



SciFinder®

The choice for chemistry research.™

SciFinder Web使用介绍

李虹

SciFinder培训专员

2015.3

提纲

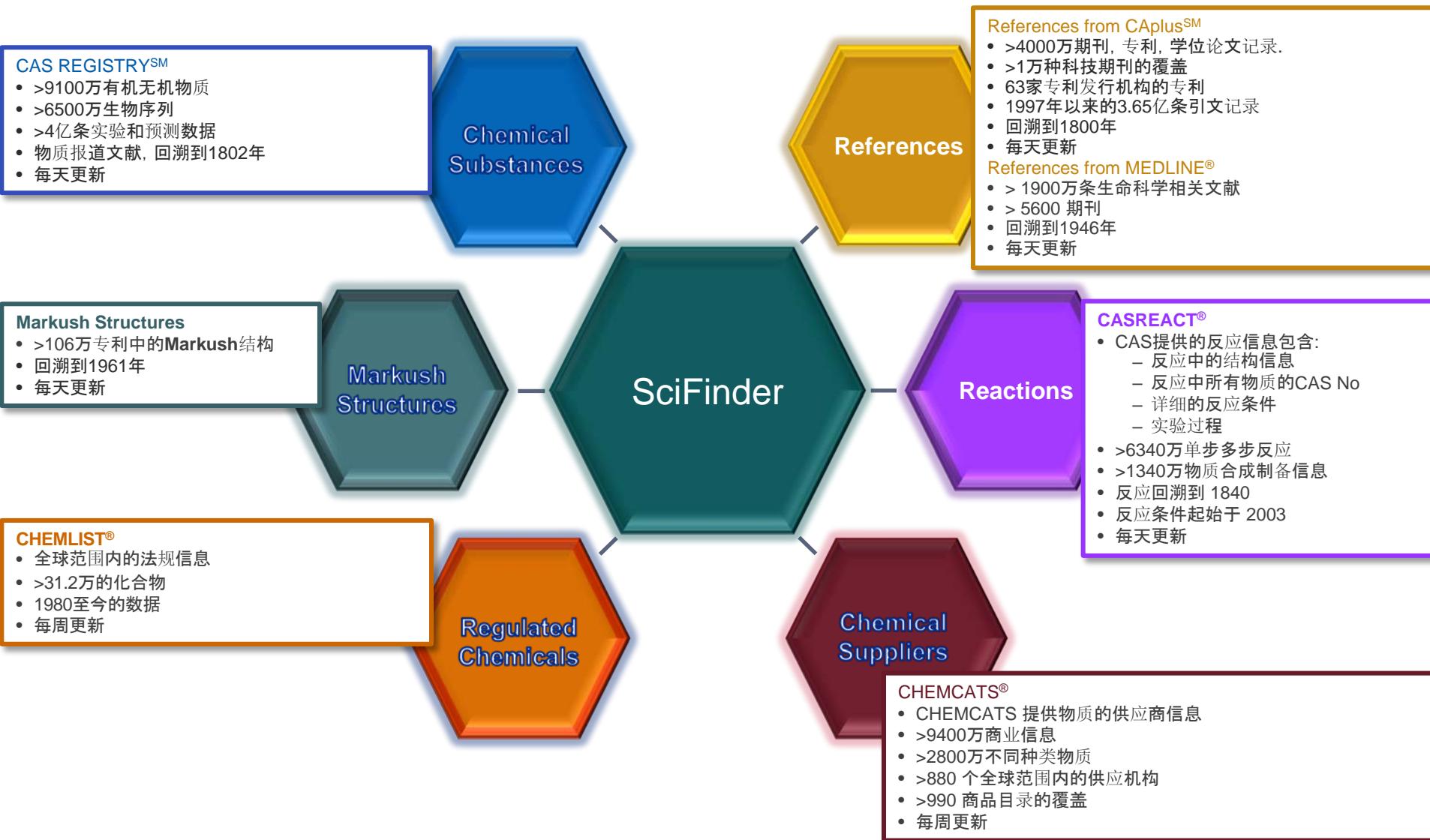
- 介绍
 - SciFinder Web中的内容
- SciFinder Web中的检索和后处理
 - SciFinder Web中的文献记录及主题检索
 - SciFinder Web中的物质结果及物质检索方法
 - SciFinder Web中的反应记录及反应检索
- SciFinder Web的注册

美国化学文摘社—Chemical Abstracts Service

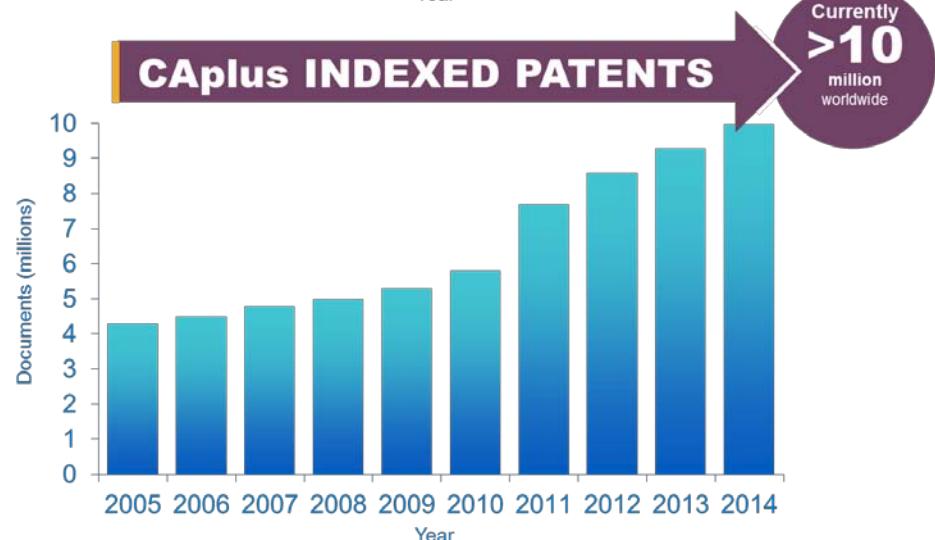
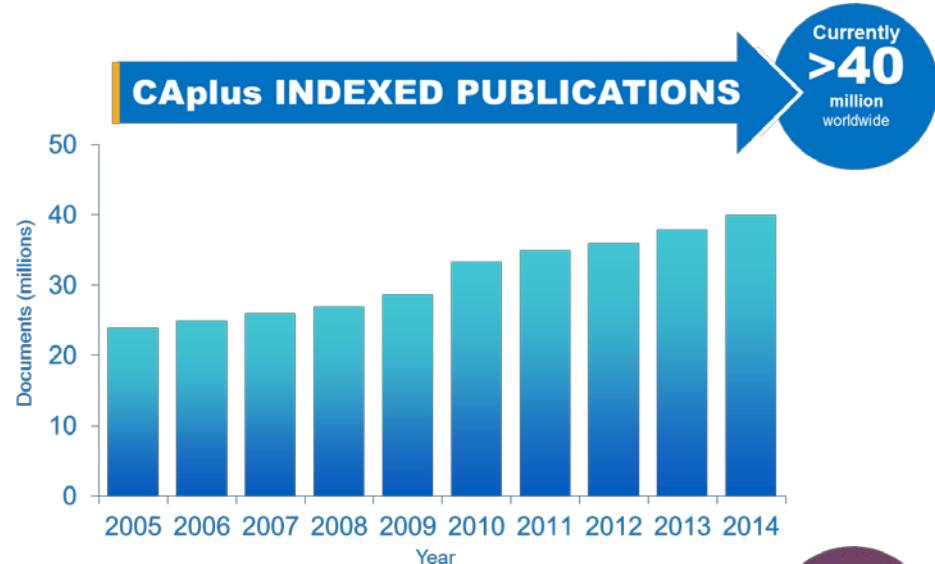
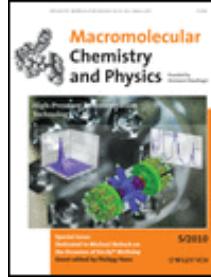
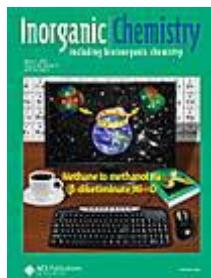
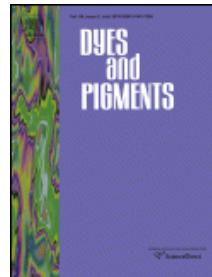
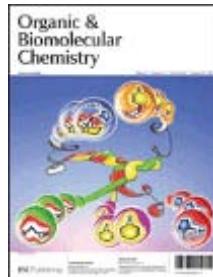
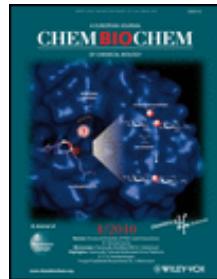
- 创建于1907年
- ACS的分支机构
- 密切关注，索引和提炼着全球化学相关的文献和专利
- 最早创立了《化学文摘》
- 总部坐落于俄亥俄州的哥伦布市



SciFinder的覆盖内容



CAplusSM 涵盖上万种期刊及63个专利发行机构专利



CAS REGISTRYSM 是化学物质信息的“黄金标准”

SciFinder®

Explore ▾ Saved Searches ▾ SciPlanner

SUBSTANCES ?

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

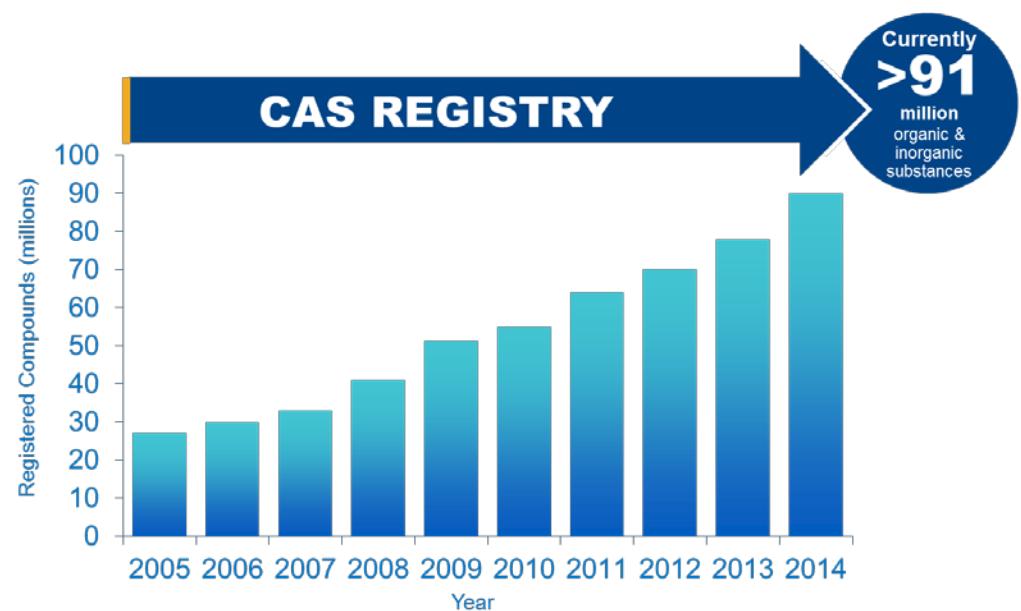
1. 50-18-0

~26818 ~65

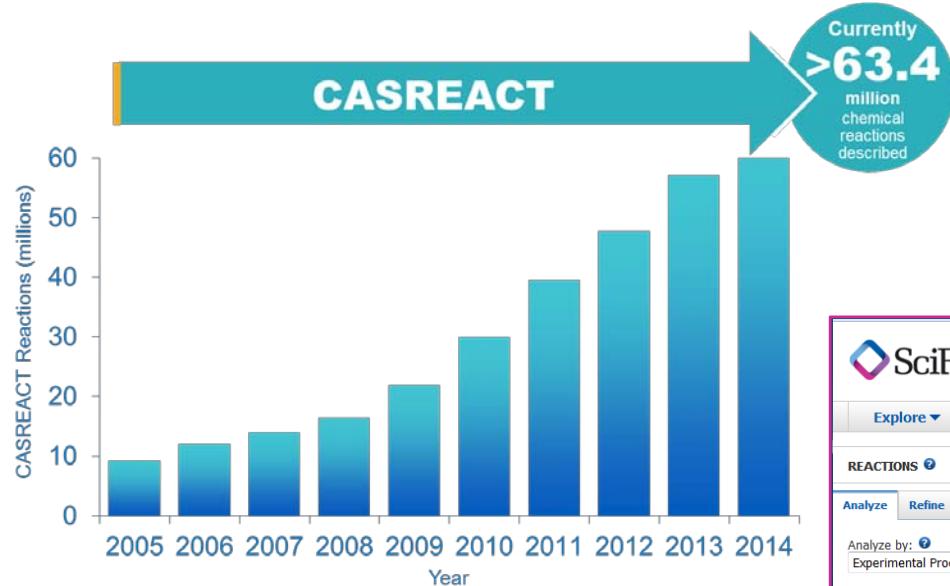
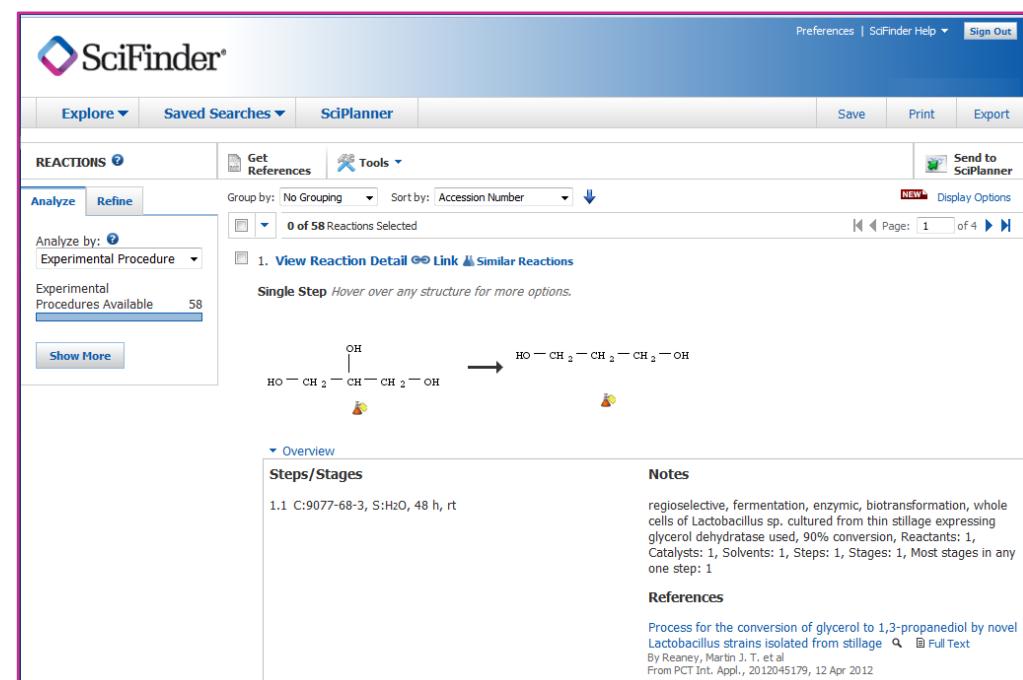
CN(CCCl)C(=O)P(=O)(OCC1CCCC1)N

C₇H₁₅Cl₂N₂O₂P
2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide

Regulatory Information
 Spectra
 Experimental Properties



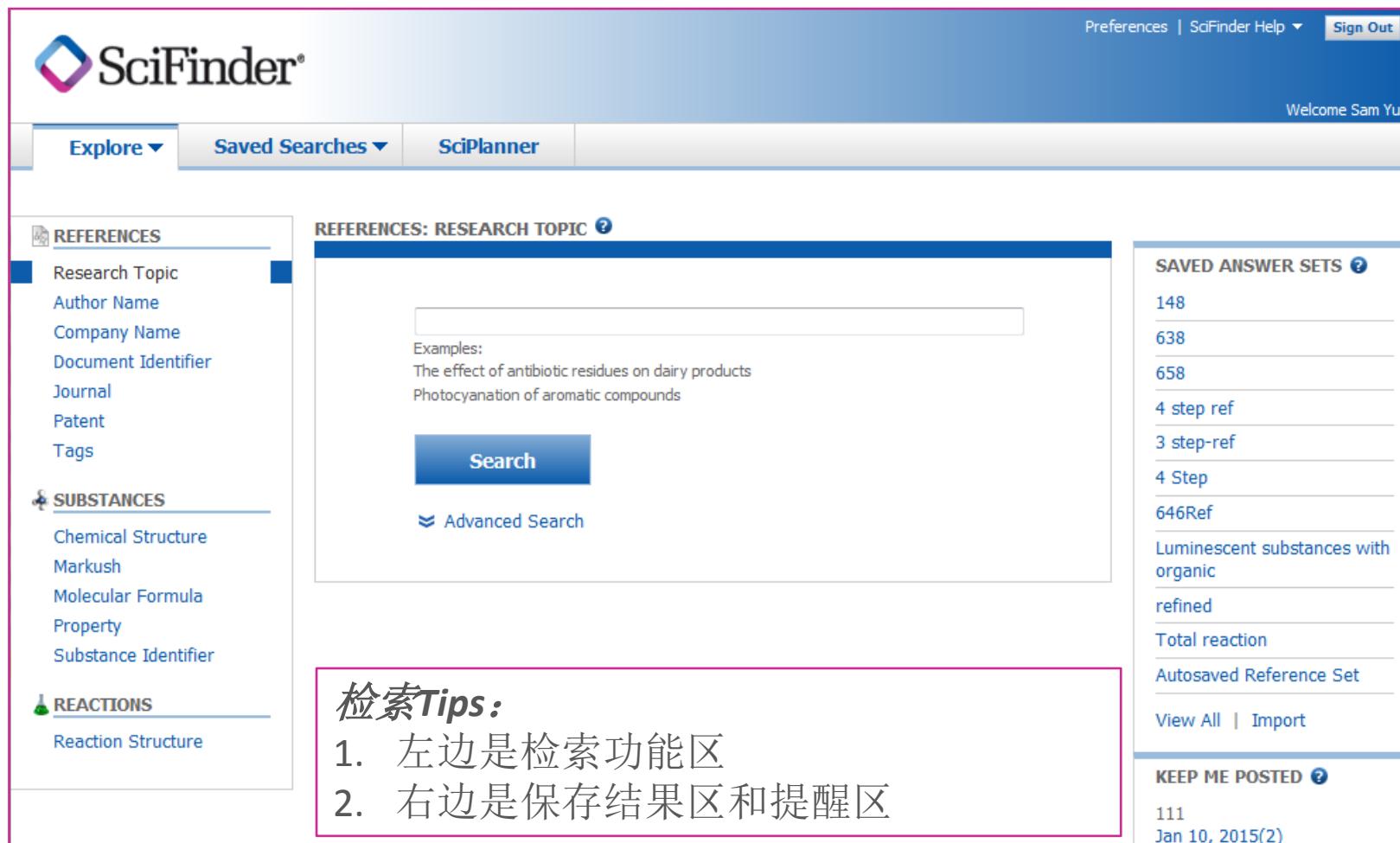
CASREACT® 是检索化学反应最权威的来源

This screenshot shows the SciFinder interface for viewing a reaction detail. The main window displays a chemical reaction scheme where glycerol (HO-CH₂-CH(OH)-CH₂-OH) is converted to 1,3-propanediol (HO-CH₂-CH₂-CH₂-OH). The reaction conditions are listed as C:9077-68-3, S:H₂O, 48 h, rt. The 'Steps/Stages' section details the process as regioselective, fermentative, enzymatic, biotransformation, using whole cells of *Lactobacillus* sp. cultured from thin stillage expressing glycerol dehydratase. The 'References' section includes a citation for Reaney, Martin J. T., et al. (2012).

CASREACT是世界上最大的，更新速度最快的反应数据库

SciFinder登录界面Http://scifinder.cas.org



The screenshot shows the SciFinder login page. At the top right are links for "Preferences", "SciFinder Help", "Sign Out", and a welcome message "Welcome Sam Yu". The main navigation bar includes "Explore", "Saved Searches", and "SciPlanner". On the left, there are three sidebar sections: "REFERENCES" (Research Topic, Author Name, Company Name, Document Identifier, Journal, Patent, Tags), "SUBSTANCES" (Chemical Structure, Markush, Molecular Formula, Property, Substance Identifier), and "REACTIONS" (Reaction Structure). The central search area is titled "REFERENCES: RESEARCH TOPIC" and contains a search input field with examples like "The effect of antibiotic residues on dairy products" and "Photocyanation of aromatic compounds", along with "Search" and "Advanced Search" buttons. To the right, under "SAVED ANSWER SETS", are lists for 148, 638, 658, 4 step ref, 3 step-ref, 4 Step, 646Ref, Luminescent substances with organic refined, Total reaction, and Autosaved Reference Set. Below these are "View All" and "Import" links. A "KEEP ME POSTED" section shows 111 items from Jan 10, 2015(2). A pink box at the bottom left contains the text "检索Tips:" followed by two numbered tips: 1. 左边是检索功能区 and 2. 右边是保存结果区和提醒区.

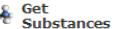
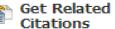
SciFinder Web使用浏览器选择建议

- 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   

 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 ($C \leq 6$) 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 oxides 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 light alkanes to bulk and industrial chems.	
Alkaline earth oxides	Rare earth oxides
catalysts contg.; catalyst-gas phase interactions in selective oxidn. of light alkanes to bulk and industrial chems.	
Catalyst use; Properties; Uses	

Substances

12026-66-3  58834-75-6 
catalyst-gas phase interactions in selective oxidn. of light alkanes to bulk and industrial chems.
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 with a search query "hydrogen storage material with cell" entered in the search bar. The results page displays various search filters and a list of references.

Left Sidebar:

- REFERENCES**
 - Research Topic
 - Author Name
 - Company Name
 - Document Identifier
 - Journal
 - Patent
 - Tags
- SUBSTANCES**
 - Chemical Structure
 - Markush
 - Molecular Formula
 - Property
 - Substance Identifier
- REACTIONS**
 - Reaction Structure

Top Navigation:

- Preferences | SciFinder Help ▾
- Sign Out
- Welcome Sam Yu

Search Bar:

Research Topic "hydrogen storage material with..."

Search Results:

REFERENCES: RESEARCH TOPIC

hydrogen storage material with cell

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

Buttons:

Search Advanced Search

Right Sidebar:

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

Bottom Buttons:

View All | Import

KEEP ME POSTED

Text Overlay:

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

SciFinder

Explore ▾ Saved Searches ▾ SciPlanner

Preferences | SciFinder Help | Sign Out

Welcome Sam Yu

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

REFERENCES ?

Analyze Refine Categorize

Sort by: Accession Number ↓

0 of 846 References Selected

Display Options

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 H₂/kg_{system}), and system volumetric capacities (>0.05 kg H₂/L_{system}). 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-BN/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

Create Keep Me Posted Alert

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

Create Keep Me Posted Profile

Title: * Required

Cell:

Description:

Characters Remaining: 1024

Duration

Expires On: Jan 15, 2016 Change

Frequency

Send updates once every Week

Exclude previously retrieved references.

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

Create Cancel

检索Tips:

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

SciFinder提供的引文排序— Citing Reference

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

REFERENCES

Analyze Refine Categorize

Analyze by: Author Name

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

Sort by: Citing References

Citing References (Selected)

Accession Number
Author Name
Citing References
Publication Year
Title

By Dillon, A. C.; Jones, K. M.; Rekkedahl, 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

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⁻¹ 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 ?

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 ▾

Display Options

0 of 846 References Selected Page: 1 of 43

1. Storage of 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

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⁻¹ at

检索Tips:

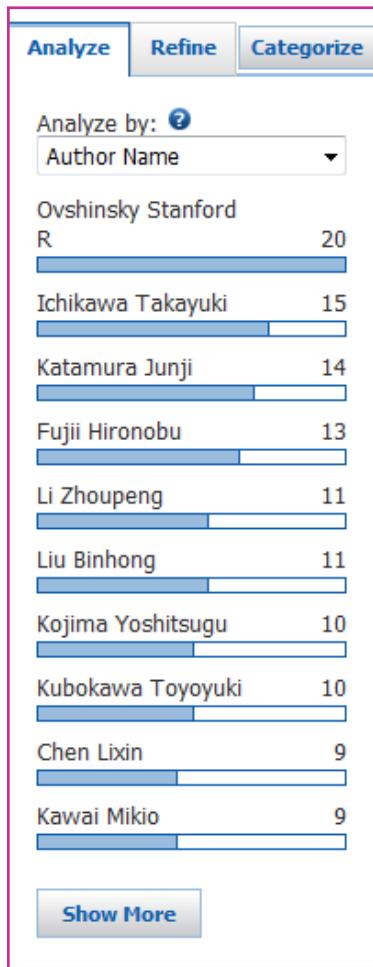
对于大量的文献结果，SciFinder提供：

1. Analyze
2. Refine
3. Categorize

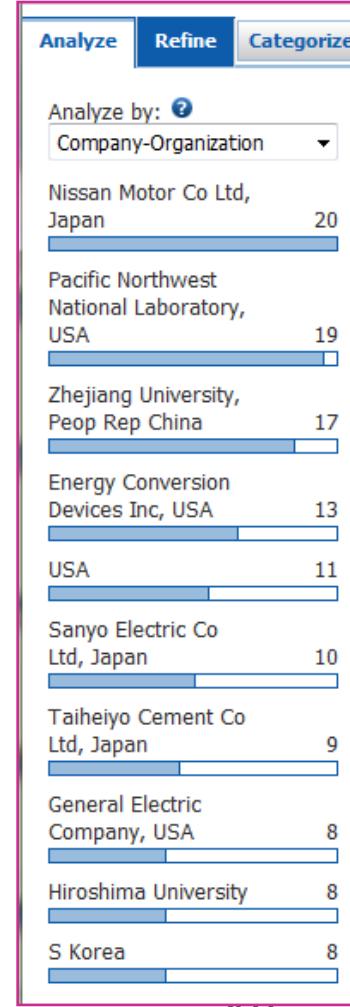
三种文献处理的手段

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

Save Print Export

Keep Analysis Clear Analysis

Explore | Saved Searches | SciPlanner

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

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

REFERENCES

Analyze Refine Categorize

Sort by: Citing References

0 of 846 References Selected

Page: 1 of 3

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 assoc. 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...

SciFinder

Preferences | SciFinder Help | Sign Out

Welcome Sam Yu

Save Print Export

Keep analysis "Journal Name" (56)

Explore | Saved Searches | SciPlanner

REFERENCES

Analyze Refine Categorize

Sort by: Citing References

0 of 56 References Selected

Page: 1 of 3

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

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**.

2. Ammonia and related chemicals as potential indirect hydrogen storage materials

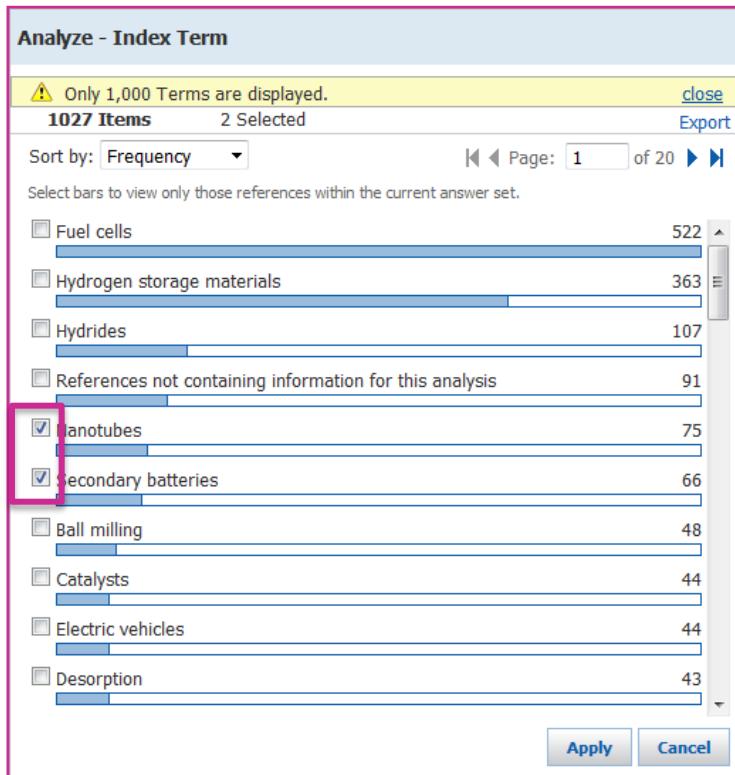
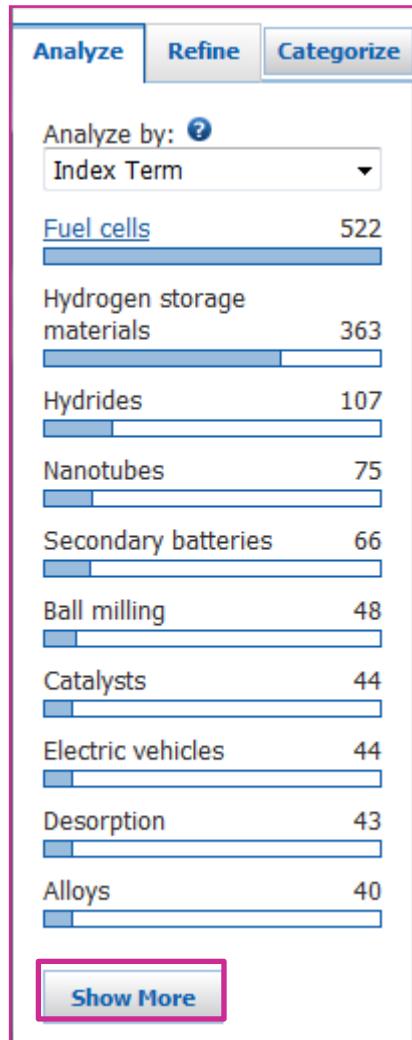
Quick View Full Text
By Lan, Rong; Irvine, John T. S.; Tao, Shanwen
From International Journal of Hydrogen Energy (2012), 37(2), 1482-1494. | Language: English; Database: CAPLUS

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 assoc. 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...

检索Tips:

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:

- 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
- 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:

3M
DuPont

Refine

Refine By Company Name,帮助获得来自某特定机构发表的文献,

SciFinder®

Preferences | SciFinder Help ▾ Sign Out

Welcome Sam Yu

Explore ▾ Saved Searches ▾ SciPlanner Save Print Export

REFERENCES ▾

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

Sort by: Citing References ▾

0 of 152 References Selected

Page: 1 of 8

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

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

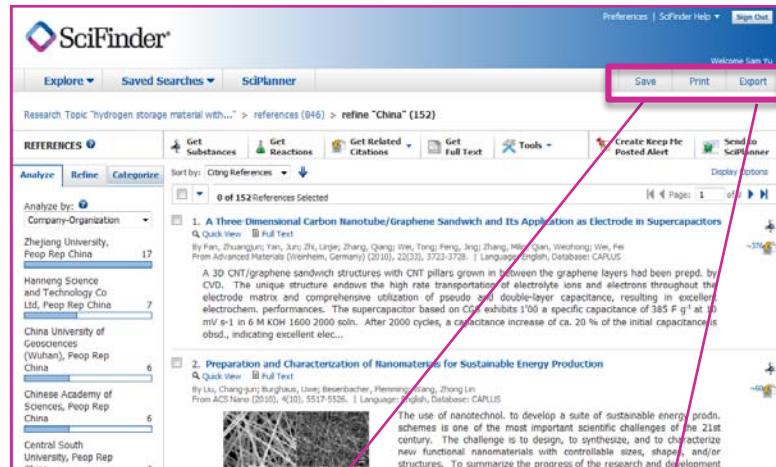
A 3D CNT/graphene sandwich structures with CNT pillars grown in between the graphene layers had been prep'd. by CVD. The unique structure endows the high rate transportation of electrolyte ions and electrons throughout the electrode matrix and comprehensive utilization of pseudo and double-layer capacitance,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

2. Preparation and Characterization of Nanomaterials for Sustainable Energy Production

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



SciFinder

Research Topic: "Hydrogen storage material with..." > references (846) > refine "China" (152)

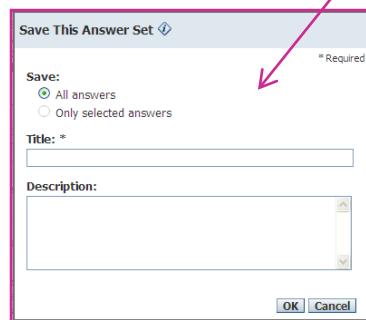
REFERENCES

Analyze Refine Category

0 of 152 References Selected

1. A Three-Dimensional Carbon Nanotube/Graphene Sandwich and Its Application as Electrode in Supercapacitors
By Fan, Zhangjun; Yan, Jun; Zhi, Lige; Zhang, Qiang; Wei, Tong; Peng, Jing; Zhang, Hui; Qian, Weicheng; Wei, Fei
From ACS Nano (2010), 4(10), 5517-5526. | DOI: 10.1021/nn100375f | PubMed ID: 20910742 | CAS Registry Number: 1429-07-5

2. Preparation and Characterization of Nanomaterials for Sustainable Energy Production
By Liu, Chang-jun; Burghaus, Uwe; Bieserbacher, Henner; Wang, Zhong-Lin
From ACS Nano (2010), 4(10), 5517-5526. | DOI: 10.1021/nn100375f | PubMed ID: 20910742 | CAS Registry Number: 1429-07-5



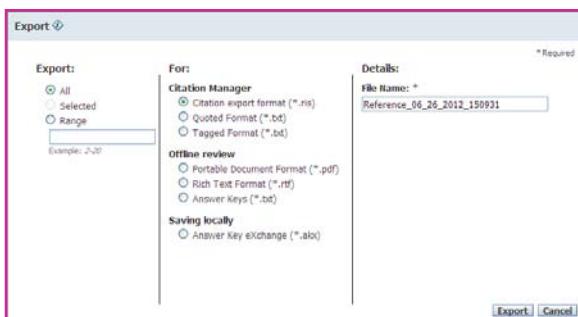
Save This Answer Set

Save:
 All answers
 Only selected answers

Title:

Description:

OK Cancel



Export

For:
 Citation Manager
 Citation export format (*.ris)
 Quoted Format (*.bt)
 Tagged Format (*.bt)

Details:
 * Required
 File Name: Reference_06_26_2012_150931

Offline review:
 Portable Document Format (*.pdf)
 Rich Text Format (*.rtf)
 Answer Keys (*.txt)

Saving locally:
 Answer Key Exchange (*.akx)

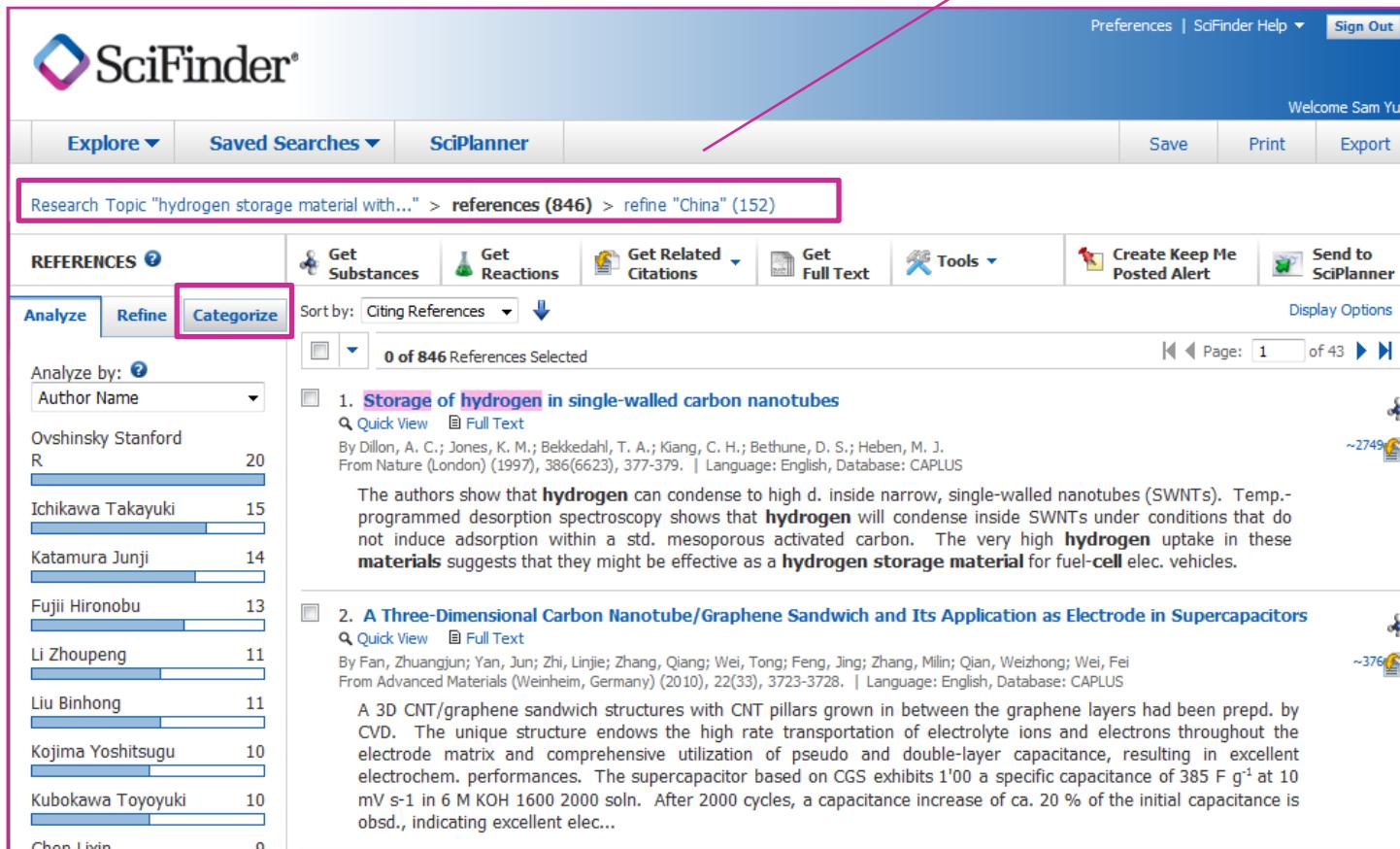
Export Cancel

检索Tips:

1. Save, 将结果保存在网络上，下次登录可以继续检索
2. Export, 将结果保存到本地电脑，其中 Citation manager 保存成 RIS 格式，用于导入 EndNote 等文献管理工具，Offline Review 保存成 PDF, RTF 格式，用于脱机浏览
3. 使用 IE8 浏览器，在使用 Export PDF 时会失败，建议升级 IE 到 IE9 以上，不要使用 360 浏览器，或者开 360 安全卫士，在大多数情况下，会 Export 失败

SciFinder 中的Categorize

通过历史导航条回到任一检索界面



The screenshot shows the SciFinder search results for "hydrogen storage material with...". A pink box highlights the "Categorize" button in the top navigation bar. A pink arrow points from the text "通过历史导航条回到任一检索界面" (Return to any search interface via the history navigation bar) to the "Categorize" button.

REFERENCES

Analyze Refine Categorize

Analyze by: Author Name

Author Name	Count
Ovshinsky Stanford R	20
Ichikawa Takayuki	15
Katamura Junji	14
Fujii Hironobu	13
Li Zhoupeng	11
Liu Binrong	11
Kojima Yoshitsugu	10
Kubokawa Toyoyuki	10
Chen Liyan	9

Sort by: Citing References

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

0 of 846 References Selected

Display Options

1 of 43

1. Storage of 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

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 1'000 a specific capacitance of 385 F g⁻¹ at 10 mV s⁻¹ in 6 M KOH 1600 2000 soln. After 2000 cycles, a capacitance increase of ca. 20 % of the initial capacitance is obstd., 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	Materials & products (245)
Technology	Processes & apparatus (287)
Physical chemistry	Power & fuel topics (44)
Catalysis	Metallurgy (152)
Synthetic chemistry	Formed, removed, & other substances (94)
Polymer chemistry	Ceramics (10)
Environmental chemistry	Construction (12)
Genetics & protein chemistry	Imaging & recording (7)
Analytical chemistry	
Biotechnology	
Biology	

2. Select index terms of interest.

Index Terms	
◀◀ Page: 1 of 13 ▶▶	
<input type="button" value="Select All"/>	<input type="button" value="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 ₂)	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MgH₂有关的词条

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

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

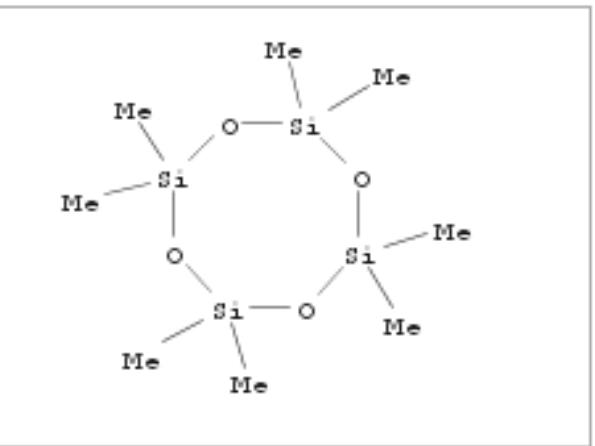
提纲

- 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中的物质结果界面

1. 556-67-2 

 ~5137  ~77 



C₈H₂₄O₄Si₄
Cyclotetrasiloxane, 2,2,4,4,6,6,8,8-octamethyl-

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

一个完整的物质结果
界面向包含：

- 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



C₈H₂₄O₄Si₄

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/cm³

Other Names

Cyclotetrasiloxane, octamethyl- (8CI,9CI)

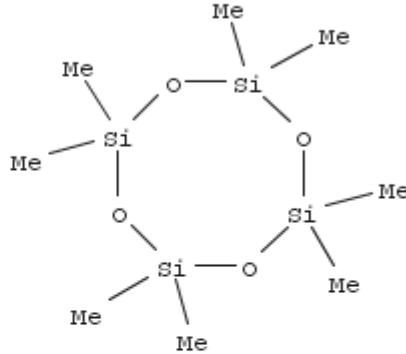
Abil K 4

Cyclic dimethylsiloxane tetramer

D 4

DC 244

[View more...](#)



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 ³					(28)CAS
Density		0.96 g/cm ³					(22)NIOSH
Density		0.9561 g/cm ³		Temp: 20 °C			(4)CAS
Density		0.9561 g/cm ³		Temp: 420 °C			(15)CAS
Density		0.956 g/cm ³					(8)GELEST

EXPERIMENTAL SPECTRA

¹ H NMR	¹³ 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				

