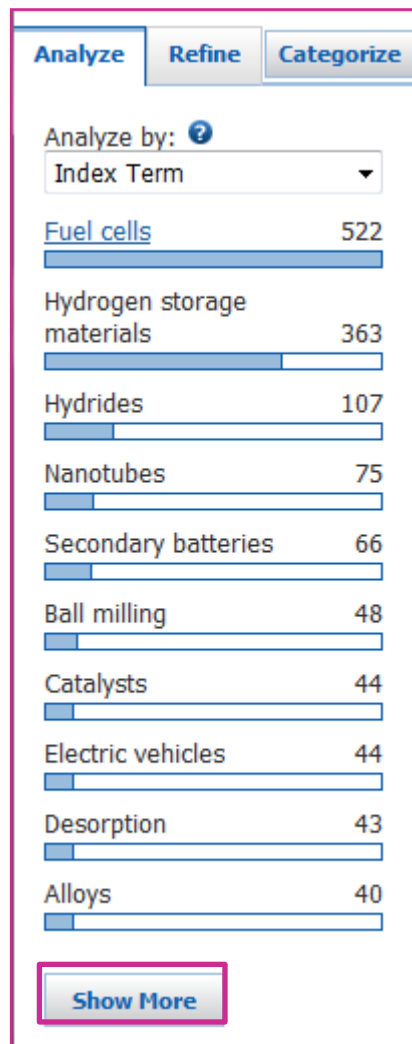
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1. 点击Analyze中的选项，获得的是结果集预览，需要点击Keep Analysis才能拿到具体的结果

# SciFinder中的Analyze By Index Term



Index Term分析帮助  
我们对文献的内容做  
大致浏览

## 检索Tips:

1. 右侧的Analyze栏最多给出10个，可以点击Show More获得全部分析结果
2. 右侧的Analyze栏最多选择1个，Show More后可以多选

# SciFinder中的Refine

Analyze

Refine

Categorize

Refine by: ?

- ☐ Research Topic
- ☐ Author
- ☒ Company Name
- ☐ Document Type
- ☐ Publication Year
- ☐ Language
- ☐ Database

Company Name

China

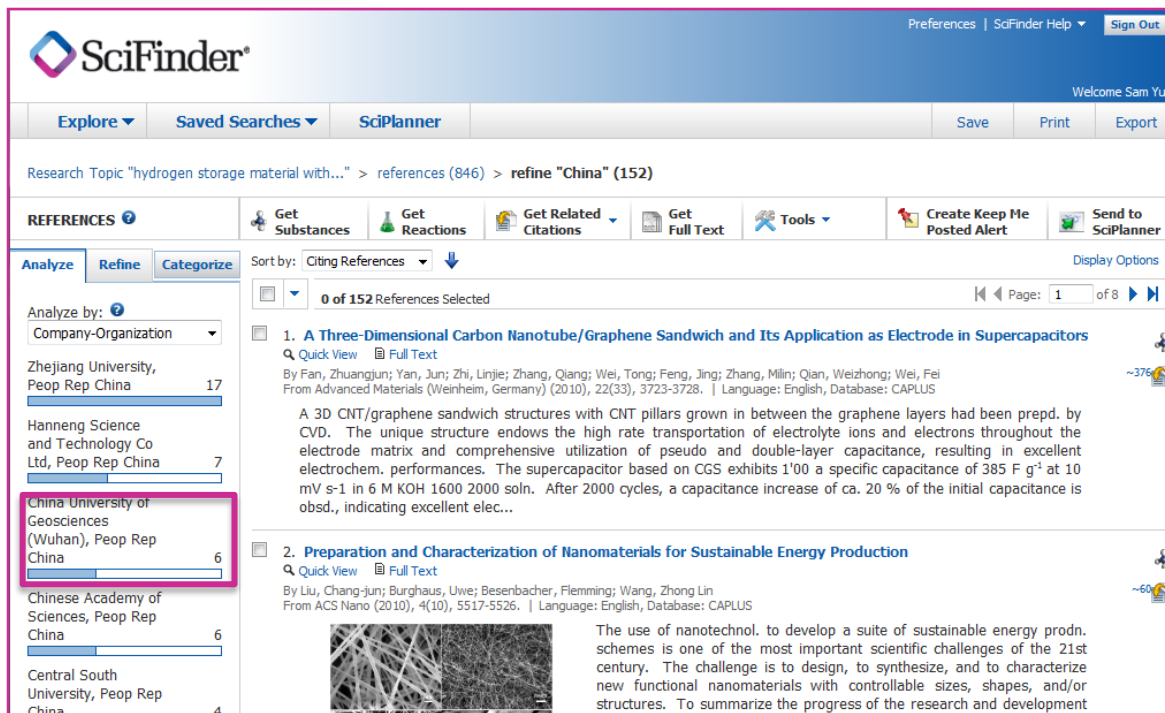
Examples:

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Company-Organization	Count
Zhejiang University, Peop Rep China	17
Hanneng Science and Technology Co Ltd, Peop Rep China	7
China University of Geosciences (Wuhan), Peop Rep China	6
Chinese Academy of Sciences, Peop Rep China	6
Central South University, Peop Rep China	4

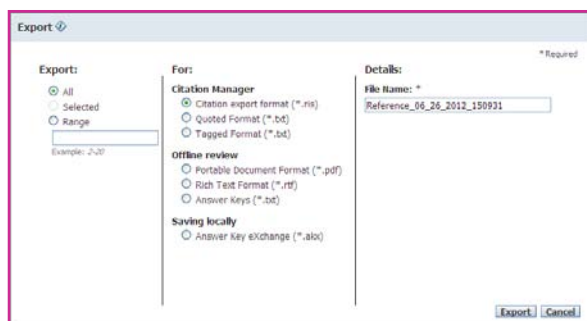
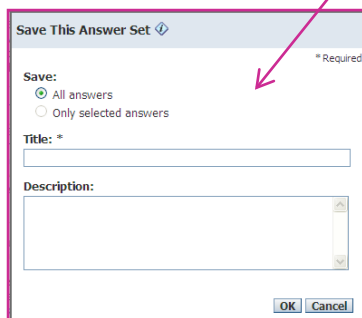
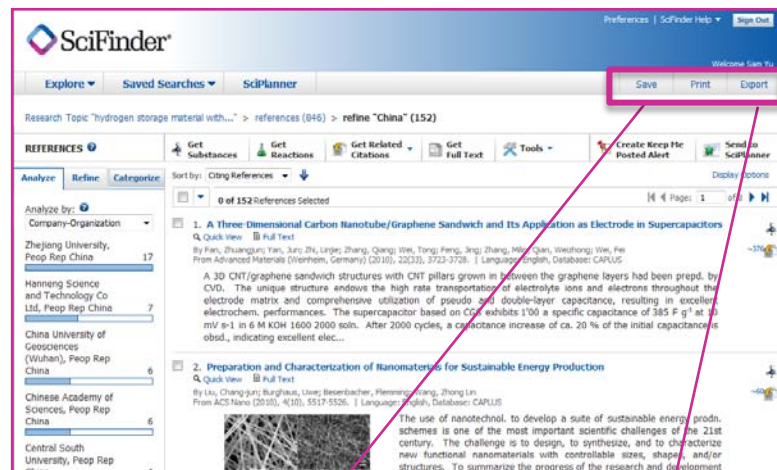
1. **A Three-Dimensional Carbon Nanotube/Graphene Sandwich and Its Application as Electrode in Supercapacitors**  
 Quick View Full Text  
 By Fan, Zhuangjun; Yan, Jun; Zhi, Linjie; Zhang, Qiang; Wei, Tong; Feng, Jing; Zhang, Milin; Qian, Weizhong; Wei, Fei  
 From Advanced Materials (Weinheim, Germany) (2010), 22(33), 3723-3728. | Language: English, Database: CAPLUS

A 3D CNT/graphene sandwich structures with CNT pillars grown in between the graphene layers had been prep'd. by CVD. The unique structure endows the high rate transportation of electrolyte ions and electrons throughout the electrode matrix and comprehensive utilization of pseudo and double-layer capacitance, resulting in excellent electrochem. performances. The supercapacitor based on CGS exhibits 1'00 a specific capacitance of 385 F g<sup>-1</sup> at 10 mV s<sup>-1</sup> in 6 M KOH 1600 2000 soln. After 2000 cycles, a capacitance increase of ca. 20 % of the initial capacitance is obsd., indicating excellent elec...

2. **Preparation and Characterization of Nanomaterials for Sustainable Energy Production**  
 Quick View Full Text  
 By Liu, Chang-jun; Burghaus, Uwe; Besenbacher, Flemming; Wang, Zhong Lin  
 From ACS Nano (2010), 4(10), 5517-5526. | Language: English, Database: CAPLUS

The use of nanotechnol. to develop a suite of sustainable energy prodn. schemes is one of the most important scientific challenges of the 21st century. The challenge is to design, to synthesize, and to characterize new functional nanomaterials with controllable sizes, shapes, and/or structures. To summarize the progress of the research and development

# 结果集的保存




## 检索Tips:

1. **Save**, 将结果保存在网络上, 下次登录可以继续检索
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Ichikawa Takayuki	15
Katamura Junji	14
Fujii Hironobu	13
Li Zhoupeng	11
Liu Binhong	11
Kojima Yoshitsugu	10
Kubokawa Toyoyuki	10
Chen Lixin	9

Sort by: Citing References

0 of 846 References Selected

1. **Storage of hydrogen in single-walled carbon nanotubes**

Quick View Full Text

By Dillon, A. C.; Jones, K. M.; Bekkedahl, T. A.; Kiang, C. H.; Bethune, D. S.; Heben, M. J.  
 From Nature (London) (1997), 386(6623), 377-379. | Language: English, Database: CAPLUS

The authors show that **hydrogen** can condense to high d. inside narrow, single-walled nanotubes (SWNTs). Temp.-programmed desorption spectroscopy shows that **hydrogen** will condense inside SWNTs under conditions that do not induce adsorption within a std. mesoporous activated carbon. The very high **hydrogen** uptake in these **materials** suggests that they might be effective as a **hydrogen storage material** for fuel-cell elec. vehicles.

2. **A Three-Dimensional Carbon Nanotube/Graphene Sandwich and Its Application as Electrode in Supercapacitors**

Quick View Full Text

By Fan, Zhuangjun; Yan, Jun; Zhi, Linjie; Zhang, Qiang; Wei, Tong; Feng, Jing; Zhang, Milin; Qian, Weizhong; Wei, Fei  
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A 3D CNT/graphene sandwich structures with CNT pillars grown in between the graphene layers had been prep. by CVD. The unique structure endows the high rate transportation of electrolyte ions and electrons throughout the electrode matrix and comprehensive utilization of pseudo and double-layer capacitance, resulting in excellent electrochem. performances. The supercapacitor based on CGS exhibits 1'00 a specific capacitance of 385 F g<sup>-1</sup> at 10 mV s<sup>-1</sup> in 6 M KOH 1600 2000 soln. After 2000 cycles, a capacitance increase of ca. 20 % of the initial capacitance is obsd., indicating excellent elec...

Categorize系统分类功能，基于Index Term，对文献依学科方向进行分类

# SciFinder中的Categorize

一级目录

二级目录

和二级目录相关的  
Index Term

选中的Index Term

Categorize ?

1. Select a heading and category.

Category Heading	Category
All	Substances in technology (1283)
General chemistry	
<b>Technology</b>	Materials & products (245)
Physical chemistry	Processes & apparatus (287)
Catalysis	Power & fuel topics (44)
Synthetic chemistry	Metallurgy (152)
Polymer chemistry	Formed, removed, & other substances (94)
Environmental chemistry	Ceramics (10)
Genetics & protein chemistry	Construction (12)
Analytical chemistry	Imaging & recording (7)
Biotechnology	
Biology	

2. Select index terms of interest.

Index Terms	
◀ ◀ Page: 1 of 13 ▶ ▶	
Select All	Deselect All
<input type="checkbox"/> Hydrogen	429
<input type="checkbox"/> Carbon	116
<input type="checkbox"/> Hydrides	101
<input type="checkbox"/> Sodium borohydride	56
<input type="checkbox"/> Nickel	50
<input type="checkbox"/> Aluminum	47
<input type="checkbox"/> Lithium borohydride	45
<input checked="" type="checkbox"/> Magnesium hydride (MgH <sub>2</sub> )	44
<input type="checkbox"/> Alloys	40
<input type="checkbox"/> Graphite	40
<input type="checkbox"/> Ammonia borane	37
<input type="checkbox"/> Copper	36
<input type="checkbox"/> Carbon fibers	35
<input type="checkbox"/> Magnesium	34
<input type="checkbox"/> Sodium aluminum	33

Selected Terms

Click 'x' to remove the category from 'Selected Terms'

✱ Technology > Substances in technology (1 Terms)

选择和MgH<sub>2</sub>有关的词条

Technology > Substances in technology > 1 Index Term(s) Selected

OK

Cancel



# 主题检索小结




- 关键词之间用介词链接，With，Of，In，On
- 建议2-3个关键词，最多不超过5个
- 候选项选择包含**Concept**和**Closed associated with**的选项
- 可以使用**KMP**时时跟踪文献
- 可以使用**Citing Reference**排序获得被引次数最多的文献
- 尽可能多的使用**Analyze，Refine**，功能对文献进行处理
- 使用**Categorize**对文献进行系统分类
- 可以使用历史导航条返回任意检索界面

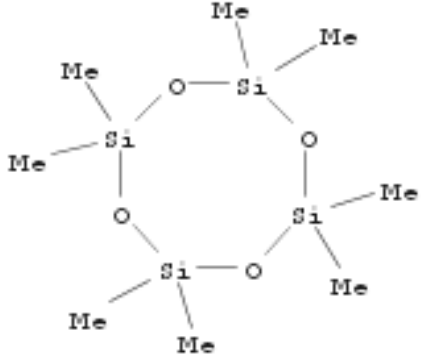
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- **SciFinder Web中的检索和后处理**
  - SciFinder Web中的文献记录及主题检索
  - SciFinder Web中的物质结果及物质检索方法
  - SciFinder Web中的反应记录及反应检索
- **SciFinder Web的注册**

# SciFinder中的物质结果界面

 1. **556-67-2** 

~5137 

~77 



**C<sub>8</sub> H<sub>24</sub> O<sub>4</sub> Si<sub>4</sub>**  
 Cyclotetrasiloxane, 2,2,4,4,6,6,8,8-octamethyl-

[Regulatory Information](#)  
[Spectra](#)  
[Experimental Properties](#)

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

# SciFinder中的物质详情界面

**CAS Registry Number** 556-67-2

~5,137   ~77 

**C<sub>8</sub> H<sub>24</sub> O<sub>4</sub> Si<sub>4</sub>**

Cyclotetrasiloxane, 2,2,4,4,6,6,8,8-octamethyl-

**Molecular Weight**

296.62

**Melting Point (Experimental)**

Value: 17.5 °C

**Boiling Point (Experimental)**

Value: 175 °C

**Density (Experimental)**

Value: 0.9558 g/cm<sup>3</sup>

**Other Names**

Cyclotetrasiloxane, octamethyl- (8CI,9CI)

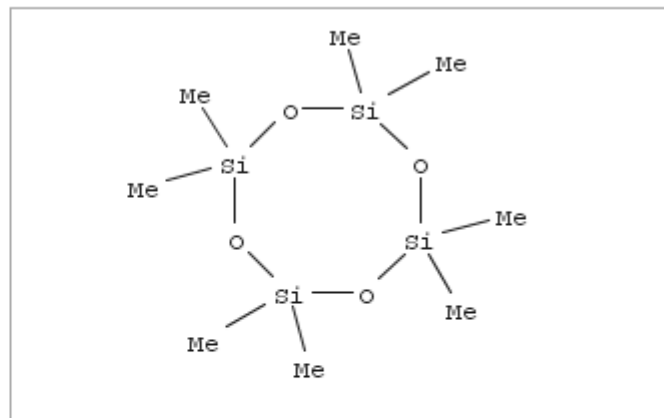
Abil K 4

Cyclic dimethylsiloxane tetramer

D 4

DC 244

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# SciFinder中的物质详情界面（续：实验性质与谱图）

## ▼ EXPERIMENTAL PROPERTIES

Biological	Chemical	Density	Flow and Diffusion	Interface	Lipinski	Optical and Scattering	Thermal
Density Properties		Value	Condition		Note		
Density		1.06 g/cm <sup>3</sup>			(28)CAS		
Density		0.96 g/cm <sup>3</sup>			(22)NIOSH		
Density		0.9561 g/cm <sup>3</sup>	Temp: 20 °C		(4)CAS		
Density		0.9561 g/cm <sup>3</sup>	Temp: 420 °C		(15)CAS		
Density		0.956 g/cm <sup>3</sup>			(8)GELEST		

## ▼ EXPERIMENTAL SPECTRA

<sup>1</sup> H NMR	<sup>13</sup> C NMR	Hetero NMR	IR	Mass	Raman	UV and Visible
Mass Properties		Value	Condition			
Mass Spectrum		See spectrum				
Mass Spectrum		See spectrum				
Mass Spectrum		See spectrum				
Mass Spectrum		See spectrum				
Mass Spectrum		See spectrum				

