



选题构思指南

利用scopus&scival进行选题思考

2021-11-19

Fu Qiang



核心问题

- 我不知道从哪里找文献
- 我不知道看什么
- 文章太多，看不过来
- 我不知道怎么看
- 看了文章，不知道怎么总结
- 怎么提取思路和逻辑



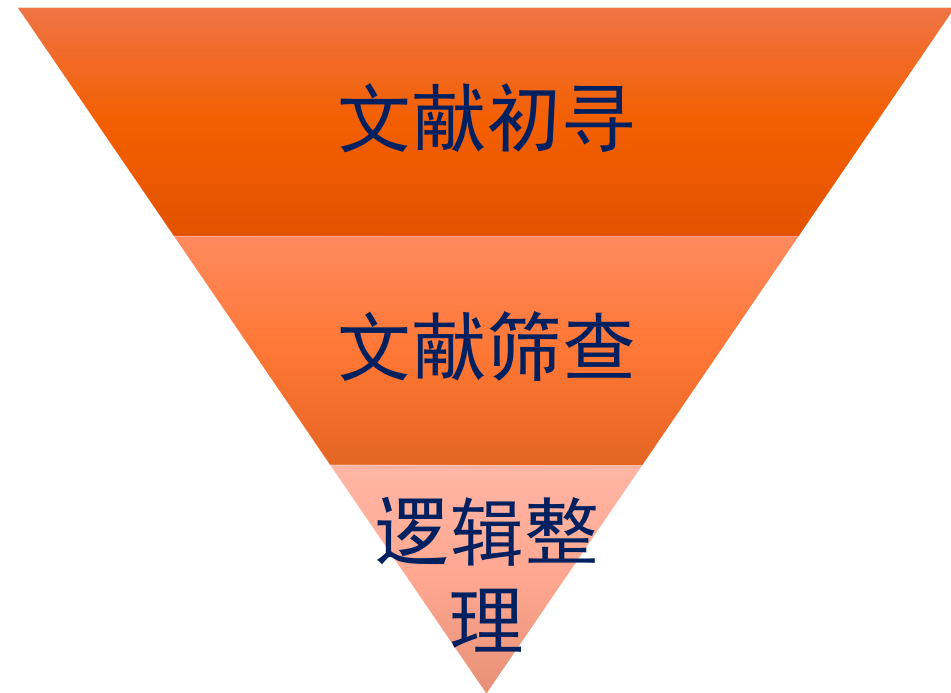
核心目的

- 让大家掌握数据库的检索方法
- 结合数据库的算法，提供一条基于数据分析的可重复性的选题方法策略



Outline

- 基础信息的收集
 - 操作方法
 - 利用Scopus调研课题
 - 利用Scival研究大牛课题进展
- 选题
 - 课题方向下的文献检索
 - 文献阅读-从点开始
- 进阶-逻辑网络的构建与填充
 - 使用思维导图构建网络



Outline

- 基础信息的收集
 - 操作方法（一个好操作的数据库）
 - 利用Scopus调研课题
 - 利用Scival研究大牛课题进展
- 选题
 - 课题方向下的文献检索
 - 文献阅读-从点开始
- 进阶-逻辑网络的构建与填充
 - 使用思维导图构建网络

文献初寻

Scopus® 全球最大的同行评议摘要引文数据库

期刊数量 (按学科分布)	期刊	会议录	图书	专利
自然科学 8,529	24,971 活跃的同行评议期刊 5,656 金色OA期刊(DOAJ/ROAD) 15.8M 基金信息 800K 预印本记录 • 完整的元数据、摘要和引用的参考文献 (仅限于1970年后的参考文献) • 引用可回溯到1970	101K 会议录 10.47M 会议文献 特别覆盖工程、计算机等领域	63.3K 系列丛书 240K 独立图书 2.00M 图书记录 集中在社会科学与人文艺术	46.7M 专利记录 五大专利组织: • WIPO • EPO • USPTO • JPO • UK IPO
医学 7,136				
社会科学 10,574				
生命科学 4,915				

全

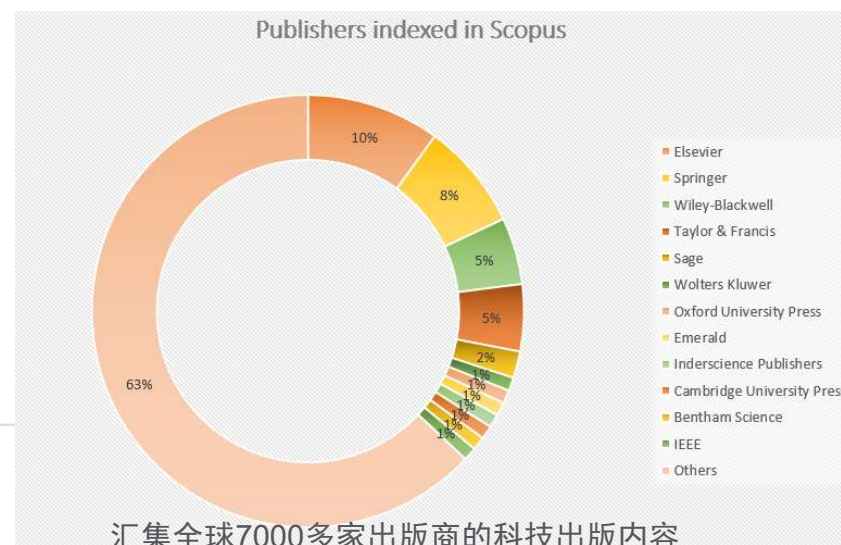
涵盖**98%**以上EI和WOS (SCI\SSCI\AHCI) 内容
 应用领域: 美国国家基金会工程指数报告 (2016-至今)、QS大学排名、THE大学排名、软科大学排名、爱思唯尔中国高被引科学家、斯坦福大学世界科学家榜

一站式科研发现大数据平台: 一库全包, 全回溯、不分库 **全**

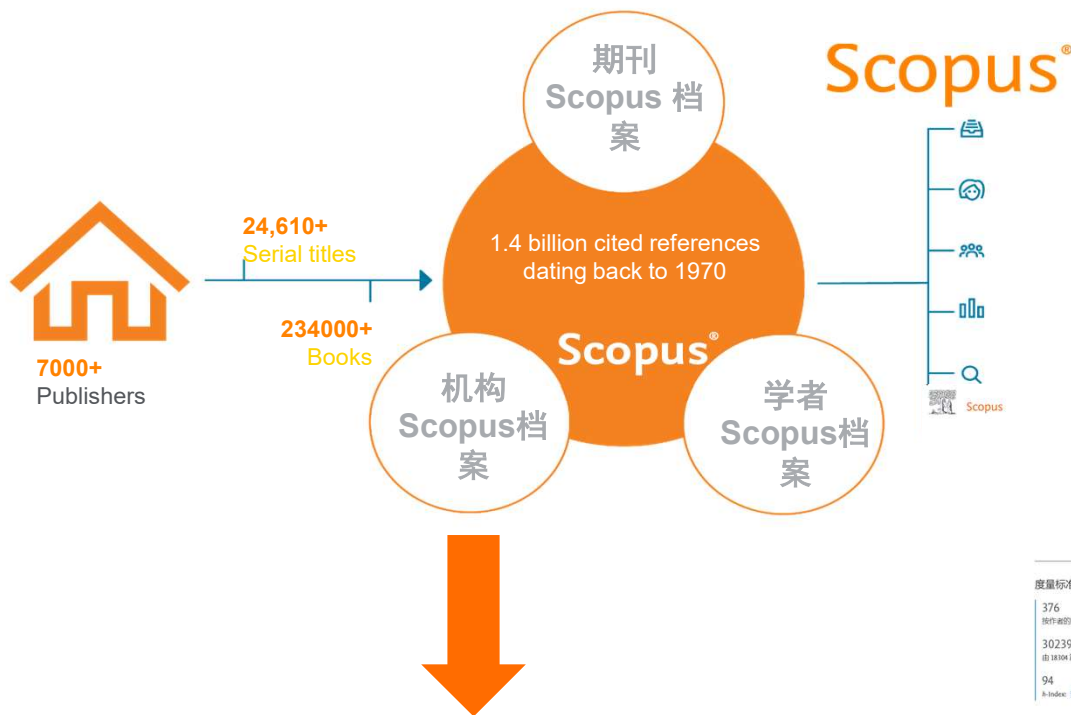
- 内容覆盖: 全球最大的同行评议摘要&引文数据库, 最早回溯至**1778**年
- 科研时效: 每天更新—约**1.1**万条科技文献记录; 收录数据量年均增长率约为8% **新**
- 开放获取: 超过**1749**万条开放获取文献, **5,656**种活跃的金色OA期刊
- 领先一步: 来自**8000**多种期刊的在线发表 (article in press) 文献, **88**万条预印本记录 (集成在作者档案中)
- 立足中国: 超过**860**种中国大陆高质量期刊 **广**



(数据截至2021年7月)



Scopus三份档案



来源出版物详情 **期刊档案**

Journal of Materials Chemistry A

以前属于: Journal of Materials Chemistry
Scopus 涵盖范围年份: 从 2013 至今
出版商: Royal Society of Chemistry
ISSN: 2050-7488 E-ISSN: 2050-7496
学科类别: [Materials Science: General Materials Science](#) [Chemistry: General Chemistry](#) [Energy: Renewable Energy, Sustainability and the Environment](#)
来源出版物类型: 期刊

查看所有文献 设置文献通知 保存到来源出版物列表 Entitled Full Text Capar EZB Ekt. Zeitschriften bib 更多

CiteScore CiteScore 排名趋势 Scopus 内容涵盖范围

CiteScore 2020 **19.7** = 199,466 引文 2017 - 2020
10,114 篇文献 2017 - 2020
丁卯 May, 2021 计算

CiteScoreTracker 2021 **19.8** = 到目前为止 180,991 次引用
到目前为止 9,126 篇文献
最近更新于 Oct, 2021 - 按月更新

CiteScore 排名 2020

类别	排名	百分位
Materials Science	#15,455	96th
General Materials Science		

学者档案 **学者档案**

Zhi, Chunyi

City University of Hong Kong, Kowloon, Hong Kong 显示所有作者信息
8723016900 <https://orcid.org/0000-0001-6266-5953>

编辑资料 设置文献通知 保存到列表 查看作者档案 导出至 Scopus

度量标准概览

376	376 篇出版物
30239	由 18304 篇文献引用
94	h-index 查看 h-graph

文献与引文趋势

最高贡献主题 2016-2020

- NaClO₂/PbO₂ Lithium Manganese Oxide; Lithium-ion Batteries 36 文献
- Electrochemical Capacitors; European Currency System; Adiponitrile 28 文献
- Zinc Air Batteries; Electrocatalysis; Chemical Reduction 18 文献

376 篇文献 被 18304 篇文献引用 1 预印本 666 位合著者 主题 0 Awarded grants

全部导出 全部保存至列表 排序依据 日期 (降序)

> 以检索结果格式查看列表

> 查看篇参考文献

设置文献通知

Article
All-in-one and bipolar-membrane-free acid-alkaline hydrogel electrolytes for flexible high-voltage Zn-air batteries
Zhu, S., Du, T., Du, Y., ... Du, C., Xu, M.
Chemical Engineering Journal, 2022, 418, 112718
查看摘要 View at Publisher 相关文章 DOC XML SOLA JSON

Article - 公开访问
Electrolyte/Structure-Dependent Cocktail Mediation Enabling High-Rate/Low-Plateau Metal
0 Citations



Scopus 机构档案-东北大学

开始浏览

一站式发掘最可靠、最相关的最新研究。

文献 作者 归属机构

检索归属机构 *

Northeastern University



Northeastern University

NO. 3-11, Wenhua Road, Heping District, Shenyang
Liaoning, China
归属机构 ID: 60031863
其他名称格式: (Northeastern University) (Northeastern Univ.) (Northeastern Univ) (Northeast University)

归属机构个人资料操作

- 提供反馈
- 设置文献通知
- 导出学科类别数据

文献, 整个机构
72,326

文献, 仅限归属机构
68,348

作者
20,098

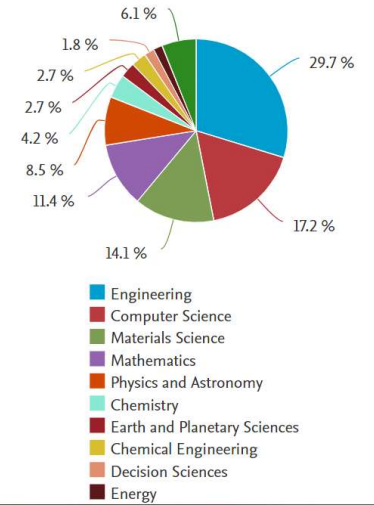
保存至作者列表

按学科类别划分的文献 归属机构层次结构 合作的归属机构 按来源出版物划分的文献

排序依据: 文献数量 (由多到少)

Engineering	43173	Business, Management and Accounting	845
Computer Science	24930	Multidisciplinary	754
Materials Science	20532	Agricultural and Biological Sciences	644
Mathematics	16554	Neuroscience	525
Physics and Astronomy	12366	Pharmacology, Toxicology and Pharmaceutics	202
Chemistry	6108	Economics, Econometrics and Finance	193
Earth and Planetary Sciences	3916	Immunology and Microbiology	170
Chemical Engineering	3870	Health Professions	131
Decision Sciences	2591	Arts and Humanities	104
Energy	2297	Psychology	67
Environmental Science	1816	Nursing	12
Biochemistry, Genetics and Molecular Biology	1359	Dentistry	9

Northeastern University



Outline

- 基础信息的收集
 - 操作方法（一个好操作的数据库）
 - 利用Scopus调研课题
 - 利用Scival研究大牛课题进展
- 选题
 - 课题方向下的文献检索
 - 文献阅读-从点开始
- 进阶-逻辑网络的构建与填充
 - 使用思维导图构建网络

文献初寻

选题的基础原则

- 从文献入手
 - 宁滥勿缺
 - 量变到质变
- 核心诉求
 - 提取关键词
(为之后的搜索提供素材)
 - 找到课题方向



Secondary Batteries; Electric Batteries; Lithium Alloys ★

[Report from template](#)

2016 to 2021

[Data sources](#)

Summary

Institutions

Countries & Regions

Authors

Scopus Sources

More... ∨

Select all | Reset

Lithium-ion
Battery

Electrochemical
Capacitor

Electrode

Electrocatalyst

Lithium

Battery

Graphite

Electrolyte

Nanosheet

Sodium-ion
Battery

Top contributors to the Topic Cluster for the selected
keyphrases:

Institutions

Top 5 by Scholarly Output

Ministry of
Education, China 3112

Chinese Academy of
Sciences 3096

Tsinghua University 1214

University of
Chinese Academy of
Sciences 1166

Central South
University 1121

Countries/Regions

Top 5 by Scholarly Output

进入Scopus主页

www.scopus.com



Scopus

[检索](#) [来源出版物](#) [列表](#) [SciVal ↗](#) [Library catalogue ↗](#)



开始浏览

一站式发掘最可靠、最相关的最新研究。

[文献](#) [作者](#) [归属机构](#)



[检索提示 ?](#)

检索范围
论文标题、摘要、关键字

关键字检索 *

[+ 添加检索字段](#) [Add date range](#) [高级文献检索 >](#)

[检索](#) 🔍



开始检索，您的检索历史将出现在此处。
如需协助以开始检索，请参阅我们的
检索窍门。

案例:探索进行**锌离子电池**相关研究的可行性



概况了解



检索 来源出版物 列表 SciVal ↗



开始浏览

一站式发掘最可靠、最相关的最新研究。

🔍 文献 👤 作者 🏢 归属机构

检索提示 ?

检索范围
论文标题、摘要、关键字

关键字检索 *
Zn ion battery

+ 添加检索字段 📅 添加日期范围 高级文献检索 > ①大方向关键词

重置 检索 🔍

熟练后可进行检索范围和检索式的修订检索

检索历史 New 保存的检索

1 📝 TITLE-ABS-KEY (zn AND ion AND battery)

2,744 个检索结果

🔔 设置通知 ⋮ 更多

🕒 Search history is only available throughout the length of your session. Save your searches to avoid losing them.



概况了解



检索 来源出版物 列表 SciVal ↗



2,744 文献搜索结果

建立感性认知
明确课题的状态

TITLE-ABS-KEY (zn AND ion AND battery)

编辑 保存 设置通知

动态追踪功能：
登录后提供检索式保存功能
保留记录&方便下次检索

在搜索结果内搜索...

精简搜索结果

限制范围 排除

开放获取

All Open Access (423) >

Gold (160) >

Hybrid Gold (51) >

Bronze (123) >



文献 辅助文献 专利

查看 Mendeley Data (20186)

分析搜索结果

②核心分析步骤

显示所有摘要 排序对象: 日期(降序)

全部 导出 Download 查看引文概览 查看施引文献 保存到列表

	文献标题	作者	年份	来源出版物	施引文献
<input type="checkbox"/> 1	Enabling a stable and dendrite-suppressed Zn anode via facile surface roughness engineering	Li, J., Le, K., Wei, W.	2022	Journal of Materials Science and Technology 102, pp. 272-277	0

查看摘要 View at Publisher 相关文章

具体分析



检索 来源出版物 列表 SciVal



分析搜索结果

< 返回搜索结果

导出 打印 电子邮件

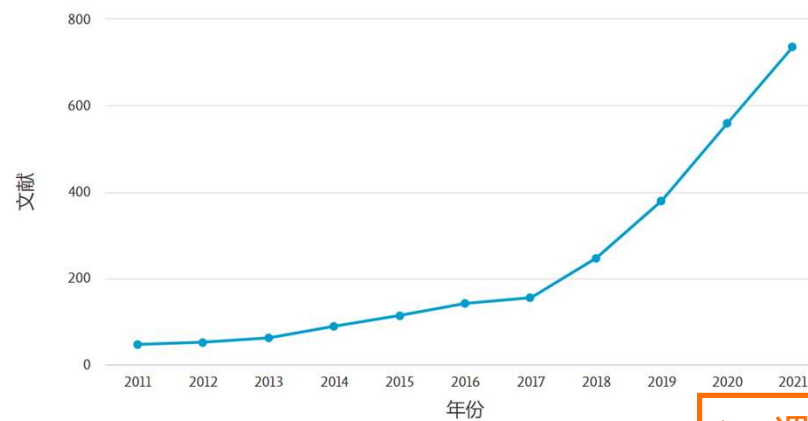
TITLE-ABS-KEY (zn AND ion AND battery)

2,583 文献搜索结果

选择要分析的年份范围: 2011 到 2021 分析

年份 ↓	文献 ↑
2021	736
2020	559
2019	380
2018	247
2017	155
2016	142
2015	114
2014	89
2013	62
2012	53

按年份划分的文献

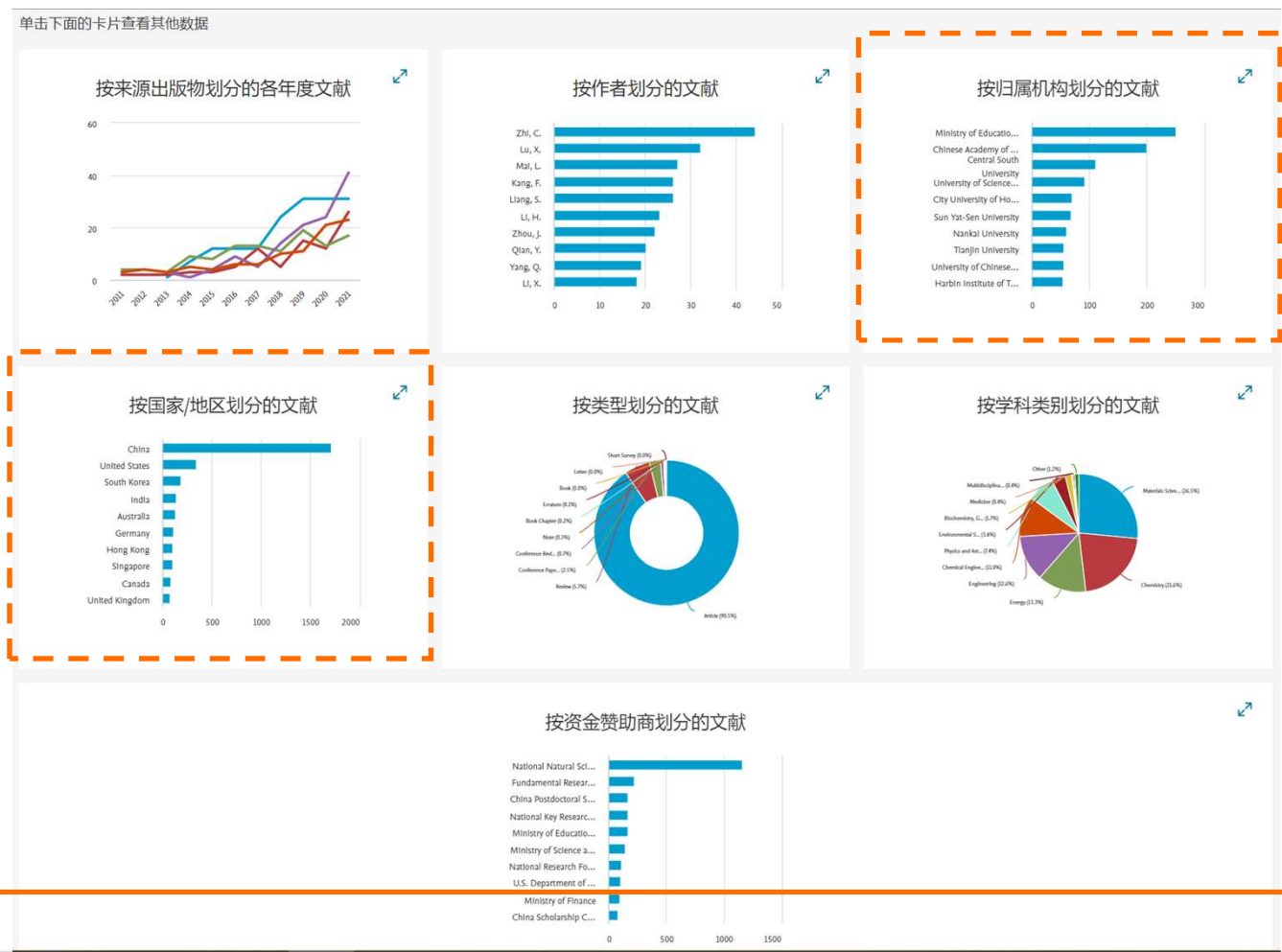


- 课题潜力
 - 文献-年份（近十年）曲线
 - 追涨杀跌
 - 增长速率决定了课题的潜力



fq4 需要补充要点
fu qiang, 2021/10/20

具体分析



课题难度

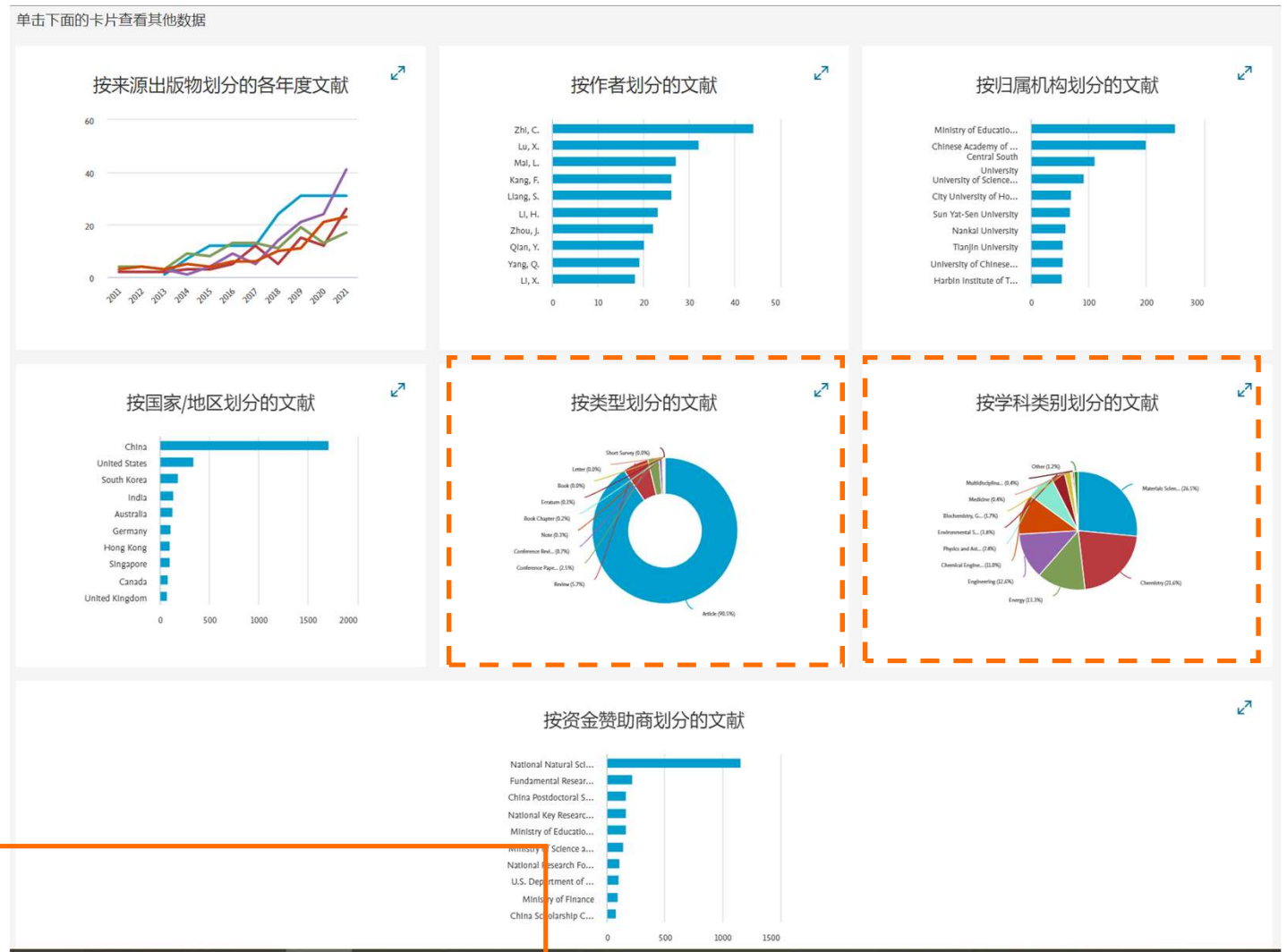


文献-年份曲线-基本盘（现在着手做的难度基础）

机构&地区（重点是中国区）-决定合作，平台，未来科研的发展走向

fq1 需要补充要点
fu qiang, 2021/10/20

概况了解



- 文章发表前景
 - 类型曲线
 - Review
 - Communication&article 决定未来可能
 - Meeting letter &Review 显示历史总结



fq5 需要补充要点
fu qiang, 2021/10/20

概况了解（总结与补充）

开始浏览

一站式发掘最可靠、最相关的最新研究。

文献 作者 归属机构

检索范围
论文标题、摘要、关键字

关键字检索 *
Zn ion battery

①大方向关键词

本阶段掌握核心重点关键

- 知道大方向即可
- 从头开始，只需要知道大课题方向就可以
- 排序对象的选择
 - 日期
 - 相关性
 - 引文数量

2,677 文献搜索结果

TITLE-ABS-KEY (zn AND ion AND battery)

编辑 保存 设置通知

在搜索结果内搜索...

精简搜索结果

限制范围 排除

开放获取

All Open Access (438) >

Gold (157) >

Hybrid Gold (44) >

Bronze (146) >

Green (220) >

详细了解

②核心分析步骤

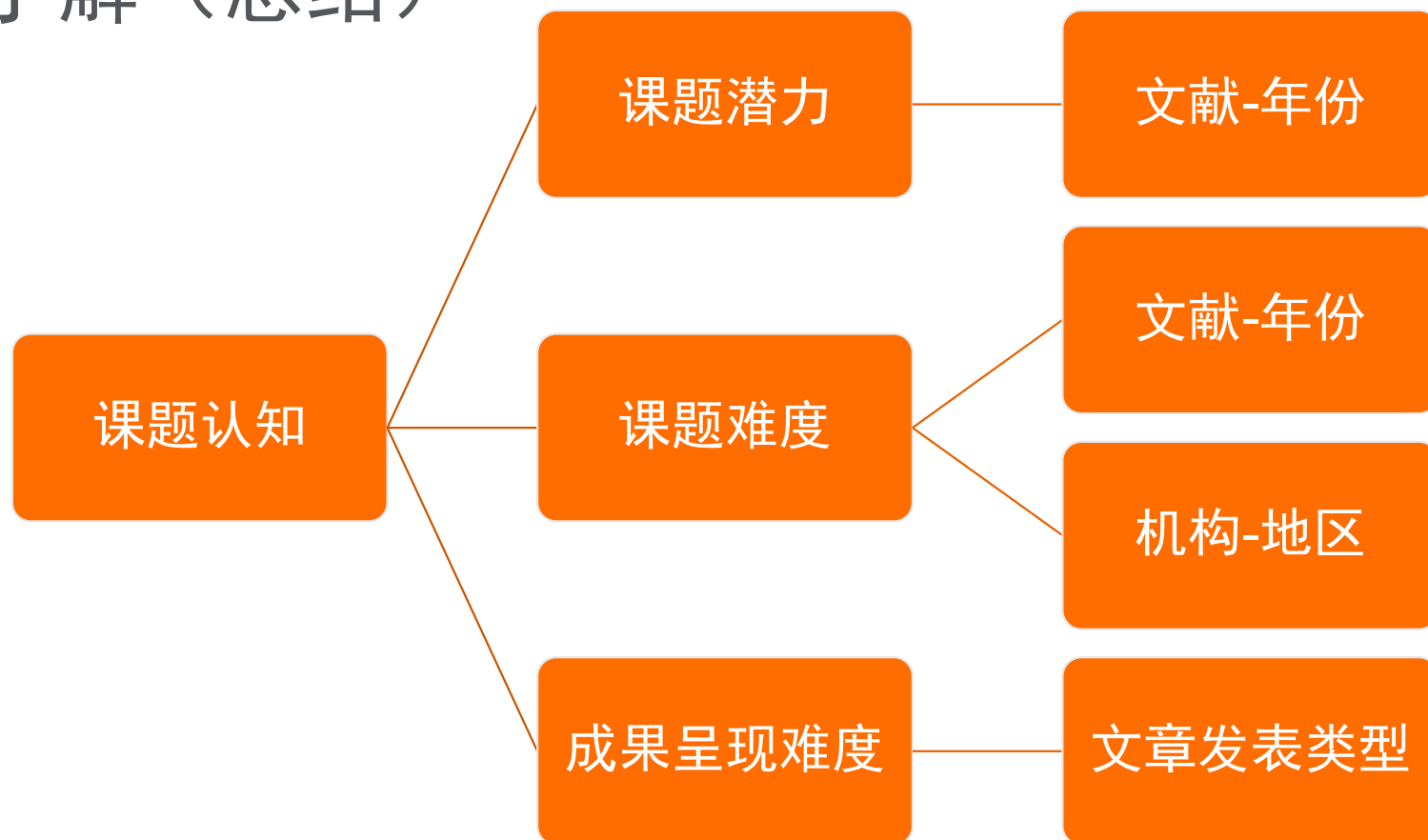
分析搜索结果

日期 (降序)

全部	导出	下载	查看全文	查看引文	添加到列表
文献标题	作者	年份	来源出版物	施引文献				
1 A four-electron Zn-I ₂ aqueous battery enabled by reversible I ⁻ /I ₂ ^{•-} conversion 开放获取	Zou, Y., Liu, T., Du, Q., (...), Zhang, L., Liang, X.	2021	Nature Communications 12(1),170	0				
查看摘要 View at Publisher 相关文章								
2 Interface Engineering via Ti ₃ C ₂ T _x MXene Electrolyte Additive toward Dendrite-Free Zinc Deposition 开放获取	Sun, C., Wu, C., Gu, X., Wang, C., Wang, Q.	2021	Nano-Micro Letters 13(1),89	0				



概况了解（总结）



对锌离子电池做一下课题展望



案例:探索进行**锌离子电池**相关研究的可行性

锌离子电池

2744篇文献

如何开始锌离子电池的调研



检索 来源出版物 列表 SciVal ↗



2,744 文献搜索结果

如何将庞杂的数据量缩减到射程范围内？

TITLE-ABS-KEY (zn AND ion AND battery)

编辑 保存 设置通知

在搜索结果内搜索...

精简搜索结果

限制范围

排除

开放获取

All Open Access (423) >

Gold (160) >

Hybrid Gold (51) >

Bronze (123) >

Green (225) >

文献 辅助文献 专利

查看 Mendeley Data (20186)

分析搜索结果

显示所有摘要 排序对象: 日期(降序)

全部

导出

Download

查看引文概览

查看施引文献

保存到列表



文献标题

作者

年份

来源出版物

施引文献

1

Enabling a stable and dendrite-suppressed Zn anode via facile surface roughness engineering

Li, J., Le, K., Wei, W.

2022

Journal of Materials Science and Technology 102, pp. 272-277

0

查看摘要

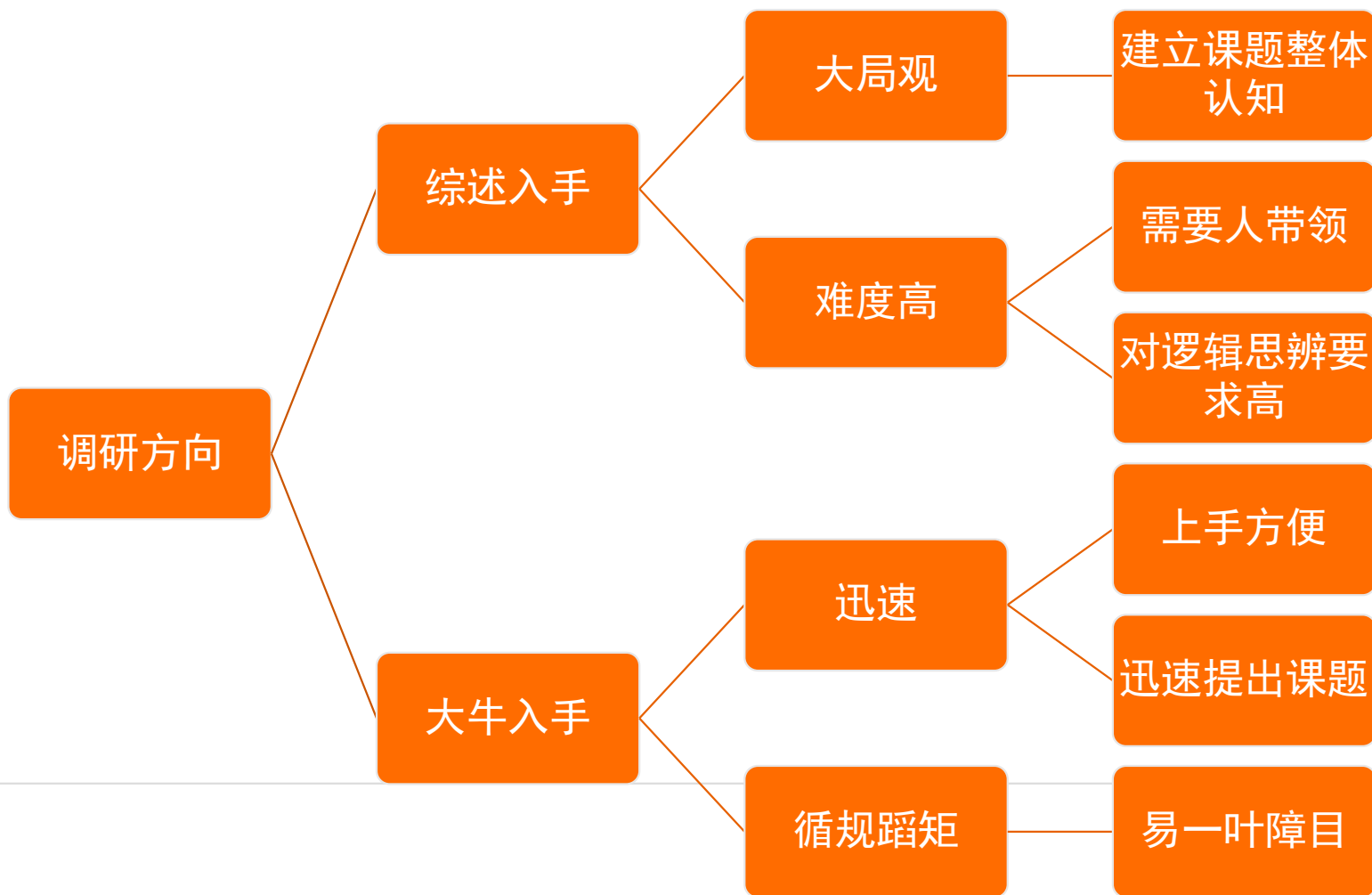


View at Publisher

相关文献



如何开始锌离子电池的调研



寻找领域合适的综述

单击下面的卡片查看其他数据



寻找综述

分析搜索结果

< 返回搜索结果

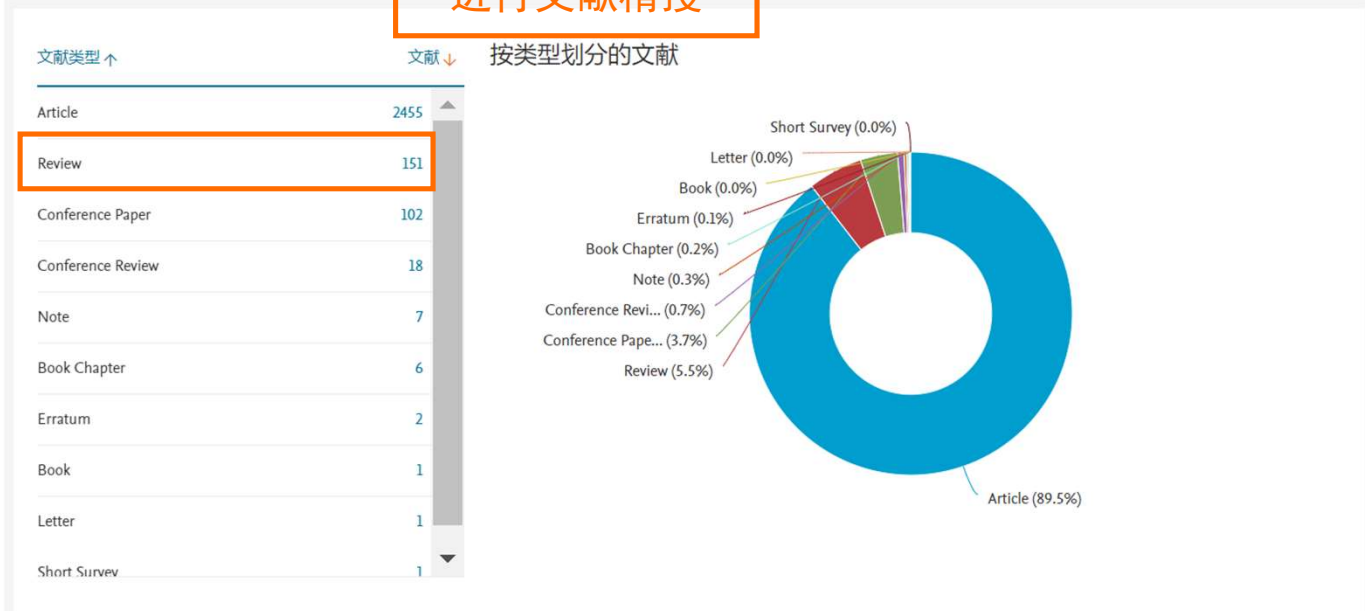
导出 打印 电子邮件

TITLE-ABS-KEY (zn AND ion AND battery)

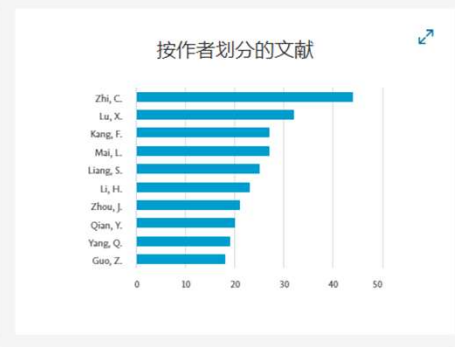
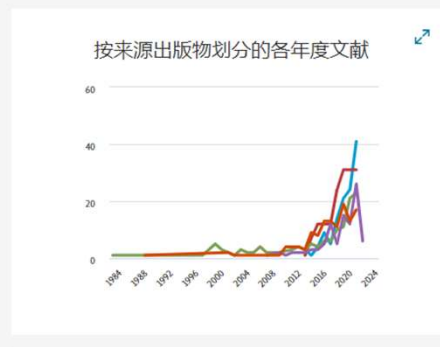
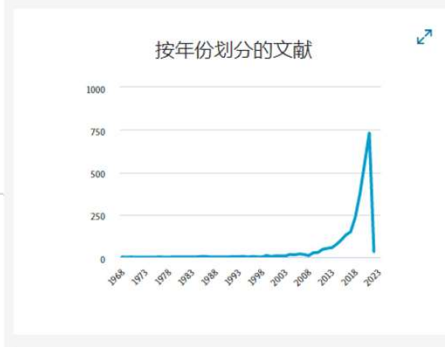
2,744 文献搜索结果

①按照类型划分
进行文献精搜

选择要分析的年份范围: 1968 到 2022 分析



单击下面的卡片查看其他数据



寻找综述

分析搜索结果

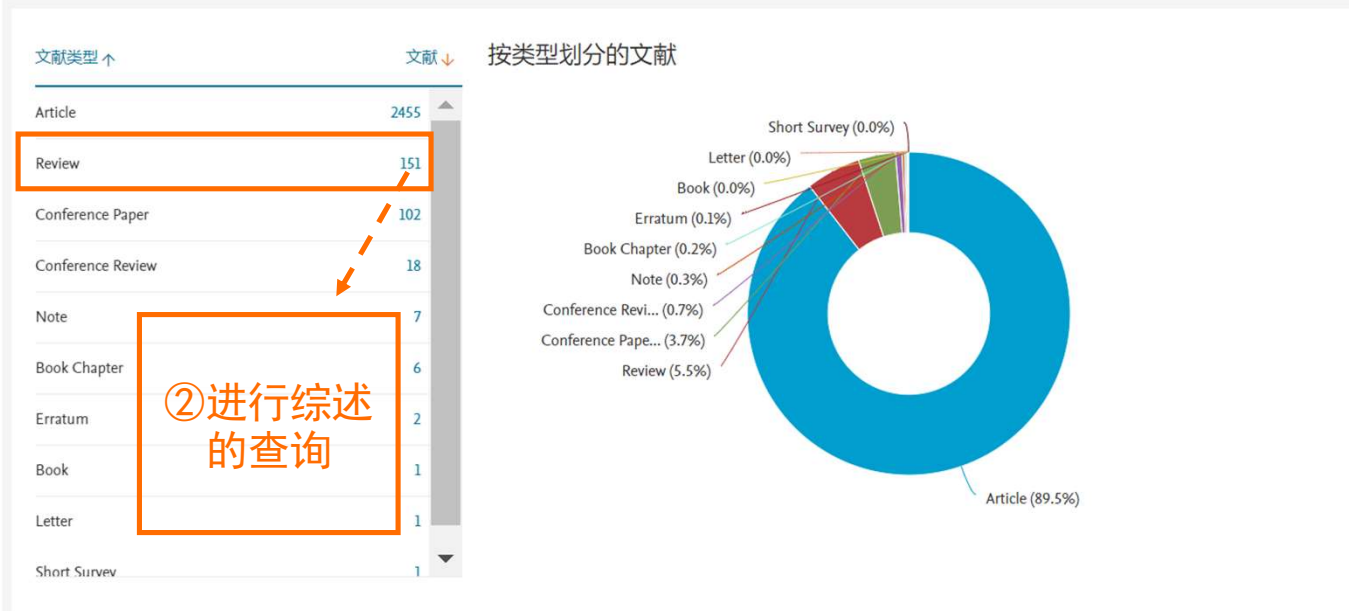
[返回搜索结果](#)

[导出](#) [打印](#) [电子邮件](#)

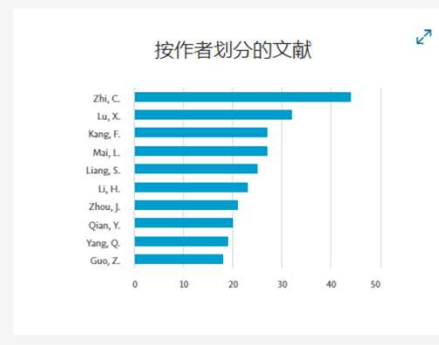
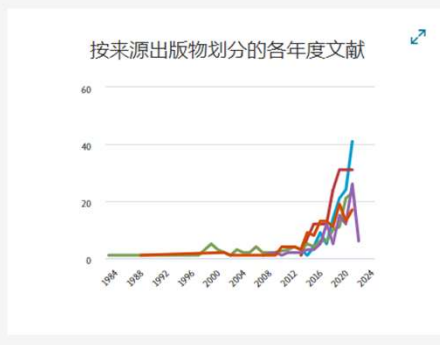
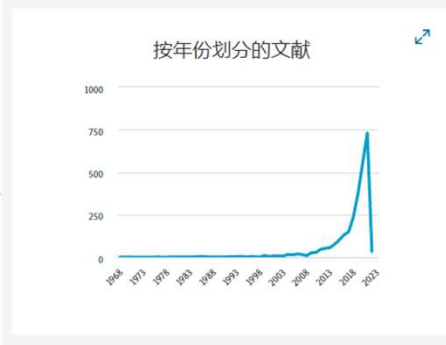
TITLE-ABS-KEY (zn AND ion AND battery)

2,744 文献搜索结果

选择要分析的年份范围: 1968 到 2022 分析



单击下面的卡片查看其他数据



寻找领域合适的综述



检索 来源出版物 列表 SciVal



151 文献搜索结果

TITLE-ABS-KEY (zn AND ion AND battery) AND (LIMIT-TO (DOCTYPE, "re"))

编辑 保存 设置通知

③进行综述的查询

在搜索结果内搜索...

精简搜索结果

限制范围 排除

开放获取

年份

作者姓名

- Mai, L. (5) >
- Fan, H.J. (4) >
- Liang, S. (4) >
- Liu, X. (4) >
- Lu, J. (4) >
- Lu, X. (4) >
- Yuan, C. (4) >
- Hou, L. (3) >
- Li, H. (3) >
- Zhang, H. (3) >

收起 查看全部

文献 辅助文献 专利

查看 Mendeley Data (20188)

分析搜索结果

显示所有摘要 排序对象: 日期(降序)

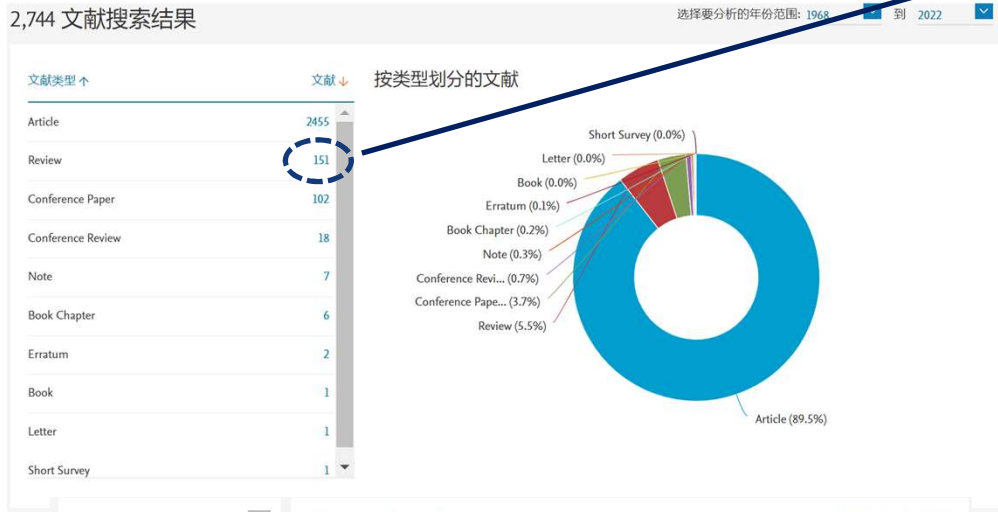
全部 导出 Download 查看引文概览 查看施引文献 保存到列表

	文献标题	作者	年份	来源出版物	施引文献
<input type="checkbox"/> 1	Different surface modification methods and coating materials of zinc metal anode	Tao, F., Liu, Y., Ren, X., (...), Wei, S., Ma, J.	2022	Journal of Energy Chemistry 66, pp. 397-412	1
	查看摘要	View at Publisher	相关文章		
<input type="checkbox"/> 2	Interfacial parasitic reactions of zinc anodes in zinc ion batteries: Underestimated corrosion and hydrogen evolution reactions and their suppression strategies	Bayaguud, A., Fu, Y., Zhu, C.	2022	Journal of Energy Chemistry 64, pp. 246-262	0
	查看摘要	View at Publisher	相关文章		
<input type="checkbox"/> 3	Multivalent metal-sulfur batteries for green and cost-effective energy storage: Current status and challenges	Yang, Y., Yang, H., Wang, X., Bai, Y., Wu, C.	2022	Journal of Energy Chemistry 64, pp. 144-165	3
	查看摘要	View at Publisher	相关文章		
<input type="checkbox"/> 4	Rational Design of MOF-Based Materials for Next-Generation Rechargeable Batteries	Ye, Z., Jiang, Y., Li, L., Wu, F., Chen, B.	2021	Nano-Micro Letters 12(1), pp. 1-12	0



寻找综述（总结）

2,744 文献搜索结果



文献类型 ↑

文献 ↓

Article

2455

Review

151

- 这个阶段需要大量的阅读
 - 需要精度，积累
 - 明确体系基本的脉络和发展
- 挖掘问题（核心）
 - 广度考量
 - 多角度（表里互相借鉴）
 - 深度考量

提供批量导出和下载功能

文献标题	作者	年份	来源出版物	施引文献
1 Zn-ion hybrid supercapacitors: Achievements, challenges and future perspectives	Wang, H., Ye, W., Yang, Y., Zhong, Y., Hu, Y.	2021	Nano Energy 85,105942	0
2 Guest-species-incorporation in manganese/nanadium-based oxides: Towards high performance aqueous zinc-ion batteries	Li, Y., Zhang, D., Huang, S., Yang, H.Y.	2021	Nano Energy 85,105969	0
3 Carbon nanotubes-based electrode for Zn ion batteries	Gao, X., Yin, W., Liu, X.	2021	Materials Research Bulletin 138,111246	0



在scopus文献检索结果页面，直接批量下载原文*

分析搜索结果 显示所有摘要 排序对象: 施引文献 (最多数量) ▼

全部 Scival 导出 ▼ 下载 查看引文概览 查看施引文献 保存到列表 ... 📄 ✉ 📄

	文献标题	作者	年份	来源出版物	施引文献
<input checked="" type="checkbox"/> 1	Tissue Engineered Skin Substitutes Created by Laser-Assisted Bioprinting Form Skin-Like Structures in the Dorsal Skin Fold Chamber in Mice <i>公开访问</i>	Michael, S., Sorg, H., Peck, C.-T., (...), Vogt, P.M., Reimers, K.	2013	PLoS ONE 8(3),e57741	257
	查看摘要 ▼	Full Text	View at Publisher	相关文章	
<input checked="" type="checkbox"/> 2	Human Skin 3D Bioprinting Using Scaffold-Free Approach	Pourchet, L.J., Thepot, A., Albouy, M., (...), Blum, L.J., Marquette, C.A.	2017	Advanced Healthcare Materials 6(4),1601101	84
	查看摘要 ▼	Full Text	View at Publisher	相关文章	
<input checked="" type="checkbox"/> 3	3D cell printing of in vitro stabilized skin model and in vivo pre-vascularized skin patch using tissue-specific extracellular matrix bioink: A step towards advanced skin tissue engineering	Kim, B.S., Kwon, Y.W., Kong, J.-S., (...), Kim, J.H., Cho, D.-W.	2018	Biomaterials 168, pp. 38-53	65
	查看摘要 ▼	Full Text	View at Publisher	相关文章	

勾选多篇目标文献，点击下载



- *原文包括OA文献和机构已订购文献；
- *第一次下载需要安装scopus download manager 插件（可联系图书馆获取）
- *每次可批量下载最多50篇原文

文献批量下载中（以chrome浏览器为例）

Scopus Document Download Manager



 Some documents may not download in full text due to restrictions on the publisher's side.








1. 3D printing of a thermosensitive hydrogel for skin tissue engineering: A proof of concept study
2. Three Dimensional Bioprinting of a Vascularized and Perfusable Skin Graft Using Human Keratinocytes, Fibroblasts, Pericytes, and Endothelial Cells *Open Access*
3. A review of 3D bio-printing for bone and skin tissue engineering: a commercial approach
4. Handheld instrument for wound-conformal delivery of skin precursor sheets improves healing in full-thickness burns
5. Clinical pilot study to evaluate the neovaginal PACIENA prosthesis® for vaginoplasty without skin grafts in women with vaginal agenesis *Open Access*
6. A New Method for Securing Dermal Substitutes and Skin Grafts to Difficult Portions of the Face Using a Custom 3D-Printed Facemask
7. Emerging and innovative approaches for wound healing and skin regeneration: Current status and advances



Scopus Document Download Manager



 4 full-text documents were successfully downloaded as PDFs in your personal Downloads folder.

1. 3D printing of a thermosensitive hydrogel for skin tissue engineering: A proof of concept study Downloaded 
2. Three Dimensional Bioprinting of a Vascularized and Perfusable Skin Graft Using Human Keratinocytes, Fibroblasts, Pericytes, and Endothelial Cells *Open Access* Downloaded 
3. A review of 3D bio-printing for bone and skin tissue engineering: a commercial approach Check publisher site 
4. Handheld instrument for wound-conformal delivery of skin precursor sheets improves healing in full-thickness burns Check publisher site 
5. Clinical pilot study to evaluate the neovaginal PACIENA prosthesis® for vaginoplasty without skin grafts in women with vaginal agenesis *Open Access* Downloaded 
6. A New Method for Securing Dermal Substitutes and Skin Grafts to Difficult Portions of the Face Using a Custom 3D-Printed Facemask Check publisher site 
7. Emerging and innovative approaches for wound healing and skin regeneration: Current status and advances Downloaded 

Done

案例:探索进行**锌离子电池**相关研究的可行性

锌离子电池

2744 篇文献

151 篇综述

Outline

- 基础信息的收集
 - 操作方法
 - 利用Scopus调研课题
 - 利用Scival研究大牛课题进展
- 选题
 - 课题方向下的文献检索
 - 文献阅读-从点开始
- 进阶-逻辑网络的构建与填充
 - 使用思维导图构建网络



步骤



Scopus

Scival

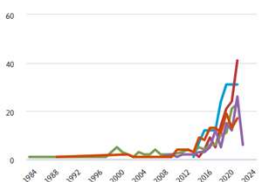


操作步骤

① 点击按作者划分的文献

单击下面的卡片查看其他数据

按来源出版物划分的各年度文献



按作者划分的文献



按归属机构划分的文献



分析搜索结果

② 找到第一个作者

< 返回搜索结果

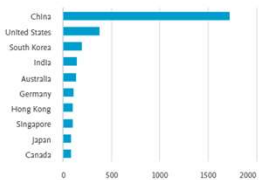
TITLE-ABS-KEY (zn AND ion AND battery)

2,744 文献搜索结果

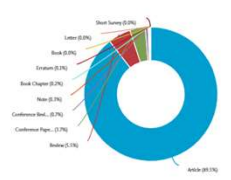
选择要分析的年份范围: 1968 到 2022 分析

导出 打印 电子邮件

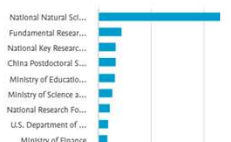
按国家/地区划分的文献



按类型划分的文献



按资金赞助商划分的文献



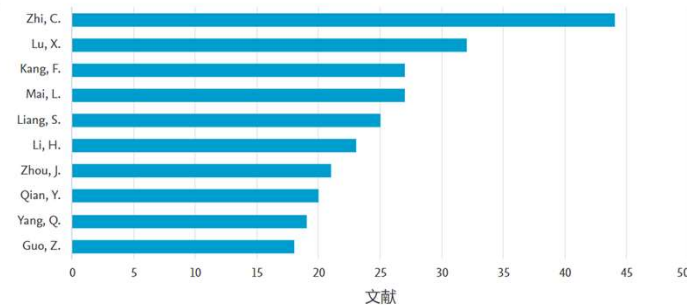
作者 ↑

文献 ↓

作者	文献
Zhi, C.	44
Lu, X.	32
Kang, F.	27
Mai, L.	27
Liang, S.	25
Li, H.	23
Zhou, J.	21
Qian, Y.	20
Yang, Q.	19
Guo, Z.	18

按作者划分的文献

比较最多 15 位作者的文献数量。



单击下面的卡片查看其他数据

操作步骤



检索 来源出版物 列表 SciVal ↗



该作者记录由 Scopus 生成 [了解更多](#)

Zhi, Chunyi

[City University of Hong Kong, Kowloon, Hong Kong](#) [显示所有作者信息](#)

[8723016900](#) <https://orcid.org/0000-0001-6766-5953>

[编辑资料](#) [设置通知](#) [保存至列表](#) [潜在作者匹配](#) [导出至 SciVal](#)

③用scival进行研究

➤ 寻找到合适的领军人物

- 文章状态
- 课题相关性
- 引文趋势

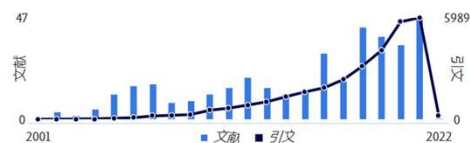
度量标准概览

376
按作者的文献

30239
由 18304 篇文献引用

94
h-Index [查看 h-graph](#)

文献与引文趋势



[分析作者的产出](#) [引文概览](#)

最高贡献主题 2016–2020

Nati2(Po4)3; Lithium Manganese Oxide; Lithium-ion Batteries
36 文献

Electrochemical Capacitors; European Currency System; Adiponitrile
28 文献

Zinc Air Batteries; Electrocatalysts; Chemical Reduction
14 文献

[查看所有主题](#)

376 篇文献 被 18304 篇文献引用 1 预印本 ^{New} 666 位合著作者 主题 0 Awarded grants ^{Beta}

[全部导出](#) [全部保存至列表](#)

排序依据 [日期 \(降序\)](#)

[以检索结果格式查看列表](#)

[查看 篇参考文献](#)

[设置文献通知](#)

Article
All-in-one and bipolar-membrane-free acid-alkaline hydrogel electrolytes for flexible high-voltage Zn-air batteries
Zhao, S., Liu, T., Dai, Y., ...Zhi, C., Ni, M.
Chemical Engineering Journal, 2022, 430, 132718
[查看摘要](#) [View at Publisher](#) [相关文章](#) [DOC XML](#) [SOLR JSON](#) 0 Citations

Article · 公开访问
Electrolyte/Structure-Dependent Cocktail Mediation Enabling High-Rate/Low-Plateau Metal
... 0 Citations



操作步骤

www.scival.com 登录后使用

Scival的overview模块

Overall research performance

209 Scholarly Output
12,996 All Open Access
61.3 Citations per Publication

5.58 Field-Weighted Citation Impact
93 h-index

Publications by Subject Area

Research Topics

Topic Clusters Topics

Top 5 Topics, by Scholarly Output

Topic	By this Researcher		Worldwide
	Scholarly Output	Field-Weighted Citation Impact	Prominence percentile
Ni ₂ (PO ₄) ₃ ; Lithium Manganese Oxide; Lithium-ion Batteries ... T.23080 Analyze activity of Researcher Analyze worldwide	50	8.62	99.908
Electrochemical Capacitors; European Currency System; Adiponitrile ... T.16939	31	5.47	99.734
Zinc Air Batteries; Electrocatalysts; Chemical Reduction ... T.350	15	7.86	99.983
Titanium Carbide; Sodium-ion Batteries; Ion Storage ... T.34461	14	7.92	99.943
Sodium-ion Batteries; Ni ₂ (PO ₄) ₃ ; Ion Storage ... T.1727	11	4.07	99.976

④ 获得课题簇

ELSEVIER

操作步骤

Scival的trend模块

The screenshot displays the SciVal Trends module interface. At the top, the navigation menu includes Overview, Benchmarking, Collaboration, Trends (highlighted with an orange circle), Grants, Reporting, My SciVal, and Scopus. The main content area is titled '2016 to 2021' and features a 'Topic character' section with two radio buttons: 'Keyphrase analysis' (selected and circled in orange) and 'Representative publications'. Below this, it states 'Top 50 keyphrases by relevance, based on 1,869 publications'. The central part of the interface is a word cloud where 'Battery' is the largest word, followed by 'Zinc', 'Electrode', 'Lithium-ion Battery', 'Manganese Oxide', and 'Energy Storage'. Other visible terms include 'Vanadium Dioxide', 'Graphene Oxide', 'Long Cycle', 'Saline Water', 'Solid State', 'Capacitor', 'Nanoribbon', 'Electric Battery', 'Energy Density', 'Vanadium Oxide', 'Vanadium', 'Secondary Battery', 'Electrochemical Property', 'Interlayer', 'Vanadate', 'Ion Storage', 'Chimera', 'Manganese Oxide', 'Nanotube', 'Ion', 'High Performance', 'Graphite', 'Vanadium Compound', 'Energy Storage', 'Solid Electrolyte', 'Electrochemical Capacitor', 'Manganese Dioxide', 'Solid-state Battery', 'Lithium Compound', and 'Nanowire'. An orange arrow points from a box containing the text '⑤获得一个小课题' to the word 'Zinc' in the word cloud. At the bottom, there is a legend: 'AAA relevance of keyphrase | declining AAA growing (2016-2020)'. On the left sidebar, the 'Others' section is also circled in orange.

⑤获得一个小课题



大牛入手（总结）



- 这个阶段需要大量的阅读
 - 需要精度，积累
 - 明确体系基本的脉络和发展
- 学会站在巨人的肩膀上（核心）
 - 顺延考量（同行对比）
 - 侧向考量（深入研究）

关键词的搜寻（总结）

Scival的trend模块

Topics, Clusters and Groups

★ Favorites

- Sodium-ion Batteries; Electrode Materials; Quinones T.13304

Others

- Ceramic Matrix Composites; Fiber Volume Fraction; Chemical Vapor Infiltration T.1899
- Electrochemical Machining; Microtechnology; Military Electronic Countermeasures T.4589
- Electromagnetic Shielding; Effective Bandwidth; Electric

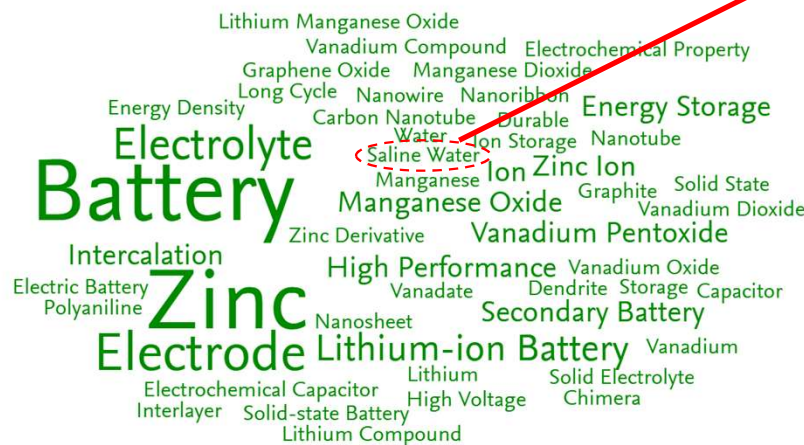
+ Add new Clean this section

Topic character

+ Add to Reporting

Keyphrase analysis Representative publications

Top 50 keyphrases by relevance, based on 1,830 publications | [Learn about keyphrase calculations](#)



①都是一个可以着手的开始



案例:探索进行**锌离子电池**相关研究的可行性

锌离子电池

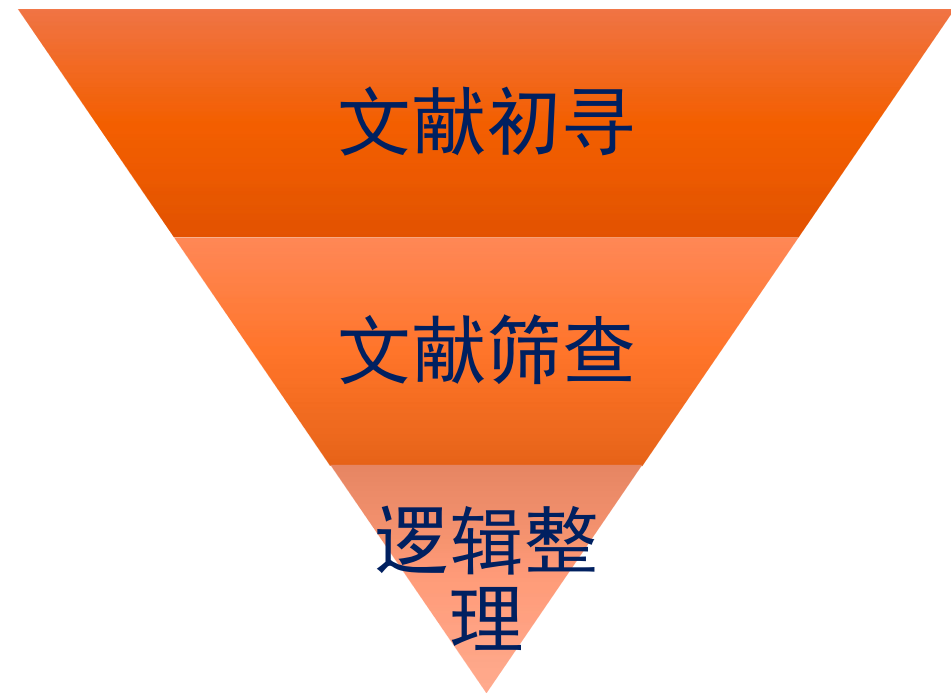
2744篇文献

151篇综述

盐水系锌离子
电池

Outline

- 基础信息的收集
 - 操作方法
 - 利用scopus调研课题
 - 利用scival研究大牛课题进展
- 选题
 - 课题方向下的文献检索
 - 文献阅读-从点开始
- 进阶-逻辑网络的构建与填充
 - 使用思维导图构建网络



寻找（原则）

- 从细处入手
 - 勿以坑小而不填
 - 着手一个点
 - 第一个课题以训练自己为主
- 掌握科研范式（收集数据，表现数据，呈现结果）**

索引关键字

Engineering controlled terms:

Cathode materials Cathodes Costs Electrolytes Energy storage Ions Structural optimization
Vanadium pentoxide Zinc Zinc compounds

Engineering uncontrolled terms

Aqueous electrolyte Composition optimization Development trends Environmental friendliness Layered Structures
Specific capacities Storage mechanism Two-electron transfer

Engineering main heading:

Secondary batteries



操作步骤

Scival的trend模块

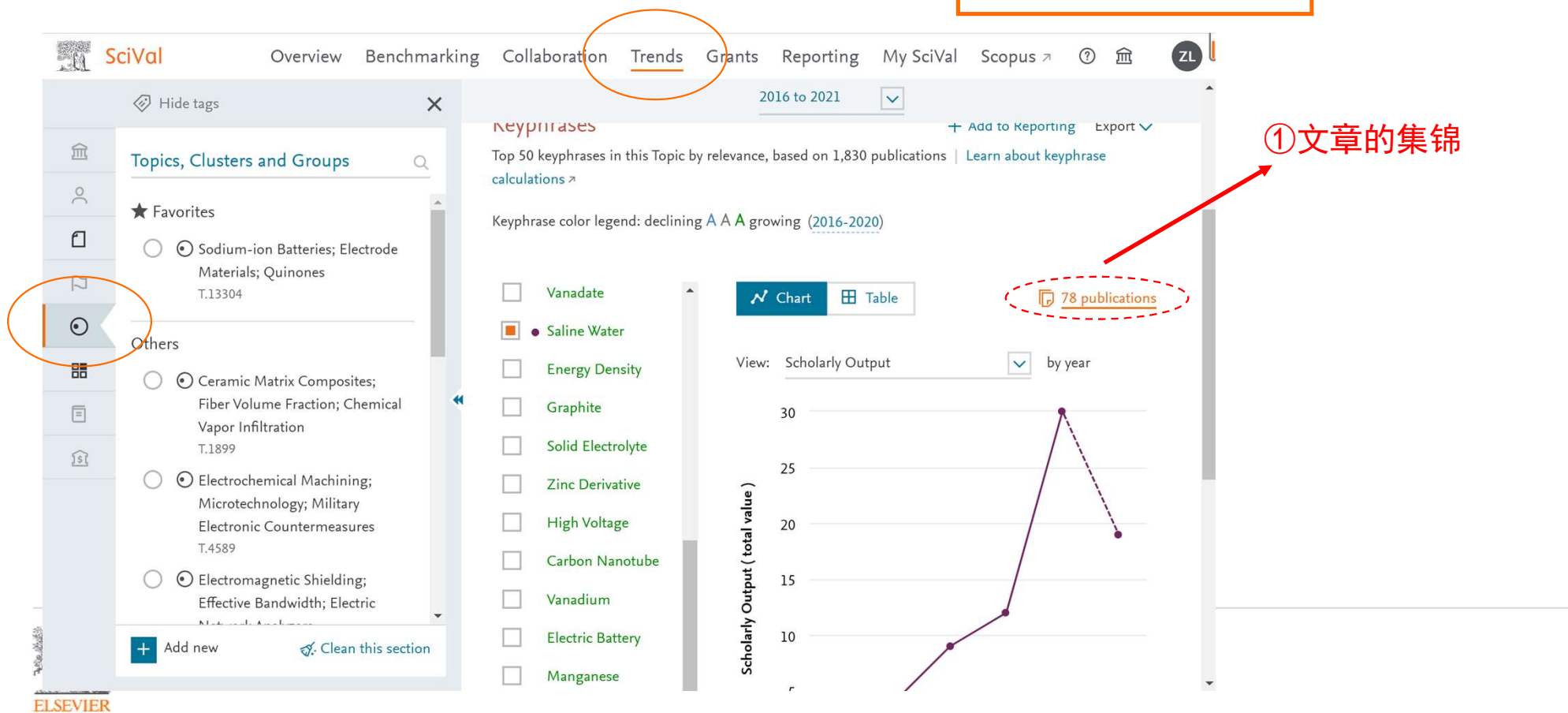
The screenshot displays the Scival Trends module interface. The top navigation bar includes 'Overview', 'Benchmarking', 'Collaboration', 'Trends', 'Grants', 'Reporting', 'My SciVal', and 'Scopus'. The 'Trends' tab is selected and circled in orange. The left sidebar shows 'Topics, Clusters and Groups' with a search bar and a list of topics. One topic is circled in orange: 'Ceramic Matrix Composites; Fiber Volume Fraction; Chemical Vapor Infiltration T.1899'. The main content area shows 'Topic character' with 'Keyphrase analysis' selected. Below this, it states 'Top 50 keyphrases by relevance, based on 1,869 publications'. A word cloud visualizes these keyphrases, with 'Zinc' and 'Battery' being the most prominent. An orange arrow points from the word cloud to a box containing the text '⑤获得一个小课题'. At the bottom, there is a legend for 'AAA relevance of keyphrase' and a status indicator 'declining AAA growing (2016-2020)'.

⑤获得一个小课题



课题方向下的文章检索

Scival的trend模块



课题方向下的文章检索

Publications in Nati2(Po4)3; Lithium Manganese Oxide; Lithium-ion Batteries for the selected keyphrases T.23080

Year range: 2016 to 2021 | Applied filters: **Review** X Reset filter

Export v

Authors

- Amiri, M. 1
- Balakrishna, R.G. 1
- Battaglia, C. 1
- Bin, D. 1
- BÃ©langer, D. 1

Show more

Institutions

- Ministry of Education, China 2
- Bordeaux INP 1
- CAS - Dalian Institute of Chemical Physics 1

Apply filter

ELSEVIER

12 publications | Save as Publication Set

Title	Authors	Year	Scopus Source	Citations
Recent Progress of Rechargeable Batteries Using Mild Aqueous Electrolytes	Huang, J., Guo, Z., Ma, Y. and 3 more	2019	Small Methods	203
High-Energy Aqueous Lithium Batteries	Eftekhari, A.	2018	Advanced Energy Materials	67
Rechargeable aqueous electrolyte batteries: From univalent to multivalent cation chemistry	Demir-Cakan, R., Palacin, M.R., Croguennec, L.	2019	Journal of Materials Chemistry A	66

②针对性的文章精简

案例:探索进行**锌离子电池**相关研究的可行性



从点开始



Scopus

检索 来源出版物 列表 SciVal ↗



1 / 1

导出 Download 打印 电子邮件 保存到 PDF 保存到列表 更多...>

View at Publisher

文献类型

评论

来源出版物类型

期刊

ISSN

23669608

DOI

10.1002/smtd.201800272

查看更多

Small Methods • 卷 3, 期 1 • January 2019 • 论文编号 1800272

Recent Progress of Rechargeable Batteries Using Mild Aqueous Electrolytes

Huang J.^{a,b}, Guo Z.^a, Ma Y.^a, Bin D.^a, Wang Y.^a ✉, Xia Y.^a

全部保存到作者列表

^a Department of Chemistry, Shanghai Key Laboratory of Molecular Catalysis and Innovative Materials, Institute of New Energy, iChEM (Collaborative Innovation Center of Chemistry for Energy Materials), Fudan University, Shanghai, 200433, China

^b School of Materials Science and Engineering, Nanchang Hangkong University, Nanchang, 330063, China

被 206 篇文献引用

Improving zinc anode reversibility by hydrogen bond in hybrid aqueous electrolyte

Du, H. , Wang, K. , Sun, T. (2022) *Chemical Engineering Journal*

Interfacial parasitic reactions of zinc anodes in zinc ion batteries: Underestimated corrosion and hydrogen evolution reactions and their suppression strategies

Bayaguud, A. , Fu, Y. , Zhu, C. (2022) *Journal of Energy Chemistry*

Aqueous rechargeable zinc batteries: Challenges and opportunities

Huang, J. , Qiu, X. , Wang, N. (2021) *Current Opinion in Electrochemistry*

查看所有 206 篇施引文献

①原文寻找与下载



ELSEVIER

文献Scopus页面点击“下载”也可以直接下载原文*

文献详情

The screenshot shows the Scopus article page for the paper "3D printing of a thermosensitive hydrogel for skin tissue engineering: A proof of concept study". The article is by Zhang, J.^a, Yun, S.^a, Karami, A.^a, Jing, B.^b, Zannettino, A.^c, Du, Y.^b, and Zhang, H.^{a,d}. The page includes a navigation bar with options like "Download", "Print", "Email", "Save to PDF", and "Save to List". A red box highlights the "Download" button. On the right side, there are sections for "Metrics" (showing PlumX metrics), "Cited by" (0 articles), and "Related articles" (listing a related article on bioengineered skin).



- *原文包括OA文献和机构已订购文献；
- *第一次下载需要安装scopus download manager 插件（可联系图书馆获取）

从点开始

3. Aqueous Batteries Using Multivalent Ions (Zn^{2+} , Mg^{2+} , Ca^{2+} , Al^{3+}) as Charge Carriers

3.1. Aqueous Zinc Batteries (AZBs)

Besides the above mentioned aqueous metal-ion battery systems, AZBs have been attracting keen interests from global researchers in the very recent years because of their high specific capacity. Generally, aqueous zinc batteries are composed of zinc-ion storage materials as cathode, zinc metal anode, and neutral (or mild acid) electrolyte. Each of the three components of AZBs will be discussed below.

3.1.1. Cathode Materials for AZBs

Generally, most ion storage materials used in aqueous Li, Na, K-ion battery can be employed as cathode materials in zinc-ion batteries, such as manganese oxides, vanadium oxides, Prussian blue analogs, etc. Because of the high theoretical capacity (308 mAh g^{-1} based on single electron transfer between Mn^{4+} and Mn^{3+}), nontoxicity, and abundance reserve, manganese

oxide is the most widely investigated cathode material for zinc-ion storage.^[34–37] As early as 1988, Zn/ZnSO₄/MnO₂ rechargeable battery system was exploited by Yamamoto and co-workers,^[38] but the mechanism of battery was unclear. Until 2009, Kang and co-workers^[39] found that alpha manganese dioxide ($\alpha\text{-MnO}_2$) can store and release zinc ion fast and reversibly, which is suitable to be the cathode materials storing zinc ion. And combining with the metal zinc anode and mild aqueous electrolyte containing zinc salt, the concept of “zinc ion battery” was proposed, although where the anode is metal zinc rather than the ion storage materials. Up to now, $\alpha\text{-MnO}_2$, $\beta\text{-MnO}_2$, $\gamma\text{-MnO}_2$, $\delta\text{-MnO}_2$, spinel-type MnO_2 , todorokite-type MnO_2 , and $\alpha\text{-Mn}_2O_3$ have been reported as host materials for zinc-ion storage.^[34–37,40–45] Due to the various crystallographic polymorphs of manganese oxides, the electrochemical reaction mechanism of manganese oxides in neutral (or mild acid) electrolyte still remains controversial.

Basically, zinc-ion insertion/extraction and proton insertion/extraction during redox of manganese oxides are the two mainstream views. Oh and co-workers^[42,43] reported the zinc-ion insertion mechanism accompanied with a series of single and two-phase electrochemical reaction, which involves reversible

➤ 开始阅读

➤ 注意问题

A. 课题相关性

B. 课题的根本目的

C. 问题（领域的根本性问题）

A. 性能问题

B. 稳定性问题

D. 时间线（历史情况+现有状态）

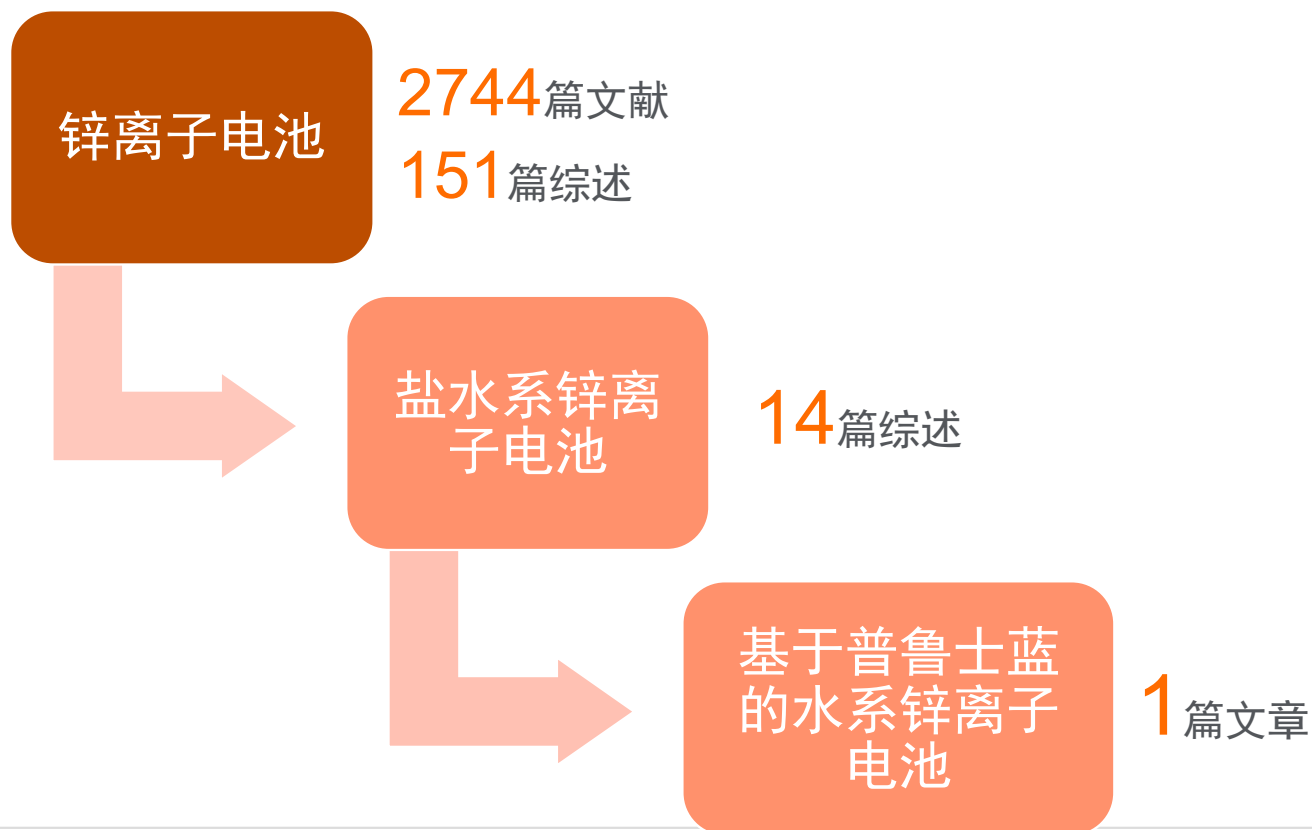
从点开始

Prussian blue analogs (metal hexacyanoferrates (MeHCFs)), as one kind of metal-organic framework materials, possess an open and tunable crystal structure. The stable and open framework containing large interstitial sites allows the kinetically easy and fast insertion/removal of guest ions. Liu and co-workers^[58] proposed zinc hexacyanoferrate (ZnHCFs) as intercalation hosts for Zn^{2+} . And yielding an average operation voltage of ≈ 1.7 V versus Zn^{2+}/Zn , which is the highest recorded operation voltage for aqueous Zn batteries. Furthermore, this group synthesized three rhombohedral phase ZnHCF particles (cubooctahedral, truncated octahedral, and octahedral shapes),^[59] and pointed out that the sample with cubooctahedral shape exerts the best rate capability and cyclic stability. Besides the zinc hexacyanoferrate, copper hexacyanoferrate,^[60,61] nickel hexacyanoferrate,^[62] and iron hexacyanoferrate^[63] can also be employed as cathode materials for aqueous zinc battery. Unfortunately, the capacity of Prussian blue analogs is relative low (< 100 mAh g^{-1} at 1 C, i.e., 60 mA g^{-1} , lower than both vanadium oxides and manganese oxides). Although some of Prussian blue analogs exert high and flat discharge voltage > 1.5 V versus Zn^{2+}/Zn , the energy density is still uncompetitive.

ELSEVIER

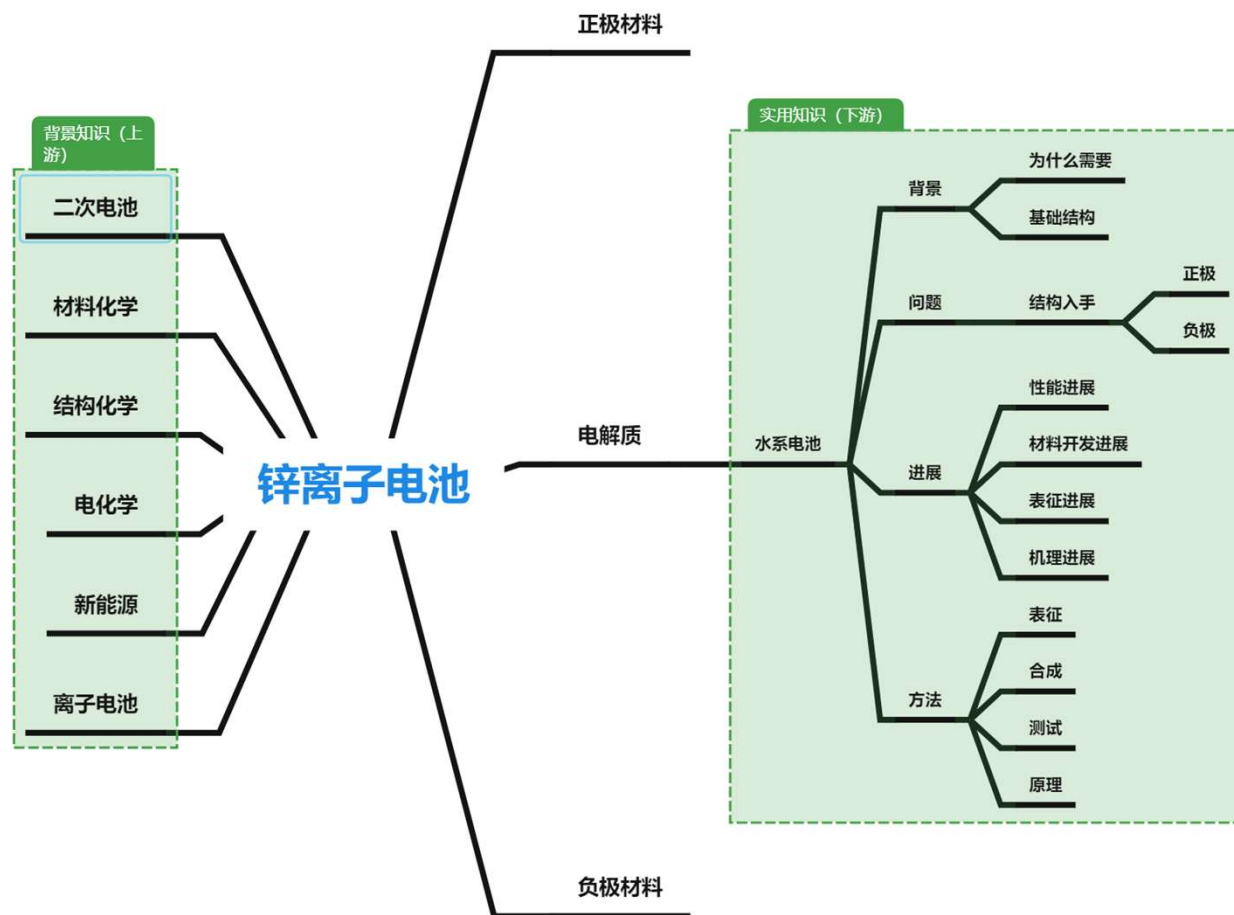
- 作者的段落逻辑
 - 定义（含义，概念，范围）
 - 优势，特点
 - 具体某项工作的展示
 - 具体事务
 - 呈现状态
 - 特点
 - 运用方法
 - 总结问题
 - 优势
 - 缺点
 - 问题所在

案例:探索进行**锌离子电池**相关研究的可行性



思路整理

- 文献整理
 - 整理思维
 - 网状逻辑（关联图）
- 着手点
 - 构思
 - 小课题入手



相关报告的整理&总结

- 学会使用模板
 - 前期是做填空题，熟练是做简答题
- 逻辑
 - 为什么做（创新性&必要性）-如何做（可行性）-怎么评价结果-（为什么是这个结果）
- 重点
 - 理清逻辑
 - 准备备用方案
- 注意事项
 - 模板化
 - 逻辑化

科研的核心

- 知识网络的构建
- 知识网络的填充
 - 期刊
 - 教科书
 - 视频教程
 - 研讨会
 - 学术会议

期刊追踪 (favorites)

SciVal

Topic T.13304 Analyze in Grants part of Topic Cluster TC.30 - Secondary Batteries; Electric Batteries; Lithium Alloys

Sodium-ion Batteries; Electrode Materials; Quinones ☆

2016 to 2020

Summary Institutions Countries & Regions Authors Scopus Sources Keyphrases Related Topics

Top Scopus Sources

Worldwide

Table Chart

Top 100 Scopus Sources in this Topic, by Scholarly Output

Compare over time Add to panel Create Research Area

Scopus Source	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Journal of Materials Chemistry A																		
ChemSusChem																		
ACS applied materials & interfaces																		
Electrochimica Acta																		
Journal of Power Sources																		
Angewandte Chemie - International Edition																		
Chemistry of Materials																		
ACS Applied Energy Materials																		
Advanced Energy Materials																		
Journal of the Electrochemical Society																		
RSC Advances																		
Chemical Communications																		
Journal of Physical Chemistry C																		
Physical Chemistry Chemical Physics																		
Energy Storage Materials																		
ACS Sustainable Chemistry and Engineering																		
Advanced Functional Materials																		
Advanced Materials																		

ELSEVIER

Scopus

来源出版物详情

Journal of Materials Chemistry A

以前名字: Journal of Materials Chemistry
Scopus 涵盖范围年份: 从 2013 至今
出版商: Royal Society of Chemistry
ISSN: 2050-7488 E-ISSN: 2050-7496
学科类别: Materials Science: General Materials Science Chemistry: General Chemistry Energy: Renewable Energy, Sustainability and the Environment
来源出版物类型: 期刊

查看所有文献 设置文献通知 保存至来源出版物列表 Entitled Full Text Kapax EZB Ekr. Zeitschriften bib 更多

CiteScore CiteScore 排名趋势 Scopus 内容涵盖范围

CiteScore 2020 19.7 = 199,466 引文 2017 - 2020 / 10,114 篇文章 2017 - 2020
CiteScoreTracker 2021 19.8 = 到目前为止 180,991 次引用 / 到目前为止 9,126 篇文章
于 05 May, 2021 计算 最近更新于 05 October, 2021 - 按月更新

CiteScore 排名 2020

类别: Materials Science #15/455 96th

49	1,387	1.60	680
47	1,471	1.62	1,030
42	1,553	1.22	633
29	1,201	1.37	506
26	1,311	3.03	1,517
24	803	1.92	575
23	562	1.06	206
23	1,436	2.02	1,185
23	369	0.71	163
23	572	0.80	269
21	462	1.55	349
17	411	0.79	156
17	444	0.96	257
15	518	2.40	269
13	372	1.51	238
12	553	3.14	560
12	771	4.68	1,105

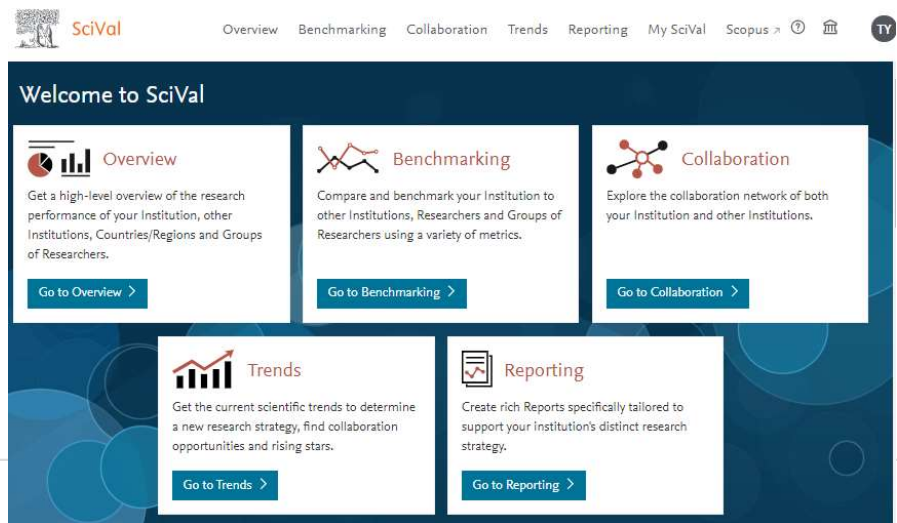
跳转到scopus 查看期刊文献详情

关于 Scopus和SciVal

- Scopus (www.scopus.com)
- 全球最大的摘要引文数据库
- 可以直接访问。登录后使用可以保存搜索结果，设置通知和推送
- 如果维护个人档案，需要登录使用



- SciVal (www.scival.com)
- 基于scopus数据的科研分析平台
- 需要注册账号后登录使用



关于注册和登录：在学校IP范围内用任意邮箱免费注册，设置密码即可；scopus和scival账号通用。

帮助

联系人	联系电话	工作时间
Scopus 支持中心	4008 426 973	周一至周五 09:00-18:00



快速指南



在线检索



应用场景小视频

更多资源

<https://www.bilibili.com/>

搜索“爱思唯尔Scopus”

bilibili | 搜索 爱思唯尔Scopus 搜索

综合 视频 39 番剧 0 影视 0 直播 0 专栏 0 话题 0 用户 0 相簿 0

综合排序 最多点击 最新发布 最多弹幕 最多收藏

全部时长 10分钟以下 10-30分钟 30-60分钟 60分钟以上

全部分区 动画 番剧 国创 音乐 舞蹈 游戏 科技 数码 生活 鬼畜 时尚 资讯 娱乐 影视 纪录片 电影 电视剧 收起

【Scopus在线指南】作者详情页面 02:17 88 2020-05-11 爱思唯尔Elsevier

【Scopus在线指南】搜索作者并查看作者详情页面 02:46 24 2020-05-11 爱思唯尔Elsevier

【Scopus在线指南】如何在其他平台上使用作者详情 02:52 17 2020-05-11 爱思唯尔Elsevier

【Scopus在线指南】如何跟踪作者 02:27 27 2020-05-11 爱思唯尔Elsevier

【Scopus在线指南】如何评估作者影响 03:26 27 2020-05-11 爱思唯尔Elsevier

【Scopus在线指南】使用Scopus API展示合著者网站 02:43 5 2020-05-11 爱思唯尔Elsevier

【Scopus在线指南】如何修正作者详情 02:21 3 2020-05-11 爱思唯尔Elsevier

【Scopus在线指南】根据研究领域搜索作者 01:34 29 2020-05-11 爱思唯尔Elsevier

【Scopus在线指南】Elsevier Product Insights 05:04 21 2020-05-11 爱思唯尔Elsevier

【Scopus在线指南】基础搜索 02:58 7 2020-05-11 爱思唯尔Elsevier

【Scopus在线指南】如何查看作者详情 02:20 01:42 02:30 02:48 03:08



19.11.2021



Thank you

www.scopus.com www.scival.com

更多，有效精彩的应用等待你去挖掘

Fu Qiang



SciVal 全球领先的科研分析工具

- 基于Scopus数据库
- 快捷地访问全球20,000家机构, 1700万学者的科研表现
- 对全球约9.6万个研究主题和研究热点的追踪和趋势分析
- 多元化指标数据 (文献、基金、专利、社交媒体评价等多维度)

SciVal



研究表现



对标研究进展



合作伙伴



研究趋势



www.scival.com

SciVal的基本结构

四大功能模块-
概览、对标、合作、趋势

The screenshot displays the SciVal interface for Tsinghua University. The top navigation bar includes 'Overview', 'Benchmarking', 'Collaboration', 'Trends', 'Reporting', 'My SciVal', and 'Scopus'. The left sidebar, titled 'Institutions and Groups', lists 'Northeastern University China' and 'Tsinghua University', with 'Tsinghua University' selected. The main content area shows 'Tsinghua University' with its Chinese name '清华大学' and various ranking metrics: 16th (QS), 23rd (THE), 43rd (ARWU), and 1st (RUANKE). It also displays 'Overall research performance' metrics: 88,913 Scholarly Output, 44,421 Authors, 1.54 Field-Weighted Citation Impact, 1,044,672 Citation Count, 11.7 Citations per Publication, and 178 h5-index.

Hide tags

Institutions and Groups

- Northeastern University China
- Tsinghua University

分析对象面板

+ Add Institutions and Groups

Clean this section

Overview Benchmarking Collaboration Trends Reporting My SciVal Scopus

Tsinghua University ☆

清华大学

16th (QS) · 23rd (THE) · 43rd (ARWU) · 1st (RUANKE) China More details on this Institution

2014 to 2019 no subject area filter selected ASJC

Summary Topics & Topic Clusters Collaboration Published Viewed Cited Authors More...

+ Add Summary to Reporting Export

Overall research performance + Add to Report

88,913 ▲ Scholarly Output	44,421 ▲ Authors	1.54 Field-Weighted Citation Impact
1,044,672 Citation Count	11.7 Citations per Publication	178 h5-index

SciVal的基本结构

分析对象面板



问题

1. Scopus 的主页网址是什么？
2. Scival的主页网址是什么？
3. 分析课题难度和课题潜力的时候，我们主要分析的对象是
文献-年份 文献-地区 文献类型
4. 当我们想使用scopus的动态追踪功能时，首先要保证自己的账号处在什么状态？
5. 分析课题时，使用scival的什么模块可以获得topic词云？
Overview benchmark trends

