



ETIP *Bioenergy*

European Technology and Innovation Platform

HOW TO SEARCH FOR BIOENERGY RELEVANT SCIENTIFIC PUBLICATIONS

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This HOWTO shall support bioenergy stakeholders with little or no experience, who want to find publications related to a specific topic. It has been generated with the intention to assist you in overcoming the usually overwhelming number of results when carrying out a publication search. E.g. searching with the term “bioenergy” you get more than 35,000 results via ScienceDirect, more than 26,000 results via Scopus and 458,000 via Google Scholar.

We suggest 2 general concepts for literature search:

1. Systematic literature search

- Use of databases (see list)
- Search for
 - Keywords
 - Authors
 - University/Research Institute / Company

This concept works well if you already have a good overview on the topic, which is prerequisite for the data base search to ensure the use of relevant keywords.

2. „Snowball search“

- Starting point is a relevant publication that you do have.
- From this publication you take note of those publications referenced in the very specific part of the publication that deals with your topic.
- You check those publications for information on your topic, and again take note of further publications referenced.
- Repeat this step

This concept works well if:

- there is (only) one relevant literature source available for a certain topic
- if you start exploring a certain topic, where you have little overview on.

Tips from experienced publication searchers:

Combine the two above described **concepts**.

- a. If you have a new topic:
 - (1) Snowball search to start with.
 - (2) Systematic search once you have gotten an overview.
- b. If you start with a known topic:
 - (1) Systematic search to start with.
 - (2) Snowball search to deepen your

2. The choice of **key words** is very important. For the field of bioenergy/biofuels we have listed a selection in the table attached.
3. A very efficient way is the search by **authors** - if you know certain key persons working in a specific field it useful to frequently check their latest publications.
4. Be aware of **synonyms** (e.g. e-fuels, efuels, electro fuels, electrofuels,) and make sure to search for all of them. On the other hand the specification of general terms like biofuels to e.g. transport biofuels can increase the accuracy of your hits.
5. It is crucial to **document your search very well**. You should not only keep track of the results but also record how you carried out each step of your search. This will make your future search much more efficient and you will avoid to search in e.g. with the same keywords more than once. The documentation can be supported by tables and/or screenshots. Depending on the platform/software you work with these records can be saved in various ways. A dynamic folder system can support the documentary of your search: relevant publications/documents are filed in folders that ideally have meaningful names. When increasing your overview keep restructuring the publications and folders. A mindmap can also help to get/keep the overview.
6. **RSS** (Really Simple Syndication) **feeds** help you to stay automatically updated within certain topics - you get updates when new content is published in a journal or book series/handbook.

Search Engines:

[Wikipedia: List of academic databases and search engines](#)

Google Scholar <https://scholar.google.at/>

Scopus (Elsevier) www.scopus.com

Web of Science (Thomson Reuters)

www.webofknowledge.com

Sciencedirect www.sciencedirect.com

(part of Scopus, only searches in Elsevier)

Publishers of journals:

American Chemical Society pubs.acs.org

American Institute of Physics www.aip.org

Elsevier Verlag www.elsevier.com

Emerald Publishing www.emeraldinsight.com

Nature/MacMillan www.nature.com
 Inst. of Electrical a. Electronics Eng.
www.ieee.org
 Informaworld, Taylor & Francis
www.informaworld.com, www.tandfonline.com
 Institute of Physics www.iop.org
 Oxford Journals www.oxfordjournals.org
 SAGE Journals www.sagepub.com
 Science Magazine / AAAS www.sciencemag.org
 Springer Verlag www.springer.com
 The Lancet www.thelancet.com
 Thomson Reuters www.thomsonreuters.com
 Wiley Interscience www.wiley.com
 Royal Society Chemistry www.rsc.org

Publishers of books:

Springer Link link.springer.com
 Hanser E-Library www.hanser-elibrary.com
 Wiley Online onlinelibrary.wiley.com/

Other valuable publications:

- Reports via International expert organizations (e.g. [JRC](http://www.jrc.ec.europa.eu)) and networks (e.g. [IEA Bioenergy](http://www.iea-bioenergy.org) and its [Tasks](http://www.iea-bioenergy.org/tasks))
- Master Theses and PhD Theses via online libraries of Universities to search for academic work
- Proceedings, reports and presentations via websites of respective conferences or programs

Key words according to the topics along the bioenergy value chain

Topic	Keyword
Feedstock	Oil crops
	Sugar crops
	Starch crops
	Lignocellulosic crops
	Lignocellulose
	Agricultural residues
	Log wood
	Wood chips
	Pellets
	Forestry residues
	Municipal solid waste (MSW)
	Waste oil
	Waste fat
	Tall oil
Waste gas	
Conversion technology	Organic residues
	Algae
	Aquatic biomass
	Cyanobacteria
	Pre-treatment
	Mechanical processing
	Energy densification
	Pelletisation
	Fractionation
	Steam explosion
Alkaline hydrolysis	
Liquid hot water (LHW)	
Use of ionic liquids (ILs)	
Plantrose process (supercritical hydrolysis)	
Low Temperature Steep Delignification (LTS/D)	
Co-solvent Enhanced Lignocellulosic Fractionation (CELF)	
Organosolv process	
Ozonolysis	
Pyrolysis	
Torrefaction	
Biomass to liquids (BTL)	
Biomass to gas (BTG)	
Gasification	
Intermediate production	
Cellulose hydrolysis	
Hydrolysis	
Synthesis	
Fermentation	
Digestion	
Combustion	
Transesterification	
Hydrotreatment	
Anaerobic digestion	
Co-firing	
Product	Bio-oil
	Raw biogas
	Biobutanol
	BioDME
	Biogas
	Biohydrogen
	Bio-synthetic Natural Gas (Bio SNG)
	Cellulosic ethanol
	Conventional ethanol
	ETBE
	FAME/Biodiesel
	FT-liquids
	Bioelectricity
	HFO/HEVA
Methanol	
PPO/SVO	
Synthetic paraffinic fuel	
End use market	Transport
	Aviation
	Road transport
	Rail transport
	Water transport
	Engine biofuels
	Space heating
Combined heat and power/electricity	