



WELCOME

NEXUS

OpenAIRE Tech-Clinic Webinar

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MONITOR PORTFOLIO



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OpenCitations: introduction

OpenCitations (<http://opencitations.net>) is an [independent infrastructure organization](#)

- dedicated to open scholarship and the **publication of open bibliographic and citation data** by the use of Semantic Web technologies
- engaged in advocacy for **open citations** and **open bibliographic metadata**

It provides:

- a data model: the [OpenCitations Data Model](#) (based on the [SPAR Ontologies](#))
- bibliographic and citation data (CC0): [OpenCitations Corpus](#), [COCI](#), [CROCI](#), [CCC](#)
- software: in our [GitHub repository](#), released with open source licenses
- online services: [REST APIs](#), [SPARQL endpoints](#), [dumps](#) and [interfaces](#)

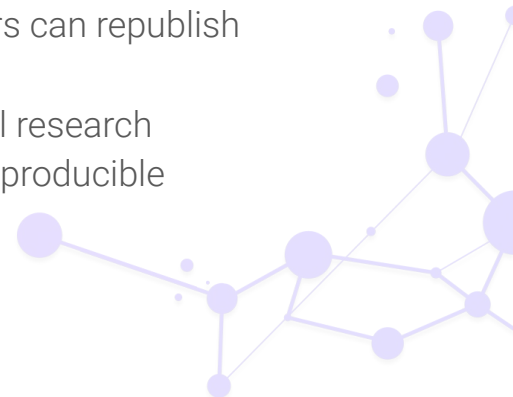


OpenCitations: goals

OpenCitations has been established as a fully free and open infrastructure to provide access to global scholarly bibliographic and citation data, with the intent to rival those from proprietary services, e.g. Clarivate Analytics' Web of Science (WoS) and Elsevier's Scopus

OpenCitations enables

- Fairness: it avoids institutions and independent scholars having to pay tens of thousands of dollars annually (that most of them cannot afford!) for commercial access to their own scholarly data
- Reuse: no license restrictions, since the data are provided under CC0, so users can republish and reuse for any purpose the citation data that OpenCitations provides
- Research assessment: by providing crucial data for national and international research evaluation exercises, OpenCitations makes such activities transparent and reproducible
- Governance: community involvement



OpenCitations: data

OpenCitations Indexes (<http://opencitations.net/index>), including COCI (our main source) and CROCI [COCI](#) (launch: July 2018): >759M citations between >60M bibliographic entities

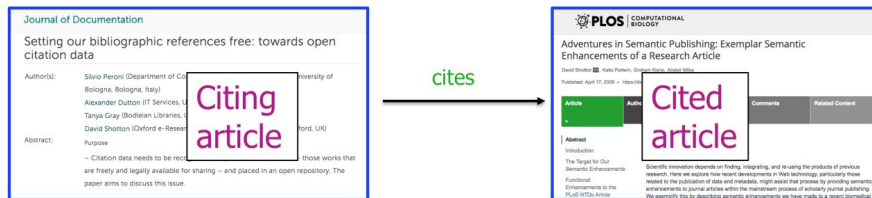
We are setting up (1) a system to enable you to share your own citation data and bibliographic metadata on our OpenCitations Indexes and in a new bibliographic metadata collection, OpenCitations Meta, and (2) the Open Biomedical Citations in Context Corpus (funded by the Wellcome Trust) that will contain in-text reference pointers and citation contexts of OA articles in the PubMed OA subset

OpenCitations Indexes Service	URL
REST API <i>results in CSV and JSON</i>	https://opencitations.net/index/api/v1
SPARQL endpoint <i>results in several formats</i>	https://opencitations.net/index/sparql
Dumps <i>all data in CSV, Scholix, RDF</i>	http://opencitations.net/download#index



Citations as first-class data entities

Citations are normally treated simply as the links between published entities



Alternative richer view is to regard a citation as a data entity in its own right

has citing article



has cited article

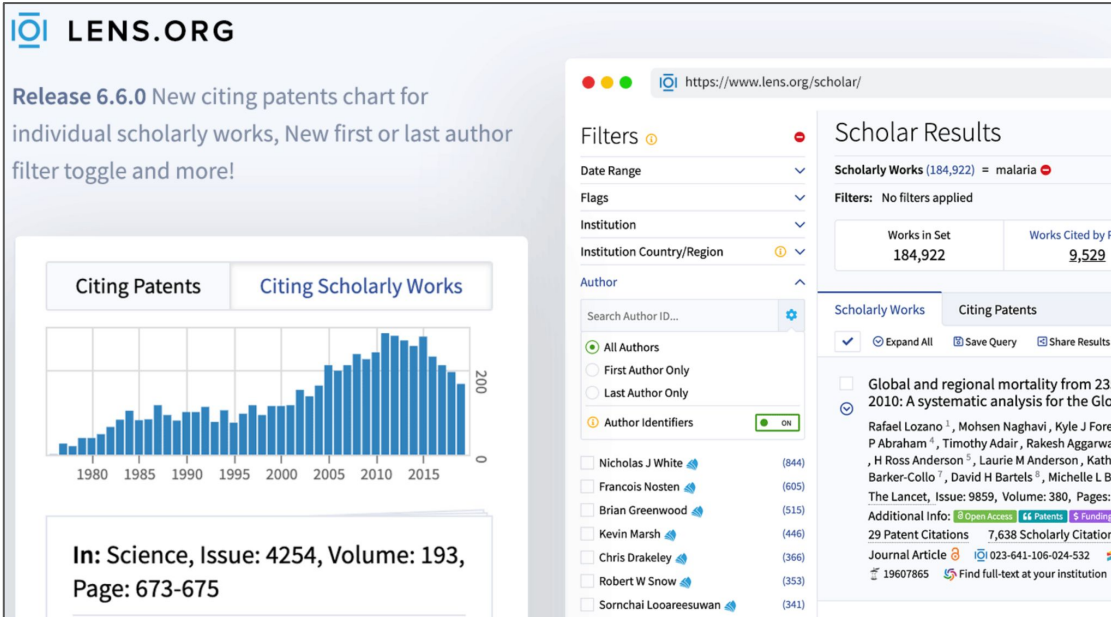
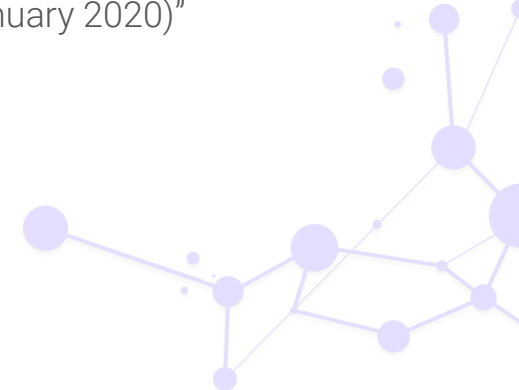
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timespan: "P2Y"  
cited: "10.1007/978-3-030-00668-6_8"  
citing: "10.1162/qss_a_00023"  
journal_sc: "no"
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Known uses of OpenCitations: Lens.org

[The Lens.org](https://www.lens.org) is an aggregator of scholarly metadata about scholarly works and patents, and offers services to discover, analyse, manage and share knowledge

In the 6.6 release, they have “added citation data from the latest release of OpenCitations Index of Crossref open DOI-to-DOI citations (COCI, most recent update: 21 January 2020)”



LENS.ORG

Release 6.6.0 New citing patents chart for individual scholarly works, New first or last author filter toggle and more!

Citing Patents | **Citing Scholarly Works**

1980 1985 1990 1995 2000 2005 2010 2015 200

In: Science, Issue: 4254, Volume: 193, Page: 673-675

Filters: No filters applied

Scholarly Works (184,922) = malaria

Works in Set: 184,922 | Works Cited by Patents: 9,529

Scholarly Works | Citing Patents

Global and regional mortality from 235 2010: A systematic analysis for the Glot

Rafael Lozano¹, Mohsen Naghavi¹, Kyle J Forer², P Abraham³, Timothy Adair⁴, Rakesh Aggarwal⁵, H Ross Anderson⁵, Laurie M Anderson⁶, Kathr Barker-Collo⁷, David H Bartels⁸, Michelle L Be The Lancet, Issue: 9859, Volume: 380, Pages: 2

Additional Info: [Open Access](#) [44 Patents](#) [9 Funding](#)

29 Patent Citations | 7,638 Scholarly Citations:

Journal Article | [DOI: 10.1016/S0140-6838\(15\)00453-2](#)

19607865 | [Find full-text at your institution](#)

Author list:


- Nicholas J White (844)
- Francois Nosten (605)
- Brian Greenwood (515)
- Kevin Marsh (446)
- Chris Drakeley (366)
- Robert W Snow (353)
- Sornchal Looaeesuwan (341)

<https://about.lens.org/release-6-6/>












Known uses of OpenCitations: DBLP



2020

- [j28]     Silvio Peroni , David M. Shotton :
Infrastructure organization for open scholarship. Quant. Sci. Stud. 1(1):
 electronic edition via DOI (open access)
- [j27]     [references & citations](#)
authority control:
    an, Silvio Peroni, Chao Che:
**ms and eleven million citations: a study of book-based scholarly
OpenCitations.** Scientometrics 122(2): 1097-1112 (2020)
- [j26]     Silvio Peroni , Paolo Ciancarini , Aldo Gangemi , Andrea Giovanni Nuzzolese , Francesco Poggi , Valentina Presutti :
The practice of self-citations: a longitudinal study. Scientometrics 123(1): 253-282 (2020)














 **References** 

load references from crossref.org, opencitations.net, and semanticscholar.org

-     Christian Bizer , Tom Heath , Tim Berners-Lee :
Linked Data - The Story So Far. Int. J. Semantic Web Inf. Syst. 5(3): 1-22 (2009)
-     Marco Corbato , Antonina Dattolo :
A Web Application for Creating and Sharing Visual Bibliographies. SAVE-SD@WWW 2018: 78-94

 **Cited by** 

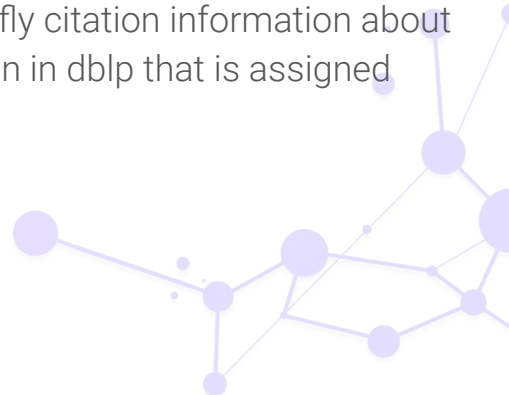
load citations from opencitations.net and semanticscholar.org

-     Alberto Martín-Martín , Mike Thelwall , Enrique Orduña-Malea , Emilio Delgado López-Cózar :
Google Scholar, Microsoft Academic, Scopus, Dimensions, Web of Science, and OpenCitations' COCI: a multidisciplinary comparison of coverage via citations. Scientometrics 126(1): 871-906 (2021)
-     Egon L. Willighagen :
Adoption of the Citation Typing Ontology by the Journal of Cheminformatics. J. Cheminformatics 12(1): 47 (2020)

<https://blog.dblp.org/2019/11/11/open-citation-data-and-dblp/>

The [dblp computer science bibliography](#) is the on-line reference for bibliographic information on major computer science publications, and provides free access to high-quality bibliographic metadata and links to the electronic editions of publications

It uses OpenCitations APIs (and others) to retrieve on-the-fly citation information about each publication in dblp that is assigned with a DOI



Known uses of OpenCitations: Inciteful

Most Important Papers in the Graph

These are the "Most Important" papers in the network based on PageRank, these tend to be older papers and represent where the literature has come from.

	published_year	page_rank	num_cited_by
Adventures in semantic publishing: exemplar semantic enhancements of a research article. David M. Shotton, ... Alistair Miles	2009	0.145779	17
Semantic publishing: the coming revolution in scientific journal publishing David M. Shotton	2009	0.138223	27
The Document Components Ontology (DoCO) Alexandru Constantin, ... Fabio Vitali	2016	0.031747	45
FaBiO and CiTO Silvio Peroni, David M. Shotton	2012	0.021216	33
The SWAN biomedical discourse ontology Paolo Ciccarese, ... Timothy Clark	2008	0.018822	10
The SPAR Ontologies Silvio Peroni, David M. Shotton	2018	0.017698	38
SALT - Semantically Annotated LaTeX for scientific publications Knud Moeller, ... Tudor Groza	2007	0.013626	9
OpenCitations, an infrastructure organization for open scholarship Silvio Peroni, ... David M. Shotton	2020	0.011662	28
SKOS Simple Knowledge Organization System Reference Alistair Miles, Sean Bechhofer	2009	0.011366	6
ScholOnto: an ontology-based digital library server for research documents and discourse Simon Buckingham Shum, ... John Domingue	2000	0.010838	3

SQL Prev 1 2 3 ... 5 Next BibTeX

<https://help.inciteful.xyz/how-does-it-work.html>

[Inciteful](#) is a database that includes information of the majority of academic papers in peer reviewed journals as well as books

It uses OpenCitations data for the citation data needed to build the knowledge graph of bibliographic resources they store



Known uses of OpenCitations: OpenAccess Helper

The image shows two screenshots. On the left is a mobile app interface for the Open Access Helper. At the top, it says 'Done' in an orange bar. Below that, the article title 'Status of vaccine research and development of vaccines for HIV-1' is displayed, along with the authors 'Safrit et al. (2016) Vaccine; 10.1016/j.vaccine.2...'. It indicates that an 'Open Access version is available at:' and provides the DOI 'https://doi.org/10.1016/j.vaccine.2016.02.074'. Below this, it says 'Bronze Open Access: Published Version'. There are four buttons: a green 'Go to Document Now' button, a blue 'Proxy Original Page' button, an orange 'Add Bookmark' button, and a grey 'Cancel' button. At the bottom, a white box with a purple CC icon and the text 'Times Cited: 10' is highlighted with an orange arrow. On the right is a screenshot of the ScienceDirect website for the same article. The article title is 'Status of vaccine research and development of vaccines for HIV-1' by Jeffrey T. Safrit et al. The page shows a 'Download PDF' button, a search bar, and a Creative Commons license icon (CC BY) circled in purple. The article is part of a special issue: 'WHO Product Development for Vaccines Advisory Committee (PDVAC) Analyses for 25 Pathogens'. The article is available under a Creative Commons license, and the text 'open access' is visible. The article is also listed in a table of contents.

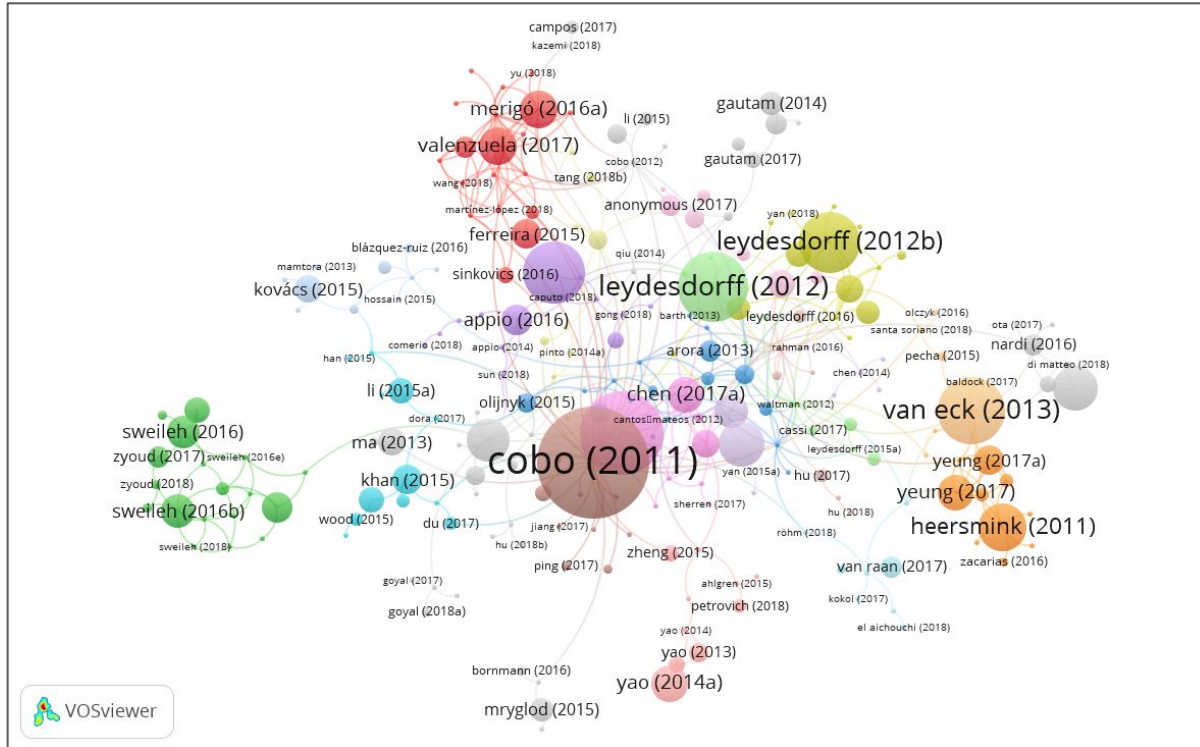
<https://www.oahelper.org/open-citations/>

[Open Access Helper](#) is designed to help you get easy access to Open Access versions of otherwise “paywalled” scientific articles

It uses OpenCitations’ APIs to gather and expose the citation count of the article in consideration



Known uses of OpenCitations: VOSviewer




[VOSviewer](#) is a software tool for constructing and visualizing bibliometric networks that can be constructed based on citation, bibliographic coupling, co-citation, or co-authorship relations

It uses OpenCitations' API to retrieve the DOIs of publications that cite one or more input papers

<https://www.cwts.nl/blog?article=n-r2v284>

Supporting Open Science Infrastructures

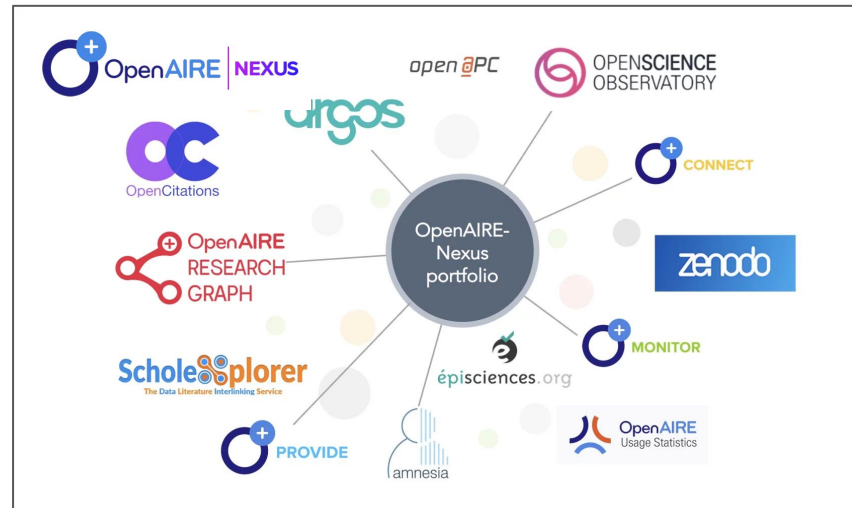



The Principles of Open Scholarly Infrastructure

DIRECTORY OF OPEN ACCESS BOOKS
OPEN ACCESS PUBLISHING FOR EUROPEAN NETWORKS
PUBLIC KNOWLEDGE PROJECT
OPENCITATIONS

SCOSS LAUNCHES SECOND FUNDING CYCLE

Read about these essential services, their
funding goals and how your institution can
help support them at www.scoss.org.



A decorative network diagram consisting of interconnected nodes and lines, rendered in purple and blue, framing the central text. The nodes vary in size, and the lines are thin and light-colored.

THANK YOU