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SciVal: Analyze Research Performance

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Objectives

Help you gain an overview of SciVal and a primer on using it practically so you can get started after the session.

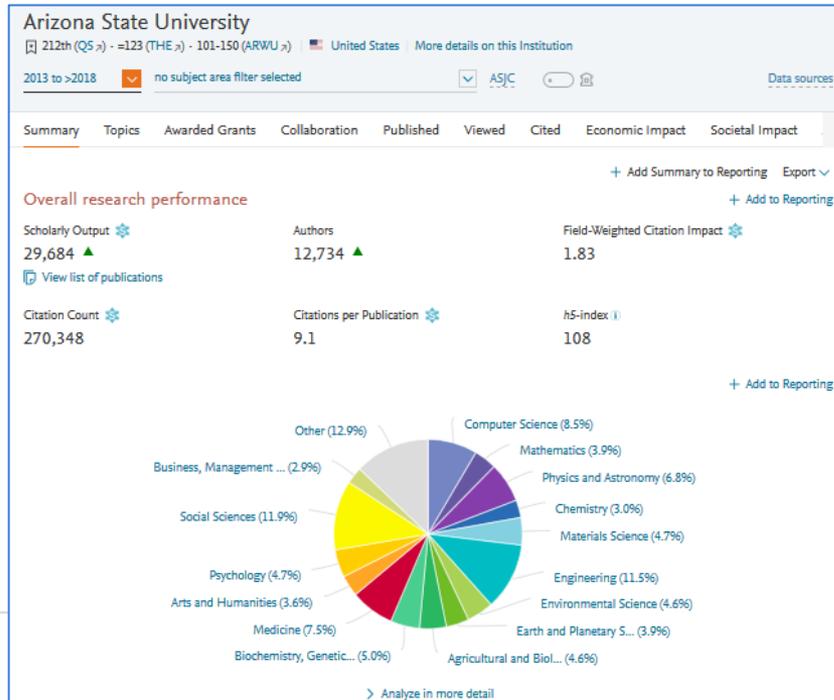
Topics covered will include:

1. What are the basics?
2. How can SciVal help me?
3. What is the underlying dataset?
4. Considerations around the data and metrics
5. Location and content of the help files



What is SciVal?

SciVal is a research intelligence solution that allows you to analyze research performance, benchmark relative to peers, identify collaborative partnerships and uncover research trends.



Research Intelligence Portfolio

DISCOVER, ANALYZE & NETWORK

Scopus

The broadest source of global scientific research.



Mendeley Reference manager

Free reference manager and academic social network



Mendeley Funding

Free discovery tool that catalogs grant information from over 2,000 funders across the globe.



MANAGE & SHOWCASE

Pure

Research information management system and research networking tool



bepress Digital Commons, EGS

Institutional repository & publishing platform for networks of full-text scholarship



Mendeley Data

A modular, cloud-based platform designed for research institutions to manage the entire lifecycle of research data



EVALUATE, PLAN & BENCHMARK

SciVal

Visualize research performance, benchmark, develop partnerships and analyze research trends



Research Metrics

Comprehensive suite of metrics helps to assess research impact



Scopus Custom Data Analytical Services

Meeting needs from specified datasets to consultative analysis, reports & services



SECURE & ADMINISTER FUNDING

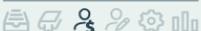
Funding Institutional

Discovery and analysis tool to help increase grant success.



Expert Lookup

Find researchers with expertise who meet your funding priorities and locate the right reviewers



Enabling Features

Fingerprinting Solutions

Pure Award Management

 Research institutions
Administration

 Research institutions
Libraries & patrons

 Funders

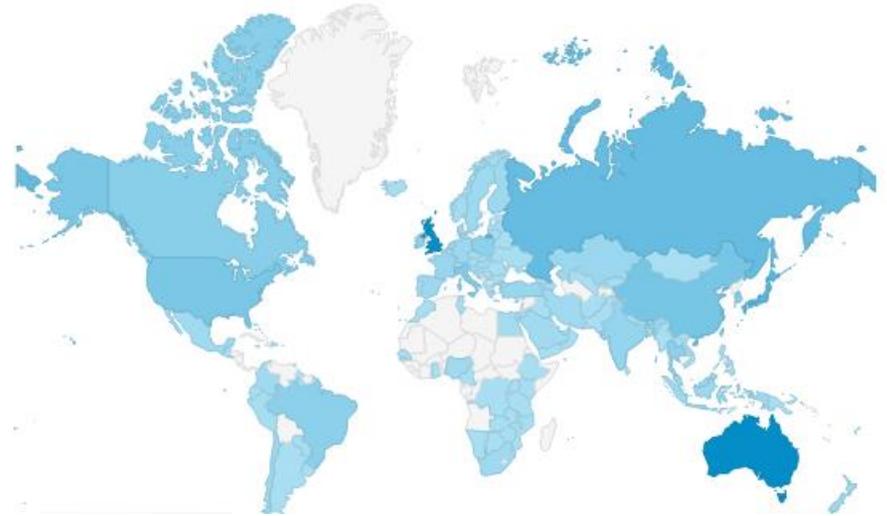
 Policy Makers

 Industry

 Ranking organisations

SciVal today

- **Measuring research performance of 10,000 academic, corporate and governmental institutions**
- More than **600 customers**, across **80 countries**, since its **launch in 2014**. Predominantly academic institutions.
- Very strong presence in **UK, Australia, Japan, China and Russia**
- **Corporate customers** include: Unilever, Siemens, Boeing
- Several **funding organizations** and **national government bodies**



Short release cycles – iterative design

Previous 2018 releases

- **Topic Prominence in Science:** Representative publications and Topics for Researcher
- Remove hyper-authored papers & view only the “real” collaborations
- **Reporting enhancements:** one library instead of two for easier navigation

Pascal
12 June

- **Hierarchical structures** from Pure into SciVal
- **Reporting enhancements** – custom naming and renaming of analyses
- h5-metric update allows year-on-year comparisons
- SciVal API supports predefined groups of researchers and countries

Qushji
10 July

- **Topic Prominence in Science:** Key contributors + support for groups of institutions
- **Reporting enhancements** – instant report from Overview summary page + Trends

Ride
28 August

- **Topic Prominence in Science:** Related Topics
- Additional subject classifications (incl. THE, QS, KAKEN)
- See only the publications from your researchers when published at your 'home' institution.

Sagan
18 September

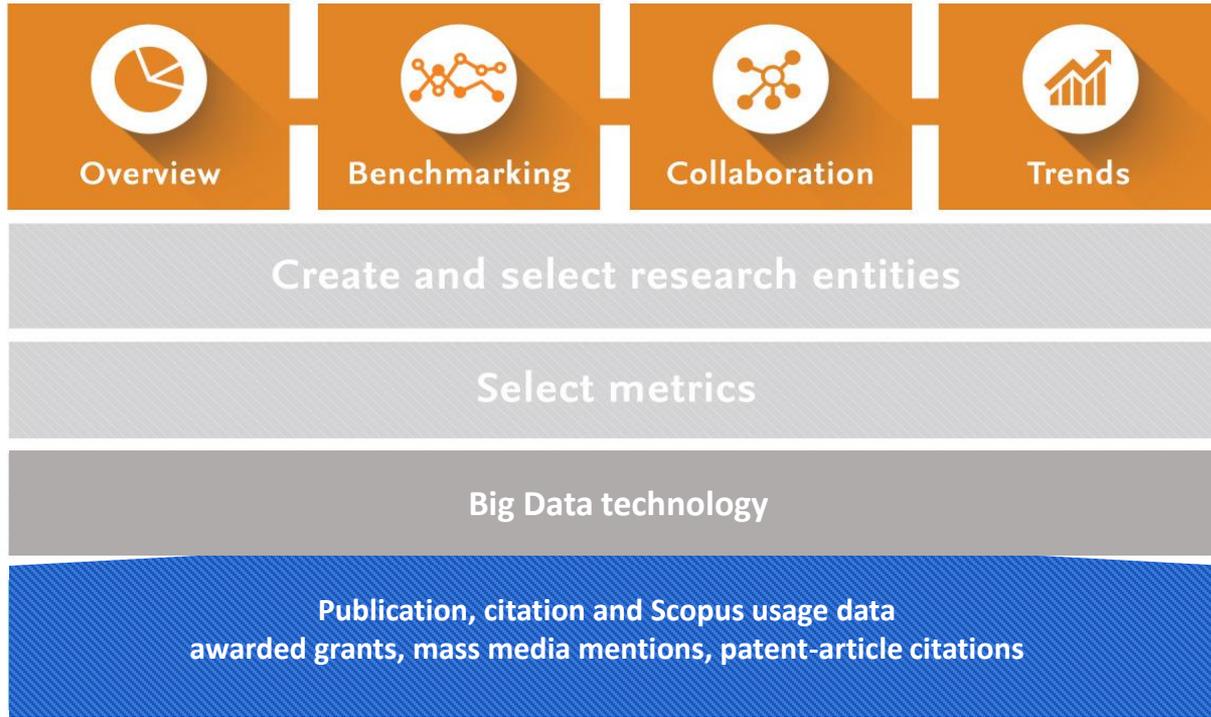
- **Reporting enhancements:** Reporting in Collaboration module
- Diacritic support. To help you find an institution faster
- Enhanced import researcher flow. Manage your **hierarchy** in SciVal using a master spreadsheet. .

Short release cycles – iterative design

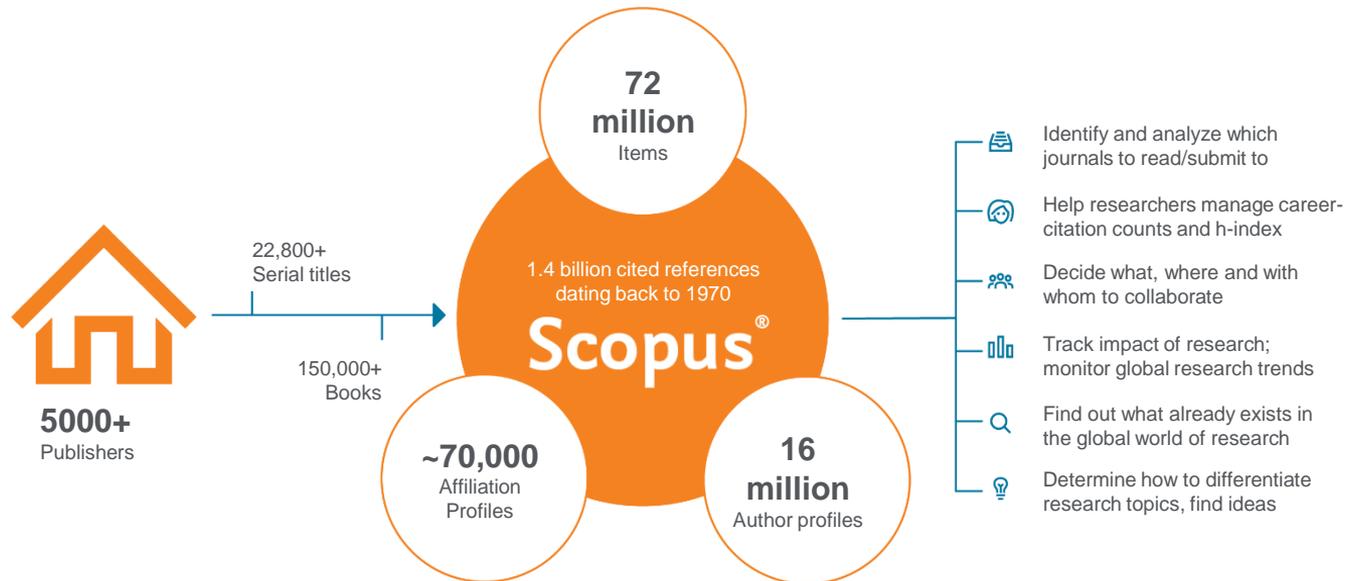
Tesla
6 November

- New heatmaps in Collaboration.
- Build Research Areas from Topics.
- Enhanced flow to import Researchers

The layers of SciVal



Scopus is the largest abstract and citation database of peer-reviewed literature, and features smart tools that allow you to track, analyze and visualize scholarly research.



Scopus delivers a comprehensive view on the world of research.
No packages, no add-ons. One all-inclusive subscription.

The foundation of SciVal

newsflo
bespoke media monitoring

Scopus
Publication,
Citation, usage data

72 M records
23,000 journals
5,000+ publishers



Publication, citation and Scopus usage data, mass media mentions, patent-article citations

Benefits for a broad range of users

SciVal supports the needs of a broad range of institutional users by providing ready-made, at-a-glance snapshots for flexible, institution-specific insight



Vice chancellors
of research

- 360 degree Performance Overview to inform strategic planning
- Identify institution's strengths and short-comings



Research
administrators

- Create management-level reports
- Accelerate institutional and cross-institutional collaboration
- Support and win large grants



Department
heads

- Evaluate researcher and team performance for recruitment and retention decisions
- Model-test scenarios by creating virtual teams



Researchers

- Raise visibility and highlight achievements
- Expand networks
- Locate collaborators and mentors

What are the questions addressed using SciVal?

“How can we demonstrate excellence in a way that best shows our unique strengths to secure funding and attract students?”



“I want to explore the various scenarios I’m considering to set up a Center of Excellence. How can the data provide me with insights?”



“Our Provost is going to South Korea; who do our academics collaborate with there and how can we expand?”



“How can I see who’s excelling in a specific subject compared to my researchers, for potential collaboration opportunities?”



“How can we demonstrate excellence in a way that best shows our unique strengths to secure funding and attract students?”



Arizona State University
 [212th (QS -) - 123 (THE -) - 101-150 (ARWU -)] United States More details on this Institution
 2013 to >2018 no subject area filter selected ASJC Data sources

Summary Topics Awarded Grants Collaboration Published Viewed Cited Economic Impact Societal Impact

Overall research performance

Scholarly Output 29,684 ▲
 View list of publications

Authors 12,734 ▲

Citation Count 270,348

Citations per Publication 9.1

Field-Weighted Citation Impact 1.83

h5-index 108

Outcomes in Top Citation Percentiles
 + Add to Reporting
 Publications in top 10% most cited worldwide

Publications in Top Journal Percentiles
 + Add to Reporting
 Publications in top 10% journals by CiteScore Percentile

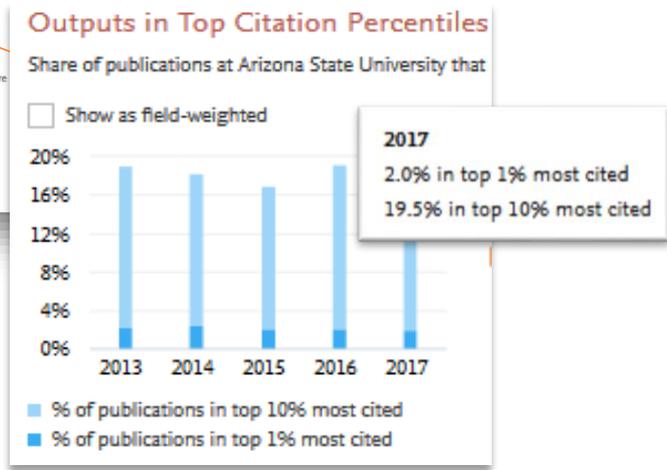
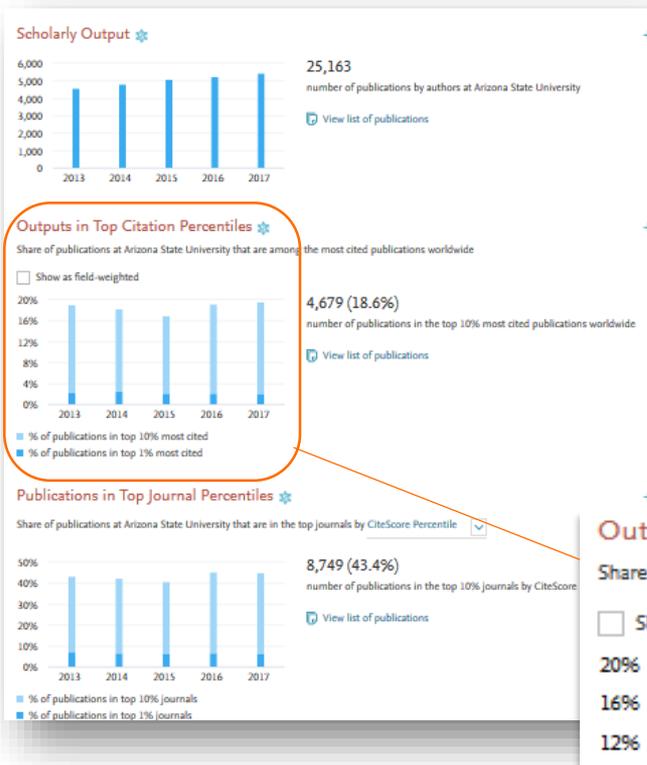
International Collaboration
 + Add to Reporting
 Publications co-authored with Institutions in other countries

Academic-Corporate Collaboration
 + Add to Reporting
 Publications with both academic and corporate affiliations

Topic	Scholarly Output	Publication Share	Field-Weighted Citation Impact	Prominence percentile
Hydrocortisone; Saliva; cortisol awakening ... T.3123	54	5.65% ▲	1.54	98.652
DNA; Nanostructures; origami nanostructures ... T.2293	52	3.17% ▼	3.26	99.898
asteroid; asteroids; space weathering ... T.4019	49	9.57% ▲	1.82	95.412
heat island; urban climate; canopy model ... T.5501	48	6.60% ▼	2.19	98.316
Motor Activity; Residence Characteristics; neighborhood environment ... T.829	48	2.60% ▼	3.30	99.646

Highlight the disciplinary focus of your institutions and your top researchers

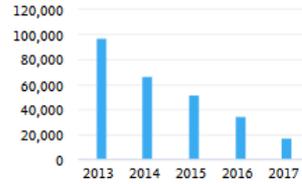
Look through different metrics to identify ones that demonstrates your institution's research excellence



See how many of your publications fall into the top 1% and 10% of the most cited articles in the world

Look through different metrics to identify ones that demonstrates your institution's research excellence

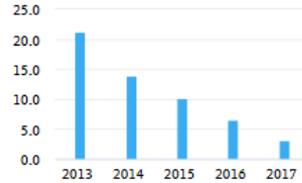
Citation Count



267,175

number of citations received by publications at Arizona State University

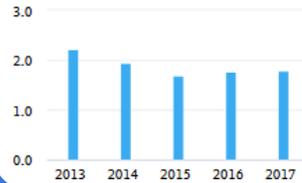
Citations per Publication



10.6

average number of citations per publication at Arizona State University

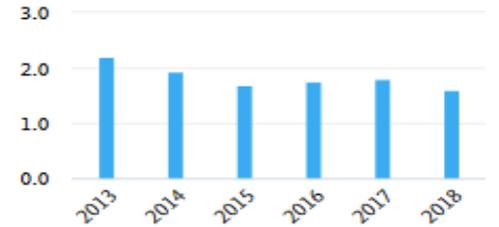
Field-Weighted Citation Impact



1.87

Field-Weighted Citation Impact of Arizona State University

Field-Weighted Citation Impact

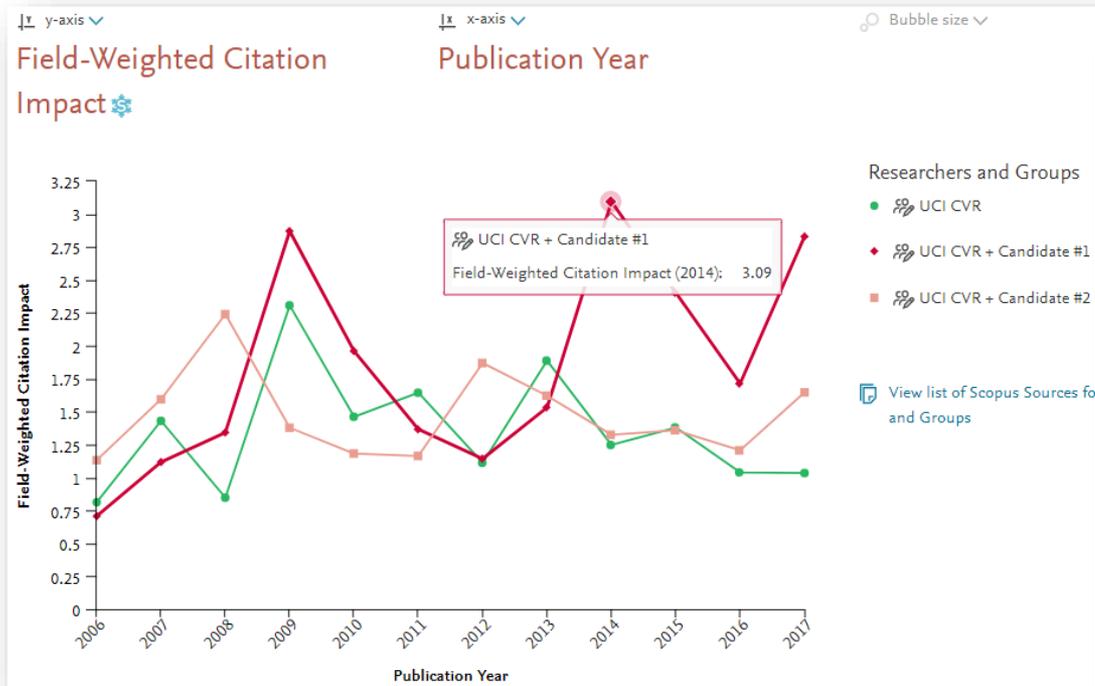


View Field-Weighted Citation Impact that normalizes citation behavior for differences in size, field and publication-type

“I want to explore the various scenarios I’m considering to set up a Center of Excellence. How can the data provide me with insights?”



Test scenario by creating virtual teams and compare using multiple metrics



“Our Provost is going to South Korea; who do our academics collaborate with there and how can we expand?”



Drill into the map to identify your collaboration partners in China



Identify existing and potential collaboration partners

Institutions collaborating with Arizona State University

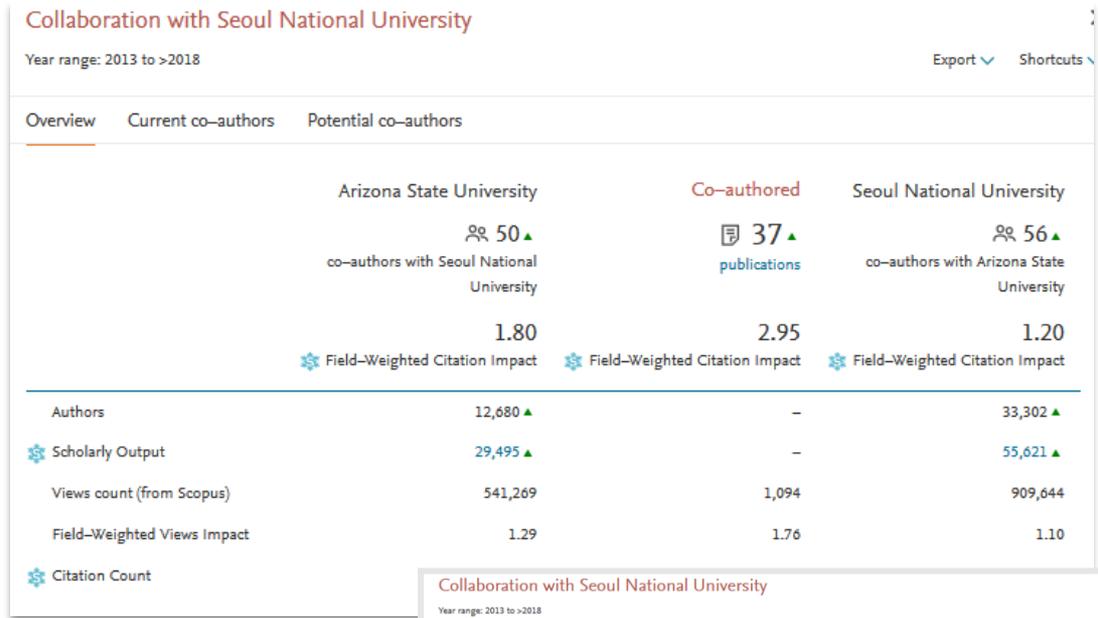
Worldwide All sectors All author numbers

3,480 collaborating institutions 19,779 co-authored publications

Map Table + Add to Reporting Export Shortcuts Find institution

Institution	Co-authored publications <input type="checkbox"/>	Field-Weight... <input type="checkbox"/>
University of Arizona	735 ▲	2.40
Harvard University	504 ▲	3.48
University of Michigan	456 ▲	3.31
CNRS	442 ▲	2.89
University of Washington	422 ▲	3.64
University of California at Los Angeles	409 ▲	2.85
University of California at Berkeley	404 ▲	3.80
Pennsylvania State University	386 ▲	2.52
Stanford University	383 ▲	5.25
Massachusetts Institute of Technology	356 ▲	3.37
Chinese Academy of Sciences	346 ▲	2.85
California Institute of Technology	317 ▲	3.34

Assess the activity level and identify researchers



Collaboration with Seoul National University

Year range: 2013 to >2018 Export Shortcuts

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

Add to panel

Arizona State University			Seoul National University		
Co-authors with Seoul National University			Co-authors with Arizona State University		
Author	Co-authored publications	Citations	Author	Co-authored publications	Citations
> Kim, Duho	6	32	> Choi, Changsu	7	127
> Suk, Hye Won	3	10	> Yoon, Yongmin	6	127
> Butler, Nathaniel R.	2	106	> Im, Myungshin	6	32
> Kubly, Michael J.	2	37	> Kim, Jae Woo	5	127
> Lee, Peggy M.	2	19	> Hong, Juseun	5	21
> Kim, Wonsun (Sunny)	2	0	> Hyun, Minhee	5	21
> O'Keefe, Michael	1	292	> Jeon, Yiseul	5	21
> Butry, Daniel A.	1	80	> Jun, Hyunsung D.	5	21
> Watkins, Tylan	1	80	> Kim, Dohyeong	5	21
> Yan, Hao	1	47	> Kim, Yongjung	5	21

“How can I see who’s excelling in a specific subject compared to my researchers, for potential collaboration opportunities?”



Choose or create your own Research Area in SciVal

Activity of Arizona State University

Within: heat island; urban climate; canopy model T.5501 | Year range: 2013 to 2018 | Analyze Topic worldwide

Summary Authors

heat island; urban climate; canopy model T.5501

2015 to 2017 | no subject area filter selected | ASJC

Summary **Institutions** Countries Authors Scopus Sources Keyphrases Related Topics

Top Institutions

Worldwide | All sectors

Map Table Chart

+ Add to Reporting Export

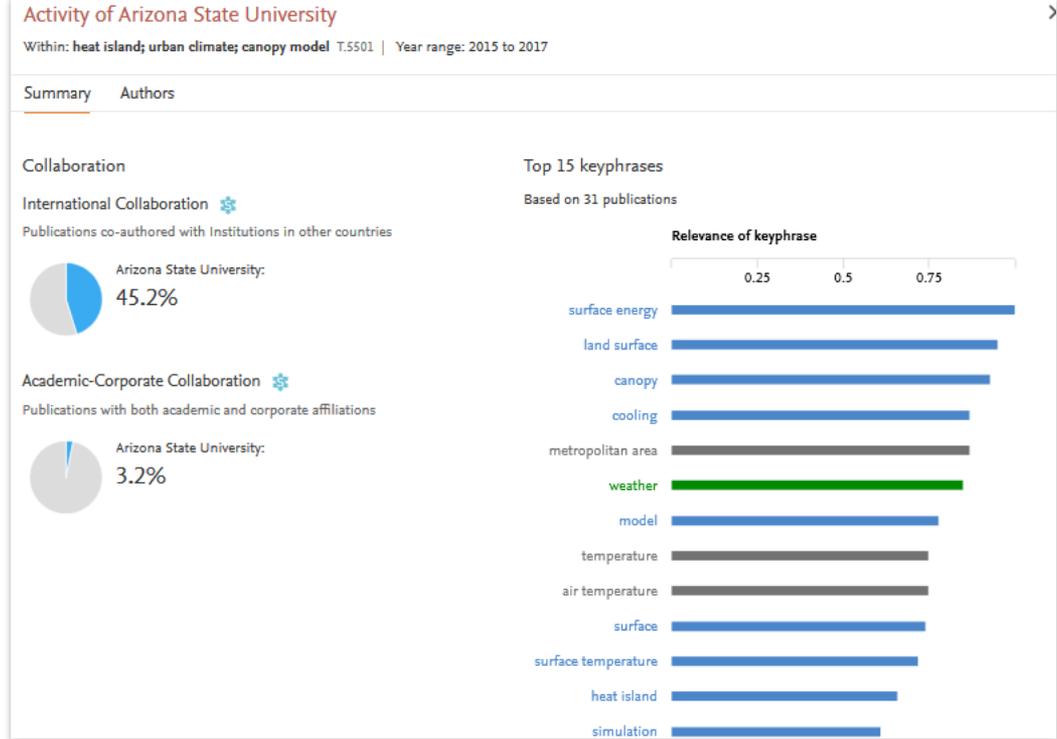
Top 100 Institutions in this Topic, by Scholarly Output

View on Chart

<input type="checkbox"/> Institution	Scholarly Output ↓	Views Count	Field-Weigh...
1. <input type="checkbox"/> Arizona State University	31	852	1.91
2. <input type="checkbox"/> Nanjing University	29	530	1.29
3. <input type="checkbox"/> Chinese Academy of Sciences	26	512	1.04
4. <input type="checkbox"/> University of Reading	26	485	1.98
5. <input type="checkbox"/> CAS - Institute of Atmospheric Physics	18	324	1.17
6. <input type="checkbox"/> City University of New York	16	440	1.32
7. <input type="checkbox"/> Nanjing University of Information Science & Technology	16	246	0.92

Analyze all or a specific part of the Research Area

View the performance of the top institutions, countries, authors and journals and compare them to your institution for potential synergies



Predictive Analytics

With Topic Prominence we can ...

...Help Researchers

- **Identify topics with high momentum** and most likely **high funding success rates**.
- **Showcase** that they are active in topics with high momentum.
- **Find the best potential co-authors** in those topics.
- **Identify emerging & related topics** with high momentum they should be aware of.

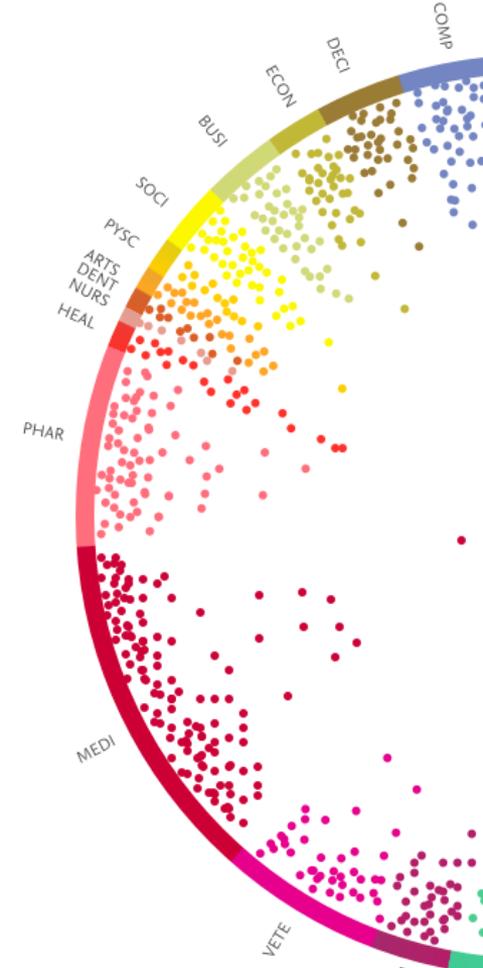
...Help Research managers

- Identify pockets of **well funded research** in the **research portfolio**.
- Find the **top performers** and **rising stars** in those areas for recruitment, tenure and collaboration.
- **Showcase** that they or their institution is active in topics with high momentum
- **Identify which topics other researchers and universities** are active in that have high momentum.



Solution – Topic Prominence

- We have identified ~96,000 global research topics by clustering all of Scopus and ranked them by Prominence.
- Prominence is a new indicator that shows the current momentum of a topic by looking at very recent citations, views and CiteScore values.
- Prominence = momentum (not the same as importance!).
- Prominence predicts funding – helps researchers and research managers identify topics in which funding will increase.

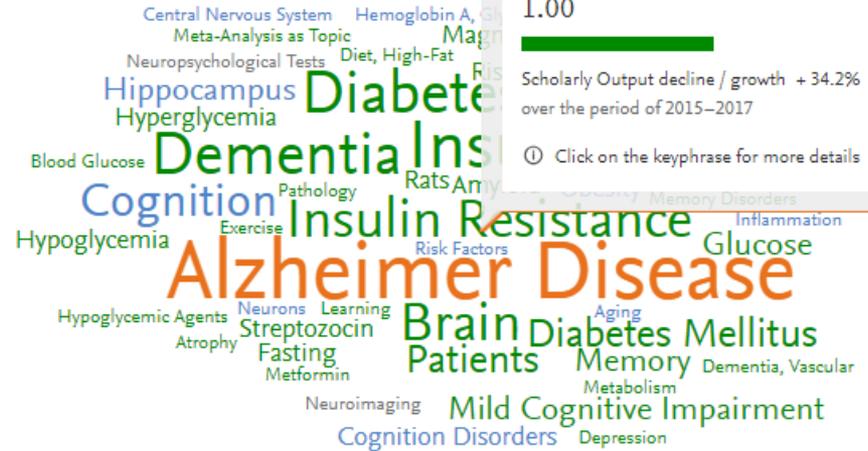
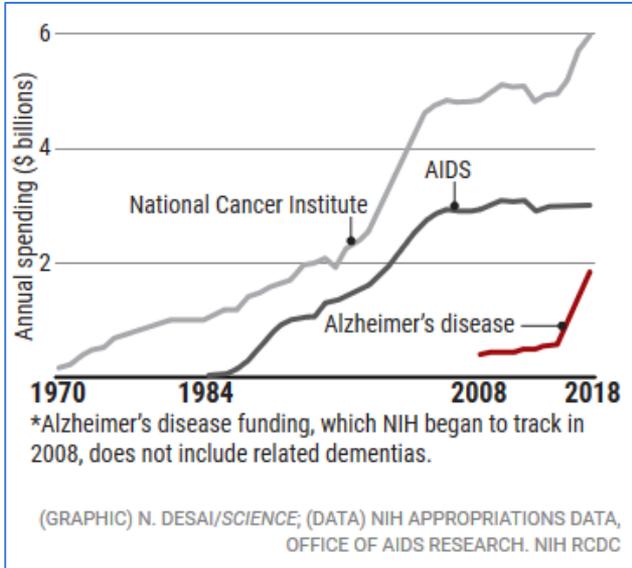


NIH tripled spending for Alzheimer's research

Topic character

Keyphrase analysis Representative publications

Top 50 keyphrases by relevance, based on 775 publications | [Learn about keyphrase calculations >](#)



Alzheimer Disease

Relevance of keyphrase
maximum value = 1.00

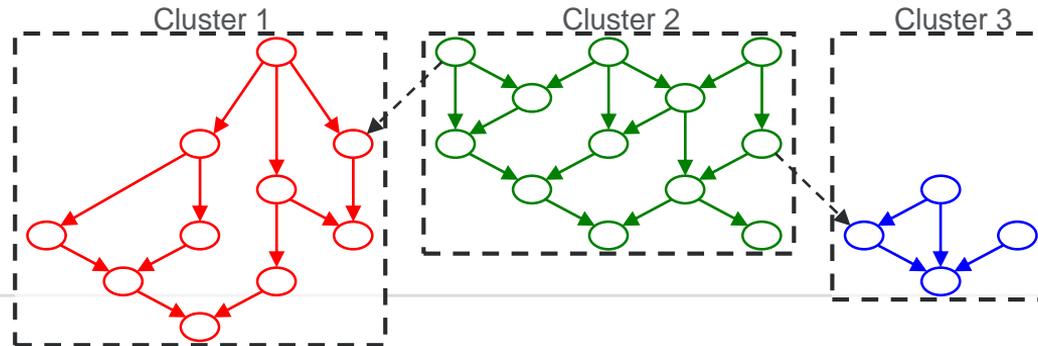
1.00

Scholarly Output decline / growth + 34.2%
over the period of 2015–2017

① Click on the keyphrase for more details

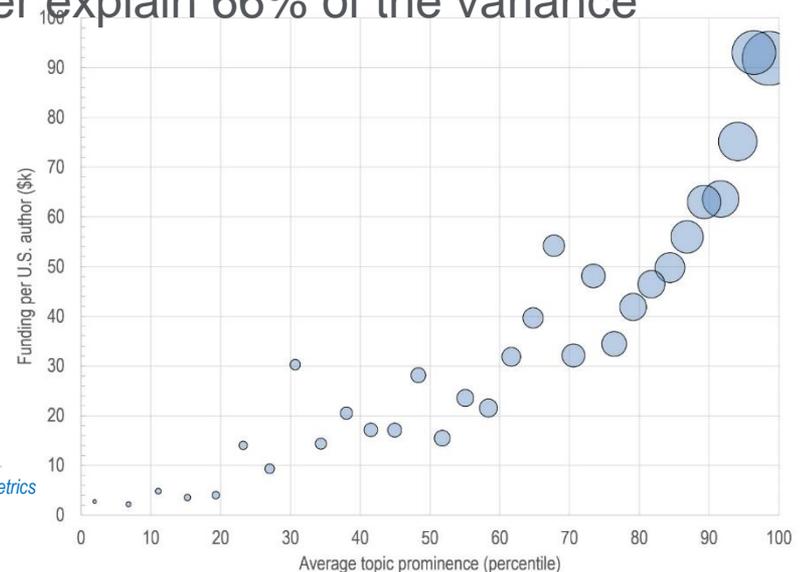
How are “Topics” identified

- All Scopus publications are clustered into topics using citation links
- ~35 million publications (1996-present) in ~96,000 topics
- Clustering is done using algorithms that
 - Divide the documents into groups
 - Have a resolution parameter where increasing the resolution increases the number of clusters and reduces cluster sizes
 - Maximize the links within clusters and minimize the links between clusters



Prominence and funding

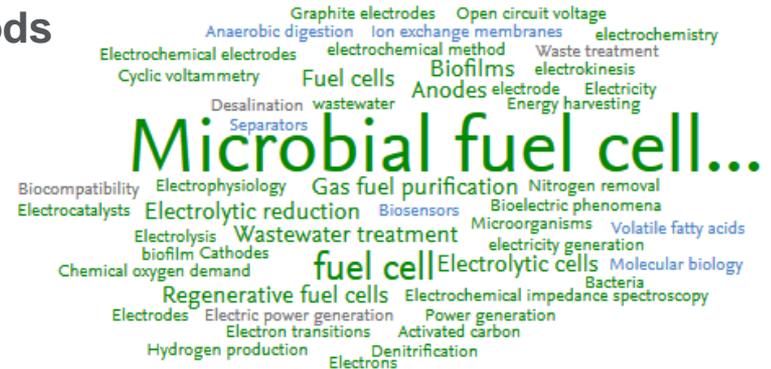
- Grant data (314K grants, \$203 billion) from STAR METRICS database were assigned to topics using textual similarity
- Dependent variable = Funding per topic 2011-2013
- Prominence + Funding (2008-2010) together explain 66% of the variance



Klavans, R. and K.W. Boyack. (2017). Research portfolio analysis and topic prominence. *Journal of Informetrics*

What is a Topic?

- A cluster of documents with a common intellectual interest
 - Instantly recognizable by researchers
- Easy to interpret
 - Articles that cite each other are generally in the same topic
- **Accurate** problem-level subdivisions of science
 - We use the most accurate clustering methods available
- Nearly **complete coverage**
 - Papers from 1996-



Back to Alzheimer's research...

Topic	Scholarly Output ↓	Field-Weighted Citation Impact	Prominence percentile
Amyloid; Alzheimer Disease; amyloid imaging ... T.2346 Analyze Topic in more detail	1,501	2.33	99.719 
Alzheimer Disease; Diabetes Mellitus, Type 2; intranasal insulin ... T.2441	1,472	1.40	99.253 
MicroRNAs; Alzheimer Disease; neuronal differentiation ... T.7146	1,432	1.73	99.383 
Magnetic resonance imaging; Alzheimer Disease; ADNI database ... T.12907	1,043	1.54	98.578 
Alzheimer Disease; Dementia; CSF biomarkers ... T.14301	990	2.70	99.154 
Alzheimer Disease; Cerebrospinal Fluid; CSF biomarker ... T.4908	925	1.87	98.714 
Alzheimer Disease; Genome-Wide Association Study; precursor protein ... T.5973	821	1.66	98.607 
Alzheimer Disease; Amyloid beta-Peptides; amyloid β ... T.6265	755	1.31	98.248 
Alzheimer Disease; Mild Cognitive Impairment; amnesic mild ... T.4061	743	1.22	96.349 
Alzheimer Disease; Amyloid; neurofibrillary tangles ... T.5470	710	2.22	98.793 
Cholesterol; Alzheimer Disease; brain cholesterol ... T.6015	590	1.30	96.567 

What can you do with Topics?

1. Help your researchers and faculty identify funding opportunity areas

2. Assess which research areas to invest in:

Identify top researchers for **recruitment** or **collaboration**

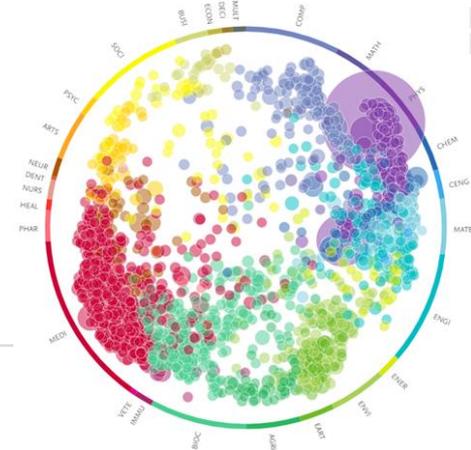
Find top institutions to partner with

Retain your best researchers

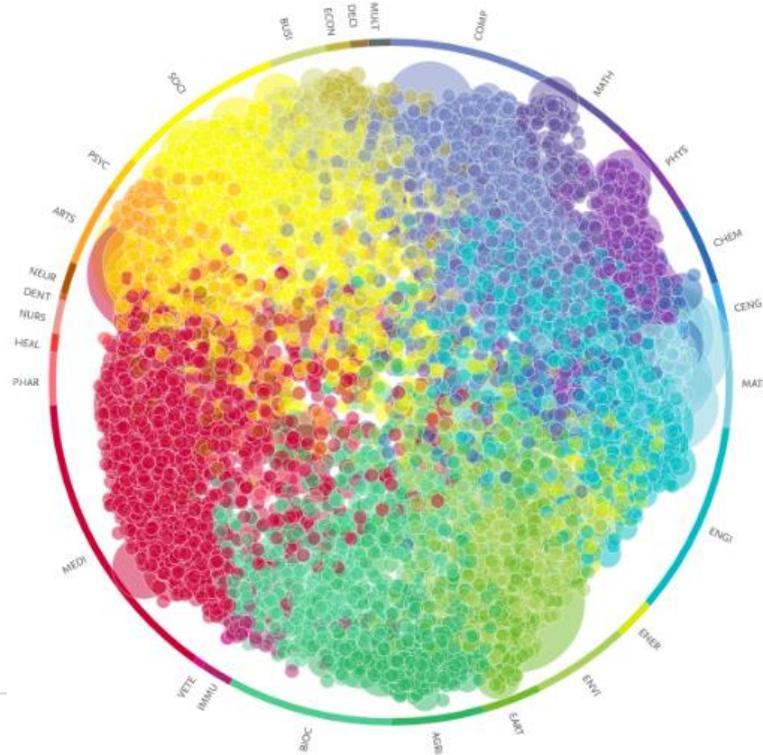
3. Help you showcase your achievements

To funding agencies

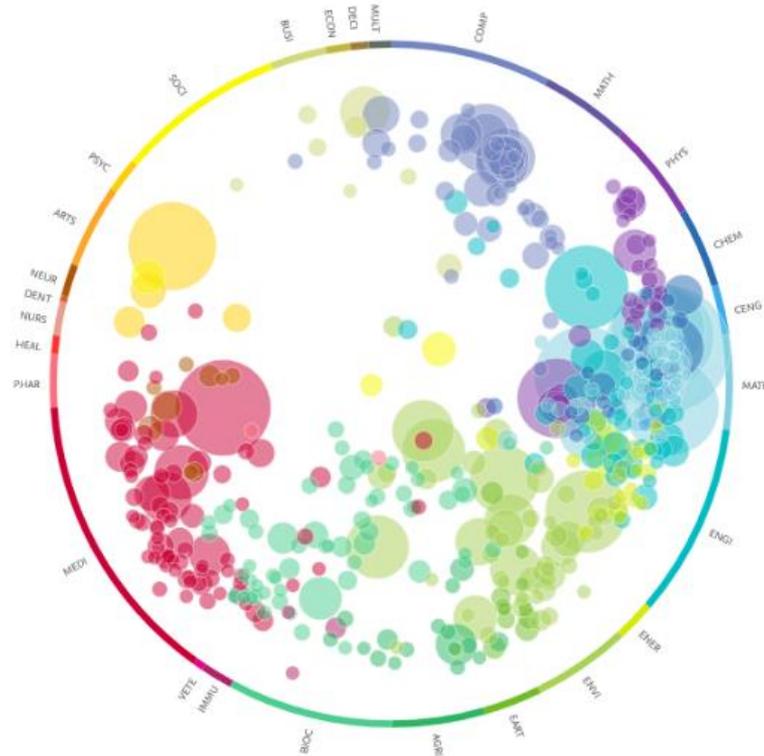
To potential collaboration partners



ASU's entire publication portfolio from 2013-2018



ASU's top 1% of Topics from 2013-2018



ASU as key contributor, in current top 1% of Topics (2013-2018)



Identify institutional research strengths

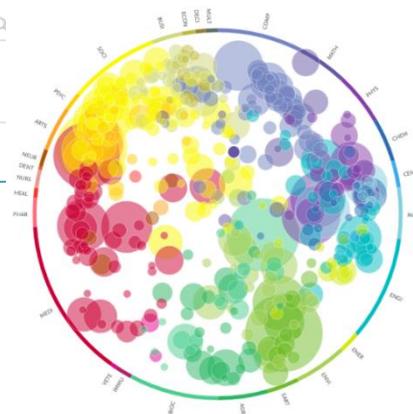
Researchers at Arizona State University have contributed to 10,242 topics between 2013 to 2018

Table Wheel

Key Topics only Filter this Institution's Topics

Key Topics are the 2,013 Topics to which Arizona State University is a Key Contributor

Topic	At this Institution			Worldwide
	Scholarly Output ↓	Publication Share	Field-Weighted Citation Impact	Prominence percentile
Mars; crater; aqueous alteration ... T.3294	90	12.73% ▼	3.51	97.587
Crystallography; Free electron lasers; crystallography SFX ... T.10298	84	10.59% ▲	4.80	98.318
Racism; African Americans; everyday discrimination ... T.2294	82	5.94% ▲	2.71	97.288
Hispanic Americans; Acculturation; acculturative stress ... T.4495	76	9.68% ▼	1.59	90.781
black holes (astronomy); time measurement; direct collapse ... T.3058	66	6.19% ▼	3.31	98.039
debris; disks; differential imaging ... T.4806	62	7.39% ▲	3.40	97.214
DNA; Nanostructures; origami nanostructures ... T.2293	61	3.00% ▼	4.11	99.898
heat island; urban climate; canopy model ... T.5501	61	7.03% ▼	2.03	98.316



Compare institutions' research strengths

View the [Scholarly Output](#)



of the selected entities, by Topic

0 280

Show navigator

Topic	Prominence Percentile ↓	Arizona State University	Northern Arizona University	The University of Arizona
Molybdenum compounds; Monolayers; dichalcogenides T.63	99.999	63	0	13
Microbial fuel cells; Bioelectric Energy Sources; T.16	99.978	48	0	4
Microalgae; Algae; lipid productivity T.139	99.921	27	0	20
Switching; Data storage equipment; conductive T.26	99.907	78	0	0
DNA; Nanostructures;	99.898	61	0	1

Further reading

For further information regarding the methodology, how Prominence is calculated and assigned etc. please see the following papers:

- **[Research Portfolio Analysis and Topic Prominence](#)**
Richard Klavans and Kevin Boyack
- **[Identifying Emerging Topics in Science and Technology](#)**
Henry Small, Kevin W. Boyack and Richard Klavans
- **[Which Type of Citation Analysis Generates the Most Accurate Taxonomy of Scientific and Technical Knowledge?](#)**
Richard Klavans and Kevin W. Boyack
- **[A New Methodology for Constructing a Publication-Level Classification System of Science](#)**
Ludo Waltman and Nees Jan van Eck

Accessing SciVal at www.scival.com

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.

(*=required fields)

Login using your Elsevier credentials

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New to SciVal? [Find out](#) what the new generation of SciVal can do for you.

Configure, visualize and export information according to your personal needs through SciVal's integrated modular platform:



Overview

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



Benchmarking

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



Collaboration

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



Trends

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



If you haven't previously registered for Scopus or ScienceDirect then please go to **Register Now**. Use VPN off-campus or ask Shelly for a Remote Access link

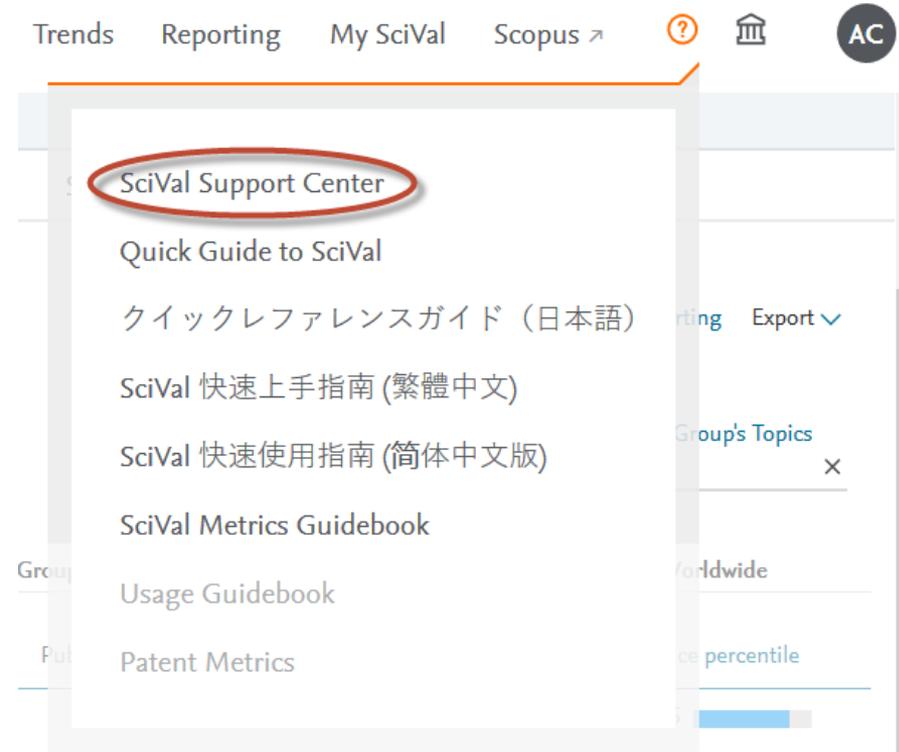
Getting help

Getting help

The spine menu will provide a line to help documentation

<https://service.elsevier.com/app/home/supporthub/scival/>

- Contact me if you have any problems and I will answer the question or find someone who can. I.Galloway@Elsevier.com
949-280-6029



Stay up-to-date on our latest releases and improvements via scival.com

❖ Read and share our exciting Twitter updates

❖ “New in this Release” news section >> see the latest release elements

❖ SciVal Development Roadmap >> see what’s coming up for SciVal in 2018 and beyond

❖ Access the latest SciVal Webinars

❖ Learn exciting new Tips & Tricks via our virtual tour guide in SciVal

What’s new in SciVal?

New in this release

September 2018, code name: Sagan

- **Diacritic support.** To help you find an institution faster, we have enhanced the way we display institution names. We will support local language characters, multiple name variations for an institution (English and up to two local name variations) and a common acronym.
- **Reporting enhancements.** You can now add an analysis directly to an existing Report, or create a new Report within the module you’re using.
- **Enhanced flow to define Research Areas.** We’ve simplified the search options when defining a Research Area and included an advanced search for our power users.

🔗 [See the list of previous releases](#)

🔗 [Check out SciVal roadmap](#)

Latest webinars

- 📺 [Thinking outside the box! Analyze your research activities globally with SciVal](#)
- 📺 [SciVal Reporting: Simple, time-saving tips & tricks](#)
- 📺 [SciVal API :: What is it & how can I use it?](#)
- 📺 [Delving Deeper into Topic Prominence in Science](#)
- 📺 [Introduction to SciVal’s Topic Prominence in Science](#)

Quick guide to SciVal

Get a quick overview of SciVal, how you can use it and how it can help you.

1. [Getting started with SciVal](#)
2. [Working with entities](#)
3. [Using SciVal for strategic planning](#)

Need help?

[Go to SciVal Support Center](#)

[Contact the helpdesk](#)

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SciVal
@SciVal

Have you seen the latest updates to our Reporting functionality? You can now add an analysis directly to an existing Report, or create a new Report within the module you’re using bit.ly/2OHRVmd

version Published Viewed Citd Economic Impact Societal Impact Authors

100 topics between 2013 to 2017



👍 🔄 5h

SciVal
@SciVal

SciVal's Sagan release is now LIVE! Diacritic support, to help you find an institution faster. [we have](#)

Stay tuned

Sign up for news updates about our latest releases, tips & tricks, webinars and more.

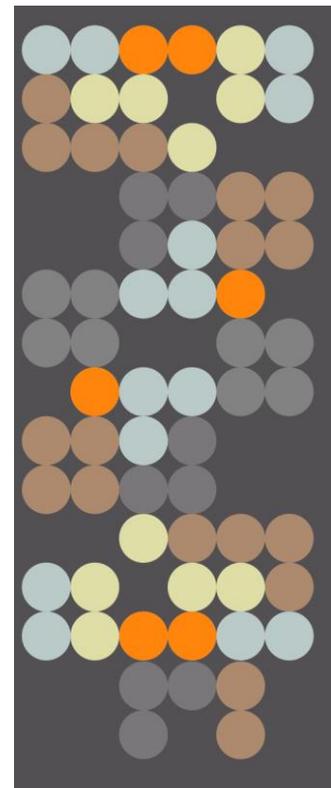
[Sign up >](#)

SciVal - Solution to your strategic planning challenges

Gain immediate access to view and analyze the world's research to:

- View the ready-made, at-a-glance snapshot of your research performance or of any team or institution around the world
- Benchmark your team's or institution's performance against any set of peers.
- Model test scenarios by creating virtual teams and newly emerging research areas.
- Evaluate existing and identify potential collaborative partnerships, locally or globally
- Track and monitor top performers and rising stars for any research topic of interest.

www.elsevier.com/research-intelligence



What are the questions addressed using SciVal?

“How can I determine if a research area is a good investment of our limited time & resources?”



“How can we raise our institution’s scholarly impact?”



“What are our institutions strengths compared to others?”



“What is the best way to showcase my institution’s prominence?”

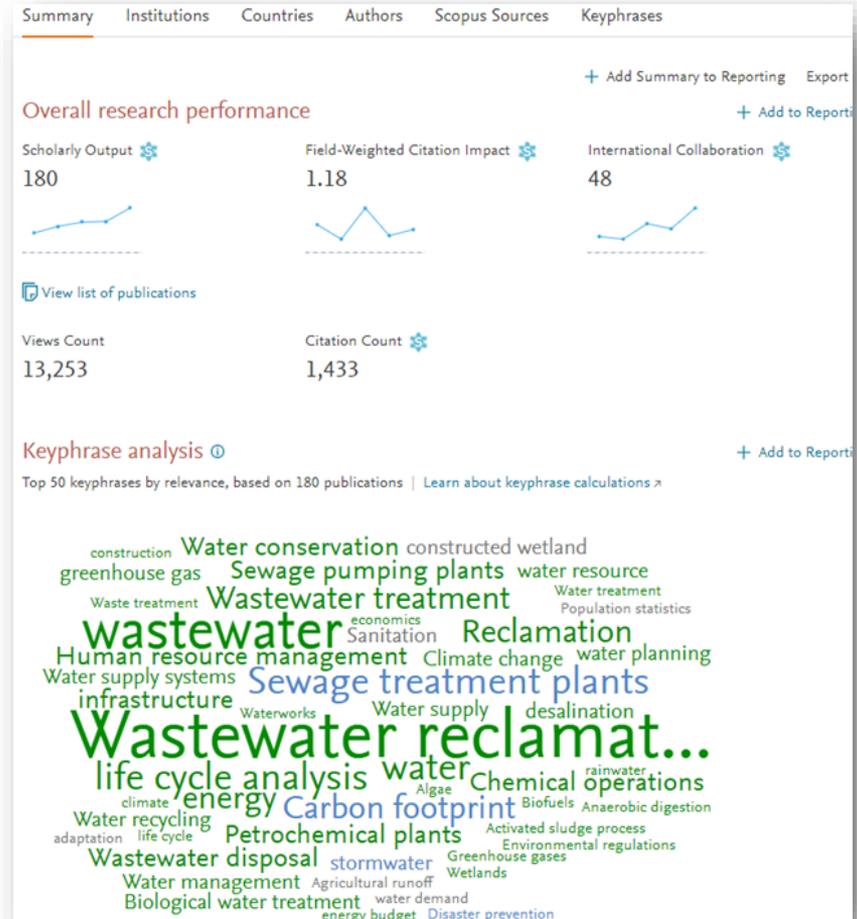


Research area: Water, Energy, Climate, Wastewater

“How can I determine if a research area is a good investment of our limited time & resources?”



Use an existing Topic or Research Area, or create your own, to uniquely represent your area of interest.



“How can I determine if a research area is a good investment of our limited time & resources?”



Examine the research area to determine your scholarly presence, your competitors, and potential collaborators. .

Find top institutions, authors, journals, etc.

Top Institutions

North America All countries All sectors reset filter

[+ Add to Reporting](#) [Export](#)

Top 100 Institutions in this Research Area

Top authors

North America All countries reset filter

Institution

[+ Add to Reporting](#) [Export](#)

Top 500 authors in this Research Area, by Scholarly Output

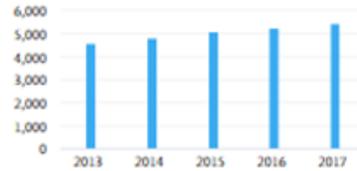
<input type="checkbox"/>	<input type="checkbox"/> Author	Affiliation	Scholarly Output <input type="button" value="v"/>	Views Count <input type="button" value="v"/>	Field-Weighted... <input type="button" value="v"/>		
1.	<input type="checkbox"/>	1. Champagne, Pascale	<input checked="" type="button" value="v"/>	Queen's University Kingston	2	88	0.41
2.	<input type="checkbox"/>	2. Rosso, Diego	<input checked="" type="button" value="v"/>	University of California at Irvine	2	111	0.46
3.	<input type="checkbox"/>	3. Sobhani, Reza	<input checked="" type="button" value="v"/>	University of California at Irvine	2	111	0.46
4.	<input type="checkbox"/>	4. Álvarez, Pedro Jose J.	<input checked="" type="button" value="v"/>	Rice University	1	250	9.15
5.	<input type="checkbox"/>	5. Anand, Chirjiv Kaur	<input checked="" type="button" value="v"/>	Universite de Sherbrooke	1	56	1.07
6.	<input type="checkbox"/>	6. Anderson, Marc A.	<input checked="" type="button" value="v"/>	University of Wisconsin	1	62	0.45
7.	<input type="checkbox"/>	7. André, Chantale	<input checked="" type="button" value="v"/>	Environment Canada	1	12	0.00
8.	<input type="checkbox"/>	8. Anumol, Tarun	<input checked="" type="button" value="v"/>	Agilent Technologies	1	19	0.53
9.	<input type="checkbox"/>	9. Apul, Defne S.	<input checked="" type="button" value="v"/>	University of Toledo	1	56	1.07
10.	<input type="checkbox"/>	10. Ashbolt, Nicholas J.	<input checked="" type="button" value="v"/>	University of Alberta	1	48	1.14
11.	<input type="checkbox"/>	11. Austin, David	<input checked="" type="button" value="v"/>	Jacobs Engineering	1	26	1.26

“How can we raise our institution’s scholarly impact?”



Strive to publish in more highly ranked journals, which may lead to more highly regarded, and cited, articles.

Scholarly Output



25,163

number of publications by authors at Arizona State University

[View list of publications](#)

Outputs in Top Citation Percentiles

Share of publications at Arizona State University that are among the most cited publications worldwide

Show as field-weighted



4,679 (18.6%)

number of publications in the top 10% most cited publications worldwide

[View list of publications](#)

Publications in Top Journal Percentiles

Share of publications at Arizona State University that are in the top journals by CiteScore Percentile



8,749 (43.4%)

number of publications in the top 10% journals by CiteScore

[View list of publications](#)

“How can we raise our institution’s scholarly impact?”



Scopus

Search

Sources

Alerts

Lists

Help

SciVal

Linda Galloway



Source details

Feedback > Compare sources >

Water Science and Technology

Visit Scopus Journal Metrics >

Formerly known as: *Progress in Water Technology*

Scopus coverage year

CiteScore

CiteScore rank & trend

Scopus content coverage

Publisher: IWA Pu

ISSN: 0273-1223

Subject area: (Envi

CiteScore 2017

CiteScore rank 2017

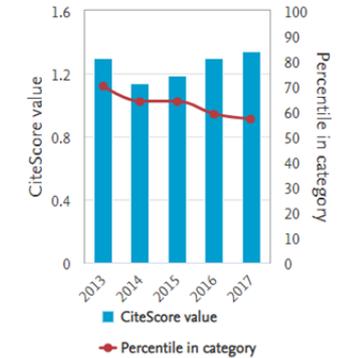
In category: Water Science and Technology

#82	Water Science and Technology	1.34	57th percentile
191			

View all documents >

Rank	Source title	CiteScore 2017	Percentile
#1	Critical Reviews in Environmental Science and Technology	7.64	99th percentile
#2	Water Research	7.55	99th percentile
#3	Water Resources and Industry	6.74	98th percentile
#4	Desalination	6.41	98th percentile
#5	Cryosphere	4.84	97th percentile
#6	Exposure and Health	4.52	97th percentile
#7	Water Resources Research	4.39	96th percentile
#8	Hydrology and Earth System Sciences	4.10	96th percentile
#9	Journal of Hydrology	4.06	95th percentile
#10	Environmental Nanotechnology, Monitoring	4.00	95th percentile

CiteScore trend



Use the ‘Sources’ tab in Scopus to find journal rankings, and journals to target for publication.

“What are our institutions strengths compared to others?”



View a Topic Prominence Heat Map to visualize research area prominence and relative strengths.

Browse Topics

Researchers in Arizona have contributed to 20,598 topics between 2013 to 2018

Table
 Heat map
 Wheel

[Filter this Institution Groups Topics](#)

View the Scholarly Output of the selected entities, by Topic 0 280

[Show navigator](#)

Topic	Prominence Percentile ↓	Arizona State University	Mayo Clinic Scottsdale AZ	Northern Arizona University	The University of Arizona	National Optical Astronomy Observatory	St. Joseph's Hospital and Medical Center	Translational Genomics Research Institute
Molybdenum compounds; Monolayers; dichalcogenides T.63	99.999	63	0	0	13	0	0	0
Microbial fuel cells; Bioelectric Energy Sources; T.16	99.978	48	0	0	4	0	0	0
Microalgae; Algae; lipid productivity T.139	99.921	27	0	0	20	0	0	0
Switching; Data storage equipment; conductive T.26	99.907	78	0	0	0	0	0	0
DNA; Nanostructures; origami nanostructures T.2293	99.898	61	0	0	1	0	0	0
jets; production; parton shower T.1026	99.875	0	0	0	280	0	0	0
traits; functional diversity; trait values T.1364	99.856	20	0	24	30	0	0	0

50

“What are our institutions strengths compared to others?”



Explore the Heat Map in more detail to find unique areas of strength, and to see how you compare world-wide.

Browse Topics

Researchers in Arizona have contributed to 20,598 topics between 2013 to 2018

Table
 Heat map
 Wheel

Filter this Institution Group's Topics

View the Scholarly Output



of the selected entities, by Topic

0



280

Show navigator

Topic	Prominence Percentile ↓	Arizona State University	Mayo Clinic Scottsdale AZ	Northern Arizona University	The University of Arizona	National Optical Astronomy Observatory	St. Joseph's Hospital and Medical Center	Translational Genomics Research Institute
Molybdenum compounds; Monolayers; dichalcogenides T.63	99.999	63	0	0	13	0	0	0
Microbial fuel cells; Bioelectric Energy Sources; T.16	99.978	48	0	0	4	0	0	0
Microalgae; Algae; lipid productivity T.139	99.921	27	0	0	20	0	0	0

Top 100 Institutions in this Topic, by Scholarly Output

View on Chart

<input type="checkbox"/> Institution	Scholarly Output ↓	Views Count	Field-Weight...	Citation Cou...
1. <input type="checkbox"/> Chinese Academy of Sciences	146	4,400	1.60	1,563
2. <input type="checkbox"/> Harbin Institute of Technology	134	4,618	1.61	1,563
3. <input type="checkbox"/> Ministry of Education China	131	4,613	1.59	1,294
4. <input type="checkbox"/> Indian Institute of Technology, Kharagpur	52	1,526	1.19	344
5. <input type="checkbox"/> Nankai University	52	1,863	1.78	605
6. <input type="checkbox"/> Pennsylvania State University	52	2,829	2.38	940
7. <input type="checkbox"/> University of the West of England	48	2,572	3.34	729
8. <input type="checkbox"/> Tsinghua University	47	2,380	2.23	670
9. <input type="checkbox"/> Virginia Polytechnic Institute and State University	47	2,267	2.06	722

“What is the best way to showcase my institution’s excellence for outreach to donors?”



RESEARCH & INNOVATION AT YORK UNIVERSITY SNAPSHOT OF 2017



York has one of the **highest growth rates in scholarly output** in Ontario for the last decade (SciVal, 2015).



“York is committed to excellence in research & scholarship in all its forms.”
– Robert Haché, Vice-President Research & Innovation



York is **No. 1 in Ontario in collaborative research publications** that involve international partnerships (SciVal, 2015).

York is **No. 1 in research impact** in business, management & accounting; economics, econometrics & finance; & energy (All Science Journal Classification & SciVal, 2012-2015).



York is **No. 1 in Canada & No. 3 in the world** in the research area of biological & computational vision (SciVal, 2011-2015).

York is **No. 2 in research impact** in engineering, physics & astronomy, & psychology (field-weighted citation impact, SciVal, 2012-2015).



Use the ready-made visualizations and graphics to embed in other applications.

Metrics selection

Two Golden Rules for using research metrics

Always use both qualitative and quantitative input into your decisions

Benefit from the strengths of both approaches. Don't replace one with the other

Combining both approaches = **closer to the whole story**

Valuable intelligence comes when these approaches **show different messages**

Always use more than one research metric as the quantitative input

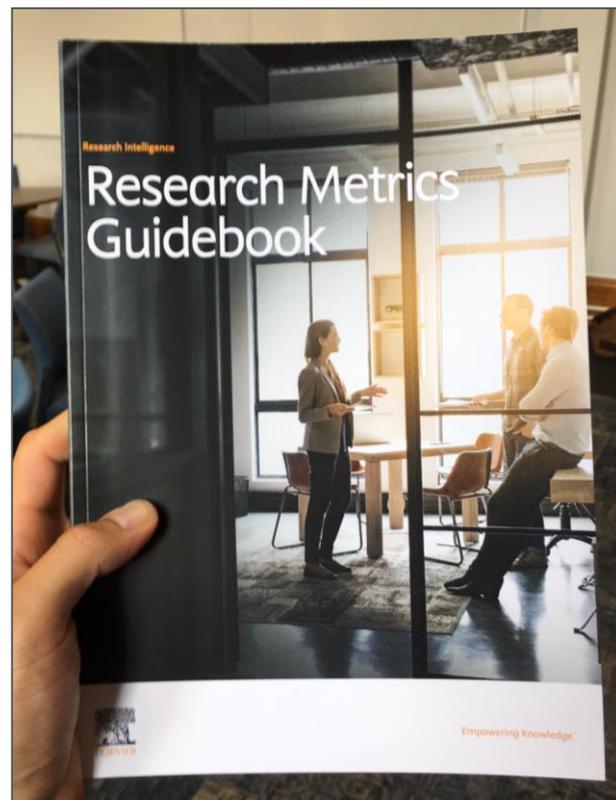
One metric's strengths can **complement** the weaknesses of others

There are many different ways of being excellent

Using multiple metrics drives desirable changes in behavior (harder to game)

Research Metrics Guidebook

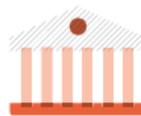
- **Topics** – Expand and enhance
- **Organisational hierarchies in SciVal** – Easy method to create and maintain
- **Reporting** – Simplify, enhance and expand the functionality
- **Improve our metrics support** – Relaunched support hub, refreshed Metrics Guidebook, in-product guidance, reporting templates, Metrics wizard
- **Additional** – REF year range, new subject classifications, home institution filter and hyper-authored papers, Collaboration module overhaul



Research Metrics Guidebook

This comprehensive metrics guidebook is intended to be a straightforward, practical companion for you to find the right metrics to meet your objectives.

- **Understanding metrics**
 - Scopus as data source
- **Selection of appropriate metrics**
 - What affects their values, besides performance?
- **For each metric**
 - Situations in which they are useful
 - When to take care and how to address short-comings
 - Worked examples



4.0 SciVal and research metrics

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How to choose a metric

There are **6 factors**, which can affect the value of a metric:

- Size
- Publication-type
- Manipulation
- Discipline
- Database coverage
- Time

	Size-normalized?	Field-normalized?	Publication-type normalized?	Resistant to database coverage?	Difficult to manipulate?	Time-independent?
Academic-Corporate Collaboration	Diagonal lines				Dark purple	Dark purple
Academic-Corporate Collaboration Impact	Dark purple					
Awards Volume					Dark purple	Dark purple
Citation Count						
Citations Per Publication	Dark purple					
Cited Publications	Diagonal lines					
Citing-Patents Count					Dark purple	
Collaboration	Diagonal lines				Dark purple	Dark purple
Collaboration Impact	Dark purple					
Field-Weighted Citation Impact	Dark purple	Dark purple	Dark purple	Dark purple	Dark purple	
Field-Weighted Mass Media	Dark purple	Dark purple	Dark purple	Dark purple	Dark purple	Dark purple
Field-Weighted Views Impact	Dark purple	Dark purple	Dark purple	Dark purple	Dark purple	Dark purple
<i>h</i> -indices						
Mass Media					Dark purple	Dark purple
Media Exposure	Dark purple				Dark purple	Dark purple
Number of Citing Countries					Dark purple	

A basket of >30 sets of metrics at your disposal

Productivity metrics

- ⚙ Scholarly Output
- ⚙ Outputs in Top Percentiles
- ⚙ Publications in Top Journal Percentiles

Citation Impact metrics

- ⚙ Citation Count
- ⚙ Citations per Publication
- ⚙ Cited Publications
- ⚙ Number of Citing Countries
- ⚙ *h*-indices (*h*, *g*, *m*)
- ⚙ Field-Weighted Citation Impact
- ⚙ Citing-Patent Count
- ⚙ Patent-Cited Scholarly Output
- ⚙ Patent-Citations Count
- ⚙ Patent-Citations per Scholarly Output

Collaboration metrics

- ⚙ Collaboration (geographical)
- ⚙ Collaboration Impact (geographical)
- ⚙ Academic-Corporate Collaboration
- ⚙ Academic-Corporate Collaboration Impact

Disciplinary metrics

- Journal count
- Journal category count

Usage metrics (Trends module)

- Views Count
- Views per Publication
- Field-Weighted Views Impact

Societal Impact Metrics

- Mass Media
- Media Exposure





ELSEVIER

Research Intelligence

SciVal: Practical analyses

November 2018



Empowering Knowledge

What is trending in a Research Area?

The screenshot shows a research intelligence interface. At the top, the word "World" is circled in red. Below it, there are filters for "2013 to >2018" and "no subject area filter selected". A navigation bar includes "Summary", "Topics", "Awarded Grants", "Published", "Viewed", "Cited", "Economic Impact", "Authors", and "Institutions".

The main content area displays the topic: "Wastewater reclamation; Water conservation; greywater treatment" with the ID "T.21307". Below this, there are filters for "2013 to 2017" and "no subject area filter selected". A navigation bar at the bottom of this section includes "Summary", "Institutions", "Countries", "Authors", "Scopus Sources", "Keyphrases", and "Related Topics", with "Related Topics" circled in red.

A table of related topics is shown below, with the following data:

Topic	Count	Score	Value	Progress Bar
Land reclamation; Coal mines; mining subsidence ... T.21185	255	0.40	65.310	<div style="width: 40%;"></div>
Reclamation; coal mine; bulk density ... T.18899	248	1.07	88.356	<div style="width: 107%;"></div>
Ecosystems; ecosystem service; coastal reclamation ... T.40708	127	0.83	77.730	<div style="width: 83%;"></div>
Reclamation; Irrigation; sewage irrigation ... T.38423	96	0.67	72.388	<div style="width: 67%;"></div>
Ocean currents; Reclamation; artificial island ... T.47099	62	0.29	42.779	<div style="width: 29%;"></div>
artificial neural network; Land reclamation; saline soil ...	48	0.66	58.022	<div style="width: 66%;"></div>

First, we'll use Topic Prominence

Top 50 related Topics, by Prominence percentile

Wastewater reclamation; Water conservation; greywater treatment T.21307

2013 to 2017 no subject area filter selected ASJC [Data sources](#)

Summary Institutions Countries Authors Scopus Sources Keyphrases **Related Topics**

Related Topics Export ▾

Top 50 related Topics, by keyphrase match

Add to panel

Topics	Relatedness	Scholarly Output	Prominence percentile ↓
<input type="checkbox"/> life cycle analysis; wastewater; assessment LCA T.18142	94%	614	98.334
<input type="checkbox"/> rainwater; harvesting; rainwater tank T.13222	88%	597	95.765
<input type="checkbox"/> Wastewater reclamation; wastewater; potable reuse T.16583	95%	398	91.247
<input type="checkbox"/> Stabilization ponds; pond; maturation ponds T.12768	88%	188	86.396
<input type="checkbox"/> Septic tanks; wastewater; onsite wastewater T.18053	91%	175	81.792
<input type="checkbox"/> Refuse derived fuels; Developing countries; Saudi Arabia T.90765	89%	28	81.466
<input type="checkbox"/> sludge; Sanitation; faecal sludge T.43788	92%	151	81.055
<input type="checkbox"/> recharge; aquifer; aquifer treatment T.20002	89%	156	75.846

Examine Topic of interest

life cycle analysis; wastewater; asses

2013 to 2017 | no subject area filter selected

Summary Institutions Countries Authors Sc

Overall research performance

Scholarly Output 614

Field-Weighted Citation Ratio 1.04

Views Count 35,638

Citation Count 4,448

View list of publications

Institutions

Top 5

- Chalmers University of Technology
- University of Santiago de Compostela
- INSA Toulouse
- Universite de Toulouse
- Ministry of Education China

2013 2014 2015

> Analyze in more detail

Top Institutions

North America | **United States** | All sectors | reset filter

Map Table Chart

+ Add to Reporting Export

Top 100 Institutions in this Topic, by Scholarly Output

View on Chart

<input type="checkbox"/>	Institution	Scholarly Output ↓	Views Count	Field-Weigh... ↓
<input type="checkbox"/>	1. University of South Florida	9	656	1.29
<input type="checkbox"/>	2. University of California at Berkeley	8	532	1.15
<input type="checkbox"/>	3. United States Environmental Protection Agency	6	679	1.55
<input type="checkbox"/>	4. Arizona State University	4	256	4.13
<input type="checkbox"/>	5. Stanford University	4	247	1.66
<input type="checkbox"/>	6. Yale University	4	257	0.89
<input type="checkbox"/>	7. AECOM	3	16	0.00
<input type="checkbox"/>	8. Carnegie Mellon University	3	173	0.89
<input type="checkbox"/>	9. Johns Hopkins University	3	140	1.10
<input type="checkbox"/>	10. Northeastern University	3	231	1.07
<input type="checkbox"/>	11. University of Florida	3	136	0.46
<input type="checkbox"/>	12. University of Pittsburgh	3	211	0.80

Explore your Research Area

Top Institutions

North America All countries All sectors reset

+ Add to Reporting

Top 100 Institutions in this Research Area, by Scholarly Output

<input type="checkbox"/>	Institution	Scholarly Output <input type="button" value="v"/>	Views Count <input type="button" value="v"/>	Field-Weigh...
1.	<input type="checkbox"/> Columbia University	3	367	
2.	<input type="checkbox"/> Carnegie Mellon University	2	55	
3.	<input type="checkbox"/> Colorado School of Mines	2	103	
4.	<input type="checkbox"/> Lawrence Berkeley National Laboratory	2	85	
5.	<input type="checkbox"/> Mississippi State University	2	22	
6.	<input type="checkbox"/> Oregon State University	2	248	
7.	<input type="checkbox"/> Queen's University Kingston	2	88	
8.	<input type="checkbox"/> University of Arizona	2	131	
9.	<input type="checkbox"/> University of California at Berkeley	2	84	
10.	<input type="checkbox"/> University of California at Irvine	2	111	
11.	<input type="checkbox"/> University of Colorado Boulder	2	36	

Top authors

North America All countries reset filter

+ Add to Reporting Export

Top 500 authors in this Research Area, by Scholarly Output

<input type="checkbox"/>	Author	Affiliation	Scholarly Output <input type="button" value="v"/>	Views Count <input type="button" value="v"/>	Field-Weigh... <input type="button" value="v"/>
1.	<input type="checkbox"/> Champagne, Pascale	Queen's University Kingston	2	88	0.41
2.	<input type="checkbox"/> Rosso, Diego	University of California at Irvine	2	111	0.46
3.	<input type="checkbox"/> Sobhani, Reza	University of California at Irvine	2	111	0.46
4.	<input type="checkbox"/> Álvarez, Pedro Jose J.	Rice University	1	250	9.15
5.	<input type="checkbox"/> Anand, Chirjiv Kaur	Universite de Sherbrooke	1	56	1.07
6.	<input type="checkbox"/> Anderson, Marc A.	University of Wisconsin	1	62	0.45
7.	<input type="checkbox"/> André, Chantale	Environment Canada	1	12	0.00
8.	<input type="checkbox"/> Anumol, Tarun	Agilent Technologies	1	19	0.53
9.	<input type="checkbox"/> Apul, Defne S.	University of Toledo	1	56	1.07
10.	<input type="checkbox"/> Ashbolt, Nicholas J.	University of Alberta	1	48	1.14
11.	<input type="checkbox"/> Austin, David	Jacobs Engineering	1	26	1.26



Thank you!

Linda Galloway, L.Galloway@Elsevier.com

949-280-6029

Societal-economic Impact – Mass Media Mentions

- Acquired by Elsevier in January 2015, **Newsflo** helps researchers and academic institutions to measure the wider impact of their work by tracking and analyzing media coverage of their publications and findings
- Counts mentions of media outlets to research related news (mostly initiated by press releases from research institutions)

The screenshot displays a Newsflo interface for a research article. The article title is "Dinosaur-killing asteroid didn't ravage earth: Study" dated 25 Jan 2015. A blue callout box points to the article text, stating "Tracks over 55,000 English speaking global media sources". Another blue callout box points to the article text, stating "Matched with 8,500 institutions in SciVal". Below the article text, there is a "Tags" section with "#Imperial College London" and a "Mentions" section listing various media outlets. The "Mentions" list includes: Russia Today (Russia), Economic Times (India), Oman Observer (Oman), Mail Online UK (United Kingdom), PhysOrg.com (United States), NewsRT.co.uk (United Kingdom), Research & Development (United States), Environmental News Network (United States), Social Dashboard (United States), Exeter University (United Kingdom), Business Standard India (India), Astrobiology Magazine (United States), NetIndia123.com (India), Laboratory Equipment (United States), Siasat Daily (India), Sify (India), Big News Network (United States), Space Daily (Australia), ZeeNews.com (India), Panorama.am (Armenia), NewsHub South Africa (United States), Yahoo! India (India), NetIndia123.com (India), ZeeNews.com (India), Mangalorean (India), DailyMe.Com (India), ProKerala.com (India), The Freepress Journal (India), One News Page United Kingdom (United Kingdom), AllVoices (United States), One News Page United Kingdom (United Kingdom), Machines Like Us (United States). At the bottom, there are two buttons: "Approve Story" and "Reject Story".

25 Jan 2015 Dinosaur-killing asteroid didn't ravage earth: Study

Tracks over 55,000 English speaking global media sources

Matched with 8,500 institutions in SciVal

Tags: #Imperial College London

Mentions: Russia Today (Russia), Economic Times (India), Oman Observer (Oman), Mail Online UK (United Kingdom), PhysOrg.com (United States), NewsRT.co.uk (United Kingdom), Research & Development (United States), Environmental News Network (United States), Social Dashboard (United States), Exeter University (United Kingdom), Business Standard India (India), Astrobiology Magazine (United States), NetIndia123.com (India), Laboratory Equipment (United States), Siasat Daily (India), Sify (India), Big News Network (United States), Space Daily (Australia), ZeeNews.com (India), Panorama.am (Armenia), NewsHub South Africa (United States), Yahoo! India (India), NetIndia123.com (India), ZeeNews.com (India), Mangalorean (India), DailyMe.Com (India), ProKerala.com (India), The Freepress Journal (India), One News Page United Kingdom (United Kingdom), AllVoices (United States), One News Page United Kingdom (United Kingdom), Machines Like Us (United States).

Approve Story Reject Story

Societal-economic Impact – Mass Media Mentions

Step 1: Newsflo creates clusters of articles

...by clustering press releases and news articles based on text matching.

Step 2: Newsflo identifies clusters with name and affiliation combinations

...and matches against Scopus Author and Affiliation Profiles

Step 3: Tag Author Profiles, Affiliation Profiles and Scopus journal categories to clusters.

Subject area assignment is based on the article fingerprints of the articles in the clusters.

Step 4: Count the number of media mentions

...inside the clusters and assign the counts to:

- Researchers (by their Scopus Author Profiles),
- Institutions (by their Scopus Affiliations)

*We consider all name variants and entire affiliation history stored in the Scopus Author Profile

