

Leveraging SciVal for Strategic Research Performance Analysis

November 2025

Changseok Shin, Customer Success Consultant(SME)

Elsevier



Agenda

- Introduction to SciVal
- Overview of key metrics
- World University Rankings
- Live demonstration
 - Identifying your institution's research strengths
 - Defining custom groups and evaluating their performance
 - Creating and sharing reports
- SciVal New Features and Updates
- Q&A

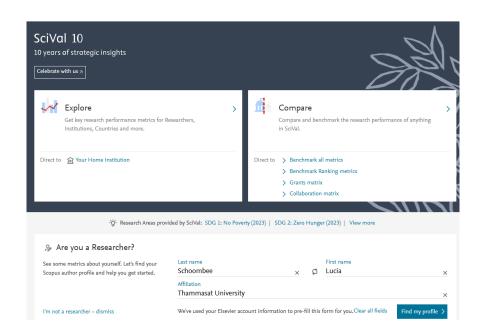
Intro to SciVal





What is SciVal?

- SciVal is a web-based analytics solution for academic/research organisations
- SciVal offers tools and metrics to help researchers, organisations, and funding bodies assess research performance, track trends, identify collaboration opportunities, and make strategic decisions.
- SciVal aims to empower institutions to strategically advance research excellence and impact by harnessing data-driven insights to overcome key challenges.





SciVal Use Cases

Insightful analyses to inform research strategy and enhance research success













Which Data Sources Feed Into SciVal?



Data	sources	

Default data source up to 31 Jan 2024 Scopus Views data source up to 31 Jan 2024 Scopus Policy data source up to 05 Jan 2024 Overton Media Source-type up to 09 Jan 2024 LexisNexis Metabase Funding data up to 01 Feb 2024 Learn more Patent data up to 31 Jan 2024

Learn more

The **Data Sources** button in the Heading opens a side panel with more information about data sources and their respective update schedules.

SciVal receives a **Weekly Update** of new data from
Scopus. Other data types each
have a different update
schedule.





Key metrics available in SciVal





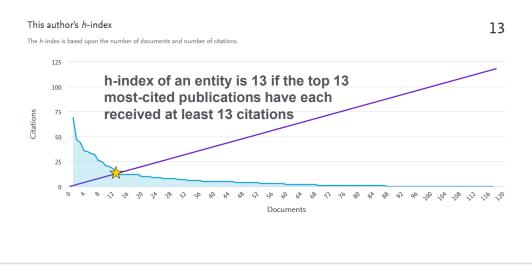
SciVal's array of metrics and analyses

Metric theme	Metric sub-theme	Metrics in SciVal		
A. Resources	Competitive project funding	Awards Value Annualised Awards Value Awards Count Median Amount	Funding per Topic Resulting publications Awardee role	
	Talent (Human Capital)	Author Profile Research Indicators		
B. Knowledge Created (Outputs)	Productivity of research outputs	Scholarly Output Number, Type and Growth, Open Access Subject Area Count		
	Visibility of communication channels	Publications in Top Journal Percentiles CiteScore		
C. Knowledge Created (excellence and Impact in academia)	Research influence	 Citations Count Field-Weighted Citation Impact Outputs in Top Citations Percentiles Citations per publication Cited publications h-indices 	Research Field/Topic Prominence Number of citing countries Views Count Outputs in Top Views Percentiles Views per Publication Field-Weighted Views Impact	
D. Knowledge Creation Process	Academic network	Collaboration (International, National, Institute, single at Inter- and multi-disciplinarity	uuthor) and collaboration Impact	
E. Broader Outcomes & Impact on society	Technological & Economic impact, Knowledge & Tech transfer	Academic-Corporate Collaboration and Impact Academic-Medical Collaboration and Impact Academic-Government collaboration and Impact	 Patents Count Scholarly Output cited by Patents Patent Citations Count Patent-Citations per Scholarly Output 	
	Societal and political impact, Public Governance, Knowledge transfer	Scholarly Output cited by PolicyCiting Policy DocumentsCiting Policy Bodies	Policy CitationsCiting Policy Body CountriesUnited Nations SDGs Relative Activity	
F. Rankings	University and Impact Rankings	THE World University Rankings bibliometrics QS World University Rankings bibliometrics	THE Impact Rankings bibliometrics U.S. News Best National Universities bibliometrics	

Researcher Impact Metric: h-Index

- Indicate a balance between the productivity(Scholarly Output) and citation impact (Citation Count) of an entity's publications
- h-index is the largest number such that the paper ranked h has at least h citations.
- h5-index uses a 5-year publication and citation window on the standard h-index calculation

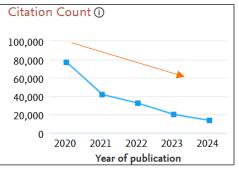
No	Citations	
1	134	
2	69	
3	43	
4	42	
5	39	
6	31	
7	29	
8	28	
9	28	
10	20	
11	18	
12	15	
13	13	
14	10	

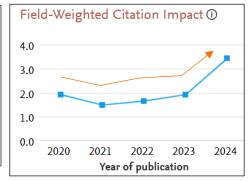


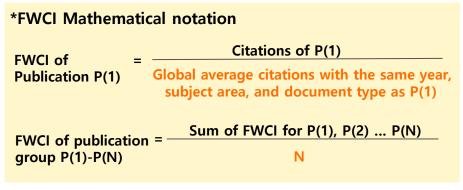


Publications Impact Metric: Field Weighted Citation Impact (FWCI)

- The Field-Weighted Citation Impact (FWCI) measures how well a publication is cited compared to the average for similar publications.
- Similar publications are those publications in the Scopus database that have the same publication year, publication type, and discipline.
- Field-Weighted Citation Impact of "World", or the entire Scopus database, is 1.00.
- A Field-Weighted Citation Impact of more than 1.00 indicates that the entity's publications have been cited more than would be expected based on the global average for similar publications; Ex) FWCI 1.34 means 34% more than the world average







*Source: Elsevier Research Metrics Guidebook



Research impact for QS and THE World University Ranking



Elsevier's position on university rankings and metrics in general

All rankings have their strengths and potential disadvantages and we do not rank the rankings!

- We believe in working on fundamentals with a "basket of indicators", always as a complement to peer opinion
- Informed decisions are better decisions
- · Metrics should complement, not replace human judgment
- Well-selected metrics drive positive behaviors
- · Metrics does not only mean bibliometrics
- · Metrics can help monitor and eliminate biases
- Assessments are costly, but availability of new tools help bring cost down
- Data sources to cover humanities are becoming more complete



Bibliometric data providers vs. ranking agencies











Clarivate – Web of Science









2018

FT.com

FINANCIAL TIMES

Global MBA Rammy















multirank



NIKKEI

Frankfurter Allgemeine

QS WUR

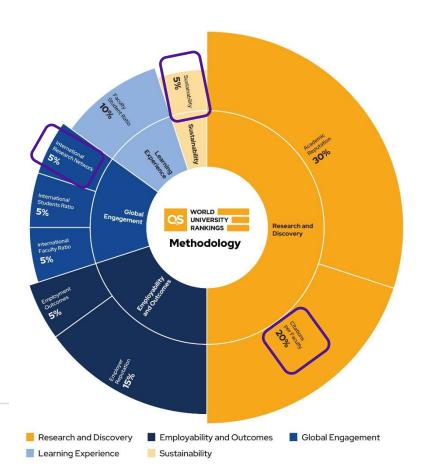
Uses Scopus since 2007 Data provided:

Scopus raw data
Sharing SciVal institution profiles
(Re)classification of multidisciplinary articles

Affiliations: Scopus profiles

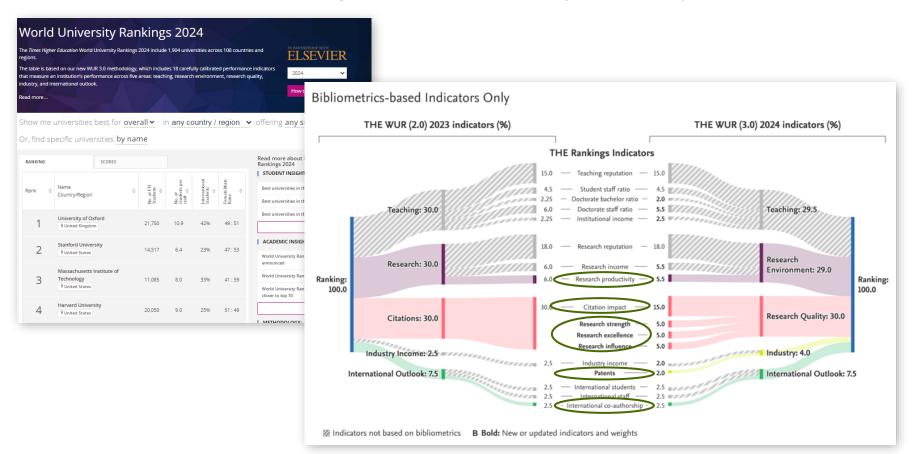
(Elsevier support is provided at the level of Scopus data corrections incl. those related to affiliations)

Citations per Faculty – 20%
International Research Network
(IRN) – 5%
Sustainability – 5%



THE WUR

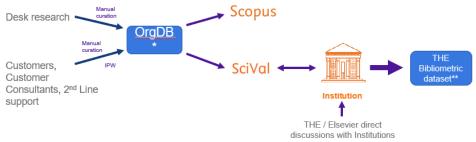
40% of the Overall ranking score from Elsevier(THE WUR)



Key factors affecting Rankings

The importance of accurate institution profiles

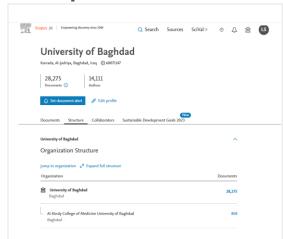
The bibliometric dataset ultimately sent to Ranking organizations is determined through the <u>SciVal</u> Institution profiles which are built with the Scopus institutional profiles as their foundation

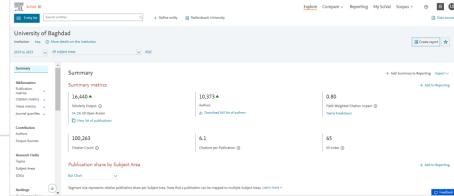


*OrgDB – Elsevier's central underlying database of "organisations" and relationships between these organisations
** The bibliometric dataset is provided to THE by Analytical Services

About Affiliation Profiles in Scopus and Institution Profile Wizard:

https://service.elsevier.com/app/answers/detail/aid/25554/supporthub/scopus/

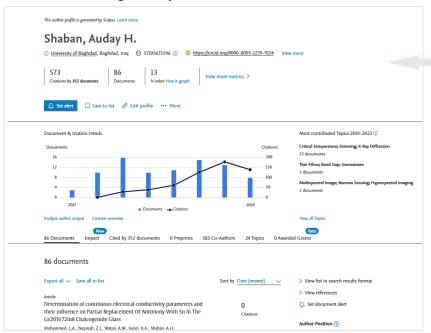




Publication attribution

Institution name, Department / Faculty,

Address including country, Author details, ORCID









Determination of continuous electrical con activity parameters and their influence on Partial Replacement Of Antim y With Sn In The Ge20Te72In8 **Chalcogenide Glass**

Laheeb A. Mohammed a *, Zainab I. Neamah a, Anaam W. Watana, Kareem Ali Jasim a and Auday H. Shaban b

- Department of Physics-College of Education for Pure Sciences Ibn Al-Haitham, University of Baghdad, Baghdad 10071, Iraq
- Department of Remote Sensing & GIS, Conege of Science, University of Bagnada, Bagnada 10071, Iraq * Corresponding author. Tel.: +9647818253987; e-mail: laheeb.a.m@ihcoedu.uobaghdad.edu.iq

Received 11 November 2022, Revised 2 December 2023, Accepted 7 March 2024

ABSTRACT

In the present work, the changes in electrical conductivity upon partial replacement of antimony by Tin (Sn) in the ternary alloy prepared by the molten cooling method were synthesized and studied. The electrical measurements were performed on Ge 20Te72In8xSnx Chalcogenide glass alloy with x = 0, 2, 4, and 6. The dark conductivity (\sigma d) increases with the increase in temperature in all the samples under the experiment. Observations of data were made at low (300 - 335K), medium (335 - 365K), and high temperatures (365 - 400K) across three distinct regions regarding electrical conductivity. For each of the three conduction regions, the factor that precedes the exponent and the effective energies were calculated using electrical conductivity measurements as a function of

Key Research Activities Influencing Rankings



Quality of
Research
Innovative and
Original Work
Research that
presents novel
findings, theories,
or methods tends
to attract more
citations.

Research
Relevance and
Timeliness:
Research that
tackles
contemporary and
high-impact
problems is often
cited more

*International Collaborations: Research involving international partnerships tends to receive higher citations due to wider exposure.

High-Impact Journals: Articles in widelyread journals are more likely to be noticed and cited.

Publication in

Industry:
Research with
practical
applications that
engage industry
and government
stakeholders can
attract citations
from both
academic and
non-academic
sources.

Collaboration with

*Interdisciplinary
Science:
There is evidence
suggesting a
correlation
between
interdisciplinary
science and higher
citation rates,
although the
relationship is
complex and
varies across
disciplines.

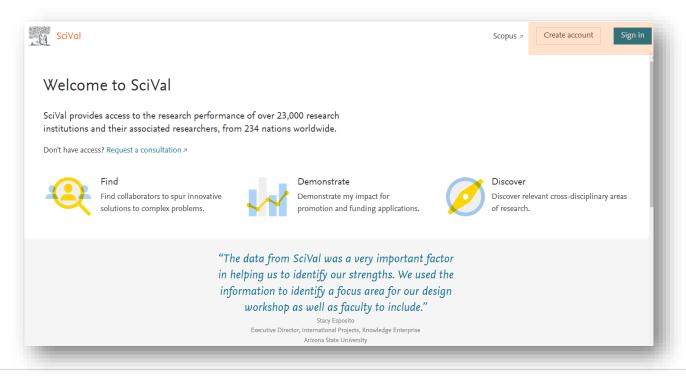
^{*}Kato, M., & Ando, A. (2013). The relationship between research performance and international collaboration in chemistry. Scientometrics, 97, 535-553.

University Research Strategy and Rankings

- University research strategy should be driven by:
 - Generating exciting new knowledge and establishing new capabilities
 - Addressing societal challenges and making a positive impact on your local community, country and the world.
 - Developing tomorrow's research leaders and providing students with an outstanding training experience
 - Inspiring the next generation

Being successful in rankings should be the consequences of an excellent strategy not the driver for it

Access SciVal at www.scival.com





If you haven't previously registered for Scopus or ScienceDirect then please go to **Register Now.**

Go Live

Demo

What are SciVal Topics and Topics Cluster, Topics of Prominence





Introducing Topics of Prominence

What is a topic?

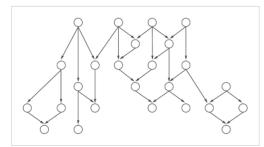
A Topic is a collection of documents with a common intellectual interest and can be large or small, new or old, growing or declining. Over time, new Topics will surface, and as Topics are dynamic they will evolve. Topics are multidisciplinary, and old Topics may be dormant but they still exist. In addition, researchers themselves are mobile, and work in various different research areas, and thereby

contribute to multiple Topics.

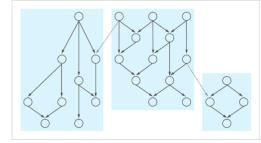
Scopus publications are clustered into Topics based upon a direct citation analysis.

96,000 topics and 1,500 topic clusters

Are available in SciVal



All Scopus publications are clustered into Topics using direct citation analysis (as opposed to co-citation analysis).



The borders between clusters (Topics) are identified by looking at where the citation links are weak. Where the links are weak, the clusters are split into separate Topics.



For more information please visit https://www.elsevier.com/solutions/scival/releases/topic-prominence-in-science

What is prominence?

Calculating a Topic's Prominence combines three metrics to indicate the momentum of the Topic:

- 1. Citation Count in year n to papers published in n and n-1
- 2. Scopus Views Count in year n to papers published in n and n-1
- 3. Average CiteScore for year n

Prominence does not signify 'Importance'

Due to the nature of certain research fields there are Topics which, will never become "Prominent", however this is not mutually exclusive with the Topic not being important. Prominence is an **indicator of momentum/movement or visibility** of a particular Topic.



Define Researchers and Groups





Why tracking research group performance is important?



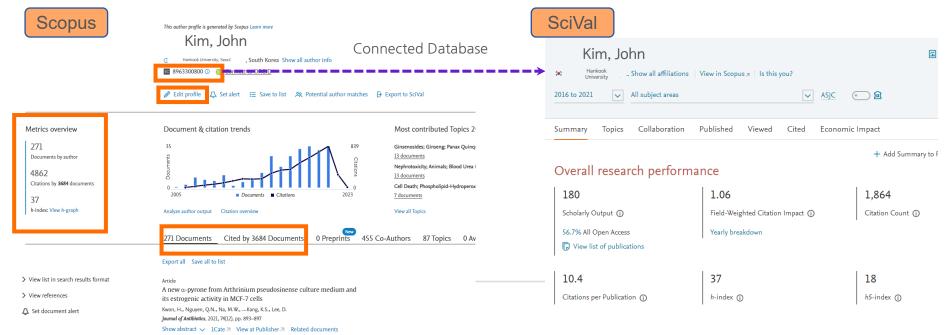
- Allocating resources and strategic planning
- Informed Hiring and Talent Strategy
- Driving collaboration
- Showcasing impact
- Early Identification of Challenges etc.

SciVal empowers institutions to monitor group productivity, benchmark departments, and support informed decision-making at every level

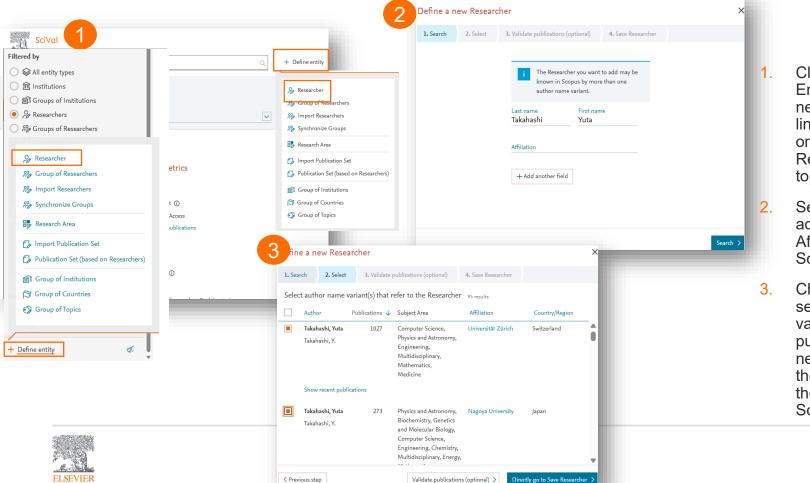


Profile of Researchers

- An author profile is automatically created in Scopus when a researcher publishes two or more papers, based on the information listed
 in the journals. When additional papers are published, Scopus algorithms automatically assign new publications to the author's profile.
- If publications are incorrectly indexed or missing, authors can use the "Edit Profile" feature to correct or add them. If multiple author IDs
 are created, they can be merged using the "Edit Profile" function.
- Scopus author profiles are also available in SciVal, with Author IDs linked between both platforms.



Different options to add researchers: Define a new Researcher

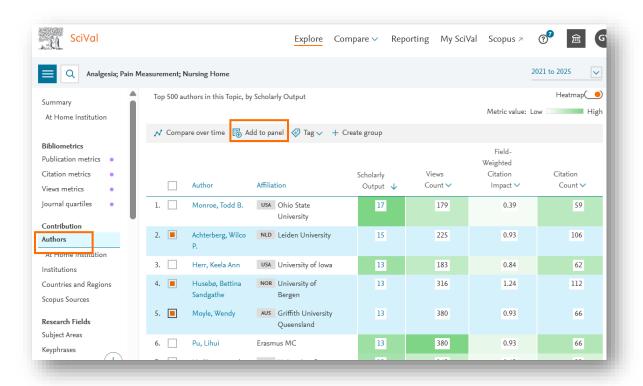


Click the Select
Entity - Define a
new Researcher
link at the bottom
or Define Entity –
Researcher on the
top

Search by name, adding e.g. Affiliation, ORCID, Scopus Author ID

Check profiles, select correct, validate publications (if needed) and follow the workflow to add the researcher to SciVal

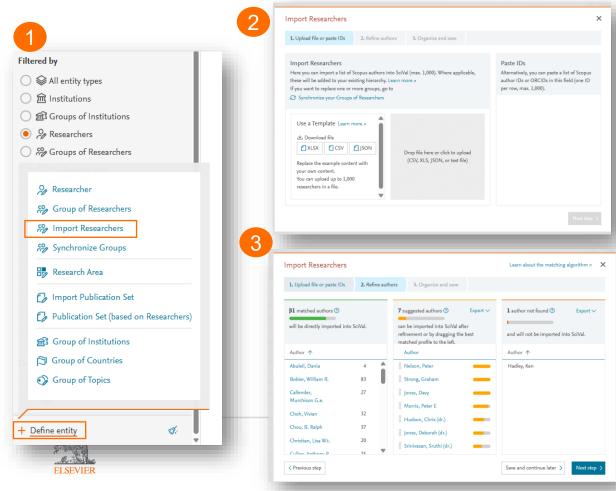
Different options to add researchers: Add from Authors tab



Select and "Add to panel" Researchers from the Authors tab across to the entity selection panel to quickly add Researchers



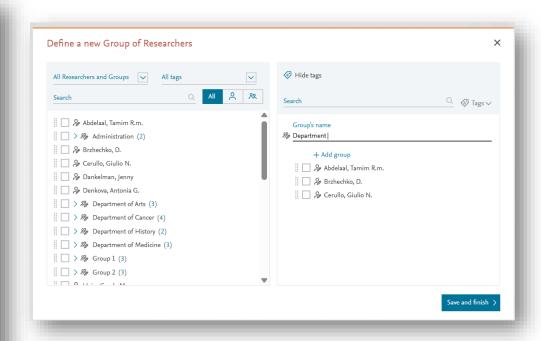
Different options to add researchers: Import Researchers



- Click 'Define
 Entity' link and then
 'Import Researchers'
- 2. Use the XLS, CSV or JSON templates, a text file, or paste a list of Scopus author IDs or ORCIDs (up to 1000)
- 3. Refine profiles where required

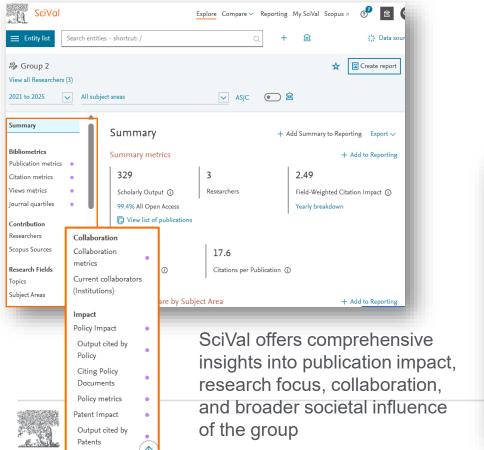
Define new Group of Researchers



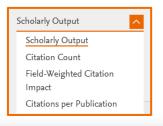


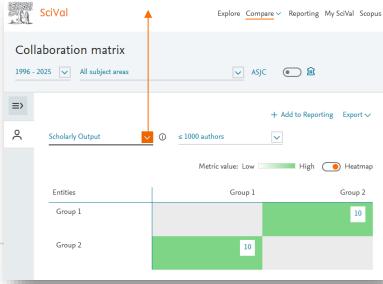
After importing the list or via "Define a new Group of Researchers" drag and drop any of your selfdefined Researchers into one or more Groups

Analyses for Group of Researchers in SciVal

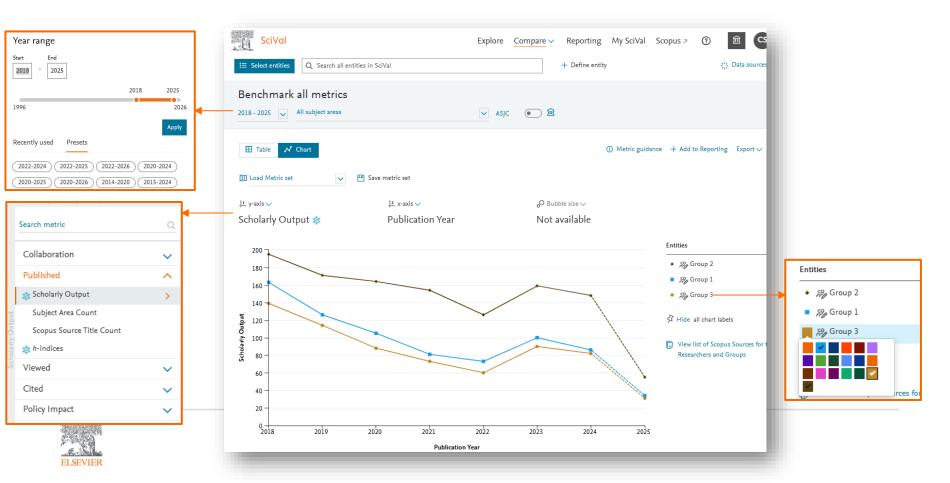


Citing Patents

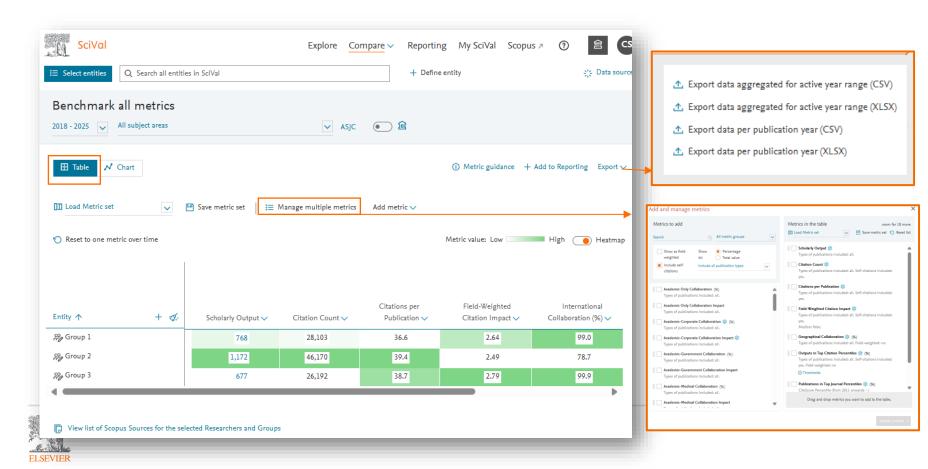




Analyses for Group of Researchers in SciVal - Compare



Analyses for Group of Researchers in SciVal - Compare

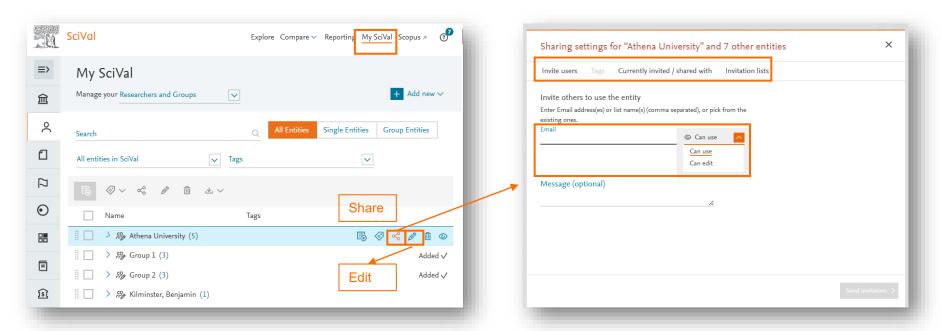


Managing and Editing Custom Group





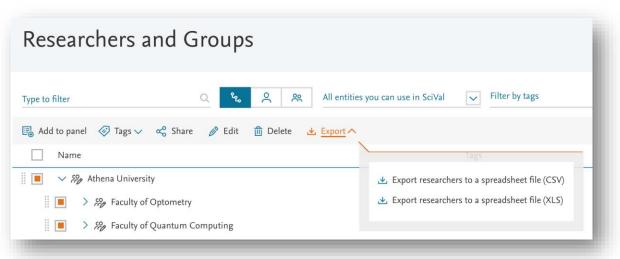
Edit and Share



SciVal allows users to manage and share custom groups and hierarchies with colleagues, with flexible permission settings. Sharing researchers and departmental structures with the entire institution available for Admins only. To activate Admin rights – contact your Elsevier representative or contact SciVal support team via https://scival.com/contact. FAQ



Synchronize: add or remove researchers



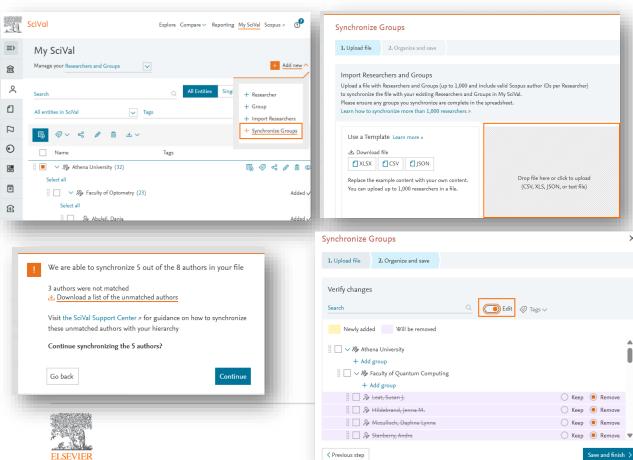
Export your current **hierarchy** from SciVal – this gives you Scopus Author IDs for each researcher, plus the correct level information:

Go to My SciVal > Researchers and Groups (choose that in the left-hand panel) > select the **hierarchy** you want to export >



- •There can be up to 1,000 researchers per spreadsheet.
- •There must be a Scopus Author ID for each researcher.
- Ensure each level in your Master Spreadsheet is complete.
- SciVal will compare the levels (hierarchy structure) in the spreadsheet with the existing ones in. SciVal. If a level is mentioned once in your Master Spreadsheet, SciVal will use that information to overwrite the existing one if applicable.
- Any researchers currently included in your **hierarchy** in SciVal that are not included in your Master Spreadsheet, will be removed from the **hierarchy** in SciVal.
- If the hierarchy is new, it will be added.
- Researchers are never deleted during this process, just removed from the **hierarchy** and added to a folder called "Removed" making them easy to locate.
- If your complete **hierarchy** contains more than 1,000 researchers, split it into multiple spreadsheets and do multiple synchronizations. Ensure each spreadsheet contains complete **hierarchy** groups.

How to synchronize?



- 1.Prepare your Master Spreadsheet so that it contains the updated **hierarchy** and each researcher has a valid Scopus Author ID.
- 2.Go to My SciVal > Researchers and Groups > Add New > Synchronize Groups.
- 3.Drag and drop or upload your Master Spreadsheet.
- 4. Verify the changes
 - If needed, click 'Edit' to overwrite the changes and move the researchers into different hierarchies.
 - Take note of all the crossed-out
 Researchers and mark them in your
 master file. Once the synchronization is
 complete you can use this list to
 potentially unshare these researchers
 with your SciVal users.

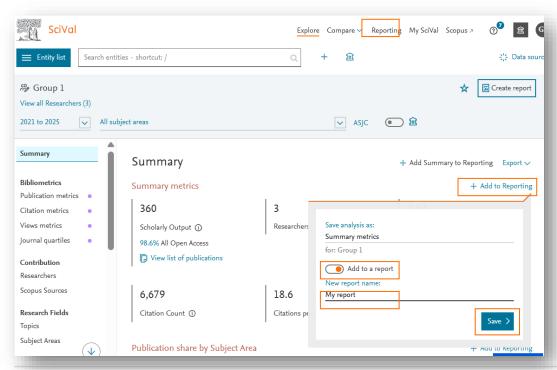
Learn more in <u>FAQ Create and import</u> departmental or institution hierarchies

Reporting





Saving and using analyses

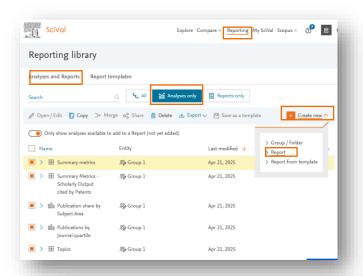


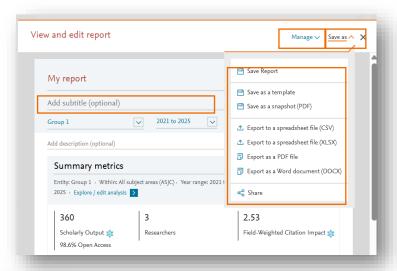
- Select the entities, metrics and options of interest and click 'Add to Reporting'
- 2. You can start creating a new report by selecting "Add a report", entering its name, and clicking Save. Alternatively, you can begin by adding selected analyses to your reports library and create the report later. Use the 'Reporting' tab in the navigation bar at the top of the screen to add analyses to an existing report or to create a new one.

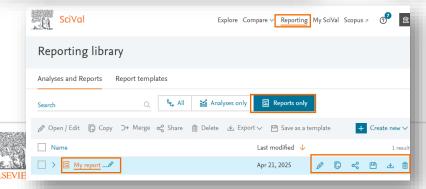
Learn more



Creating, Managing, Sharing and Exporting a Report





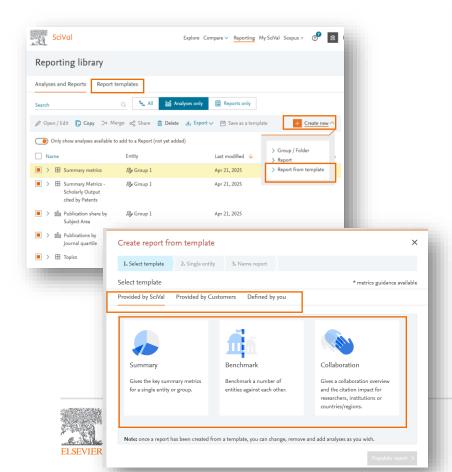


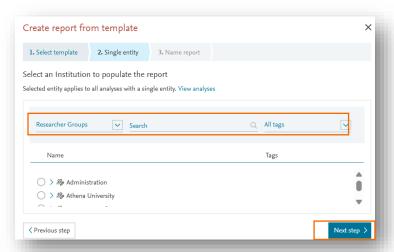
- Go to 'Reporting' in the global navigation bar at the top of the screen
- Select needed analyses and click 'Create new' and select 'Report'
- or, if you were adding your analyses directly to created Report open it or edit or share
- Use Report layout and add descriptions as needed, or add analysis by "Manage" or Save as Template, Share or Export your Report as required selecting "Save as"

Learn how to use SciVal created report templates

Learn how to create your own report template

Using report templates





SciVal-created report templates, including customer-endorsed templates

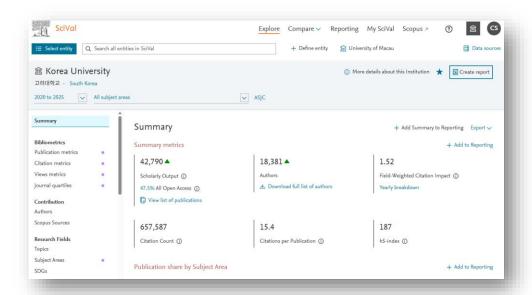
- Go to Reporting and click 'Create new' and then 'Report from Template' or open "Report Templates" tab
- Select the template you would like to use from 'Provided by SciVal', 'Provided by Customers', or 'Defined by You'
- Select the entity or entities you would like to analyse
- Name and save your Report, which will now be a standard Report that you can change, remove, add

New Features & Updates

New architecture

To make SciVal easier to navigate and content easier to find, the pages in SciVal into 2 main analysis sections: "Explore" and "Compare", while keeping Reporting and My SciVal.

"Explore" combines the pages from modules which analyze entities one by one (Overview, Collaboration, Trends, Impact and Grants) into one place. "Compare" contains pages that support the selection and analysis of multiple entities: the pages previously grouped under Benchmarking, as well as the Grants Dashboard for subscribers to the Grants module



When you select an entity, you automatically see all the available pages, regardless of which module they come from.

Your Institution's module subscription determines which pages are available to you.

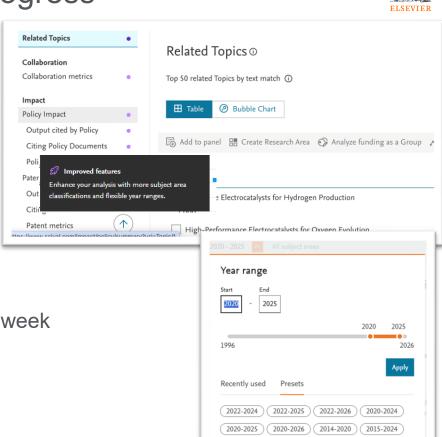


Big data pipeline migration in progress



2024+

- Flexible year ranges
- Multi-select for Subject areas in Benchmarking and Impact
- More Subject classifications
- Flexible content type selection
- Larger entities with real-time computation
- Faster pre-computation
- Daily processing available throughout the week



SciVal topics GenAl titles full production launch

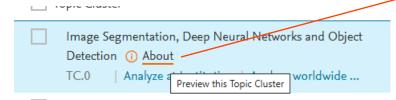


- SciVal Topic summaries and titles are powered by generative AI (GenAI) and LLM technology
- 393 votes received by April 2025: 81% positive
- Need your Feedback!

We are considering renaming this Topic from "Heavy Metal; Antioxidant; Glutathione" to "Heavy Metal Accumulation and Antioxidant Mechanisms in Plants"

Do you think this is a better name? \circlearrowleft yes

Learn more 7



About Innovative Vocal Mechanisms in Robotic Speech Production

92 publications (2015 to 2024)

Summary

T.63925







This Topic is about the development of a talking robot with advanced vocalization capabilities, focusing on speech learning, mechanical vocal system construction, acoustic modeling, and human-robot interaction. The research explores the robot's ability to imitate human vocalization, adaptively learn vocal sounds, and simulate articulatory motions for speech production.

Key aspects of the research include:

- · Educational models for intuitive speech instruction and evaluation of bone-conducted voice for voice recognition.
- · Comparison of advanced talking robot models, fuzzy rule representation for speech acoustic parameters, and physical models of human vocal tract for whistling sound production.
- · Robot's vocal cord redesign and vowel sound generation experiments.
- · Exploration of vocal tract and lip opening areas for human whistling sound production.



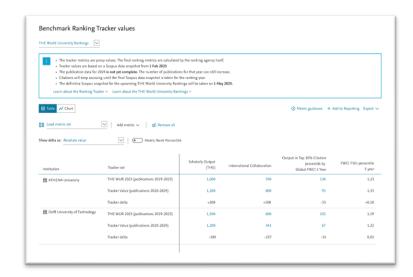




Ranking Tracker in Compare

ELSEVIER

- Analyze and Benchmark your institution and peers Ranking tracker metrics for THE World University Ranking in Compare.
- Analyze per THE subject area.
- Export the data and add to Reporting for further analysis.
- New tabs to benchmark ranking metrics and ranking tracker





SciVal Al



Past Period

Conducted customer interviews to gather feedback on various SciVal AI experiments, identify overall customer needs and understand their current use of generative AI in daily tasks.

Incorporated feedback and internal insights to refine our approach.



New Focus: Smart Reporting with Context

Our core customer, the Research Office, often spends significant time producing reports that require detailed writing and contextual metrics.

We aim to streamline this process by developing features for faster, smarter reporting with added context.



Upcoming Initiatives

Conduct small (development/prompting) experiments to enhance narrative value in analyses and reports.

Engage in further discussions with customers to understand their specific reporting needs and deliverables for their internal clients. (we will contact you)

Getting help and SciVal Homepage



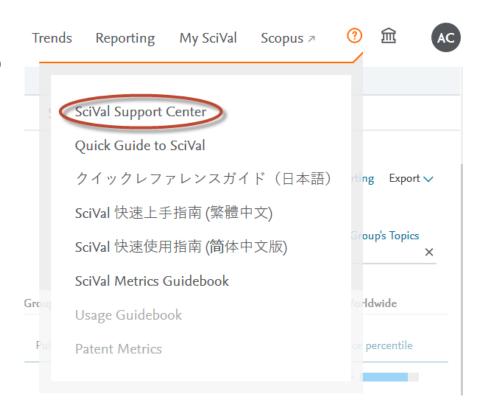


Getting help

The spine menu will provide a line to help documentation

https://service.elsevier.com/app/home/supp orthub/scival/

- Contact us if you have any questions or problems with SciVal
- Customer Success Manger: Liu,
 Xiaoqian(Xiaoqian.Liu@elsevier.com)



Useful resources

- 2025 Lecture Series SciVal / Scopus
 - SciVal: 2025 Lecture series: SciVal
 - Scopus: <u>2025 Lecture series: Scopus</u>
- SciVal LibGuide
 - Help & Support SciVal LibGuide LibGuides at Elsevier
- Metrics guidebook
 - Elsevier_ResearchMetricsBook.pdf
- SciVal certification
 - SciVal Certification Program



Q&A

Please contribute your question on Zoom



Thank you

