#### Performing science: From a research project to communicating results

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www.cyfronet.krakow.pl/~uxlaskow

### Organizational matters

- 30 hours: 5 lectures x 3 h + 3 workshops x 3 h + 6 h e-learning
- Two parts:
  - Preparing scientific publications, article reviews and grant proposals (Ryszard Laskowski)
  - Effective presentation (Marcin Czarnołęski)
- e-learning:
  - reviewing a research paper (HOMEWORK!)
  - preparing a grant proposal (HOMEWORK!)

#### Evaluation:

- scoring grant proposals
- scoring oral presentations
- scoring manuscript reviews
- attending at least 24 hours out of 30

#### Recommended books

- Katz, M. J. (2009) From research to manuscript: a guide to scientific writing. Springer, 210 pp.
- Peat, J., Elliott, E., Baur, L. & Keena, V. (2002).
   Scientific writing: easy when you know how.
   Wiley-Blackwell, 312 pp .
- Day, R. A. & Gastel, B. (2006) How to write and publish a scientific paper. Greenwood, 320 pp.
- Glasman-Deal, H. (2010) Science research writing for non-native speakers of English. London Imperial College Press, 257 pp.

# Supplementary materials

www.cyfronet.krakow.pl/~uxlaskow

Research communication				
supplementary materials for the course				
Only for registered students - login and password required				
Login:				
Password:				
Login	Reset			

### www.cyfronet.krakow.pl/~uxlaskow

#### Supplementary materials for course participants

#### Click to download:

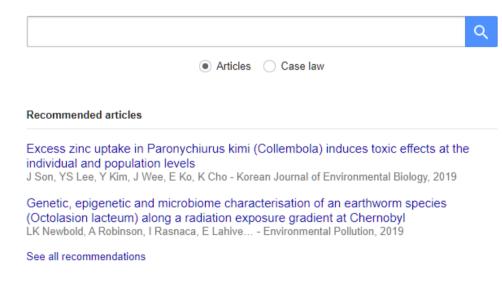
- Letter from the editor major revision
- Letter from the editor minor revision
- · Letter from the editor rejection
- Review: "I love this study..."
- Habits of successful writing
- How to write a scientific article (Carpenter)
- · How to write a scientific article (Collier)
- How to write a scientific article (Shubroook)
- · How to write a scientific article (Stirling)
- Maximizing the impacts of your research: A handbook for social scientists
- San Francisco Edit 00: Title
- San Francisco Edit 01: Focusing
- San Francisco Edit 02: Outline
- San Francisco Edit 03: First draft
- San Francisco Edit 04: Abstract
- San Francisco Edit 05: Introduction
- San Francisco Edit 06: Methods
- San Francisco Edit 07: Discussion
- San Francisco Edit 08: Results
- San Francisco Edit 09: Tables & Figures

# PART 1: Handling scientific information

# Google Scholar – basic yet fine

http://scholar.google.com

#### Google Scholar

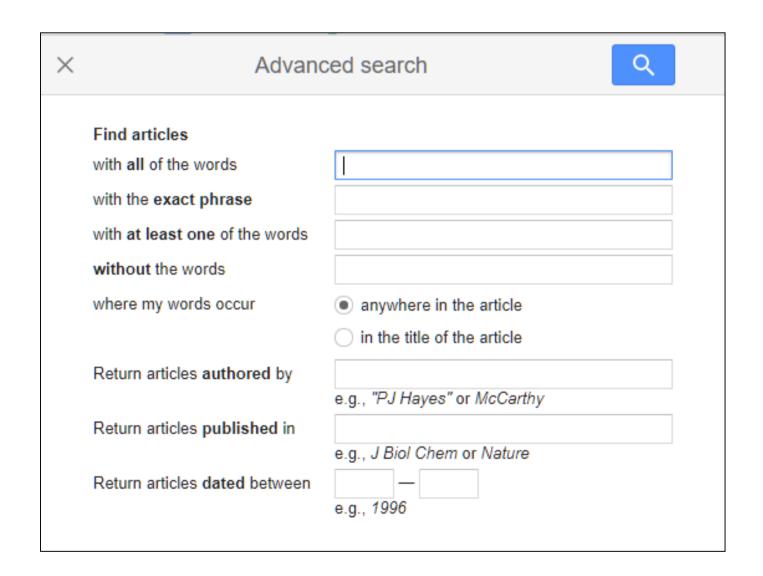


- Advantages:
  - free
  - easy to use
  - gives access to pdfs located even on private servers

#### Disadvantages:

- limited search options
- Google does not maintain formal database

#### Google Scholar – Advanced search



### Web of Knowledge: the benchmark

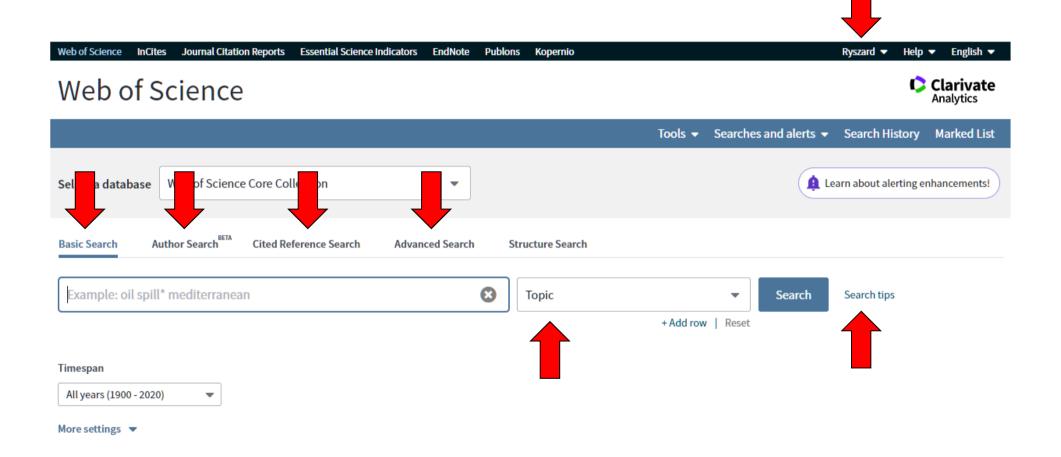
#### Advantages:

- Formal database by Thomson Reuters
- Special section for science (Web of Science)
- Covers all important journals
- Allows for complex queries
- Highly customizable (lemmatization, with or without conference proceedings, timespan, etc.)
- Recognized by universities etc.
- Useful add-ins (EndNote, Citation Alerts, Publons)

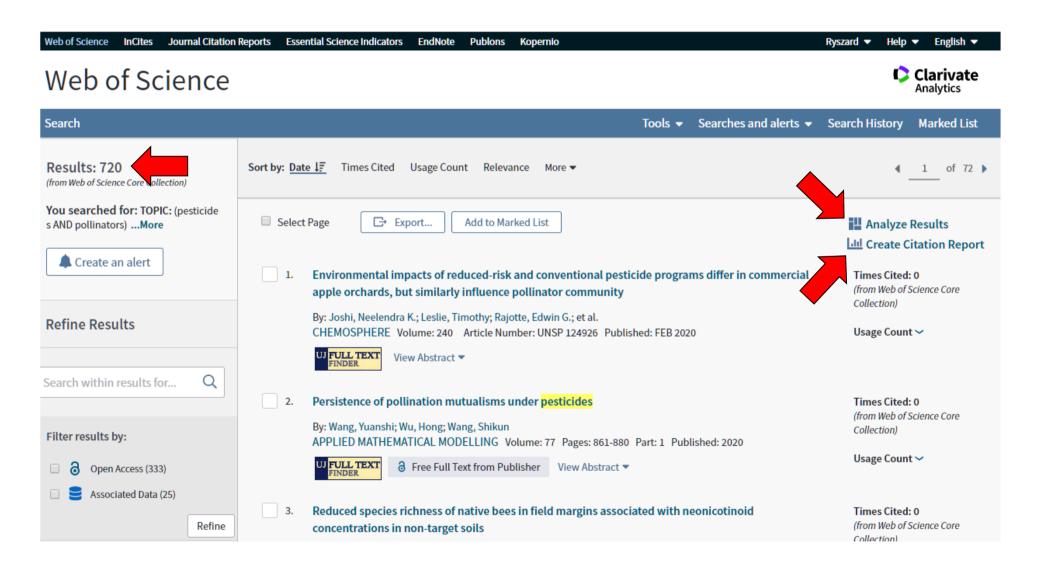
#### Disadvantages

- Not free (but most universities have access)
- Search limited to publications covered by the data base

### http://apps.webofknowledge.com



# Web of Kowledge: search results



# Constructing effective queries

NOT just one keyword in one form:



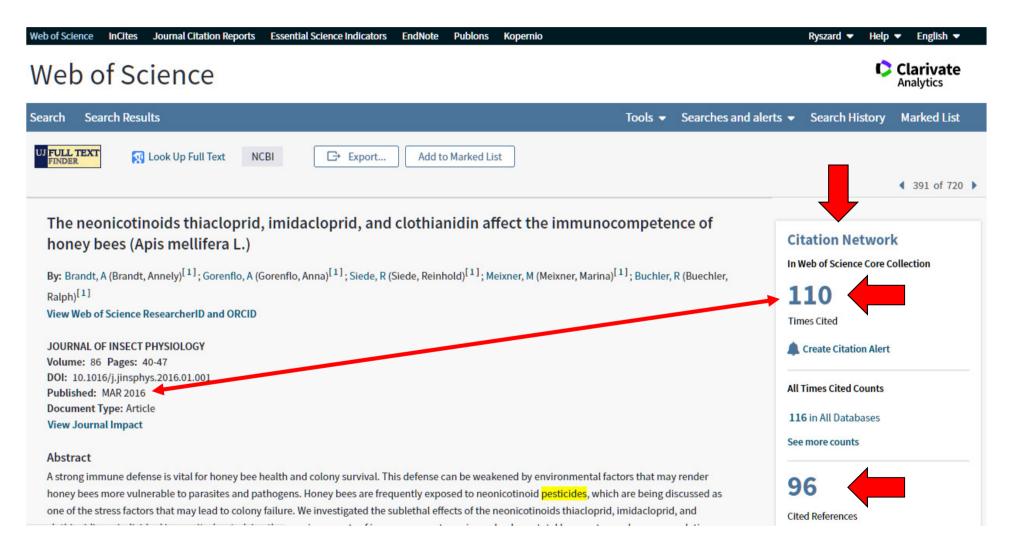
Lemmatization, plural forms, etc. – using asterisks:

metal\* insect\* forest\* pollut\* ....

Complex formulas:

(metal\* OR Zn OR zinc) AND (insect\* OR inverteb\*) NOT...

# Making good use of citations: citation network



# Making good use of citations: citation network

Cited References: 96

Showing 30 of 96 View All in Cited References page

(from Web of Science Core Collection)

How should behavioural ecologists interpret measurements of immunity?

By: Adamo, SA

ANIMAL BEHAVIOUR Volume: 68 Pages: 1443-1449 Part: 6 Published: DEC 2004

2. The Global Stock of Domesticated Honey Bees Is Growing Slower Than Agricultural Demand for Pollination

By: Aizen, Marcelo A.; Harder, Lawrence D.

CURRENT BIOLOGY Volume: 19 Issue: 11 Pages: 915-918 Published: JUN 9 2009

3. Brain, physiological and behavioral modulation induced by immune stimulation in honeybees (Apis mellifera): A potential mediator of social immunity? Times Cited: 13

By: Alaux, Cedric; Kemper, Nele; Kretzschmar, Andre; et al.

BRAIN BEHAVIOR AND IMMUNITY Volume: 26 Issue: 7 Pages: 1057-1060 Published: OCT 2012

4. Interactions between Nosema microspores and a neonicotinoid weaken honeybees (Apis mellifera)

By: Alaux, Cedric; Brunet, Jean-Luc; Dussaubat, Claudia; et al.

ENVIRONMENTAL MICROBIOLOGY Volume: 12 Issue: 3 Pages: 774-782 Published: MAR 2010

5. Immune defence reaction in bumble-bee workers after a previous challenge and parasitic coinfection

By: Allander, K; Schmid-Hempel, P

FUNCTIONAL ECOLOGY Volume: 14 Issue: 6 Pages: 711-717 Published: DEC 2000

Times Cited: 253



Times Cited: 396

Times Cited: 288

Times Cited: 33

#### SCOPUS: next to the benchmark

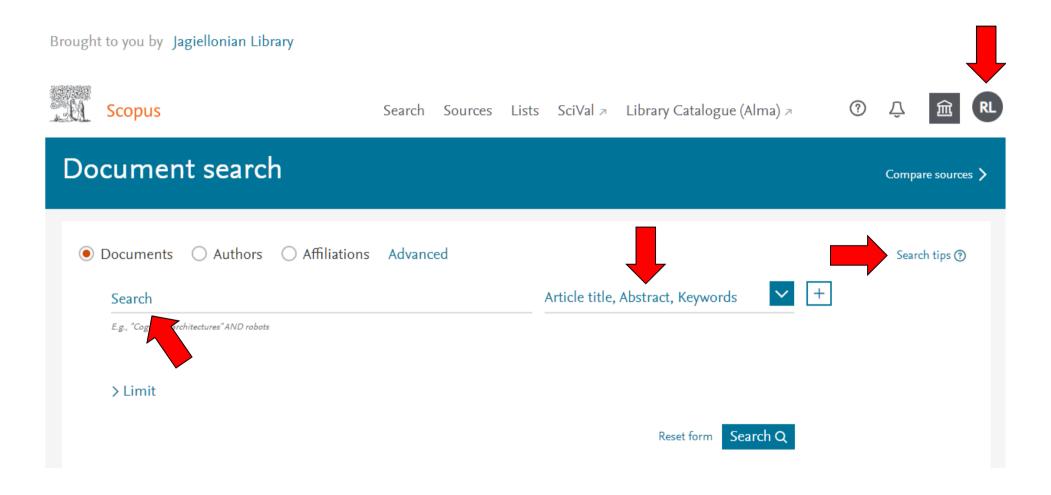
#### Advantages:

- Formal data base by Elsevier
- Claims to be "the largest abstract and citation database of peer-reviewed literature"
- Covers all important journals
- Allows for simple and very complex queries
- Customizable
- Recognized by some universities etc.
- Useful add-ins (Analyze Results)

#### Disadvantages

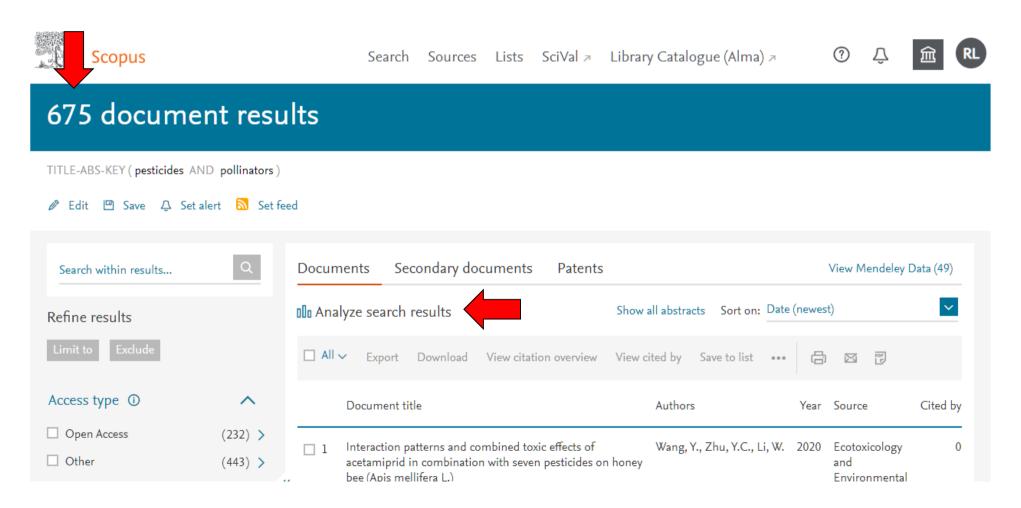
- Not free (but most universities have access)
- Search limited to publications covered by the data base

# http://www.scopus.com

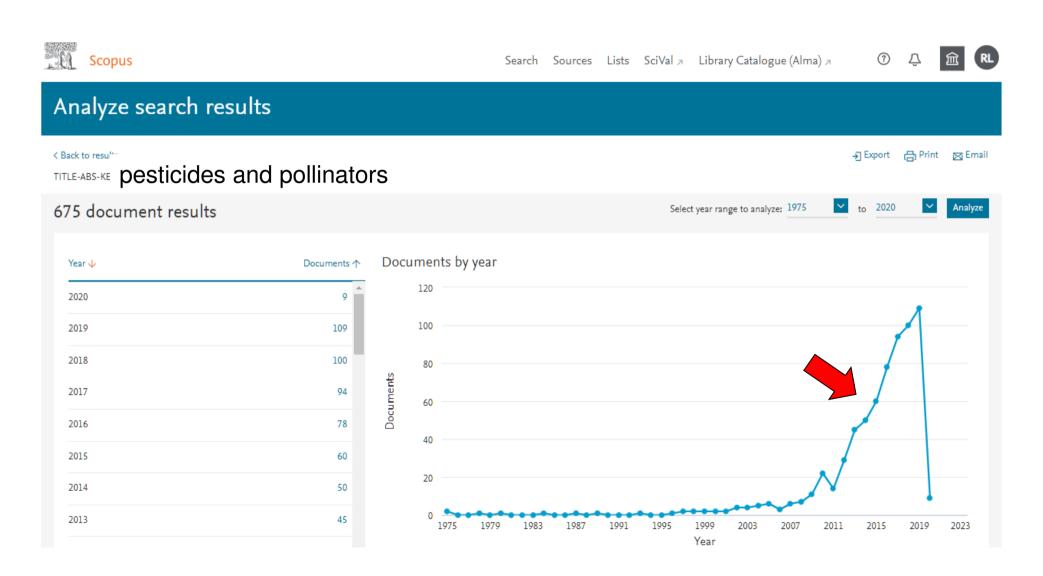


#### SCOPUS: search results

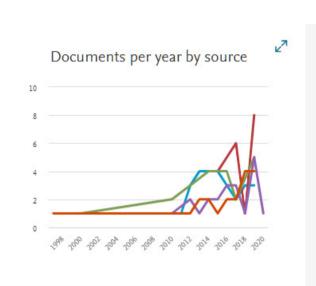
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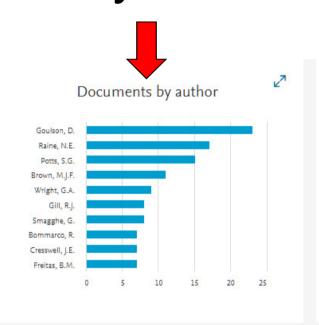


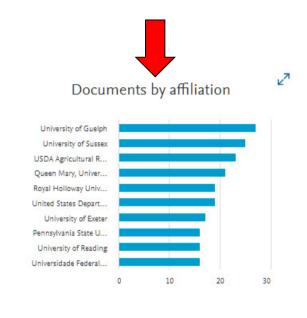
# SCOPUS: 'Analyze search results'

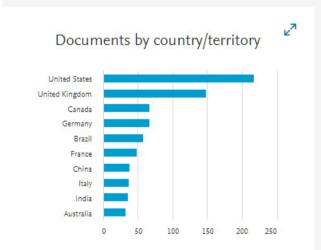


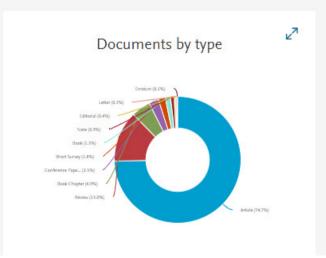
# SCOPUS: 'Analyze search results'

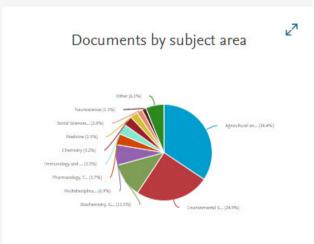












# Managing your references

#### • Minimum requirements:

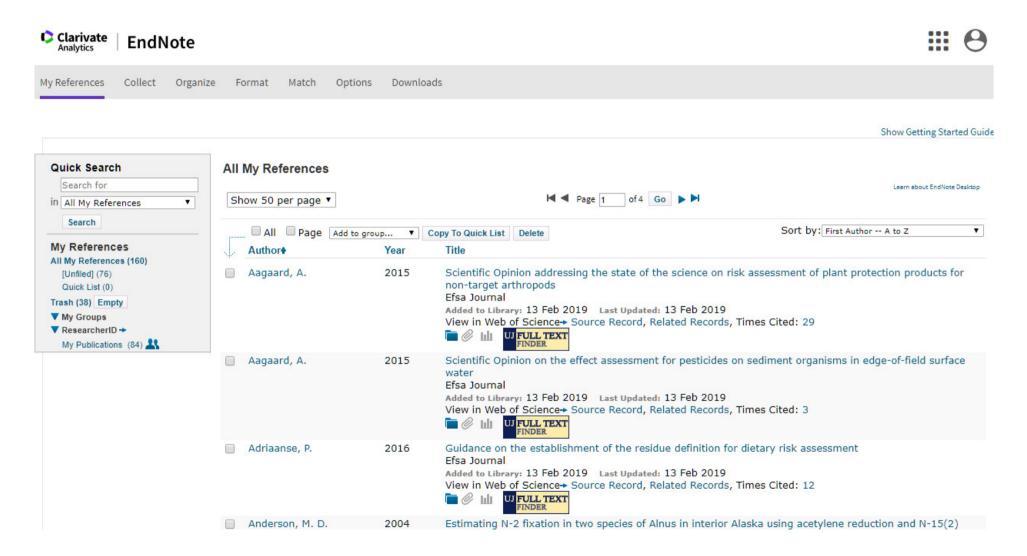
- bibliographic database of your reprints/pdfs
- searchable database
- generating reference lists for articles

#### Better also:

- database entries linked to the respective files
- integration with word processor ('cite while you write')
- exchange of pdfs with colleagues
- networking
- collections (e.g., for different projects), etc...

#### EndNote Web: minimal but classic and not bad

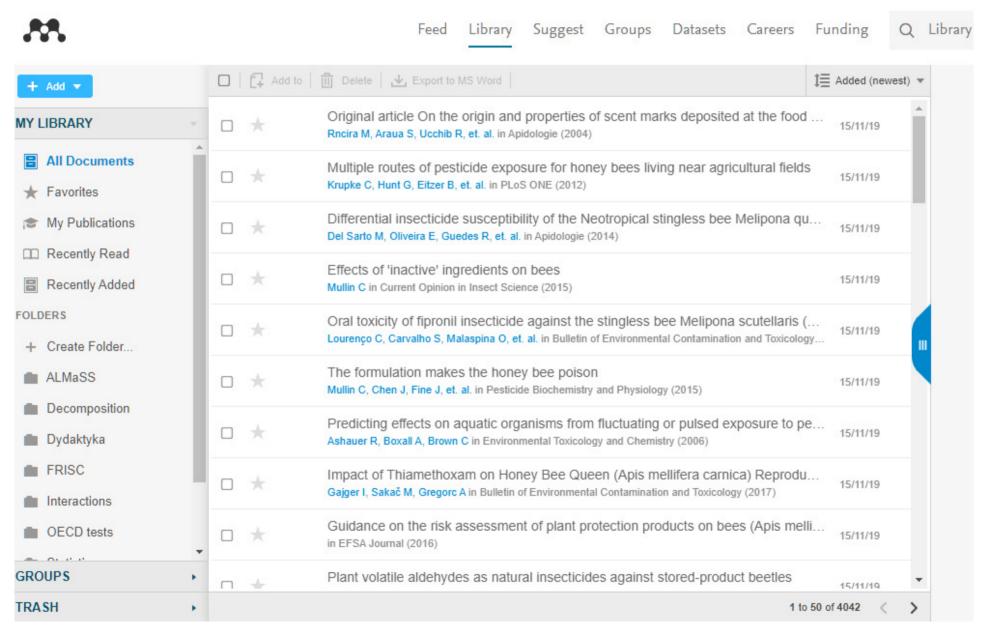
#### http://www.myendnoteweb.com

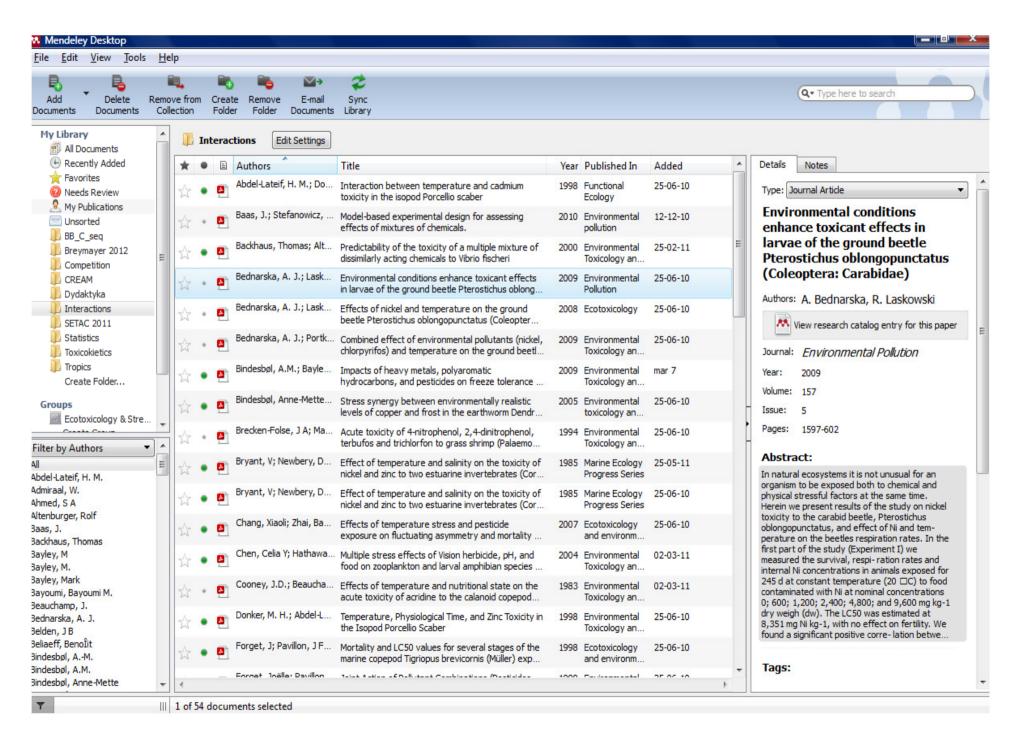


# Mendeley: probably the best RM

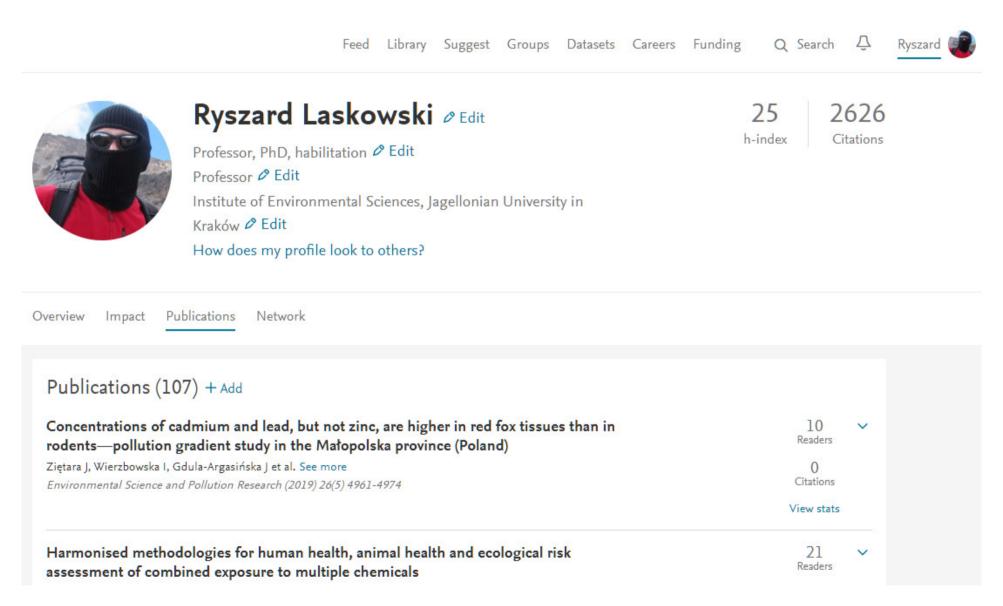
- Full-featured reference manager
- Free
- Both desktop and Internet based
- Data base synchronized between computer and server
- Working groups
- Direct download of your articles by researchers
- Collections (e.g., for different projects, publications)
- "Scientists' facebook"

#### http://www.mendeley.com





#### Mendeley: a place to share information



# Google Scholar: My profile



#### Ryszard Laskowski 🗸

✓ FOLLOW

Professor of Ecology, <u>Jagiellonian University</u>

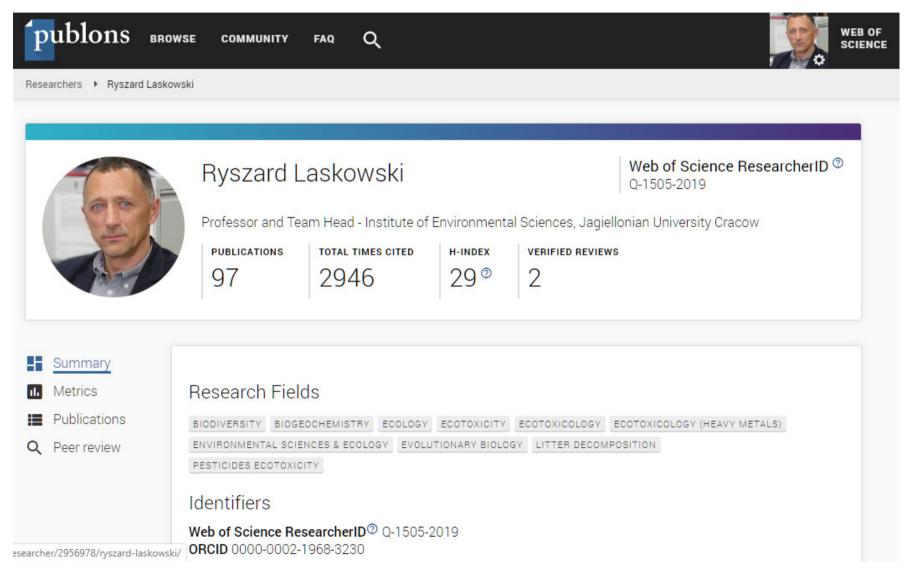
Verified email at uj.edu.pl - <u>Homepage</u>

Ecotoxicology Stress ecology Biogeochemistry Ecosystem ecology

TITLE :	CITED BY	YEAR
Litter Decomposition: A Guide to Carbon and Nutrient Turnover B Berg, R Laskowski Advances in Ecological Research 38	704 *	2005
Interactions between effects of environmental chemicals and natural stressors: a review M Holmstrup, AM Bindesbøl, GJ Oostingh, A Duschl, V Scheil, HR Köhler, Science of the Total Environment 408 (18), 3746-3762	486	2010
The dynamics of chemical elements in forest litter R Laskowski, M Niklinska, M Maryanski Ecology 76 (5), 1393-1406	183	1995
Some good reasons to ban the use of NOEC, LOEC and related concepts in ecotoxicology R Laskowski Oikos, 140-144	134	1995
Accumulation of Zn, Cu, Pb and Cd in the garden snail (Helix aspersa): implications for predators R Laskowski, SP Hopkin Environmental Pollution 91 (3), 289-297	130	1996

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