

Introduction to The Lens

An open facility for discovery,
analysis, metrics and mapping of
scholarly literature and patents

June 2021

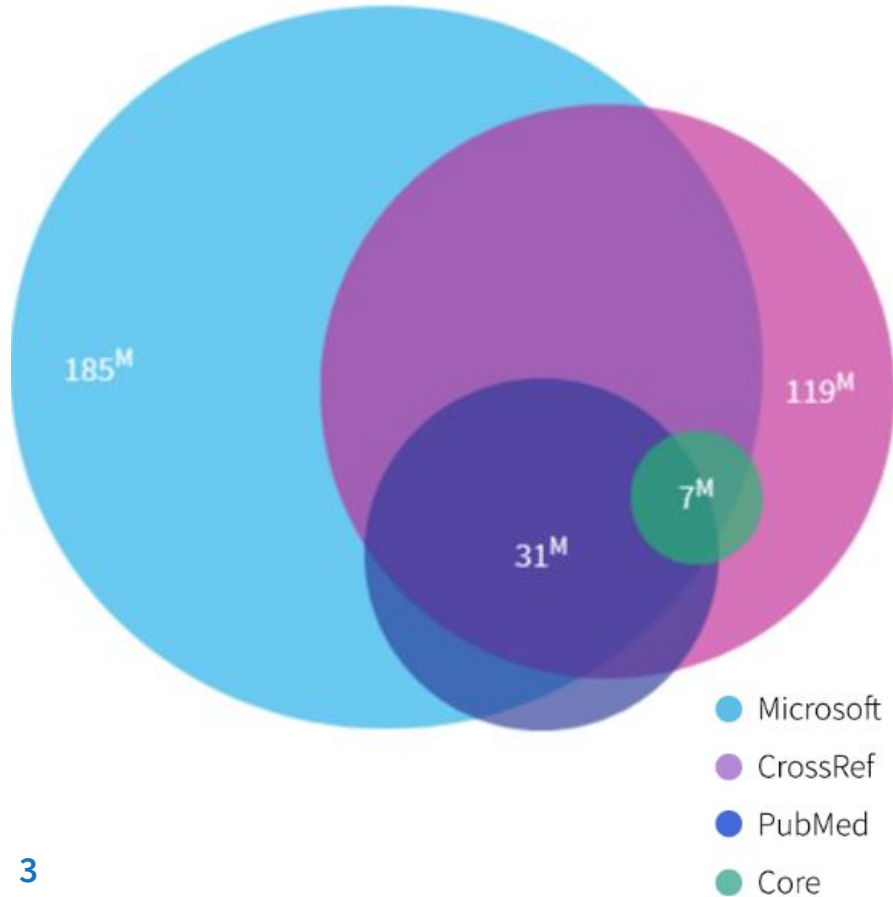




BACKGROUND

The Lens and Cambia

- Cambia, founded in 1991, started Patent Lens in 2001, the precursor of lens.org, the world's first free and open full text patent search capability.
- In 2006, launched the world's first public patent sequence search capability for United States patent applications.
- Since 2013, Lens.org has served the world most comprehensive public Patent Sequence platform to navigate biological patents from over 17 jurisdictions.
- In 2011, with seed money from USPTO, Cambia began extracting and resolving non-patent literature strings in collaboration with NIH-NCBI and Crossref.
- By 2014, Cambia linked non-patent literature to patents and began serving the data, created [PatCite](#) and [In4M](#) metric to map influence of research on industry and foster meaningful partnerships.
- Lens ensure privacy and confidentiality and its data is fully open, shareable and reusable.
- The platform has been up 24/7 for over 20 years.



FEBRUARY 2021

Lens Scholarly Data

227.7M scholarly works records:

- 115.5M journal articles
- 21.4M Books and book chapters
- 7.3M conference proceedings
- 4.3M works cited in patents
- 76.8M works cited by other scholarly works
- 1.7B scholarly citations

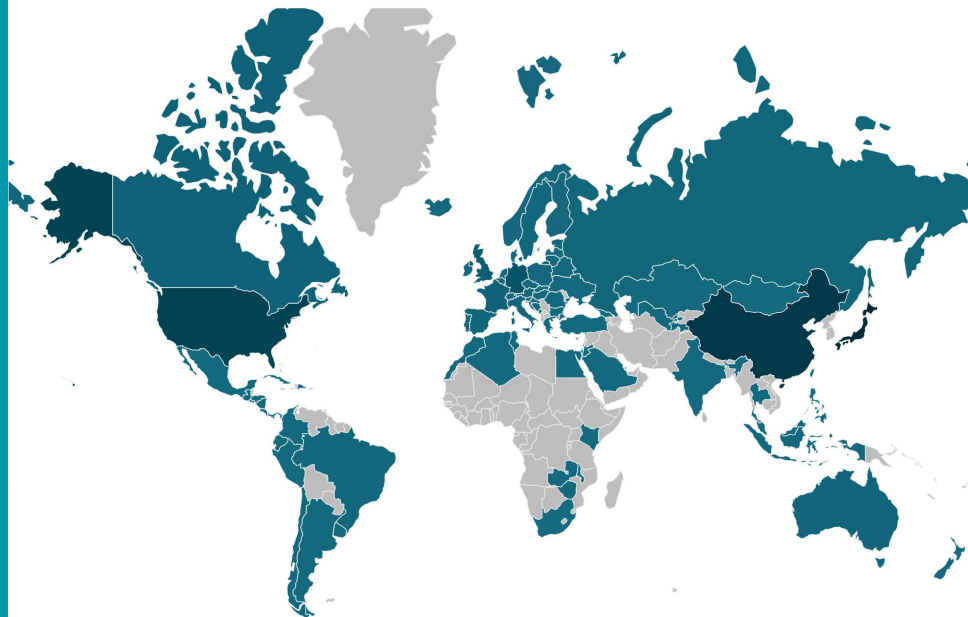


FEBRUARY 2021

Lens Patent Data

128.7 Million Patent Records:

- 105 jurisdictions
- 70.9M patent families
- 741k biological patents
- 371.1M patent sequences





Our **Special Sauce**

Linkages between data silos

128M Patent Records

71M Patent Families

16M Applicants

1.6M Owners

228M Scholarly Works

33M Authors

19k Research Organizations

4.4M Works cited in patents

1.6B Scholarly citations

371M Bio Sequences

2.4B Document Linkages

Our Data

The special sauce is our
data silo joins.

128,787,496

Patent Records

228,236,987

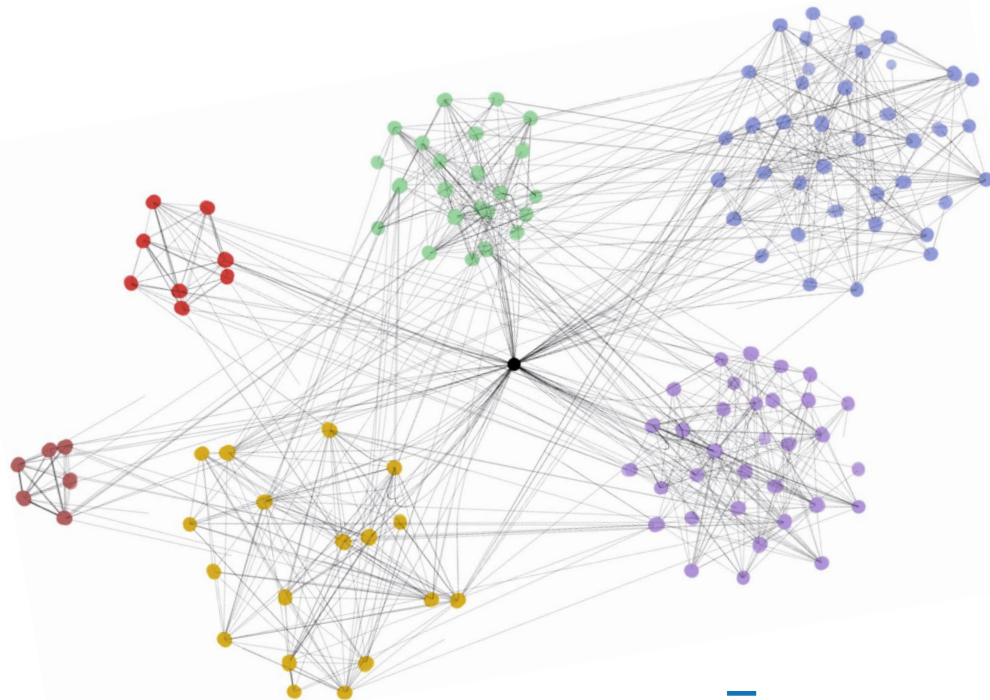
Scholarly Works

371,716,561

Biological Sequences

2,386,272,979

Document Linkages



THE LENS

Meta Record Strategy

Lens use a “Meta Record” concept as a core element of our facility. We use a 15 digit open and persistent identifier, LensID, to expose credible variants, sources and context of knowledge artifacts, such as scholarly works or patents, while maintaining provenance, and allowing aggregation, normalization, and quality-control of diverse metadata.

<https://osf.io/preprints/lissa/t56yh/>

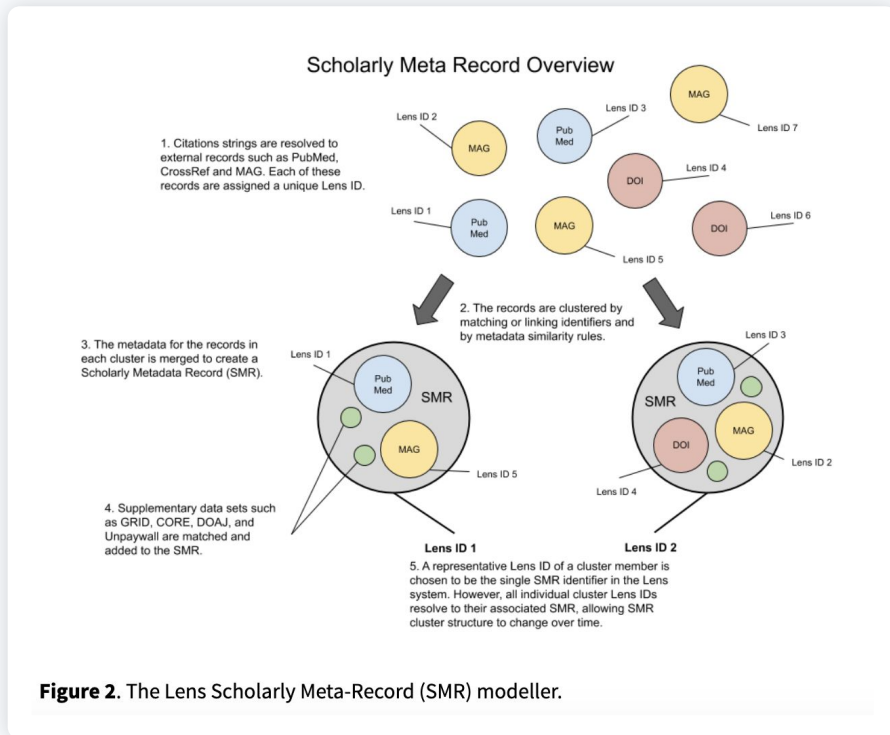


Figure 2. The Lens Scholarly Meta-Record (SMR) modeller.



CURRENT OFFERINGS

Discovery, Analytics, And Management Tools

API & Data Facility:

Scholarly API, PatSeq
bulk data, Patent API

Reports:

Assemble your saved
queries and collections
with other knowledge in
a dynamic and
interactive report*

Collections:

based on Scholarly
Works and Patents Lens
searches and analyses.

In4M:

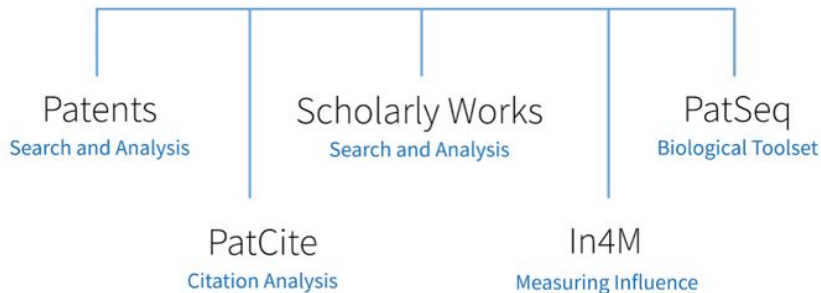
International Industry &
Innovation Influence
Mapping

* coming soon



LENS.ORG

Solving The Problem Of Problem Solving™



LENS PROFILES BETA

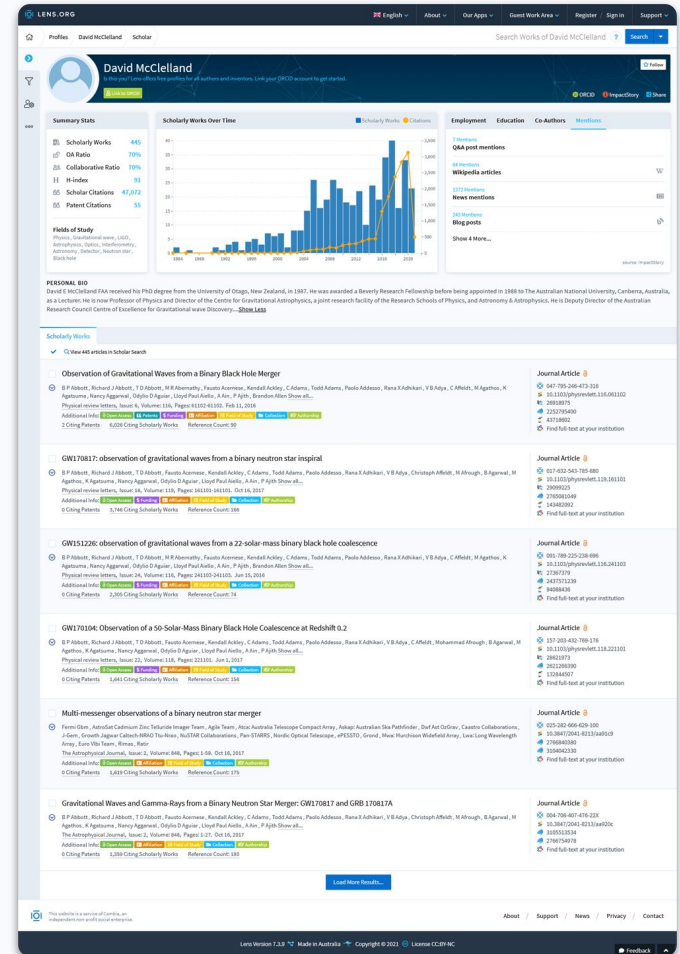
Introducing Lens Profiles

Unique to open data, Lens Profiles are auto-generated author and inventor profiles based on public ORCID records.

Compiled from publicly available data sources using the ORCID iD as the linking identifier.

Lens Profiles can be used to update your ORCID record with scholarly works or patents from the Lens in just a few steps.

Research4Life ORCID seminar:
<https://www.research4life.org/training/webinars/>



Lens Profile for [Prof. David McClelland, ANU](#)

Collections

Use open dynamic collections to create, curate, annotate and share dynamic portfolios of scholarly works and patents.

Explore these collections to understand who does what, when and where, who influences whom. These open tools inform decision-making for work product management, for partnering, for investing/funding or for research trajectories.

Filters

- Date Range
- Flags
- Author
- Institution
- Institution Country/Region

Only institutions with a matched GRID record have country data available. Selecting one or more filters will result in only scholarly works with an affiliated GRID institution (NLM).

 Search Institution Country/Region...

Coronavirus: Cited Works In The Scholarly Literature

Curator: Osmat A. Jefferson, Director of Application Development, Lens.org
Contents: 24,608 Scholarly Works (Public access)
Created: Mar 23, 2020 Updated: May 20, 2020

Collection Description:
Coronavirus: Broad collection filtered by those cited in scholarly literature

Scholarly Works (24,313) = All Docs

Filters: No filters applied

Works Cited by Patents	Citing Patents	Patent Citations	Works Cited by Scholarly	Scholarly Citations
2,540	4,595	9,354	24,154	881,411

Scholarly Works

- Expand All
- Save Query
- Share
- Export
- Cited by Patents
- High Analysis
- Patent Citations (Highest)

Mapping of linear antigenic sites on the S glycoprotein of a neurotropic murine coronavirus with synthetic peptides: a combination of nine prediction algorithms fails to identify relevant epitopes and peptide immunogenicity is drastically influenced by the nature of the protein carrier.

Claude Daniel, Martial Lacroix, Pierre J Talbot
Virology, Issue: 2, Volume: 202, Pages: 540-548, Aug 1, 1994
Additional Info: [Open Access](#), [S](#), [Citation](#), [Reference](#), [Full Text](#), [Full Text at your institution](#)
174 Patent Citations | 15 Scholarly Citations | Reference Count: 0
Journal Article @ 691-118-413-367-417 | 10.1006/viro.1994.1136 | 8030220 | 206802199
[Find full text at your institution](#)

An efficient method to make human monoclonal antibodies from memory B cells: potent neutralization of SARS coronavirus

Elisabetta Traggiai, Stephan Becker, Kanta Subbarao, Larissa Kolencikova, Yasushi Uematsu, Maria Rita Gismondo, Brian R Murphy, Rino Rappelli, Antonia Landaveroza
Nature Medicine, Issue: 8, Volume: 10, Pages: 871-875, Jul 1, 2004
Additional Info: [Open Access](#), [S](#), [Citation](#), [Reference](#), [Full Text](#), [Full Text at your institution](#)
363 Patent Citations | 493 Scholarly Citations | Reference Count: 31
Journal Article @ 941-194-807-252-395 | 10.1038/nm0104-395 | 12547913 | 199838358
[Find full text at your institution](#)

The Genome Sequence of the SARS-associated Coronavirus

Marco A Marra, Steven J M Jones, Caroline Alabell, Robert A Holt, Angela Brooks Wilson, Yaron S N Butterfield, Jawinder Khattar, Jennifer Asaro, Sarah Barber, Sasana Y Chan, Alison Clover, Shun W Coughlin, Doug Freeman, Nooren Gni, Ohi Griffith, Stephen Leach, Michael Mayo, Helen McDonald, Stephen B Montgomery, Pawan Pandoh Show all ...
Science, Issue: 5624, Volume: 300, Pages: 1395-1404, May 1, 2003
Additional Info: [Open Access](#), [S](#), [Citation](#), [Reference](#), [Full Text](#), [Full Text at your institution](#)
1,267 Patent Citations | 1,267 Scholarly Citations | Reference Count: 19
Journal Article @ 685-568-406-725-831 | 10.1126/science.1085952 | 12739501 | 216916829
[Find full text at your institution](#)

Description

a novel coronavirus associated with severe acute respiratory syndrome

Stephan S Monroe, William Allan Nix, Ray Campagnoli, Joseph P Iacone, Silvia Penaranda, Min Min Chen, Sukong Tong, Azizi Tamir, Luis Lowe, Michael Frace, Joseph Deliski, Qi Han, Teresa C P Patel, Carol Burns Show all ...
Virus Research, Issue: 134, Volume: 134, Pages: 139-139, May 1, 2003
Additional Info: [Open Access](#), [S](#), [Citation](#), [Reference](#), [Full Text](#), [Full Text at your institution](#)
6754-202 | 10.1126/science.1085952 | 12739500 | 211656425
[Find full text at your institution](#)

Make Dynamic Collection

Dynamic collections are automatically updated when new items are added to our sets. You can choose to accept or reject new items into your collection.

Dynamic Collection Updater: malaria





Scholarly - Aug 31, 2020

MRC LensIn4M Report

The Medical Research Council of the UK uploaded to the Lens, an open list of scholarly work that resulted from their funding, to create a draft In4M Report. Upload a list of your institution's scholarly work, and get a fully navigable, open & shareable collection of worldwide patents that cite your publications.

[Request In4M Report](#) [View MRC Report](#)

Top 200 Institutions

Institution / University Name		
<input type="checkbox"/>	 The Scripps Research I... Lens Ranks - RD: 1 / FOU: 2	
<input type="checkbox"/>	 Rockefeller University Lens Ranks - RD: 2 / FOU: 3	
<input type="checkbox"/>	 Massachusetts Institute... Lens Ranks - RD: 3 / FOU: 1	
<input type="checkbox"/>	 University of Massachu... Lens Ranks - RD: 4 / FOU: 20	

[Quick Compare](#)

In4M

International Industry & Innovation
Influence Mapping

Carnegie Mellon University

Lens Rank RD: 71 Lens Rank FOU: 4 ARWU: 68 Nature: 241 Leiden: 322
Grid: grid.147455.6 ISBN ID: 0000 0001 2097 0344 Ringgold ID: 6612
Info: [private](#)



[Patents Citing Scholarship](#)
[View Profile Information](#)
[Draft Institution Patent Portfolio](#)
[Claim ownership of these details](#)



78,204

Citing Patents
(expanded by family)

12,166

Citing Patent Families
(one patent per family)

11,980

Citing Patent Families
(3rd Party)

77,025

Citing Patents
(3rd Party expanded by family)

CARNEGIE MELLON UNIVERSITY

In4M Report (v2017.1)

Relative to the other Global institutions, Carnegie Mellon University (Carnegie Mellon Univ) ranked #71 when the In4M metric was normalized by scholarly research disciplines (RD) and #4 when normalization by technology fields of use (FOU) was performed. The inferred economic influence by normalized RD seems to favour institutions with strong life sciences disciplines whereas influence based on normalized FOU seems to highlight special institutional scholarship strengths as relevant to particular industry.

Besides self citations, in the patent literature, major actors citing Carnegie Mellon Univ scholarly work from 1980-2015 have included Microsoft Corp (872), IBM (732) and Netapp Inc (188).

Carnegie Mellon Univ is an influential contributor to Computer technology, with over 30,500 citing patent families in 2017. In addition, Carnegie Mellon Univ has influenced Biotechnology and Pharmaceuticals sectors with 14,980 and 11,195 citing patent families respectively.

[Read More...](#)

TOP LEGAL ENTITIES INFLUENCED BY

Scholarly Work

Top Citing Commercial

1. Microsoft Microsoft Corp 872	2. IBM IBM 732	3. NetApp Netapp Inc 188
4. Sun Sun Microsystems Inc 182	5. Google Google Inc 173	6. Microsoft Microsoft Technology Lic... 167

Research Disciplines **Fields of Use** Applicants of Citing Patents Citations

Fields of Use

In what technology sector is CMU having the biggest influence per scholarly output relative to the other institutions?

4.1 Analysis of biological materials	17.2 Audio-visual technology	7.7 Basic communication processes	3.4 Basic materials chemistry	3.2 Biotechnology
4.0 Chemical engineering	5.4 Civil engineering	20.1 Computer technology	13.1 Digital communication	4.5 Electrical machinery, apparatus, energy
4.9 Engines, pumps, turbines	4.1 Environmental technology	1.1 Food chemistry	13.8 Furniture, games	21.8 Handling
20.4 Instruments-Control	31.3 IT methods for management	5.1 Machine tools	8.1 Macromolecular chemistry, polymers	2.9 Materials, metallurgy
6.1 Measurement	3.2 Mechanical elements	3.6 Medical technology	5.3 Micro-structural and nano-technology	4.3 Optics
2.2 Organic fine chemistry	14.2 Other consumer goods	2.1 Other special machines	1.9 Pharmaceuticals	5.9 Semiconductors
4.2 Surface technology, coating	7.3 Telecommunications	8.0 Textile and paper machines	3.2 Thermal processes and apparatus	11.8 Transport



In4M

International Industry & Innovation Influence Mapping

An open, transparent and granular tool to explore, expose and showcase the degree to which research works, scholars' work product, or whole institution's capabilities influence outcomes for society, in myriad forms.



LENS.ORG

Solving The Problem Of Problem Solving™

To learn more, watch Richard Jefferson, founder of The Lens, at the
Skoll World Forum for Social Entrepreneurship:

<https://www.youtube.com/watch?v=of8ai1HhqK4>

Check out support for tips for using Lens.org: <https://support.lens.org/>



ACCESS TO LENS.ORG Patents, Patseq & Scholarly Works

Research4Life is a public-private partnership of five programmes:



Access to Lens databases (current portal)



- Open **Databases for discovery** list from any of the programmes' content pages.
- Scroll down the list to the links to **Lens.org** options

Content Home Find by: Subject Language Publisher

Hinari - Enabling the developing world to access health research

Search across all Research4Life... **Search**

Search function provided by Summon [Advanced search](#)

Journals collection
[A B C D E F G H I J K L M N O P Q R S T U V W X Y Z](#)
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Books collection
[A B C D E F G H I J K L M N O P Q R S T U V W X Y Z](#)
[View complete list of books](#)

Free collections
-- SELECT FREE COLL

[Databases for discovery](#)

[Reference sources](#)

- ☐ **IRIS (WHO Digital Publications)**
- ☐ **Joanna Briggs Institute EBP Database**
- ☐ **Lens.org - Patents**
- ☐ **Lens.org - Patseq**
- ☐ **Lens.org - Scholarly Works**

Access to Lens databases (new 'unified' content portal)



- After logging in, open the **Content list**
- Open **Databases list**
- Scroll down the list to the links to **Lens.org** options
- Lens.org is available to all Research4Life registered institutions

A screenshot of the Research4Life login page. The URL in the browser bar is "login.research4life.org/tacsgr1portal_research4life_org/". The page features the Research4Life logo, a "Welcome to Res" banner, and a search bar. A red box highlights the "Databases" option in the "Content" dropdown menu. Another red box highlights the "Databases" link in the top navigation bar. A third red box highlights a list of databases on the right side of the page, including "LawArXiv Database", "Lens.org - Patents Database", "Lens.org - Patseq Database", and "Lens.org - Scholarly Works Database". Red arrows indicate the navigation path from the "Databases" menu item to the database list.

LENS.ORG

English

About

Our Apps

Guest Work Area

Register / Sign in

Support

228,108,724 Scholarly Works

Explore Science, Technology & Innovation...

Search

Filters

Date Range

Flags

Author

Institution

Institution Country/Region

Identifier Type

Funding

Journal

Conference Name

Publication Type

Publisher

Subject Matter

Open Access

Query Tools

New Structured Search

New Scholar Search

Scholarly Works (228,108,724) = All Docs

Filters: No filters applied

Works in Set

Works Cited by Patents

Citing Patents

Patent Citations

Works Cited by Scholarly

Structured Search

Query Text Editor

Profiles

Beta

Field

Predicate: AND OR

All Fields

e.g. malaria

Date Range

ORCID Lookup Author

Flags

Identifier Type

Publication Type

Data Set

Search Tips

Presets

Scholarly Data Set

Last Updated: May 24, 2021

The below scholarly data sources are currently ingested and integrated in the Lens. Updates are performed on a fortnightly basis at the present time.

LENS.ORG

Lens Patents 2.0

Take a sneak peak at the New Lens Patents 2.0, with three times as many fields (120+) and powerful analytics. Your chance to test and send feedback before it enters full

Musings about Librarianship: Open Access analysis

ure | musingsaboutlibrarianship.blogspot.com/2020/10/oa-week-2020-creating-free-and.html

Musings about librarianship

(by Aaron Tay - Subscribe now)



OCT
21

[OA week 2020] - Creating a free and beautiful auto-updating dashboard for tracking Open Access rates for your institution using Lens.org

So it is Open Access Week 2020, while I write quite a bit on [Open Access](#) and [Open Data](#), I don't often post specifically for Open Access Week.

One exception was 2017's [My reflection on my journey in open access or Can you be a librarian without being an open access advocate?](#) where I shared my fears about how the rise of open access might slowly reduce part of the importance or value of academic librarianship (the part that focuses on providing access to resources behind paywalls what Lorcan Dempsey's calls outside-in) and the difficulties of adjusting to a post OA world and wondering if I should feel guilty about that.

I concluded by saying that

In any case, my thinking currently is open access is inevitable now, so arguing whether you are an advocate or not is pointless. As a librarian we need to prepare now for it's coming and influence it in a way that leads to the maximum benefits for our users and maybe even with a little bit of consideration for ourselves.

It's 2020, and my views haven't changed that much, though I have become more and [more aware of the innovation that can be unleashed the more open data \(metadata and full text\) is available](#) particularly in the research tools space.

[\[OA week 2020\] - Creating a free and beautiful auto-updating dashboard for tracking Open Access rates for your institution using Lens.org | Musings about librarianship](#)



University analysis: [Makerere University](#)

Research institute analysis: [ICDDR'B](#)

Company Analysis: Sasol, South Africa

Patent Portfolio: <https://www.lens.org/lens/dashboard/3486>

Scholarly research Output: <https://www.lens.org/lens/dashboard/3491>