

Elsevier Research Intelligence

# 解密科研表现与学术合作

[www.scopus.com](http://www.scopus.com) [www.scival.com](http://www.scival.com)

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[t.yu@elsevier.com](mailto:t.yu@elsevier.com)

## 主要内容

- Scopus & SciVal简介
- 多角度呈现学术表现
  - 查看学者个人表现
  - 查看学科/院系表现
- 分析合作网络，发掘潜在合作伙伴



# SciVal 全球领先的科研表现分析工具

- 方便快捷地访问全球12,100家机构的科研表现
- Top of Prominence -- 对全球约9.6万个研究主题进行趋势分析
- 多元化指标数据（文献、基金、专利、社交媒体评价等多维度）
- 超过600位客户，遍布全球80个国家
- 基于Scopus数据库

## SciVal



### Overview

特定机构和研究人员  
的研究表现细节



### Benchmarking

比较多个机构和研究  
人员的研究表现



### Collaboration

了解机构和机构之间的  
合作和研究的情况



### Trends

掌握研究领域的趋势

# SciVal的基本功能板块



SciVal

[Overview](#) [Benchmarking](#) [Collaboration](#) [Trends](#) [Reporting](#) [My SciVal](#) [Scopus](#) [?](#)

## Welcome to SciVal



### Overview

Get a high-level overview of the research performance of your Institution, other Institutions, Countries and Groups of Researchers.

[Go to Overview >](#)

### Benchmarking

Compare and benchmark your Institution to other Institutions, Researchers and Groups of Researchers using a variety of metrics.

[Go to Benchmarking >](#)

### Collaboration

Explore the collaboration network of both your Institution and other Institutions.

[Go to Collaboration >](#)

### Trends

Get the current scientific trends to determine a new research strategy, find collaboration opportunities and rising stars.

[Go to Trends >](#)

### Reporting

Create rich Reports specifically tailored to support your institution's distinct research strategy.

[Go to Reporting >](#)

# SciVal的基本结构

## 四个主要的分析模块



SciVal

### 分析对象面板



#### Institutions and Groups

- Tsinghua University
- Beijing Normal University
- Guangdong
- Hong Kong
- Macau
- North China Electric Power University
- Peking University
- Renmin University of China
- Shandong Normal University
- Shandong University
- Tongji University

+ Add Institutions and Groups

x Remove all entities from this section

Overview

Benchmarking

Collaboration

Trends

Reporting

My SciVal

Scopus >

## Tsinghua University

清华大学

17th (QS) · 22nd (THE) · 45th (ARWU) · 1st (RUANKE) | China More details on this Institution

2013 to 2018

no subject area filter selected

ASJC

Summary

Topics & Topic Clusters

Collaboration

Published

Viewed

Cited

Authors

Economic Impact

Societal Imp

+ Add Summary to Re

### Overall research performance

Scholarly Output

82,897 ▲

View list of publications

Authors

43,554 ▲

Field-Weighted Citation Impact

1.44

Citation Count

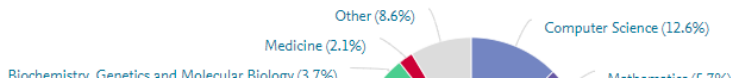
780,312

Citations per Publication

9.4

h5-index

157



# Scopus® 全球最大的摘要，引文数据库

Scopus 收录了全球105个国家，5000多家出版商的科技出版内容，覆盖40多种语言；实现全领域，全文献类型的覆盖；每日更新

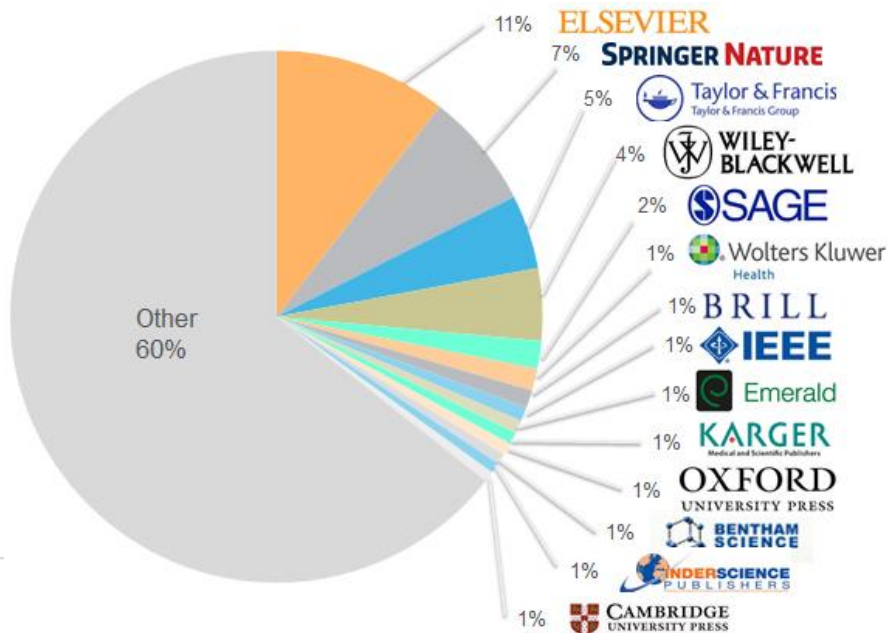
	Number of active Journals by subject area	期刊 Journal	会议论文 Conference	书籍 Book
自然科学	Physical Sciences 8,102	<b>23,578</b> Peer-reviewed journals	<b>111K</b> Conference events	<b>752</b> Book series
医疗健康	Health Sciences 7,468	<b>308</b> Trade journals	<b>8.8M</b> Conference papers Mainly Engineering and Computer Sciences	<b>40K</b> Volumes
社会科学	Social Sciences 9,692	<b>4,065</b> Active Gold Open Access journals		<b>1.6M</b> Items
生命科学	Life Sciences 4,883	<b>&gt;8,000</b> Articles in Press Full metadata, abstracts. Cited references back to 1970.		<b>183,034</b> Stand-alone books
				<b>1.5M</b> Items Mainly Social Sci. and Arts & Humanities

Source: Scopus.com, October 2018



# Scopus

收录了全球**105**个国家，**5000**多家出版商的科技出版内容



\*Counts February 2018

# 为机构和学科排名提供客观、权威的底层数据和技术实现



## 软科中国最好大学排名2018

Powered by  
**Scopus®**

## SCIENCE & ENGINEERING INDICATORS



中国高被引学者  
Chinese Most Cited  
Researchers

[查看2018年榜单 >](#)

NATIONAL SCIENCE BOARD



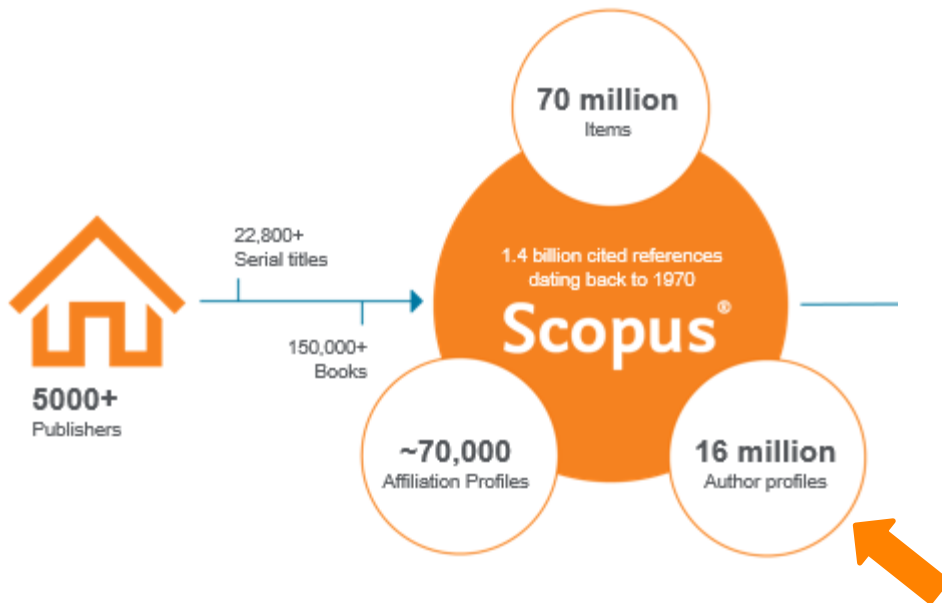


## 多角度呈现学术表现

- 查看学者表现
- 查看学科/学院表现



# Scopus已涵盖1600万完善的学者个人学术数据



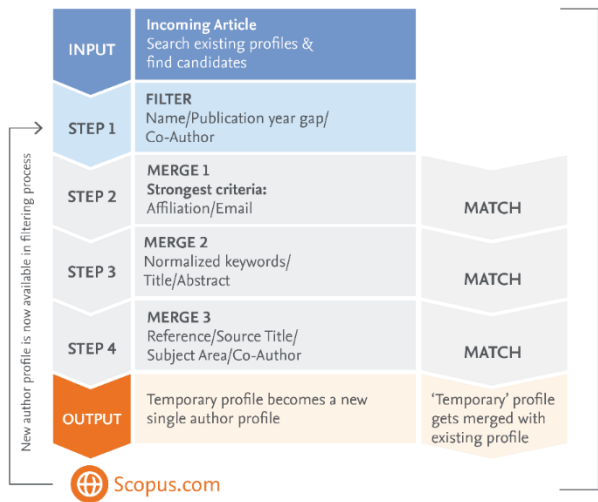
# Scopus结合算法和多层反馈机制建立学者档案

Power of

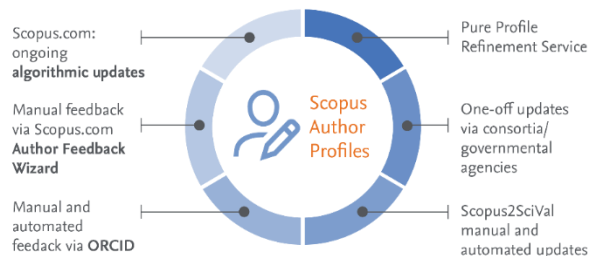
# Scopus

## Multi-layered Feedback Process

### New Article Algorithmic Process



Scopus uses a combination of automated and curated data to automatically build Author Profiles, which power Elsevier's Research Intelligence portfolio.



### ORCID

An ORCID is a 16-digit number which will usually be presented in the form of a web address that leads to the researcher's profile.



姓名、机构、邮箱、合作者、参考文献、学科领域、关键词/标题/摘要。。。。



# 1. 学者科研表现分析

## 在scopus中直接检索作者

Scopus

[检索](#) [来源出版物](#) [通知](#) [列表](#) [帮助](#) ▾

### 作者搜索

[文献](#) [作者](#) [归属机构](#) [高级](#)作者姓氏  
Mourou

✕

作者名字  
Gérard

归属机构

例如 University of Toronto

输入作者姓名的全名

 仅显示完全匹配

id ORCID

例如 1111-2222-3333-444x

检索 🔍





检索 来源出版物 通知 列表 帮助 ▾ SciVal »

## 作者详情

关于 Scopus 作者辨识功能

< 返回检索结果 1/2 下一个 >

打印 电子邮件

Mourou, Gérard A.

关注该作者

École Polytechnique, Palaiseau, France

作者 ID: 7102620818

其他姓名格式:

- Mourou, G.
- Mourou, Gérard
- Mourou, Gerard A.
- Mourou, G. M.
- Mourou, Grand A.
- Mourou, Gerard H.
- Mourou, Gerard
- Mourou, Grand
- Mourou, G. A.
- Mourou, Gérard A.

查看可能的匹配作者

*h*-Index: 77

查看 *h*-graph

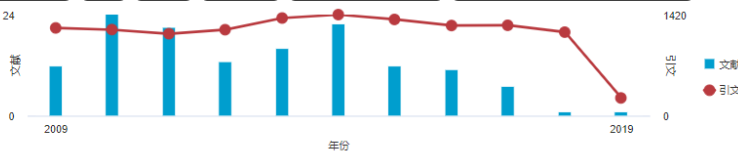
77

H指数

学科类别:

- Physics and Astronomy
- Engineering
- Materials Science
- Chemistry
- Mathematics
- Computer Science
- Multidisciplinary
- Social Sciences
- Chemical Engineering
- Energy
- Medicine
- Neuroscience
- Earth and Planetary Sciences
- Biochemistry, Genetics and Molecular Biology

文献和引用趋势:



近10年的论文和引用-数量及趋势

按作者的文献

652

总论文  
分析作者的产出

总引文数

总引用

按 18637 文献分组的 27465 查看引文概览



## 重要代表作

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  CSV 导出  下载  查看引文概览  查看施引文献  保存到列表 ...  打印  邮件  分享

	文献标题	作者	年份	来源出版物	施引文献
<input type="checkbox"/> 1	Compression of amplified chirped optical pulses	Strickland, D., Mourou, G.	1985	Optics Communications 56(3), pp. 219-221	2451
	查看摘要 <input type="checkbox"/>	<a href="#">Full Text</a>	<a href="#">View at Publisher</a>	<a href="#">相关文献</a>	

<input type="checkbox"/> 2	Self-channeling of high-peak-power femtosecond laser pulses in air	Braun, A., Korn, G., Liu, X., (...), Squier, J., Mourou, G.	1995	Optics Letters 20(1), pp. 73-75	1157
----------------------------	--	---	------	------------------------------------	------

查看摘要 [Optics Communications](#)  
Volume 56, Issue 3, 1 December 1985, Pages 219-221

<input type="checkbox"/> 3	Terawatt t	Compression of amplified chirped optical pulses (Article)			
----------------------------	------------	---	--	--	--

Strickland, D., [Mourou, G.](#) 

查看摘要 Laboratory for Laser Energetics, University of Rochester, 250 East River Road, Rochester, NY 14623-1299, United States

<input type="checkbox"/> 4	Femtosec	摘要			
----------------------------	----------	----	--	--	--

We have demonstrated the amplification and subsequent recompression of optical chirped pulses. A system which produces 1.06  $\mu\text{m}$  widths of 2 ps and energies at the millijoule level is presented. © 1985.

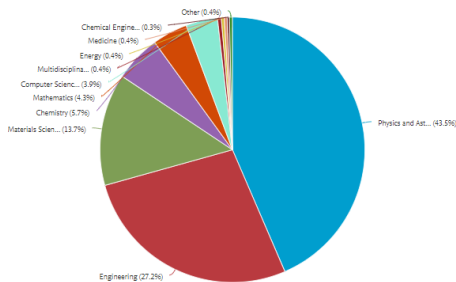
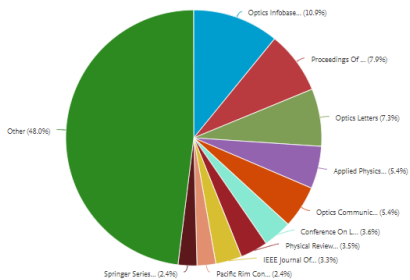




# 分析论文/引文搜索结果

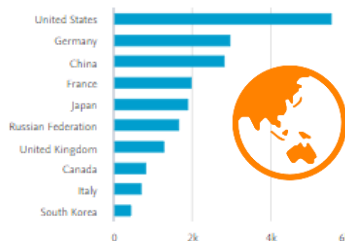
## 论文实力-主要发表期刊和优势学科领域

Scopus

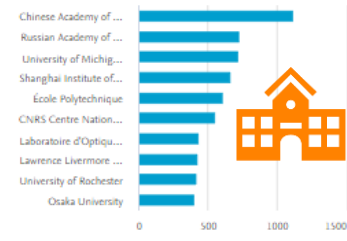


## 论文影响力-被哪些国家、机构的关注

按国家/地区划分的文献



按归属机构划分的文献





# 学者信息概览 (overview)

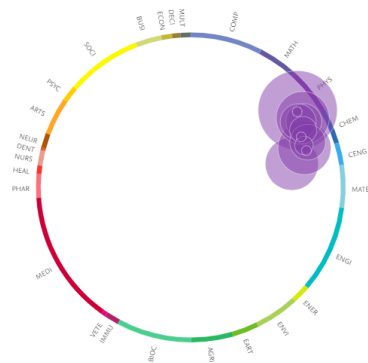
# SciVal

## Overall research performance

Scholarly Output	Field-Weighted Citation Impact	Citation Count
68	1.42 <b>FWCI &gt; 1</b>	782
<a href="#">View list of publications</a>		
Citations per Publication	h-index	h5-index
11.5	51	13

归一化的引用影响力

参与的 (热门) 研究主题及其领域分布



## Outputs in Top Citation Percentiles

+ Add to Reporting

Publications in top 10% most cited worldwide

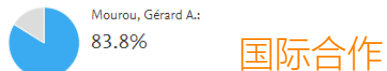


> Analyze in more detail

## International Collaboration

+ Add to Reporting

Publications co-authored with researchers in other countries



## Publications in Top Journal Percentiles

+ Add to Reporting

Publications in top 10% journals by CiteScore Percentile

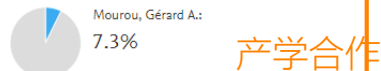


> Analyze in more detail

## Academic-Corporate Collaboration

+ Add to Reporting

Publications with both academic and corporate affiliations





# 演示与练习1

结合Scopus和SciVal查找 潘建伟教授的学术成果及表现，具体包括：

- 1) 过去10年的论文数及引用情况
- 2) H指数
- 3) 论文学科分布和主要期刊
- 4) 论文的影响力（国家和机构）
- 5) 过去5年的FWCI值
- 6) 高水平论文的占比
- 7) 国际合作情况
- 8) 研究主题 topic



## SciVal的使用 -- 学校IP范围内开通、登录/注册后使用

与Scopus共享账号，可直接使用Scopus账号登录

**Login**

SciVal is a ready-to-use solution with unparalleled power and flexibility, which enables you to navigate the world of research and devise an optimal plan to drive and analyze your performance.

New to SciVal? Find out what the new generation of SciVal can do for you.

(\*required fields)

**Login using your Elsevier credentials**

Username:  \*

Password:  \*

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**If not, Register Now**

**Register**

Registration is quick and free. It allows you to personalize these [Elsevier Products](#) if you have access. For example you can stay up-to-date with Search Alerts and Document Citation Alerts or keep track of your research with Saved Searches.

(\*required fields)

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**Your details** [Privacy policy](#)

First name:  \*

Family name:  \*

**E-mail and password**

Enter a password between 5 and 20 characters. Your e-mail address will be your username

E-mail address:  \*

Password:  \*

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I wish to receive information from Elsevier B.V. and its affiliates concerning their products and services

\* I have read and understood the [Registered user agreement](#) and agree to be bound by all of its terms.

## 2. 学科表现分析

### Tsinghua University

清华大学

📄 17th (QS) · 22nd (THE) · 45th (ARWU) · 1st (RUIANKE) | 🇨🇳 China | [More details on this Institution](#)

2013 to 2018

no subject area filter selected

ASJC

学科选择

时间窗口选择

Clusters Collaboration Published Viewed Cited Au

### Overall research performance

Scholarly Output

82,897 ▲

[View list of publications](#)

Citation Count

780,312

Authors

43,554 ▲

Citations per Publication

9.4

#### Select Subject Classification

This will be used to categorize Scopus Sources (and the publications in those Scopus Sources) into scientific disciplines.

[Change subject classifications in Settings](#)

ASJC – All Science Journal Classification

Used in Scopus. This is the default scheme in SciVal.

[View more details](#)

QS – Quacquarelli Symonds Classification

Used in QS World University Rankings. It covers 6 subject areas and 63 subjects.

ASJC, THE, QS学科分类



# Scopus学科：四大领域和27个一级学科

## Life Sciences

1100 **A**gricultural and  
Biological Sciences

1300 **B**iochemistry,  
Genetics and Molecular  
Biology

2400 **I**mmunology and  
Microbiology

2800 **N**euroscience

3000 **P**harmacology,  
Toxicology and  
Pharmaceutics

## Health Sciences

2700 **M**edicine

2900 **N**ursing

3400 **V**eterinary

3500 **D**entistry

3600 **H**ealth Professions

## Social Sciences

1200 **A**rts and Humanities

1400 **B**usiness, Management and  
Accounting

1800 **D**ecision Sciences

2000 **E**conomics, Econometrics  
and Finance

3200 **P**sychology

3300 **S**ocial Sciences

## Physical Sciences

1500 Chemical Engineering  
**CENG**

2200 **E**ngineering

1600 **C**hemistry

2300 **E**nvironmental Science

1700 **C**omputer Science

2500 **M**aterials Science

1900 **E**arth and Planetary  
Sciences

2600 **M**athematics

2100 **E**nergy

3100 **P**hysics and Astronomy



# 举例：查看清华大学化学学科的表现

## 具体指标与学者表现类似

### Tsinghua University

清华大学

📄 17th (QS ↗) · 22nd (THE ↗) · 45th (ARWU ↗) · 1st (RUANKE ↗) | 🇨🇳 China | [More details on this Institution](#)

2013 to 2018



Chemistry



ASJC

Summary

Topics & Topic Clusters

Collaboration

Published

Viewed

Cited

Authors

Economic Impact

Societal Imp:

+ Add Summary to Rep

### Overall research performance



Scholarly Output ⚙️

10,267 ▲

📄 View list of publications

Authors

9,459 ▲

Field-Weighted Citation Impact ⚙️

1.77

Citation Count ⚙️

169,620

Citations per Publication ⚙️

16.5

h5-index ⓘ

102



# 3. 学院表现分析

## 具体指标与学者表现类似



SciVal

Overview **Benchmarking** Collaboration Trends Reporting My SciVal Sci

Hide tags
X

Researchers and Groups

- College of Science
- College of Commerce

+ Add Researchers and Groups

X Remove all entities from this section

## College of Science

2013 to 2018 Chemistry ASJC Home

Summary
Topics & Topic Clusters
Collaboration
Published
Viewed
Cited
Researchers
Economic Impact

### Overall research performance

Scholarly Output <span style="float: right;">⚙️</span>	Researchers	Field-Weighted Citation Impa
35 <span style="color: green;">▲</span>	14 <span style="color: green;">▲</span>	1.38
<a href="#">View list of publications</a>		
Citation Count <span style="float: right;">⚙️</span>	Citations per Publication <span style="float: right;">⚙️</span>	
559	16.0	

此处学院实际上是researcher group



# 主要参与的热门研究主题-Key topics

## Topics & Topic Clusters

+ Add to Reporting Export ▾

Between 2013 to 2018, researchers at Tsinghua University have contributed to:

- 229 Topic Clusters | [Learn about Topics and Topic Clusters](#) ↗
- 2,679 Topics

that appear within Chemistry ⓘ

Table  Wheel

Key Topics only

Filter this Institution's Topics













Key Topics are the 501 Topics to which Tsinghua University is a Key Contributor

Topic	At this Institution		Worldwide	
	Scholarly Output ↓	Publication Share	Field-Weighted Citation Impact	Prominence percentile
Agglomeration; Fluorescence; fluorescent organic ... T.2829	210	7.56% ▲	3.12	99.947
Flexible electronics; Sensors; stretchable electronic ... T.1110	202	6.05% ▼	4.73	99.983



# 什么是key topics

<input type="checkbox"/> Institution	Scholarly Output ↓	Views Count	Field-Weight...	Citation Count
1. <input type="checkbox"/>  CNRS	132	4,072	1.10	1,558
2. <input type="checkbox"/>  Tsinghua University	104	2,534	0.97	1,017
3. <input type="checkbox"/>  Harvard University	91	4,499	2.73	2,719
4. <input type="checkbox"/>  Chinese Academy of Sciences	49	967	0.54	235
5. <input type="checkbox"/>  Ministry of Education China	49	1,193	0.96	377
6. <input type="checkbox"/>  PSL Research University	46	1,823	1.58	915
7. <input type="checkbox"/>  Swiss Federal Institute of Technology Zurich	46	1,754	0.98	546
8. <input type="checkbox"/>  Tianjin University	42	998	1.12	307
9. <input type="checkbox"/>  Korea Advanced Institute of Science and Technology	40	1,679	1.83	807
10. <input type="checkbox"/>  University of Hong Kong	40	1,153	1.93	632

以某topic排名第一的机构为基准，  
其它机构在该topic的论文量/引用量需达到top 1机构的1/3





## 演示与练习2

- 在SciVal中查看清华大学 环境学科的科研表现
- 例如过去5年的
  - 总体发文和引用
  - FWCI值
  - 高水平论文的占比
  - 国际合作情况
  - 研究主题 topic及表现



# 学术合作



# Collaboration模块

## 举例：我校化学领域和美国大学的合作情况

Overview Benchmarking **Collaboration** Trends Reporting My SciVal Scopus ↗

### Collaboration by Tsinghua University

China | [More details on this Institution](#)

2013 to 2018

Chemistry

ASJC

Current collaboration

Potential collaboration

### Institutions collaborating with Tsinghua University

North America

United States

Academic

All authors

reset filter

292 collaborating institutions

1,513 co

选择区域和机构类型

Map

Table

Co-authored publications per country/region:

Top 10 institutions worldwide by co-aut

0 1-50 51-250 251-1,000 >1,000

All authors







All authors

≤ 10 authors

≤ 50 authors

≤ 100 authors

## 与美国的主要合作机构概览

Institution	Co-authored publications ↓	Co-authors at Tsinghua University	Co-authors at the other institution	Field-Weigh... ▾	Field-Weigh... ▾
 Pennsylvania State University	83 ▲	136 ▲	102 ▲	3.39	2.20
 Princeton University	80 ▲	70 ▲	46 ▲	1.49	1.50
 University of Illinois at Urbana-Champaign	66 ▲	73 ▲	206 ▲	5.15	3.52
 Northwestern University	62 ▲	76 ▲	93 ▲	5.84	3.51
 Stanford University	58	122 ▲	137 ▼	7.00	2.87
 Massachusetts Institute of Technology	57 ▲	123 ▲	94 ▲	2.74	2.13
 Georgia Institute of Technology	55 ▲	118 ▲	74 ▲	3.66	2.41
 University of Michigan, Ann Arbor	45 ▲	107 ▲	51 ▲	2.60	2.12
 Harvard University	41 ▲	76 ▲	105 ▲	2.40	1.68
 Brown University	40	29 ▼	17 ▼	4.32	1.72
 Purdue University	40 ▲	72 ▲	64 ▲	2.13	1.32
 University of California at Berkeley	39 ▲	68 ▲	110 ▲	4.52	2.04
 Columbia University	29 ▲	38 ▲	36 ▲	1.59	1.60



## Collaboration with Northwestern University

Within: **Chemistry** | Year range: 2013 to 2018



# Win-Win

Export ▼ Shortcuts

Overview **Current co-authors** Potential co-authors

Tsinghua University	Co-authored	Northwestern University
76 ▲ co-authors with Northwestern University	62 ▲ publications	93 ▲ co-authors with Tsinghua University
1.77 Field-Weighted Citation Impact	5.84 Field-Weighted Citation Impact	2.35 Field-Weighted Citation Impact

Authors	Tsinghua University	Co-authored	Northwestern University
Authors	9,459 ▲	-	3,301 ▲
Published			
Scholarly Output	10,267 ▲	-	3,830 ▲
Viewed			
Views count (from Scopus)	282,349	4,383	141,727
Views per Publication	27.5	70.7	37.0
Field-Weighted Views Impact	1.21	3.51	1.64



# 与东京大学在化学领域的合作成果不理想

## Collaboration with the University of Tokyo

Within: **Chemistry** | Year range: 2013 to 2018

Export ▼ Shortcuts ▼

Overview Current co-authors Potential co-authors



### Tsinghua University

55 ▲

co-authors with the University of Tokyo

### Co-authored

28 ▼

publications

### University of Tokyo

61 ▲

co-authors with Tsinghua University

	Tsinghua University	Co-authored	University of Tokyo
Field-Weighted Citation Impact	1.77	1.03	1.34

	Tsinghua University	Co-authored	University of Tokyo
Authors	9,459 <span>▲</span>	–	6,408 <span>▲</span>
Scholarly Output	10,267 <span>▲</span>	–	6,943 <span>▲</span>
Views count (from Scopus)	282,349	688	172,333
Field-Weighted Views Impact	1.21	1.20	1.15
Citation Count	169,620	306	94,277



# 两所机构的主要合作者

## Collaboration with Northwestern University



Within: **Chemistry** | Year range: 2013 to 2018

Export Shortcuts

Overview Current co-authors Potential co-authors

Add to panel

### Tsinghua University

Co-authors with Northwestern University

Author	Co-authored publications	Citations	
<input type="checkbox"/> > Zhang, Yihui	18	1,930	
<input type="checkbox"/> > Feng, Xue	13	298	
<input type="checkbox"/> > Ma, Yinji	11	206	
<input type="checkbox"/> > Su, Yewang	7	1,847	
<input type="checkbox"/> > Liu, Fei	4	152	
<input type="checkbox"/> > Liu, Yuan	4	82	
<input type="checkbox"/> > Hwang, Kehchih	3	220	
<input type="checkbox"/> > Xu, Chao	3	94	

### Northwestern University

Co-authors with Tsinghua University

Author	Co-authored publications	Citations	
<input type="checkbox"/> > Huang, Younggang Young	38	2,878	
<input type="checkbox"/> > Rogers, John A.	15	285	
<input type="checkbox"/> > Ma, Yinji	9	205	
<input type="checkbox"/> > Zhang, Yihui	6	1,448	
<input type="checkbox"/> > Luan, Haiwen	6	160	
<input type="checkbox"/> > Cheng, Huanyu	5	1,172	
<input type="checkbox"/> > Kanatzidis, Mercouri G.	5	231	
<input type="checkbox"/> > Xue, Yeguang	5	109	



## 演示与练习3

- 分析清华大学在环境科学领域的国际合作现状
  - 合作论文最多的5所英国高校
  - 分析和剑桥大学的合作表现，主要的学科领域和主要的合作者
  - 合作论文最多的5所企业







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# Thank you

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