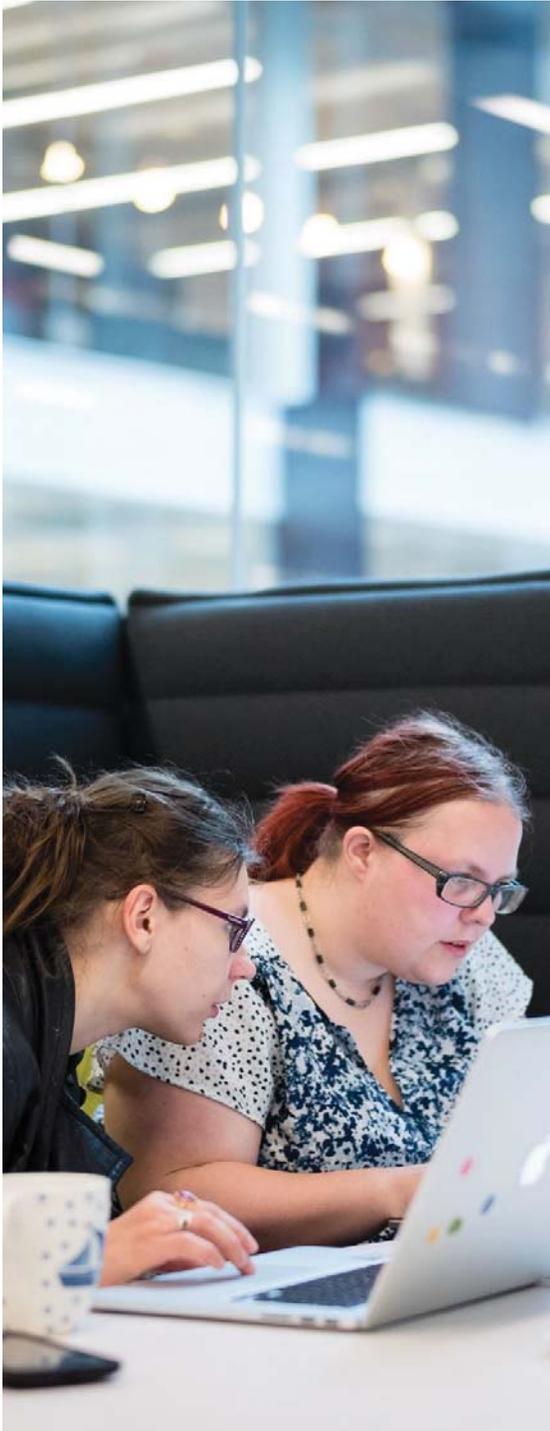


# Empower your Research with ScienceDirect



Nicholas Pak  
Solutions Consultant  
Research Solutions Sales  
Elsevier  
[n.pak@elsevier.com](mailto:n.pak@elsevier.com)

ScienceDirect



## Who We Are

A global  
information analytics company  
specializing in science and health.

## Why We Do It

We help you solve your  
challenges, for the  
benefit of humanity



## What We Do

We help institutions and  
professionals progress  
science, advance  
healthcare and improve  
performance.

## A Unique Combination

Combine content with technology,  
supported by operational efficiency,  
to turn information into actionable knowledge.

# Elsevier combines content with technology to provide actionable knowledge



Read  
*this*

Cell  
Fundamentals  
Gray's Anatomy



Search  
*this*

ScienceDirect  
Scopus  
ClinicalKey®  
Reaxys®



Do  
*this*

Sherpath  
Mendeley  
InferMed  
Knovel®



# To help customers meet those challenges: Elsevier combines content with technology to provide actionable knowledge

Operational Excellence

Content



Technology

**Chemistry database**

**500m** published experimental facts

**1,000**

technologists employed by Elsevier

**User queries**

**13m** monthly users on ScienceDirect

**Machine reading**

**475m** facts extracted from ScienceDirect

**Books**

**35,000** published books

**Semantic Enhancement**

Knowledge on 50m chemicals captured as 11 billion facts

**Drug Database**

**100%** of drug information from pharmaceutical companies updated daily

**Machine learning**

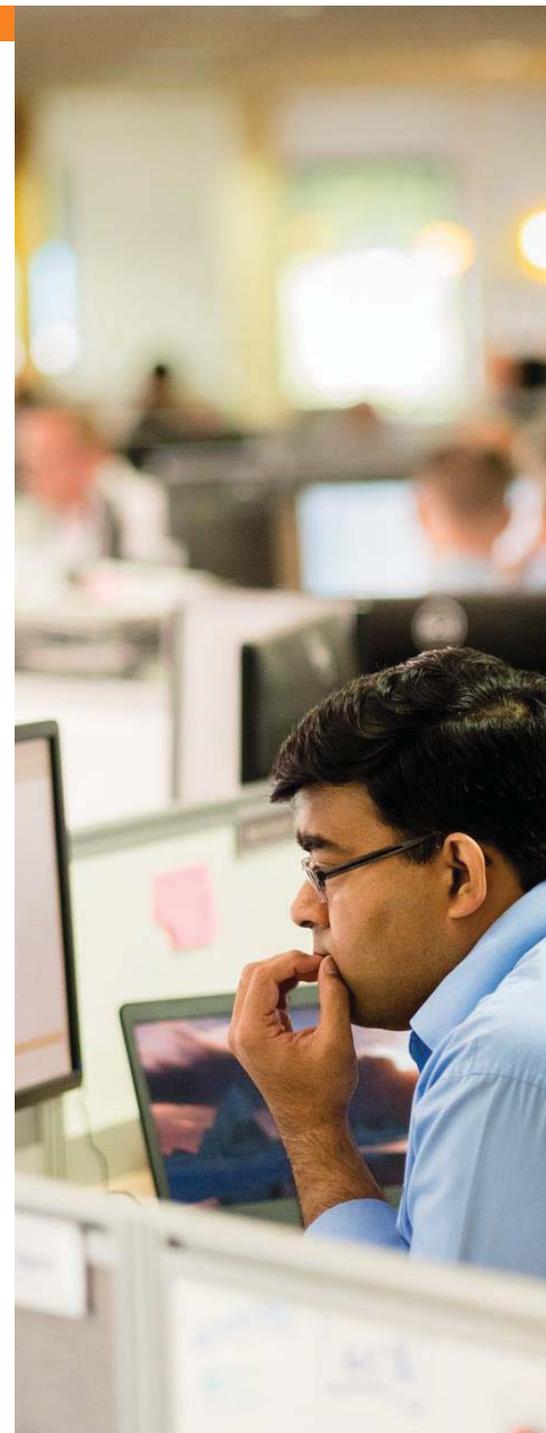
Over 1,000 predictive models trained on 1.5 billion electronic health care events

**Research**

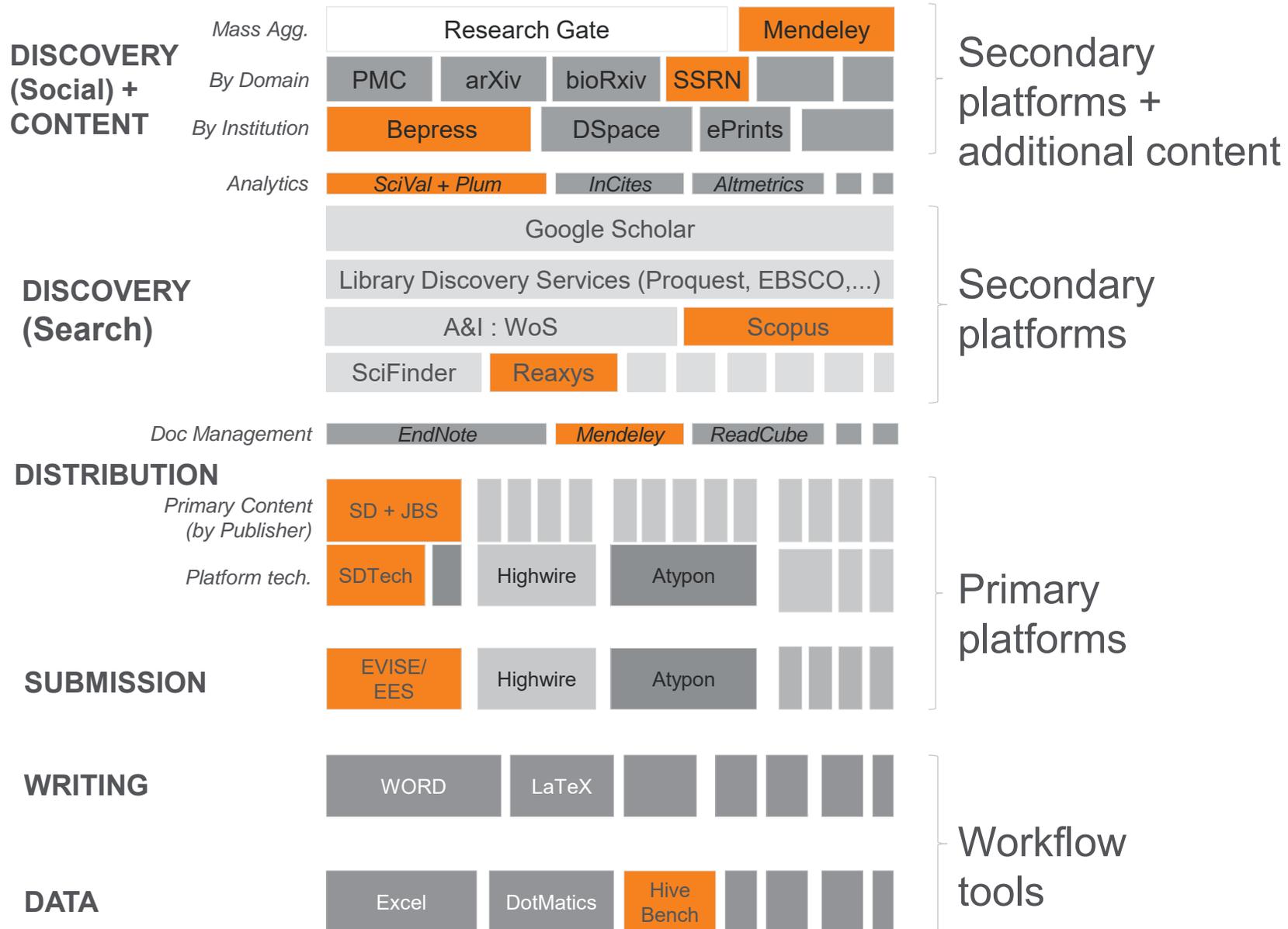
**16%** of the world's research data and articles published by Elsevier

**Collaborative filtering:**

**1bn** scientific articles added by 2.5m researchers analyzed daily to generate over 250m article recommendations



# How Elsevier combines Content with Technology



## Researchers today are faced with ever growing volumes of information they need to search, evaluate and incorporate into their work

Keeping up with scientific literature has been described as the single most important skill throughout a researcher's career.\*

But it's no easy task, as there are 28,100 active peer-reviewed journals and 2.5 million new articles published each year, according to The STM Report.\*\*

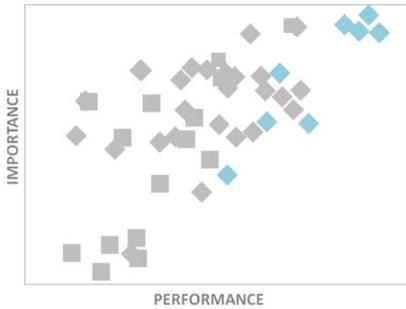
### This information overload can cause researchers to:

- Lose time combing through resources
- Get frustrated with dead ends
- Become unsure of their next steps

\*Source: <http://www.sciencemag.org/careers/2016/11/how-keep-scientific-literature>

\*\*Source: The STM Report, <http://www.sciencemag.org/careers/2016/11/how-keep-scientific-literature>, 2016.





## Using Published Literature

Four activities take more than 2 hours per week and are considered highly important but researchers feel well supported. Developing hypotheses is important but researchers feel less supported by tools and resources



**Time (in hours):** Approximately how much time last week did you spend on the following activities?



**Importance**  
How important are the following activities to you as a researcher?  
% Very important + important

**ScienceDirect** continues to focus on increasing your research effectiveness by incorporating innovative technologies to evolve the information discovery and management needs of researchers

**Our goal is to help you and the people in your institute**



**Uncover more  
novel science**



**Use your time  
efficiently and  
effectively**



**Make decisions  
based on the  
highest-quality  
scientific  
information**

Demonstrably improve user experience by providing an integrated, social and personal reading experience when optimizing for the ScienceDirect use cases:

- Help me discover the relevant information
- Give me access to the detail
- Make the process quick and easy
- Keep me informed on the latest developments and news



# The Value of ScienceDirect

What's behind ScienceDirect

In Demand Content

Superior Quality

The Freedom Collection

The Platform

Improved Visibility

Impactful Research

ScienceDirect



# The Value of ScienceDirect

## What's behind ScienceDirect

In Demand Content

Superior Quality

The Freedom Collection

The Platform

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Impactful Research

ScienceDirect

## High-quality Science

Decisions based on inaccurate or poor-quality information increase project costs, lead to inefficient resource allocation, and can incur litigation.

We ensure that the information you find is of the highest standard.

### VOLUME

**ScienceDirect** delivers over **15M** publications from over **3,800** journals and more than **37,000** books from Elsevier, our imprints and our societies.

### IMPACT

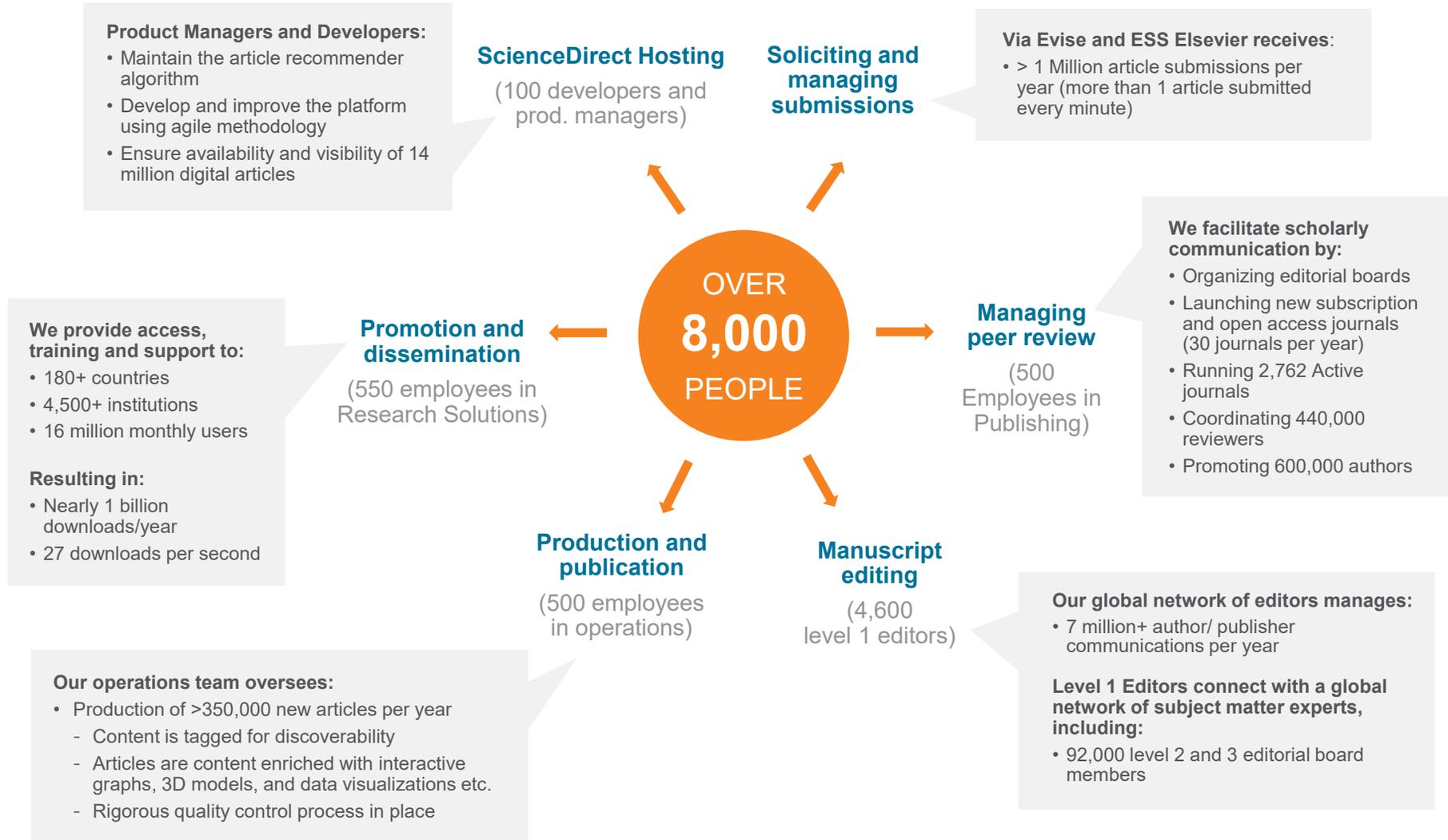
**71% of our journals increased their Impact Factor rating in 2017.**

A 10% increase from 2016, with the number of titles ranked first in their subject categories rising from 71 to 76.

### CITATION

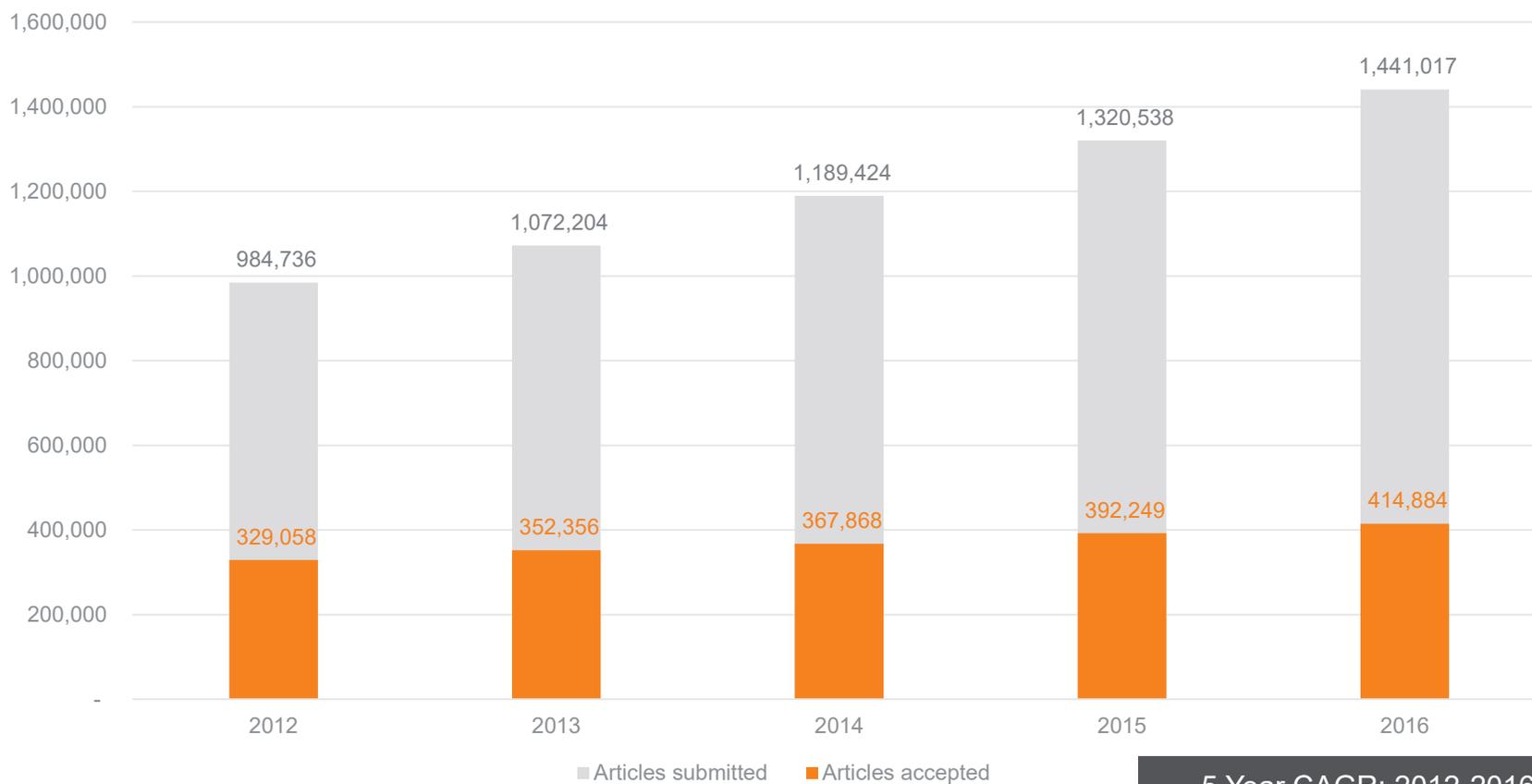
**Of the top 5% cited articles, 30% are Elsevier's.**

# What's behind ScienceDirect?



# Attracting and Managing Quality, Global Submissions

Submissions and Publications



5 Year CAGR: 2012-2016	
Articles Submitted	9.50%
Articles Published	5.03%

\*Figures for all Elsevier Journals



# The Value of ScienceDirect

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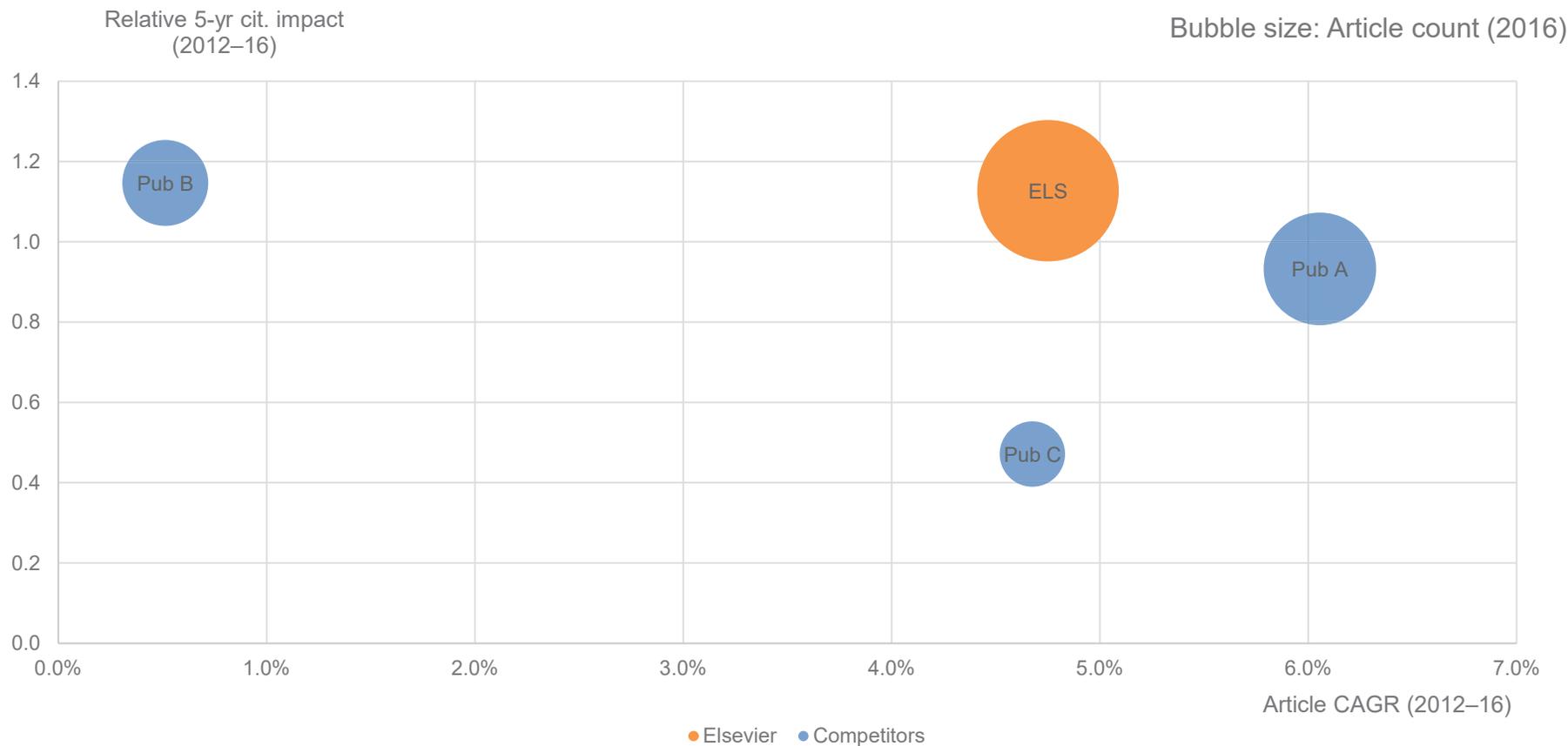
The Platform

Improved Visibility

Impactful Research

ScienceDirect

# All Subjects (2012 – 2016)



## Largest Repository of Growing, Quality Content

- Over 388,000 articles in 2016
- Comprises 24.6% of global article content alone in 2016
- Provides 27% of global references in 2012 - 2016
- FWCI of 1.13 in 2012 - 2016
- More than 58.1% more articles than next largest publisher



# The Value of ScienceDirect

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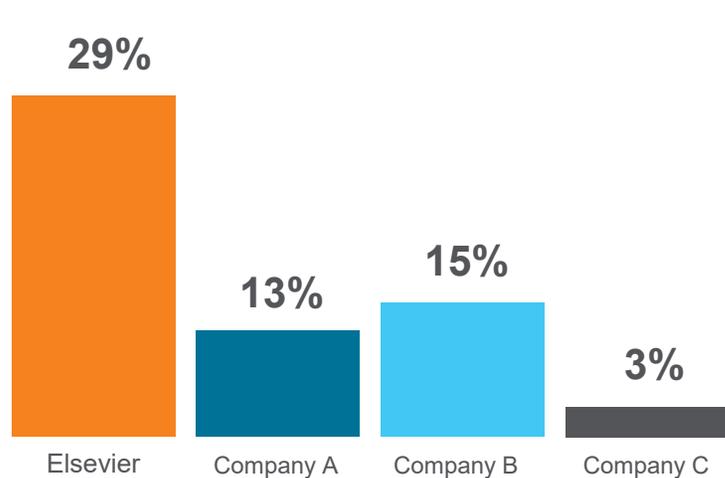
# ScienceDirect Impact Factor - No.1 Journal in 76 Subjects



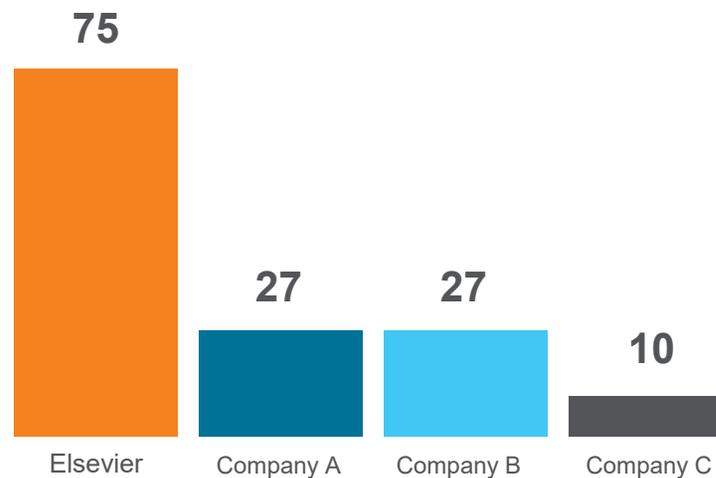
## ScienceDirect Impact Factor - No.1 Journal in 76 Subjects

### Journal ranking—Impact Factor

Share of top-10% journals

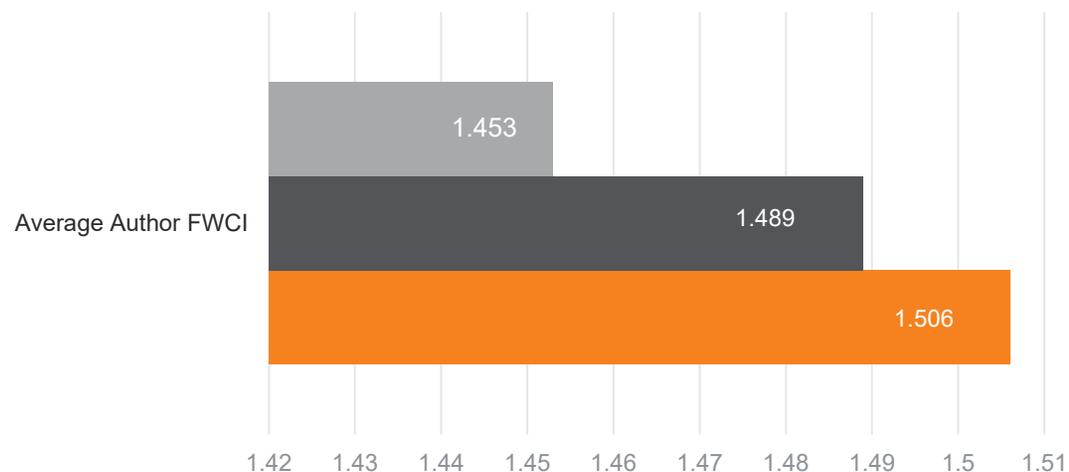


Subjects with top rank  
(Journal Citation Reports)

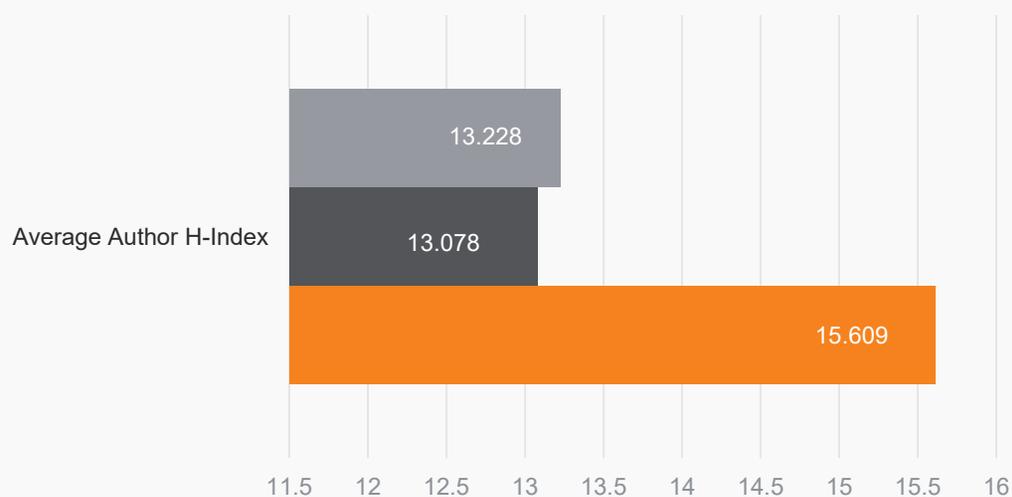


Journal ranking by Journal Impact Factor across 234 subjects per Clarivate’s Journal Citation Reports database; source: Clarivate data (2016)

# The World's Best Researchers



Publisher	Authors	Average Author FWCI
Publisher A	1,034,646	1.453
Publisher B	1,716,325	1.489
Elsevier	2,719,232	1.506



Publisher	Authors	Average Author H-Index
Publisher A	1,034,646	13.228
Publisher B	1,716,325	13.078
Elsevier	2,719,232	15.609

## Quiz

- How many subjects categories in Journal Citation Reports is Elsevier number 1 of?



# The Value of ScienceDirect

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# ScienceDirect contributes to global research

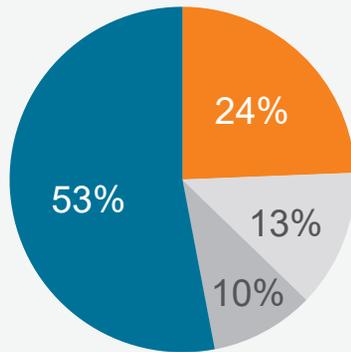
More than a quarter of global references are to ScienceDirect content



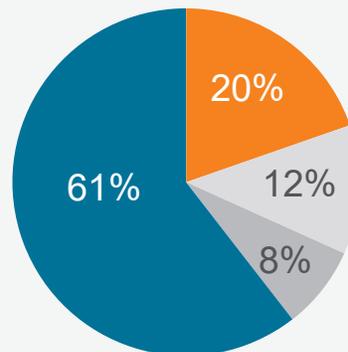
## In the last 5 years:

- Researchers from 247 countries have downloaded 4,007,955,430 documents from ScienceDirect
- Globally, authors published on ScienceDirect have been cited 64,734,635 times

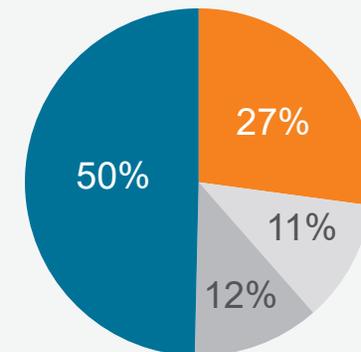
Disseminate



Certify



Investigate



■ Elsevier  
 ■ Pub. A  
 ■ Pub. B  
 ■ Others



# The Value of ScienceDirect

What's behind ScienceDirect

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**The Platform**

Improved Visibility

Impactful Research

ScienceDirect

## ScienceDirect is incorporating innovative technologies to evolve the information discovery and management needs of researchers

Researchers can benefit from ScienceDirect technology improvements in multiple ways:

### To help uncover new research

to identify patterns and connections between content that might have been otherwise overlooked, ScienceDirect is enhancing its advanced data analytics and machine learning capabilities to deliver researchers the information they need, when they need it



### To deliver search results that are more relevant

and delivered faster than ever before, ScienceDirect is expanding its browse and search functionalities



### To provide a best in class user experience

which is personal, secure, and fast, ScienceDirect is creating customizable settings and annotation features so that researchers can tailor their workspace to fit their needs



## ScienceDirect invests continually to ensure continuous optimization and meet the most vigorous standards

We focus on 3 key areas to ensure the best possible customer experience:



### Better performance

Optimized architecture for journal homepages ensures pages load within 1 second



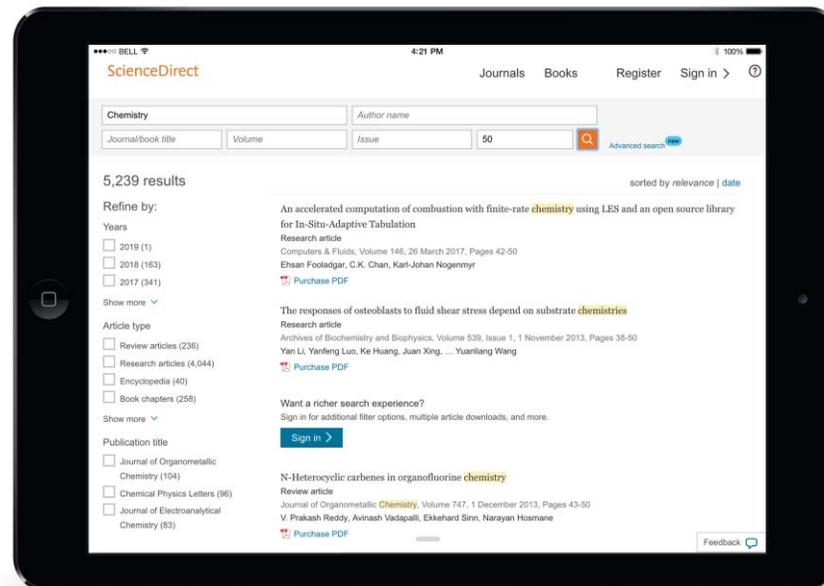
### 100% results

The most relevant information is prioritized (latest articles and issues, articles in press, special issues, alerts and journal information)



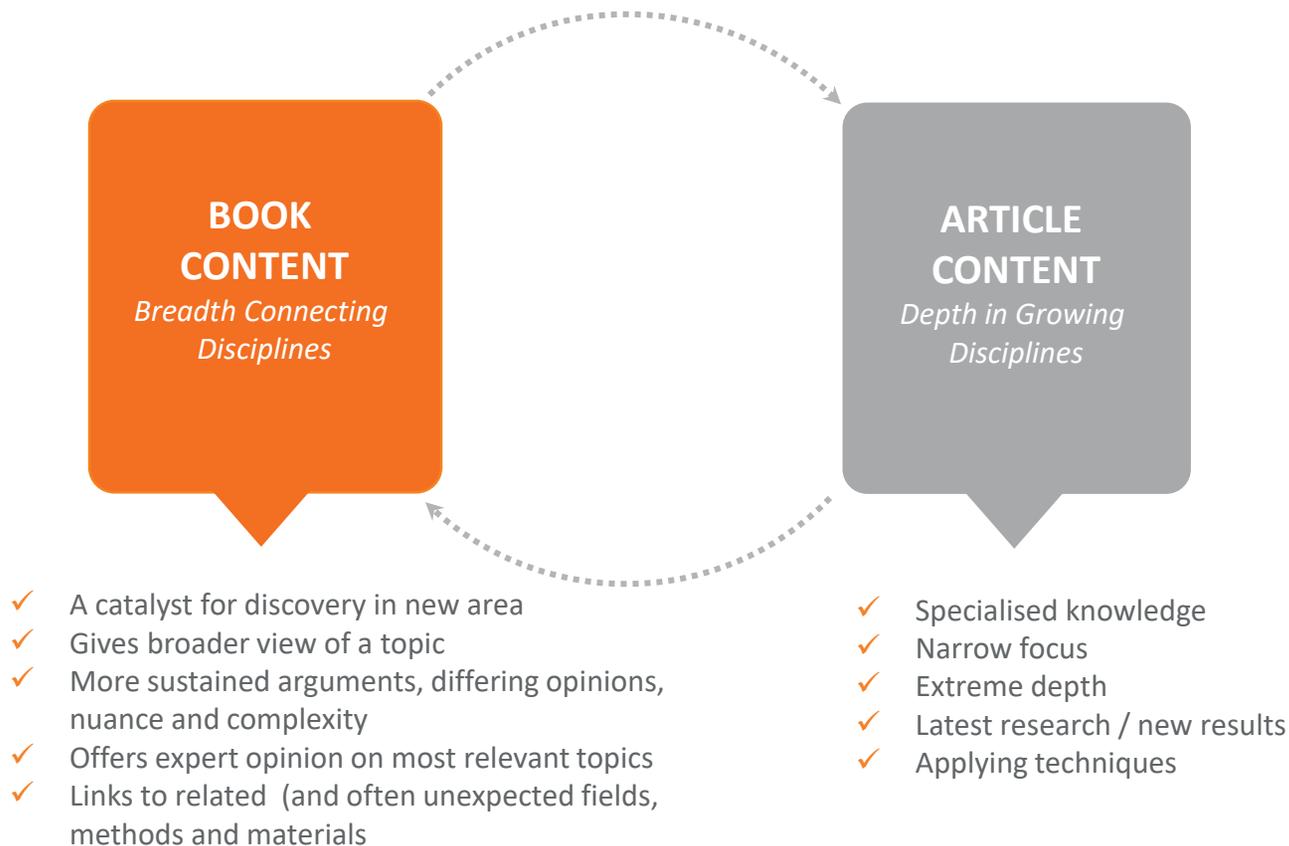
### Ease of use

A modern and clean look on any screen size with each journal instantly recognizable to the user thanks to custom colors



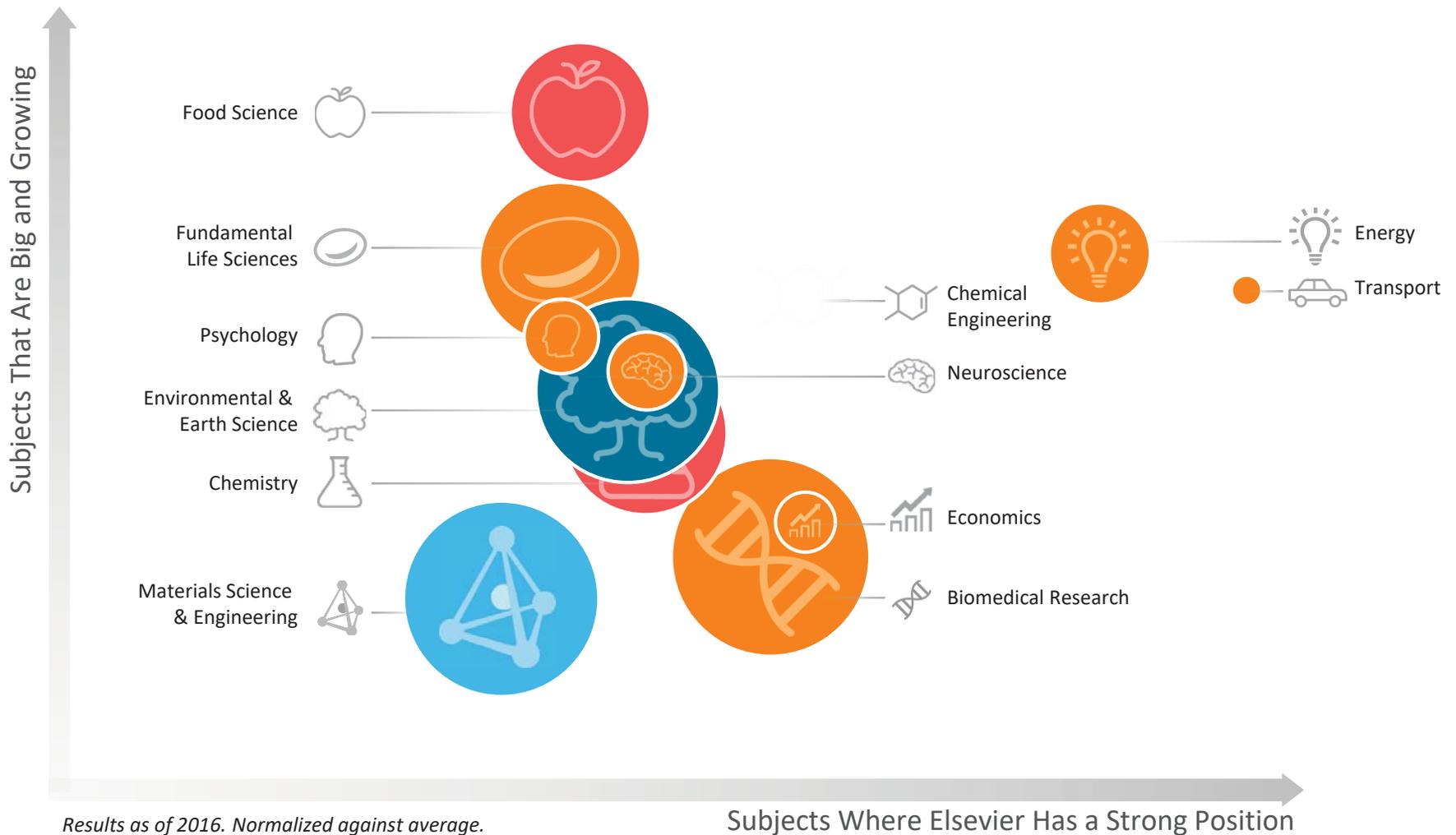
## eBook content is a critical complement to journal content

Books and journal articles provide different types of content, but for this reason they are fundamentally interlinked: **researchers/students need both to build their knowledge around a topic.**



# Deep Vertical Strategy focusing on the largest fastest growing research areas where Elsevier is strongest

1



Results as of 2016. Normalized against average.

## Usage data shows books and journals are used together



ELSEVIER SCIENCEDIRECT BOOKS CUSTOMER TESTIMONIAL

“ eBooks are part of a comprehensive whole which includes journals and other information resources.

— Librarian, State & Local Government

ELSEVIER SCIENCEDIRECT BOOKS CUSTOMER TESTIMONIAL

“ Oftentimes a book will provide an in-depth review of a theory or research approach that just isn't possible in a single journal article.

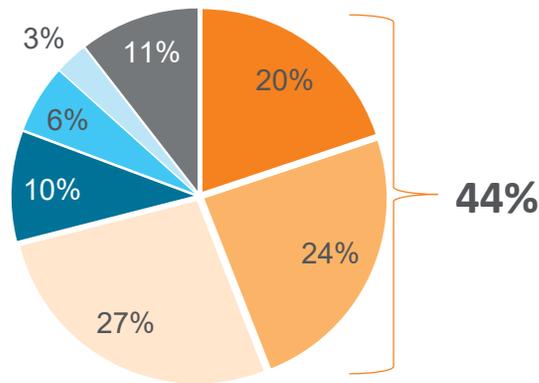
— Researcher, Educational Institution

## Researchers are often working in interdisciplinary fields

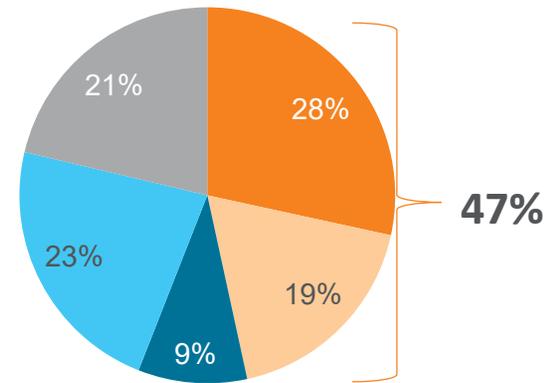
Understanding User Needs & Behaviour and Identifying Core Use Cases

44% of researchers look for **content** outside their field at least weekly

47% of researchers look for **collaborators** outside their field at least once a year

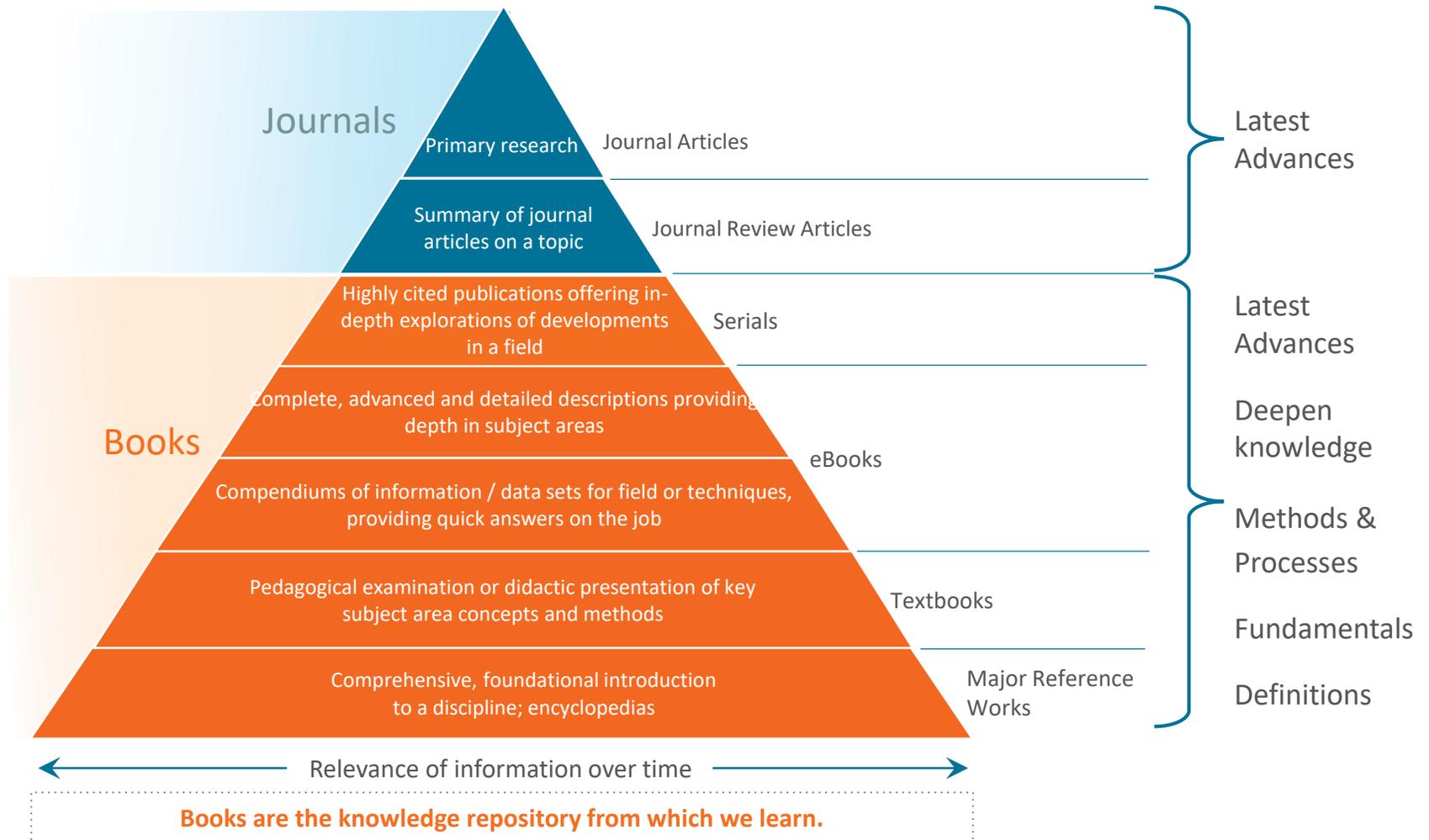


- Several times a week
- Around once a week
- Around once or twice a month
- Once every 2-3 months
- Once every 6 months
- Less often/never

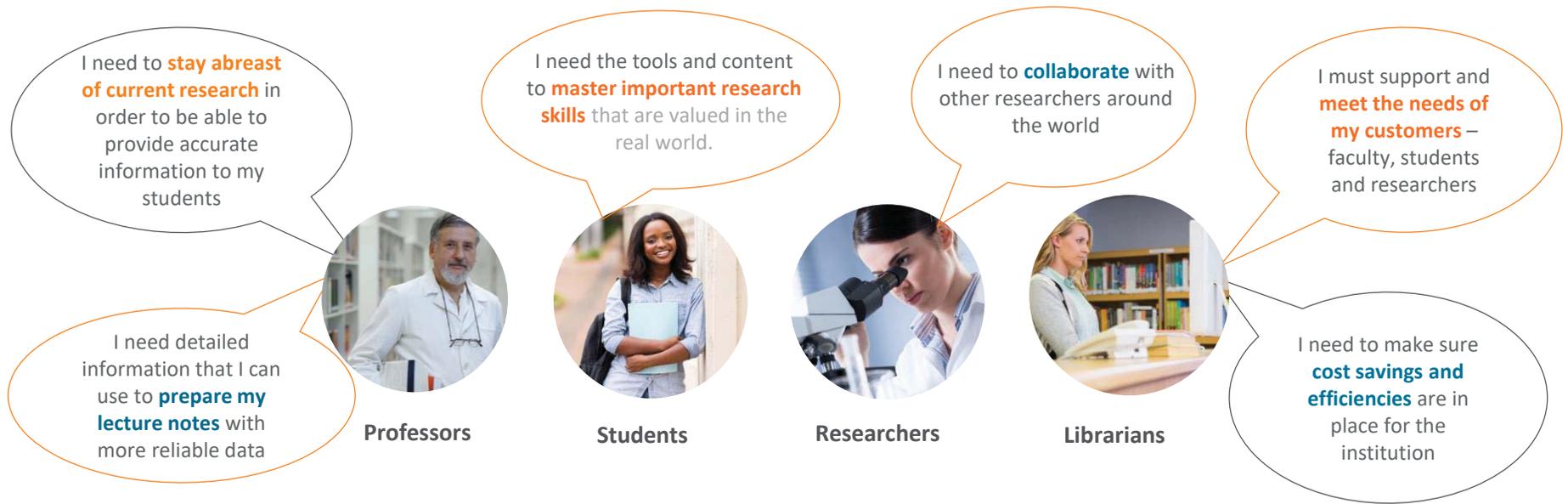


- At least once every 6 months
- Once a year
- Once every 2-3 years
- Less often/never
- It varies

## Researchers Need Different Content Types for Different Steps in Their Workflow



## Exploring Literature Needs



### Register

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

This registration form uses Google's new reCAPTCHA test to prevent use by robotic programs. The new reCAPTCHA is designed to be simple and accessible. A significant number of users will pass the reCAPTCHA challenge without having to solve a CAPTCHA. Instead, with just a single click they'll confirm they are not a robot. For the visually impaired, reCAPTCHA provides an audio CAPTCHA option. To register without completing the reCAPTCHA test, please contact [Elsevier Customer Support](#).

(\* = required field)

#### Create a unique sign in to use in Elsevier products

##### Your details

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##### E-mail and password

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

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Password:  \*

Confirm password:  \*

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# Remote Access

## ScienceDirect

### ScienceDirect

Remote access confirmation

Submit Your Email > Submit Your Password > Review Your Email > **Activate Your Remote Access**

Dear Customer,  
Thank you for applying for remote access.  
**Sign in to ScienceDirect when you access your page and you will receive long term access anytime, anywhere.**  
Click on the link below to activate remote access and verify your email.

[Activate my remote access now!](#)

Please do not forward this message.

Sincerely,  
The ScienceDirect team

Data Protection Notice:

This e-mail has been sent to n.pak@elsevier.com from Elsevier B.V., Radarweg 29,1043 NX Amsterdam, The Netherlands, Reg. No. 33156577, BTW No. NL005033019B01. This confirmation link is for your exclusive use and shall not be forwarded to or shared with anyone else. If you have any questions or require any assistance, please contact us.

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# ScienceDirect Platform

ScienceDirect

Journals &amp; Books

Nicholas Pak  Search for peer-reviewed journals, articles, book chapters and [open access](#) content.[Advanced search](#)

**Search effectively supports the four most frequent research tasks and is available on every page:**

- Related articles by searching specific keywords
- A specific author name
- A specific journal/book title
- A specific article by publication/ vol./ issue/ page search

gluconeogenesis is the process that leads to the generation of glucose from a variety of sources such as pyruvate, lactate, glycerol, and certain amino acids.

[Learn about gluconeogenesis >](#)

Explore scientific, technical, and medical research on ScienceDirect

[Physical Sciences and Engineering](#) [Life Sciences](#) [Health Sciences](#) [Social Sciences and Humanities](#)

## The ScienceDirect Advanced Search provides multiple options for more precise information search

#	Feature	Old advanced search	New advanced search
1	Number of field combinations using Boolean AND, OR, NOT	▲ Supports only 2 field combinations	✓ Supports 11 fields that can be combined by Boolean AND & NOT. In future, this will grow to >15
2	Number of Boolean operators	▲ Supports only one operator	✓ Supports unlimited number
3	Nested clauses using parentheses()	✗ Not supported	✓ Supported
4	Exclude operator: minus-hyphen	✗ Not supported	✓ Supported
5	Search for DOI	✗ Not supported	✓ Supported
6	Helpful messages when user makes a mistake	✗ Not supported	✓ Supported
7	In-place editing of advanced search	✗ Not supported	✓ Supported. Easy-to-use UI
8	Quick filtering using left-pane facets	✗ Very slow. Not dynamic	✓ Fast filtering. Dynamic UI
9	Auto-suggestions for journals & books	✗ Not supported	✓ Supported
10	Page performance & response times	✗ Very slow (5 -15 seconds)	✓ Fast response (1-2 seconds)
11	Quality of results	▲ Good	✓ Better Improved by intelligent query handling, better validation and fewer zero results
12	Filter by article types	▲ Limited support Supports only 11 types	✓ Extensive support Supports up to 24 article types
13	Downloading of multiple PDFs on page	▲ Supports only max 20 PDFs	✓ Max 100 PDFs
14	Filter by content type (Journal / Books)	▲ Supported but confusing UI	✓ Supported via article type filters
15	Filter by Subscribed publications	▲ Present but does not work	▲ Coming soon: Feb 2018
16	Filter by subject area category	▲ Present but doesn't work well	▲ Much improved subject area search coming in Q3 2018
17	Multi export of citations	✓ Supported	▲ Coming soon: Mar 2018
18	Display graphical abstracts & highlights	✓ Supported	▲ Coming soon: Mar 2018
19	Search within References  Note: this feature is used by less than 0.3% of advanced search users	✓ Supported	▲ Coming soon: Mar 2018
20	Search within Author Affiliation  Note: this feature is used by less than 0.2% of advanced search users	✓ Supported	▲ Coming soon: Mar 2018
21	Set-up new email alerts for search	✓ Supported	▲ Coming in Q2-Q3 2018

## Search Functionality

- **Choosing Search Terms**
  - Use specific search terms that are closely related to your research topic
  - Include alternative words and abbreviations
  - Avoid words that are too general
- **Use Boolean Operators**
  - AND
    - Finds documents that contain ALL of the terms
    - Use this when the terms must appear and may be far apart from each other
    - Example: “Geographic Information System” AND urban sustainability
  - OR
    - Finds documents that contain any of the terms
    - Use OR when at least one of the terms must appear (such as synonyms, alternate spellings, or abbreviations)
    - Example: micromouse OR picomouse
    - Example: “S. W. Hawking” OR “Stephen W. Hawking” OR “Stephen Hawking”
  - NOT
    - Excludes documents that include the specified term from the search
    - Use NOT to exclude specific terms. This connector must be used at the end of a search.
    - Example: “particle collisions” AND NOT theoretical
- **Users can combine terms using Boolean operators AND, OR and NOT.**
  - Users can also group terms using parentheses; multi-level nested clauses are supported.
    - Example: (“black hole” OR radiation) AND gravity

## Search Functionality

- **Precedence Rules**

- NOT takes precedence over AND which takes precedence over OR. i.e., NOT>AND>OR.
  - Example: Tesla AND “self-driving cars” OR “self-driving vehicles” (309 results) works, but not “self-driving cars” OR “self-driving vehicles” AND Tesla (664 results)

- **Finding Variations of a Word**

- To search for an specific phrase, enclose the phrase in inverted commas: “South East Asia”
- Using the singular form of a word finds the singular, plural, and possessive forms of most words
- Special characters are included in the search
- Subscript and Superscript: enter subscripted and superscripted characters on the same line as other characters.
  - Example: for the chemical notation "H<sub>2</sub>O," enter H2O
- Accented Characters: To search for the name Fürst, enter Fürst or Furst.
- Non-alphanumeric Characters: Characters such as hyphens, bullets, arrows, plus signs, and minus signs are ignored unless they are enclosed in brackets.

- **Wildcard Characters**

- Use wildcard characters to search for variations of a word
- Asterisk (\*) replaces multiple characters anywhere in a word; it can be used to replace 0 and more characters: Optim\* [NOTE: This will be supported in Q3-Q4 2018.]
- Users can exclude terms by using the minus-hyphen operator. For example, to find articles related to depression but not economic depression, search for: depression -economics
- To find all articles authored by Heisenberg but not by Sommerfeld, enter the following in the ‘Authors’ search box: Heisenberg -Sommerfeld

## Exercise

- **Sustainable Urban Development and Transportation**

- 83,247 Document Results – Search for “Sustainable Development”
- 30,563 Document Results – Search for “Sustainable Development”, use the AND Boolean modifier, and include “Transport\*”
- 1,109 Document Results – Search for “Sustainable Urban Development”, use the AND Boolean modifier, and include “Transportation”

- **Socio-Culturalism in Financial Inclusive Institutions**

- 15 Document Results – Search for “Financial Inclusion”, use the AND Boolean modifier and include “socio-culturalism”

- **Integrated Agricultural and Water Resources Management Models**

- 8 Document Results – Search “Water Resource Management”, use the AND Boolean modifier, and include “Agricultur\*”

For more details: [https://service.elsevier.com/app/answers/detail/a\\_id/25974/supporthub/sciencedirect/](https://service.elsevier.com/app/answers/detail/a_id/25974/supporthub/sciencedirect/)

## Topic Alerts

**Journal and book-series alerts** Alerts are sent to [n.pak@elsevier.com](mailto:n.pak@elsevier.com). Visit your [profile](#) to edit your email.

**You currently have no Journal and book-series alerts defined.**

A Journal alert notifies you by email when a new issue or new articles in press of a particular journal or a new volume of a particular book series or handbook series becomes available on ScienceDirect.

Select the journals and books you are interested in to create Journal and book-series alerts.

**Topic alerts** Alerts are sent to [n.pak@elsevier.com](mailto:n.pak@elsevier.com). Visit your [profile](#) to edit your email.

[Add a topic alert](#)

Alert name	Frequency	Actions	Content view	RSS
Biomedical Engineering	Weekly	<a href="#">Delete</a>	<ul style="list-style-type: none"> <li>Latest results</li> <li>Archive/Details</li> </ul>	
Civil Engineering	Weekly	<a href="#">Delete</a>	<ul style="list-style-type: none"> <li>Latest results</li> <li>Archive/Details</li> </ul>	
Computational Methods	Weekly	<a href="#">Delete</a>	<ul style="list-style-type: none"> <li>Latest results</li> <li>Archive/Details</li> </ul>	
<input type="checkbox"/> Control Engineering	Weekly	<ul style="list-style-type: none"> <li>Latest results</li> <li>Archive/Details</li> </ul>		
<input type="checkbox"/> Electrical Engineering	Weekly	<ul style="list-style-type: none"> <li>Latest results</li> <li>Archive/Details</li> </ul>		
<input type="checkbox"/> Electronic Engineering	Weekly	<ul style="list-style-type: none"> <li>Latest results</li> <li>Archive/Details</li> </ul>		



Feedback 

# Save Searches

## Journal and book-series alerts Alerts are sent to [n.pak@elsevier.com](mailto:n.pak@elsevier.com). Visit your profile to edit your email.

**You currently have no Journal and book-series alerts defined.**

A Journal alert notifies you by email when a new issue or new articles in press of a particular journal or a new volume of a particular book series or handbook series becomes available on ScienceDirect.

Select the journals and books you are interested in to create Journal and book-series alerts.

## Topic alerts Alerts are sent to [n.pak@elsevier.com](mailto:n.pak@elsevier.com). Visit your profile to edit your email.

[Add a topic alert](#)

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A Topic alert notifies you by email when new articles pertaining to a specific topic are available on ScienceDirect.

Select the topics you are interested in to create a Topic alert.

## Search alerts [Add a search alert](#)

Alert name 	Frequency 	Actions	Content view	RSS
Automated Ignition System	Weekly	<a href="#">Edit alert</a>   <a href="#">Edit email</a>   <a href="#">Edit search</a>   <a href="#">Delete</a>	<a href="#">+ Latest results</a> <a href="#">+ Archive</a>	

## ScienceDirect Personalized Recommender

Free Personalized *Recommendations* service uses machine learning and the user's online activity to suggest research tailored to their needs



### How does it work?

Once a researcher has registered, our powerful adaptive algorithm uses the signed-in activity on [ScienceDirect](#) to understand the user's research interests.

It then searches our database of more than [3,800 journals](#) and over [37,000 book titles](#) to find related content. The more frequently someone signs in, the better it gets to know them, and the more relevant the recommendations they'll receive



### Want to try it for yourself?

It's simple:

1. Create an account with [ScienceDirect](#)
2. Stay signed in while searching and browsing!

# ScienceDirect Personalized Recommender

ScienceDirect

Journals Books **Nicholas Pak**  

My recommendations new My alerts

Full list Preferences About recommendations

My recommendations new

Manage alerts

**Details & settings**

My account & privacy

Change password

Sign out

## Personalized recommendations based on your recent signed-in activity

### Concentrated solar thermal power in Saudi Arabia: Definition and simulation of alternative scenarios

Review article • Renewable and Sustainable Energy Reviews • Volume 80 • Pages 75-91 • December 2017  
Abdulrahman Kassem, Kamal Al-Haddad, Dragan Komljenovic

### Learning deep representations via extreme learning machines

Original research article • Neurocomputing • Volume 149, Part A • Pages 308-315 • 3 February 2015  
Wenchao Yu, Fuzhen Zhuang, ... Zhongzhi Shi

### Big Data computing and clouds: Trends and future directions

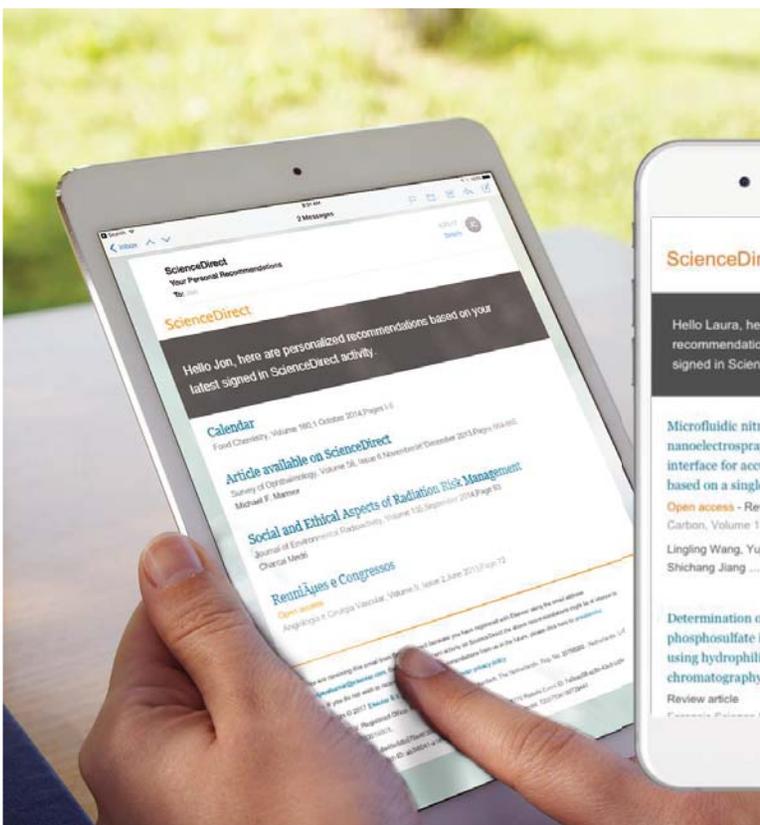
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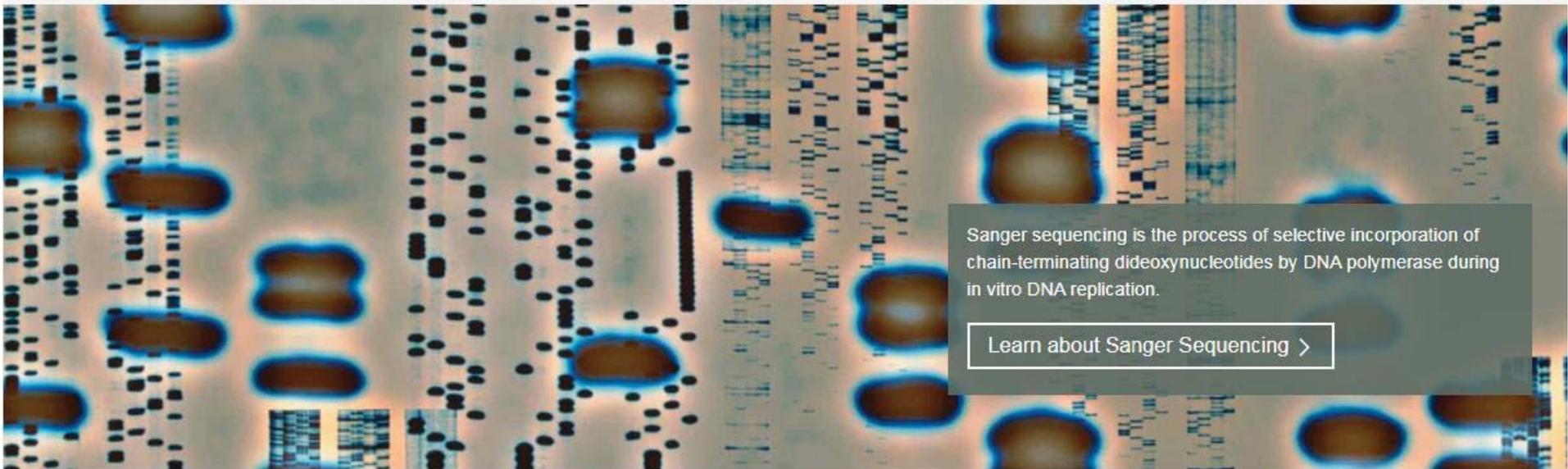
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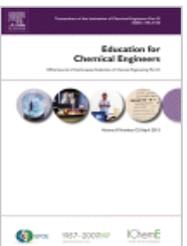
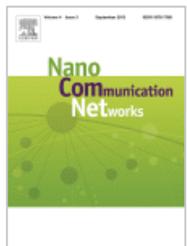
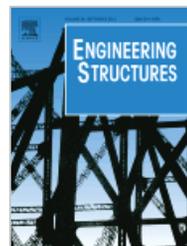
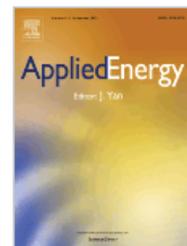
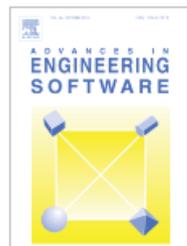
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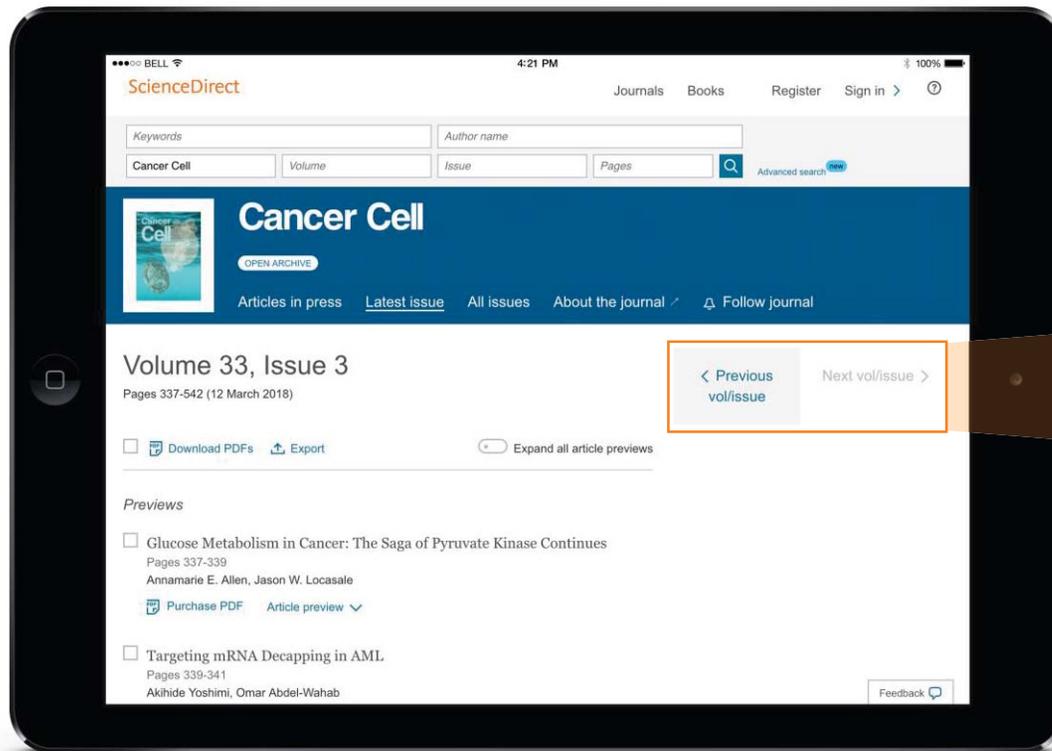
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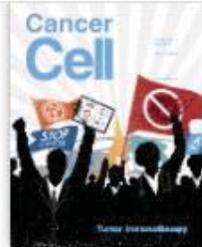
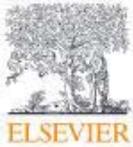


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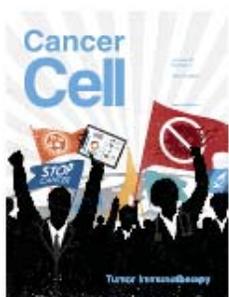
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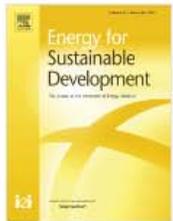
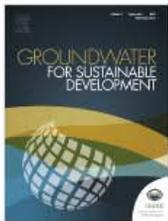
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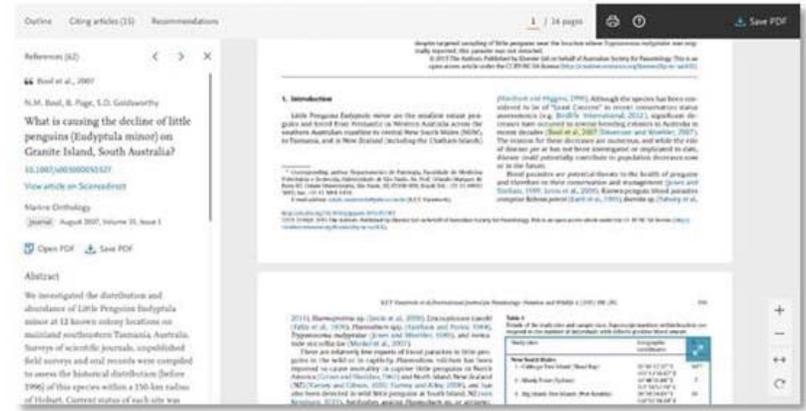
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that a particular facility has a Quantity\_Of instance relating a particular item with a specific number. It is also necessary to be able to associate each air base with an ordered list of remote supply facilities available to provide additional parts. We further develop the supplier network by identifying the participating suppliers that will contribute to the costs and quantity of parts involved in the manufacturing and maintenance of the aircrafts as seen in Fig. 3.

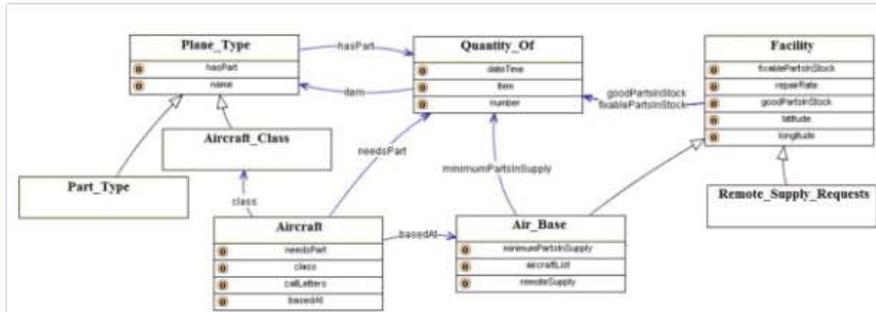


Fig. 2. The fuzzy aircraft entity relationship diagram and attributes for quantity and unit part costs.



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**Ontology structure for real options**

**Concept**

- Part
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- Program
- Production

**Property**

- Cost
- Revenue
- Recurring Costs
- Quantity

Property      Value

Ontology structure for real options.

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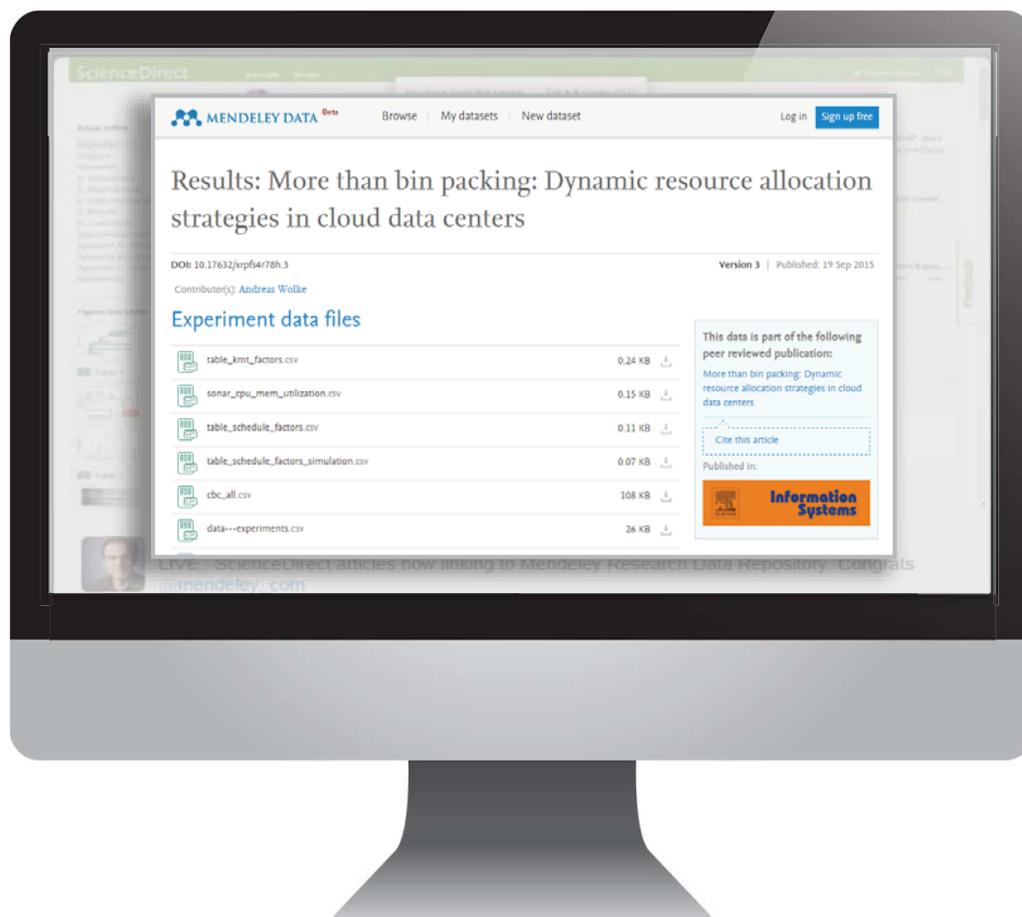
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Clinical Neurology and Neurosurgery  
Volume 109, Issue 2, February 2007, Pages 208–209

Case report  
**Recurrent limbic and extralimbic encephalitis associated with thymoma**

Kenji Okita<sup>a</sup>, Noriyuki Matsukawa<sup>a</sup>, Manabu Hatton<sup>a</sup>, Kentaro Yamada<sup>a</sup>, Koji Takada<sup>a</sup>, Takemori Yamawaki<sup>a</sup>, Mari Yoshida<sup>a</sup>, Yoshio Hashizume<sup>a</sup>, Kosei Ojika<sup>a</sup>

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**Abstract**  
A 33-year-old woman, with a 7-year clinical history of invasive thymoma treated at ages 26 and 30 years by thymectomy and radiation, presented with a generalized convulsion and loss of consciousness. Following the seizure there was no neurological deficit and normal tendon reflexes. Magnetic resonance imaging (MRI) of the brain without gadolinium enhancement revealed multiple small lesions of high signal intensity on T2 and diffusion weighted images located in the cortical area beyond the temporal lobes. Brain biopsy demonstrated encephalitis with activated microglia and activated T-cell infiltration. Within 4 months of treatment with nothing other than anticonvulsant therapy,

ScienceDirect Journals Books

Back to article > Encephalitis

**Encephalitis**  
Encephalitis is an acute inflammation of the brain, commonly caused by a viral infection.  
From: Encyclopedia of Neuroscience, 2009

**Related terms**  
Enterovirus, HSV, Herpes simplex virus type 1, Viral encephalitis, Bulbar polio, Epidemic encephalitis, Aseptic meningitis, Herpes simplex virus 1

Learn more about Encephalitis

**Encephalitis**  
Karen L. Roos, in *Handbook of Clinical Neurology*, 2014.

**Introduction**  
Encephalitis is an infectious or inflammatory disorder of the brain manifest by fever and headache and associated with a depressed level of consciousness, an altered mental status (confusion, behavioral abnormalities), focal neurologic deficits, or new onset seizure activity.

This chapter will address the viral etiologies of encephalitis. Other chapters in this volume address the bacterial, fungal, spirochetal, and parasitic etiologies of encephalitis. The California Encephalitis Project was initiated in 1998 to improve the

**3 Viral Infections**  
Karen L. Roos, in *Textbook of Clinical Neurology (Third Edition)*, 2007.

**Western Equine Encephalitis**  
Western equine encephalitis tends to occur in children younger than age 1 year and in adults older than age 50.<sup>54</sup> Inapparent infections with western equine encephalitis virus are more common than symptomatic cases. Like the other arthropod-borne encephalitides, western equine encephalitis begins with an influenza-like syndrome of fever, malaise, myalgias, pharyngitis, and vomiting. As the disease progresses, irritability, convulsions, or coma develops.<sup>49</sup>

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# 1. Quick Definition

## Cell membrane

The cell membrane is a selectively permeable biological membrane found inside the cell wall and surrounding the cytoplasm.

From: *Atlas of Oral Microbiology, 2015*

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### Cell membrane

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Learn more about Cell membrane

**Structure and Composition of Microbes\***

J.P. Coleman, C.J. Smith, in *Reference Module in Biomedical Sciences*, 2014.

**Cytoplasmic Membrane**

The cytoplasmic membrane (inner membrane of Gram-negative bacteria) has a structure similar to eukaryotic cell membranes in that it is a bilayer of phospholipids containing embedded proteins. It differs from eukaryotic cell membranes by the absence of polyunsaturated lipids and endogenously synthesized sterols, although some bacteria incorporate membrane sterols

**Basic Biology of Oral Microbes**

in *Atlas of Oral Microbiology*, 2015.

**Cell Membrane**

The cell membrane is a selectively permeable biological membrane found inside the cell wall and surrounding the cytoplasm. It is made of a lipid bilayer. The cell membrane is compact and flexible, and measures approximately 7.5nm in thickness. It accounts for 10–30% of the bacterial cell dry weight. The structure of the bacterial cell membrane resembles that of eukaryotic cell membranes, except it is deficient in cholesterol. The lipid bilayer is embedded with carrier proteins and

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**Related terms**

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From: *Atlas of Oral Microbiology*, 2015

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J.P. Coleman, C.J. Smith, in *Reference Module in Biomedical Sciences*, 2014.

#### Cytoplasmic Membrane

The cytoplasmic membrane (inner membrane of Gram-negative bacteria) has a structure similar to eukaryotic cell membranes in that it is a bilayer of phospholipids containing embedded proteins. It differs from eukaryotic cell membranes by the absence of polyunsaturated lipids and endogenously synthesized sterols, although some bacteria incorporate membrane sterols derived from host cells. The cytoplasmic membrane is the site of important cellular functions, such as electron transport, protein secretion, nutrient transport, and lipid biosynthesis.

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### Basic Biology of Oral Microbes

in *Atlas of Oral Microbiology*, 2015.

#### Cell Membrane

The cell membrane is a selectively permeable biological membrane found inside the cell wall and surrounding the cytoplasm. It is made of a lipid bilayer. The cell membrane is compact and flexible, and measures approximately 7.5nm in thickness. It accounts for 10–30% of the bacterial cell dry weight. The structure of the bacterial cell membrane resembles that of eukaryotic cell membranes, except it is deficient in cholesterol. The lipid bilayer is embedded with carrier proteins and zymoprotein, which possess specific functions.

The cell membrane of some bacteria can form invaginations into the cytoplasm called mesosomes.

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J.P. Coleman, C.J. Smith, in *Reference Module in Biomedical Sciences*, 2014.

#### Cytoplasmic Membrane

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### Cell Membranes

Jeffrey C. Freedman, in *Cell Physiology Source Book (Fourth Edition)*, 2012.

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This chapter reviews some basic biochemical properties of

### Regulation of K+ Excretion

Gerhard Malnic, Gerhard Giebisch, Shigeaki Muto, Wenhui Wang, Matthew A. Bailey, Lisa M. Satlin, in *Seldin and Giebisch's The Kidney (Fifth Edition)*, 2013.

#### K+ Secretion

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### Pyramidal tracts

The pyramidal tract exits the cortex, and after passing the pyramids of the medulla, the majority of these fibers cross to the opposite side and descend in the corticospinal tract through the spinal cord ( Figure 3 ). Some of the fibers that do not cross over in the medulla travel ipsilaterally down the cord and cross to the opposite side in the neck or upper thoracic region.

From: [Reference Module in Biomedical Research, 2014](#)

### Definitions

Related terms

RTMS, Motor area, Motor cortex, Cervical spinal cord, Decussate, Motor neuron, Corticobulbar tract, Facial nucleus, Precentral gyrus, Anterior horn cells

Learn more about Pyramidal tracts

### Methods

#### Spinal Tracts – Descending/Motor Pathways

Paul Rea, in *Essential Clinical Anatomy of the Nervous System*, 2015.

#### Pyramidal tracts

The **pyramidal tracts** are comprised of the corticospinal and **corticobulbar** tracts. These are called as **pyramidal tracts** as they crossover at the level of the pyramids in the medulla. They are collections of upper **motor neuron** fibers which go to the **spinal cord** (corticospinal) or the brainstem (corticobulbar) and control the motor function of the body.

### Fundamentals

#### Spinal Cord

Gulgun Sengul, Charles Watson, in *The Human Nervous System (Third Edition)*, 2012.

#### Corticospinal Tract

The corticospinal tract, also called the pyramidal tract because its fibers form the **medullary pyramids**, is found in all mammals with considerable variation between species. The dorsal corticospinal tract is the major corticospinal bundle, found in the **dorsal column** in rodents. In primates, it is highly developed and the major bundle is in the **lateral column**.

The fibers that give rise to the corticospinal tract in adult mammals arise from the **neurons** of the **precentral gyrus** and the **pa**

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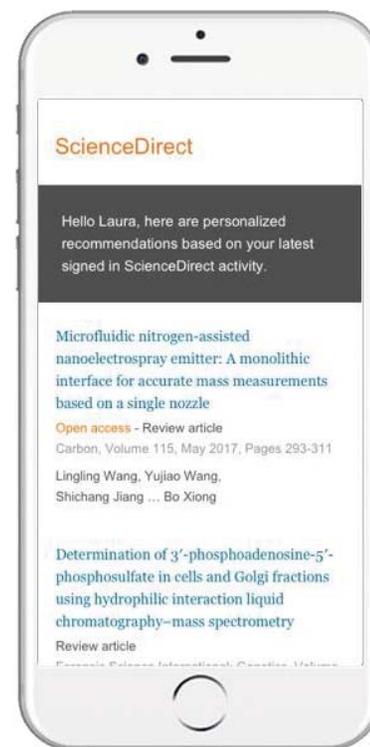
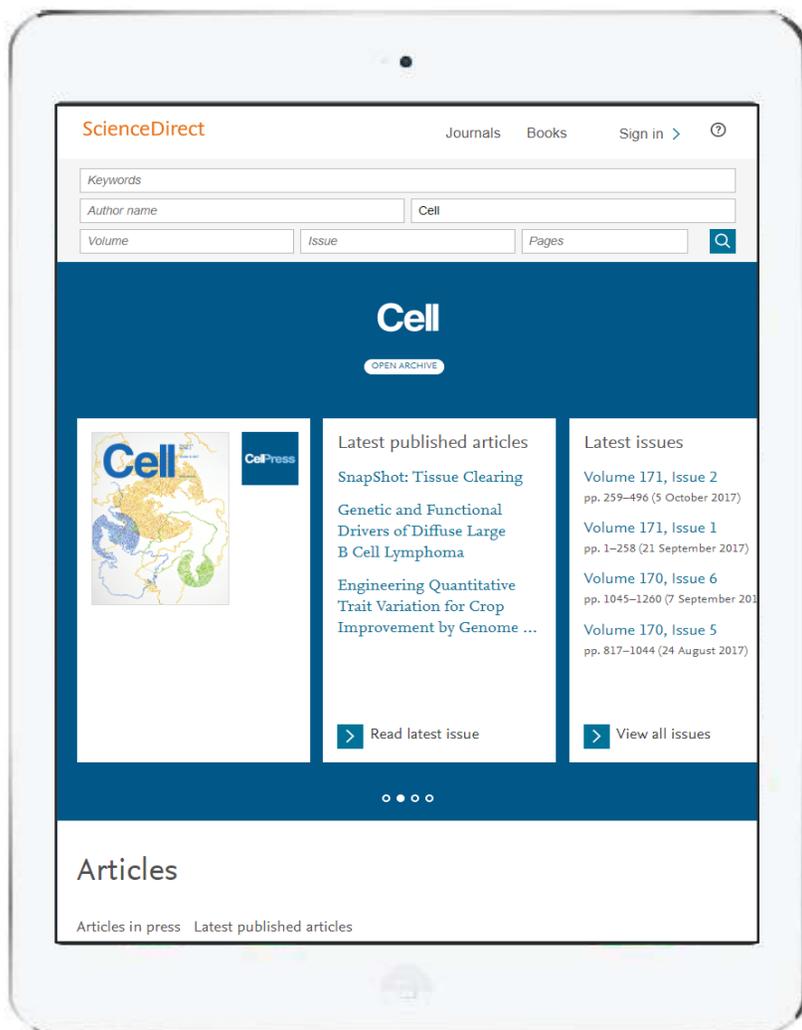


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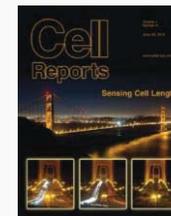
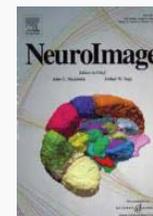
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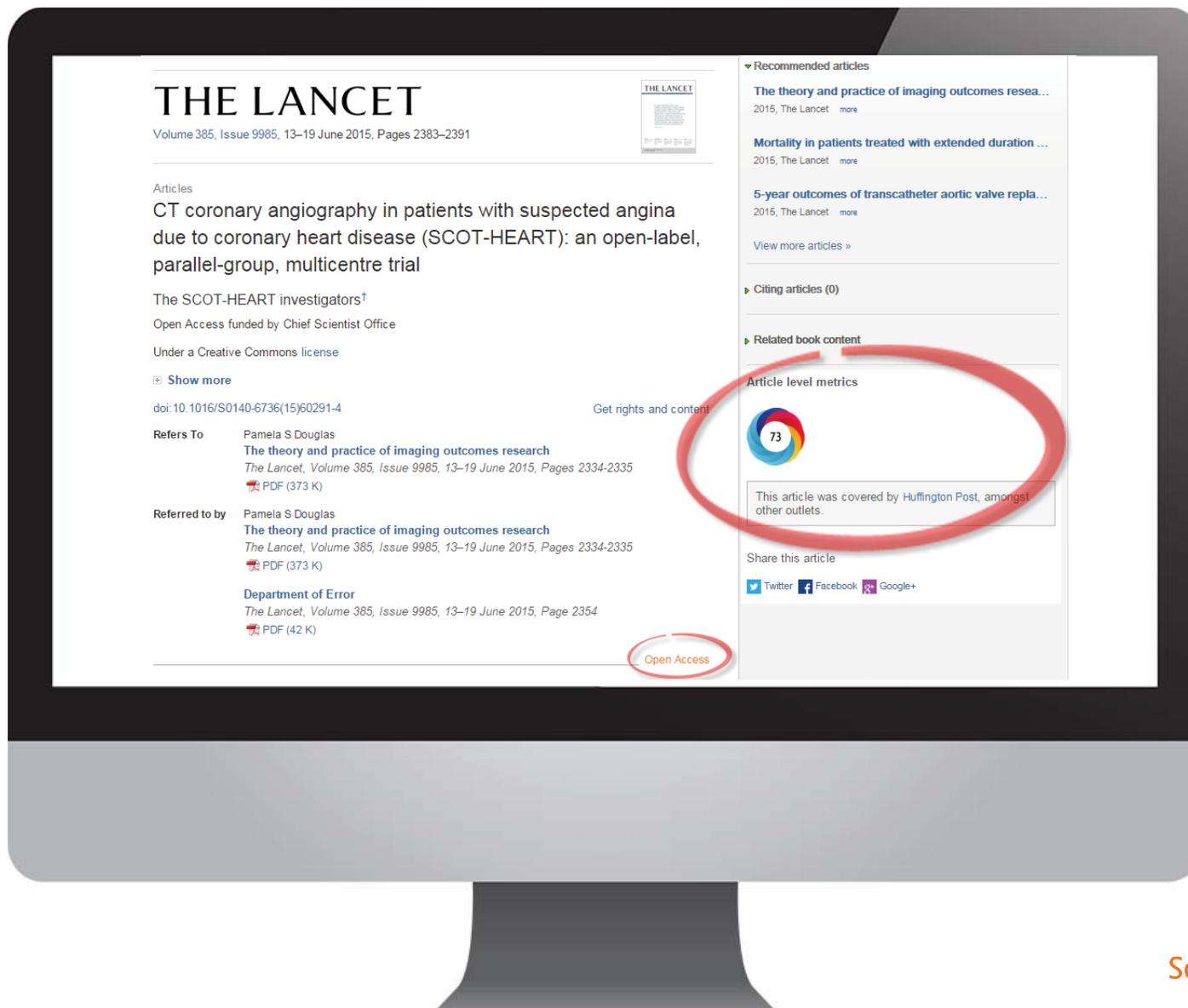
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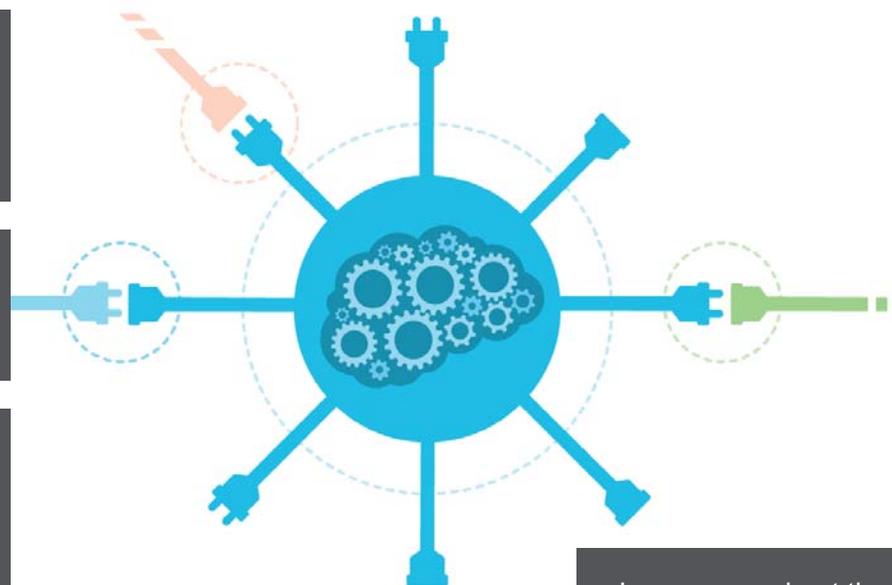


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Review

## Povidone iodine in wound healing: A review of concepts and practices

Paul Lorenz Bigliardi <sup>a, b, c</sup>  , Syed Abdul Latiff Alsagoff <sup>d</sup>, Hossam Yehia El-Kafrawi <sup>e</sup>, Chad Tse Cheuk Wa <sup>g</sup>, Martin Anthony Villa <sup>h</sup>

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International Journal of Surgery, Volume 37, Supplement 1, January 2017, Pages 411

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### 1. Original submission

#### 1.1. Recommendation

Minor Revision.

#### 1.2. Comments to the author

Congrats on an excellent work reviewing current concepts regarding povidone iodine in wound healing.

The manuscript is well written and structured. Also, adequate tables are provided summarizing all the info.

Perhaps the only flaw is that this is not a systematic review and meta-analysis. Also a paragraph regarding how the search literature was carried out is missing.

### 2. First revision

#### 2.1. Recommendation

Accept.

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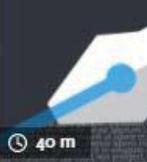


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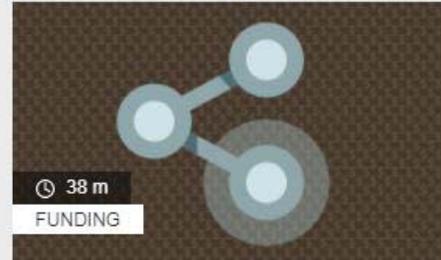


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**Groundbreaking research from China: first cloned monkeys**

**Standing on the shoulders of giants; linking of articles**

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Groundbreaking research from China: first cloned monkeys

Standing on the shoulders of giants; linking of articles

Generation of Knock-In Pigs Carrying Oct4-tfTomato Reporter through CRISPR/Cas9-Mediated Genome Engineering

**Abstract**

The Oct4 gene is a key transcription factor for pluripotency and is essential for the establishment and maintenance of the embryonic stem (ES) cell state. In this study, we generated knock-in pigs carrying the Oct4 gene under the control of the Oct4 promoter using CRISPR/Cas9-mediated genome editing. The resulting knock-in pigs were found to express Oct4 protein in the embryonic stem cells, indicating successful genome editing and gene expression. These results demonstrate the feasibility of generating knock-in pigs for studying gene function and disease models.

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**Materials and Methods**

The Oct4 gene was amplified from the Oct4 promoter region of the Oct4 gene. The resulting DNA fragments were ligated into the CRISPR/Cas9 vector. The resulting CRISPR/Cas9 vectors were transfected into pig embryonic stem cells. The resulting knock-in pigs were generated by zygote injection and embryo transfer.

**Results**

The resulting knock-in pigs were found to express Oct4 protein in the embryonic stem cells, indicating successful genome editing and gene expression. These results demonstrate the feasibility of generating knock-in pigs for studying gene function and disease models.

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Standing on the shoulders of giants; linking of articles

**Abstract**

This article discusses the importance of linking research articles to uncover the origins of breakthroughs. It highlights the role of ScienceDirect in providing a comprehensive database of research articles and their relationships. The article emphasizes the need for researchers to explore the literature thoroughly to build upon existing knowledge and avoid duplication of effort.

**Introduction**

The field of research is constantly evolving, and it is essential for researchers to stay up-to-date with the latest findings. ScienceDirect provides a platform for researchers to access a vast collection of research articles and to explore their relationships. This article discusses the importance of linking research articles to uncover the origins of breakthroughs.

**Methods**

The authors used ScienceDirect to search for research articles related to the topic of interest. They analyzed the titles, abstracts, and keywords of the articles to identify potential links and relationships. The results of the search are presented in the following sections.

**Results**

The search results revealed a large number of research articles related to the topic. The authors identified several key articles that were highly cited and influential. These articles were linked together to show their relationships and to trace the origins of the research.

**Conclusion**

The results of the search demonstrate the importance of linking research articles to uncover the origins of breakthroughs. ScienceDirect provides a valuable resource for researchers to explore the literature and to build upon existing knowledge.

2018



**Thank You!**

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