

Navigating Scientific Resources & Staying Organized

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National Centre
for Information Support of Research,
Development, and Innovation

Navigating Scientific Resources & Staying Organized

Making It Easier to Write a Ph.D. Dissertation, Article, or Proposal

Barbora Šátková, Klára Witzany Hutková

Courses, Workshops and Webinars (in English)

October 24, 2023



Which University Are You from?

- A. Czech Technical University in Prague
- B. University of Chemistry and Technology Prague
- C. Czech University of Life Sciences Prague
- D. Charles University
- E. Other


Agenda

1. Searching: Introduction
2. Google Scholar
3. Library Resources & Full Text Access
4. Types of Sources
5. Reading & Organizing Sources
6. Publishing and Presenting of the Outputs

1. SEARCHING: INTRODUCTION

Keywords (for Searching)

- Which keywords in your subject area are used by other authors?
- Is there a thesaurus/dictionary for your field?
 - [MeSH](#) (Medical Subject Headings)
 - [IEEE Thesaurus and Taxonomy](#)
 - [Mathematics Subject Classification](#)
 - [The Transportation Research Thesaurus](#)
 - [INSPEC Thesaurus](#) (after login)
- Other useful tools:
 - [Wikipedia](#) (translation of terms, fact checking,...)
 - [Google Scholar](#)



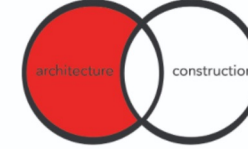
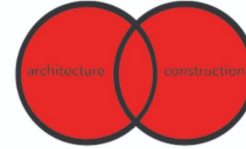
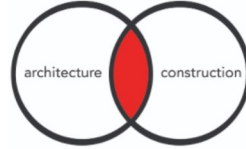
Affective computing	
BT:	Artificial
intelligence	
	Human computer
interaction	
RT:	Behavioral sciences
	Cognitive systems
	Emotion recognition
	Human factors
	Psychology

Which of These Techniques Do You Use Most Often when Searching?

- A. AND, OR, NOT/-
- B. Phrase searching (“”)
- C. Truncation (*/?/...)
- D. Advanced search & filters (search engine tools)
- E. Combination of the above
- F. None of the above

Database Search Tips

- AND, OR, NOT/-



- Phrase searching “”



- Truncation *

- Filters ≡ ↓

- Advanced search

- (author, title, abstract, full text, other)

→ [More database tips](#)

Where Do You Go First when Searching for Information Related to Your Writing?

- A. Google
- B. Google Scholar
- C. University Library Searching Tool (“Discovery”)
- D. Web of Science or Scopus search
- E. Article databases (Elsevier, Nature, EBSCO, Springer, IEEE, ScienceDirect, and others provided by libraries) or open access full-text and pre-print collections (such as arXiv, PubMed, ResearchGate, repositories)

Search Tools for Scientific Resources

- **Search engines**

- [Google Scholar](#)
- Library discovery tool ([NTK](#), [chemTK](#), [CTU](#))

...searching through multiple databases and collections mentioned below

- **Article/book databases**

- Paid databases (eg. [IEEE](#), [ScienceDirect](#), see [library subscribed databases](#))
- Open databases and journals (eg. [DOAJ](#), [PubMed Central](#) and [others](#))

- **Preprint collections** on servers as [arXiv](#), [ResearchGate](#), [Academia.edu](#) or [institutional repositories](#)

- **Citation databases** [Web of Science](#) and [Scopus](#) (no full text, but links to full text)

- & **P2P servers** as [Sci-Hub](#), [LibGen](#), Ulož.to

2. GOOGLE SCHOLAR

Library Links

Google Scholar

treatment greywater OR "grey water" "membrane reactor" -rainwater

Articles About 463 results (0.03 sec)

Any time
Since 2022
Since 2021
Since 2018
Custom range...

Sort by relevance
Sort by date

Any type
Review articles

include patents
 include citations

Create alert

Performance of a Micro-Scale Membrane Reactor for Greywater Treatment at Household Level
[V Diamantis - Membranes, 2021 - mdpi.com](#)
... The aim of this study is to develop a micro-scale household **greywater treatment** system, based on the **membrane reactor** technology, for possible installation under the wash basin or ...
★ Save Cite Cited by 2 Related articles All 9 versions Web of Science: 1 Import into EndNote

[HTML] mdpi.com
Full text @ NTK

Fouling control of a membrane coupled photocatalytic process treating greywater
[M Pidou, SA Parsons, G Raymond, P Jeffrey... - Water Research, 2009 - Elsevier](#)
... Comparison between the current system and more traditional hybrid **membrane reactor** ... 1 with the fouling profile for an MBR **treating greywater**. At fluxes below 25 LMH the fouling ...
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[PDF] academia.edu
Full text @ NTK

A low energy gravity-driven membrane bioreactor system for grey water treatment: Permeability and removal performance of organics
[A Ding, H Liang, G Li, I Szivak, J Traber... - Journal of Membrane ..., 2017 - Elsevier](#)
... The aims of this study were therefore: (1) to evaluate if it is possible to operate a **grey-water membrane reactor** in a stable manner without any aeration; (2) to understand how the ...
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Greywater treatment using an oxygen-based membrane biofilm reactor: formation of dynamic multifunctional biofilm for organics and nitrogen removal
[Y Zhou, R Li, B Guo, L Zhang, X Zou, S Xia... - Chemical Engineering ..., 2020 - Elsevier](#)
... **greywater treatment** performance. The application of O₂-MBfR for **greywater treatment** has ... In this study, we evaluated the **treatment** of synthetic **greywater** by a bench-scale O₂-MBfR. ...
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Find It @ CUNI

Google Scholar

&

- CTU is currently not fully integrated with Google Scholar

Library Links Setting

Google Scholar

- Articles
- Case law
- Profiles
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- Alerts
- Metrics
- Advanced search
- Settings

Settings

Search results
Languages
Library links
Account
Button

Collections
 Search articles (include patents).
 Search case law.

Results per page
10 Google's default (10 results) provides the fastest results.

Where results open
 Open each selected result in a new browser window.

Bibliography manager
 Don't show any citation import links.
 Show links to import citations into **BibTeX**

Show library access links for (choose up to five libraries):

praze

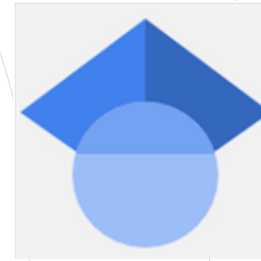
e.g., Harvard

- National Library of Technology - Full text @ NTK
- Státní technická knihovna - Získat v STK
- Masaryk University - Get Fulltext at MU
- Vysoká škola chemicko-technologická - Získat přes VŠCHT (SFX)
- Czech University of Life Sciences Prague - Získat full text
- Czech National Library - Full-text @ NKP (JIB)
- Museum of Decorative Arts in Prague - Get it @ UPM via ART SG
- Městská knihovna v Praze - Získat v MKP
- Národní lékařská knihovna v Praze, ČR - Plný text v NLK
- Vysoká škola ekonomická v Praze (Prague University of Econom - Full-Text @ VŠE)
- Mestska knihovna v Praze - ProQuest Fulltext

Online access to library subscriptions is usually restricted to patrons of that library. You may need to login with your library password, use a campus computer, or configure your browser to use a library proxy. Please visit your library's website or ask a local librarian for assistance.

Google Scholar Button

Browser extension ([Chrome](#), [Firefox](#), [Opera](#))

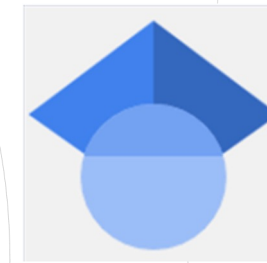


A vertical sidebar menu for Google Scholar. At the top is the Google Scholar logo with a hamburger menu icon to its left. Below are several menu items: 'Articles', 'Case law', 'Profiles', 'My profile', 'My library', 'Alerts', 'Metrics', 'Advanced search', and 'Settings'. The 'Settings' item at the bottom is highlighted with a red rectangular border.

A settings dialog box titled 'Settings' with a blue arrow icon. On the left is a sidebar with options: 'Search results', 'Languages', 'Library links', 'Account', and 'Button'. The 'Button' option is highlighted with a red rectangular border. The main area is titled 'Scholar Button for your browser' and shows a preview of the extension's interface. It features a text input field containing 'https://www.example.edu/paper.pdf' with a blue arrow icon to its right. Below the input is a green button with a magnifying glass icon, '[PDF]', and 'Cite'. Underneath is a 'Bibliography' section with a single entry: '1. Einstein, A., B. Podolsky, and N. Rosen, 1935, "Can quantum-mechanical description of physical reality be considered complete?", Phys. Rev. 47, 777-780.' At the bottom of the dialog is a blue 'Save' button and a gray 'Cancel' button. A red rectangular border highlights the text 'Install Scholar Button to look up papers as you browse.' at the bottom of the main content area.

Google Scholar Button

Quick access to **full text** & citations download



References

[1] Sheehan J, Cambreco V, Duffield J, Garboski M, Shapouri H. An overview of biodiesel and petroleum diesel life cycles. A report by US Department of Agriculture and Energy; 1998. p. 1-35.
[Google Scholar](#)

[2] S. Puhan, N. Vedaraman, B.V. Rambrahaman, G. Nagarajan
Mahua (*Madhuca indica*) seed oil: a source of renewable energy in India
J Sci Ind Res, 64 (2005), pp. 890-896
[View Record in Scopus](#) [Google Scholar](#)

[3] A. D. ...

[4] D. ...

[5] P. ...

J. ...

V. ...

Chcete-li vyhledat jiný článek, vyberte jeho název na stránce.

Mahua (*Madhuca indica*) seed oil: A source of renewable energy in India

Sukumar Puhan¹, N Vedaraman^{1*}, B V Rambrahaman¹ and G Nagarajan²

¹Chemical Engineering Division, Central Leather Research Institute, Chennai
²Department of Mechanical Engineering, Anna University, Chennai

Mahua oil methyl, ethyl and butyl esters were prepared and studied in a four stroke, direct injection diesel engine for their performance and emissions. The engine test results showed high thermal efficiency in case of methyl ester compared to all other esters and diesel fuel. Different emissions such as carbon monoxide (CO), oxides of nitrogen (NO_x), hydrocarbons (HC) is low for alkyl esters compared to diesel. Among alkyl esters except NO_x all tail pipe emissions are lower in case of methyl ester compared to other esters. The ethyl ester shows lower NO_x emission compared to other esters. Based on this study, mahua oil methyl ester performs well compared to other esters on the basis of performance and emissions.

Keywords: Biodiesel, Diesel engine, Emissions, Mahua oil, Renewable energy
IPC Code: F02B13/10

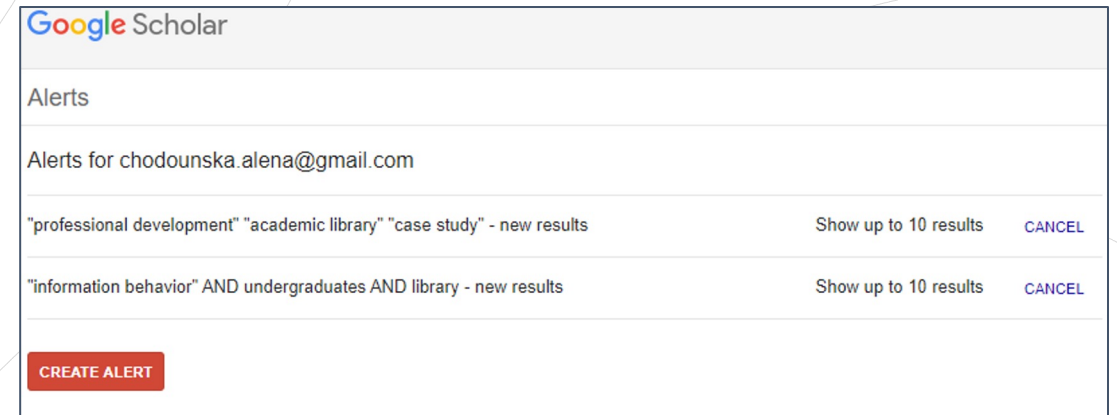
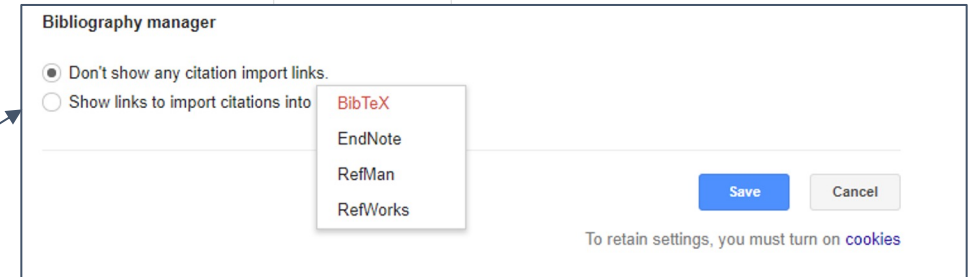
Introduction

Worldwide energy consumption has increased 17 fold in the last century and, as a consequence, the carbon dioxide (CO₂), sulfur dioxide (SO₂) and nitrogen oxides (NO_x) emissions from the combustion of fossil fuels have damaged the atmosphere to a significant extent. CO₂ emissions have risen over the last two decades, reaching an atmospheric content of 360 ppm, estimating the world CO₂ emissions at about 26 billion metric ton per year.

diesel fuels substitute; soybean oil in the USA, rapeseed and sunflower oils in Europe, palm oil in south East Asia and coconut oil in Philippines are being considered as substitutes for diesel fuels. Since edible oil demand is higher than its domestic production (Table 1), there is no possibility of diverting this oil for production of biodiesel in India. Being a tropical country, India is rich in forest resources having a wide range of trees, which yield a significant quantity of oilseeds. The production of

Google Scholar Tips & Tricks

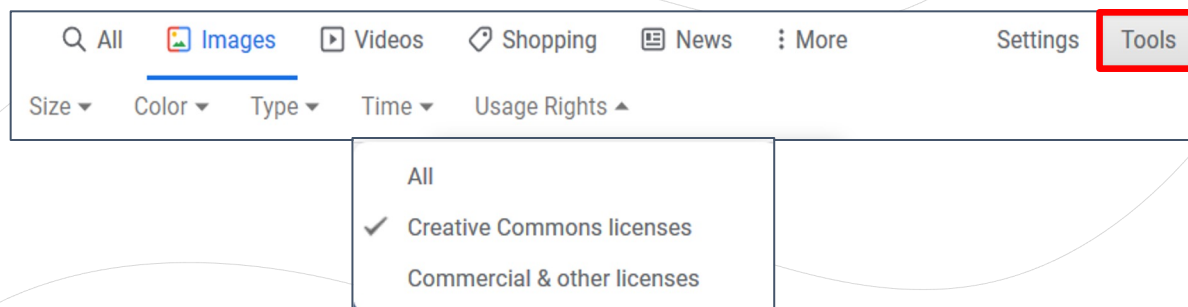
- Library links
- Citation management tools
- Google Scholar Button
- Google Scholar Alerts
- Google Scholar Account
 - GS author profile
 - My library



Google Tips & Tricks

- Find the **name of the person** you are citing (especially when you are writing in Czech)
- Find pictures under **open licence**

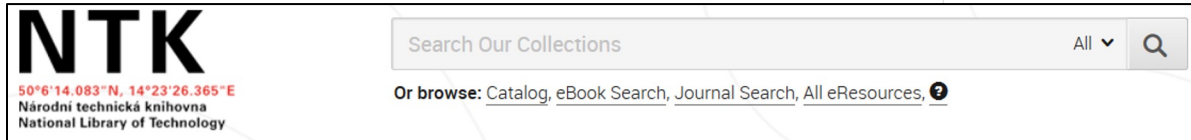
site:cvut.cz dissertation (all pages with keyword “dissertation“ on domain “cvut.cz”)



→ [More Tips & Tricks on Google](#)

3. LIBRARY RESOURCES & FULL-TEXT ACCESS

Library Discovery Tools



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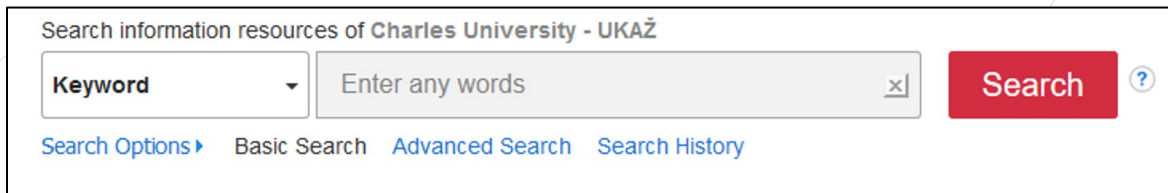


chemTK
Joint UCT, IOCB, and NTK
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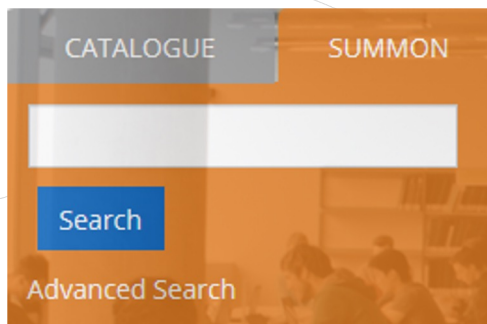


Search information resources of Charles University - UKAŽ

Keyword ?

[Search Options](#) [Basic Search](#) [Advanced Search](#) [Search History](#)

<https://ukaz.cuni.cz>



CATALOGUE SUMMON

Advanced Search

<http://knihovna.cvut.cz/en/#summon>

- **One box** for searching across **all journals and books** (both electronic and print) provided by the library (items from databases like IEEE, ScienceDirect, EBSCO, ProQuest, and more)
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- Advanced filtering
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- [Print, Scan, Copy](#)
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- [What's On](#)

Current seating occupancy:
259 out of 900

Quick access to main databases including Web of Science and Scopus

News

Digitization of EOD historical books
5. 10. – From October 1-31, you can order digital copies of historical books from nine EOD (eBooks on Demand) member libraries for 10 euros. More information can be found [here](#).

Winter Semester webinars
23. 9. – We've prepared a series of free Winter Semester webinars for [doctoral students](#) and [other early career researchers](#). Registration is open.

Changes starting September 1
7. 9. – Starting September 1, you can use the [Team Study Rooms](#) and the [Quiet Study Room](#) again. Library seating capacity has been increased to 900, and 46 persons can now be in

- Selected eResources**
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 - [Emerald Premier](#)
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 - [IEEE Xplore](#)
 - [IOPscience](#)
 - [Nature Complete](#)
 - [Oxford English Dictionary](#)
 - [Oxford Journals](#)
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 - [Wiley Online Library](#)

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Searching @ NTK

- NTK discovery tool
- Browse/find eBooks and eJournals
- Specific databases and electronic collections
- Access to full text
- Document delivery/interlibrary loan

Electronic resources accessible from home

Direct Access to Databases and Collections Provided by NTK

Electronic Resources

Most of these [eResources](#) can be accessed outside the library. To search a specific database, select *via NTK*. To search all eResources at once, use the *Search Our Collections* box above.

Use filters to find resources relevant to a particular subject, in a particular format, or by language.

Title	Access	Description
Academic Search Ultimate	via NTK	Description
AccessScience New	via NTK	Description
ACM Digital Library	via NTK	Description
ACS New	Open access	Description
American Institute of Physics - Complete	via NTK	Description
Analytical Abstracts	via NTK	Description
Anopress IT	Workstations in the library	Description
Apress	via NTK	Description
APS e-Journals	via NTK	Description

Search and Filters

Type to filter

- | RESOURCE TYPE
- | CONTENT TYPE
- | SUBJECTS
- | ACCESS
- | CONTENT LANGUAGE

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- [eBooks A-Z](#)
- [eJournals A-Z](#)
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- [Scientific resources for COVID-19](#)

Getting Full Text (when Sci-Hub is down) ;-)

1. Always make sure you are logged onto the library website for **off-campus access**
2. Activate Library links on Google Scholar
3. Use tools on library web page



eJournals	eArticles	eBooks
<p><u>Journal Search</u></p> <ul style="list-style-type: none">● Search for journal title or ISSN	<p><u>Discovery tool</u></p> <ul style="list-style-type: none">● “Phrase search” of article title● Supplement with name of one author for better accuracy	<p><u>Discovery tool</u></p> <ul style="list-style-type: none">● “Phrase search” of book title● Supplement with name of one author for better accuracy <p><u>eBook Search</u></p> <ul style="list-style-type: none">● Search for book title, ISBN, or author

Getting Full Text: Other Options

International ILL Order Form for individual NTK patrons

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 A copy

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Searching with new AI tools

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Searching

Searching NTK Resources
Web of Science & Scopus
Google Scholar
AI tools for research

Overview of AI search tools, chatbots, text analyzers and detectors

Summarise the state of the art for research on greywater treatment in membrane reactors.

Sources

A state-of-the-art-review on grey water... R ^o researchgate • 1	A state-of-the-art-review on grey water... A academia • 2	Membrane Technologies in Wastewater Treatment... mdpi • 3	Membrane-Based Processes Used in... mdpi • 4
Greywater Characteristics, Treatment Systems, ... nih • 5	Performance and energetic analysis of... sciencedirect • 6		

Answer

Greywater treatment using membrane reactors is an emerging technology that has gained popularity in recent years. Here is a summary of the state of the art for research on greywater treatment in membrane reactors:

- Membrane technology has emerged as a favorite choice for reclaiming water from different wastewater streams for re-use ³.
- Membrane-based technology in greywater reclamation has been reviewed, and it has been found that membrane filtration and oxidation processes are effective in treating greywater ⁴.
- Compact submerged membrane sequencing batch reactors (SM-SBR) have been used for greywater treatment, and their performance has been evaluated ⁴.



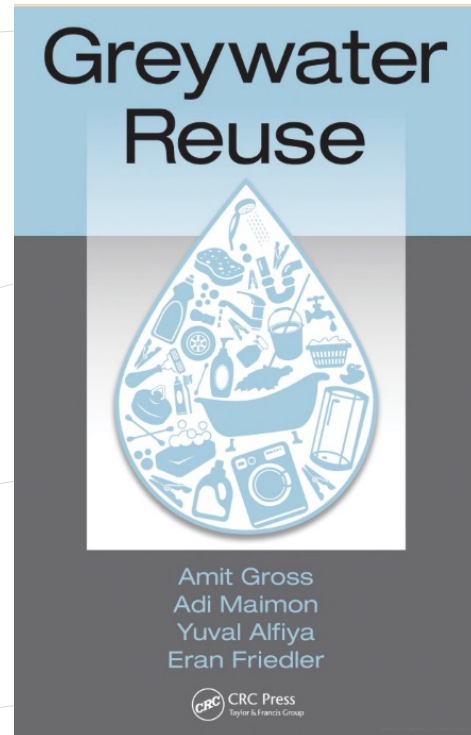
The screenshot shows a research collection interface. On the left, a list of papers is displayed with titles like 'Design and modeling of an on-site grey water treatment plant for a hotel building' and 'Overview of Biological Treatment Technologies for Greywater Reuse'. A sidebar on the right offers various filters and actions such as 'Remove from', 'Add to Other Collection', 'Similar Work', and 'These Authors'. On the far right, a network graph titled 'Research Rabbit' visualizes connections between authors, with names like Woodworth, Roedel, and Collins appearing in a circular arrangement.

[www.https://www.techlib.cz/en/2719-tutorials](https://www.techlib.cz/en/2719-tutorials)

4. TYPES OF SOURCES

Handbooks, Textbooks, & Encyclopedias

- To get familiar with **terminology** and **context** for a new project



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GROSS, Amit et al. *Greywater reuse*. London; New York; Boca Raton: CRC Press, Taylor & Francis Group, 2015.
ISBN 9781482255041;1482255049;

→ greywater AND (handbook OR text book OR encyclopedias OR dictionary)

Dissertations

- Get inspired by others' approaches to similar dissertation topics, formatting, and structure
- List of sources
- Discuss the choice of sample theses with mentor
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This database is the world's most comprehensive collection of dissertations and theses on sciences and engineering.

- Czech institutional repositories (CTU, UCT, CU, Grey literature)
- International repositories, ProQuest Theses (via NTK)

Review Articles

- Type of scholarly articles that provide summary and analysis of previous research on a specific topic/problem/question
- Efficient way to gain an overview of existing research and current state-of-the-art
- A comprehensive lists of relevant sources
- Review/Systematic Review, Meta-Research, Meta-Analysis

→ (greywater OR "grey water") AND (review OR meta-analysis OR meta-research)

→ Use a filter (available e.g., in [Scopus](#), [Web of Science](#), [Google Scholar](#), [Semantic Scholar](#))

CIVIL ENGINEERING AND ENVIRONMENTAL SYSTEMS, 2016
VOL. 33, NO. 1, 35–54
<http://dx.doi.org/10.1080/10286608.2015.1124868>



Grey water in buildings: a mini-review of guidelines, technologies and case studies

Sabino De Gisi^a, Patrizia Casella^b, Michele Notarnicola^a and Roberto Farina^c

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ABSTRACT

The aim of the work is to describe the state-of-the-art on the reuse of grey water at building level taking into account (i) the grey water characteristics and amounts produced, (ii) the recycling guidelines, (iii) the treatment systems and reuse technologies, also considering the removal of micro-pollutants as xenobiotic organic compounds, and (iv) an overview of case studies for developed countries. The mini-review highlights how the existing technologies allow the safe reuse of grey water. Attention must be given to the removal of micro-pollutants especially when the discharge takes place in surface water. With reference to 12 case studies of buildings which adopt non-conventional technologies with the aim to optimise energy

ARTICLE HISTORY

Received 3 April 2015
Accepted 7 October 2015

KEYWORDS

Buildings; grey water; reuse; treatment technologies

DE GISI, Sabino et al. Grey water in buildings: a mini-review of guidelines, technologies and case studies. *Civil engineering and environmental systems*. 2016, vol. 33, no. 1, pp. 35–54 [cit. 2022-10-10]. Available: <https://doi.org/10.1080/10286608.2015.1124868>

Seminal Articles

- **Core articles** for specific fields, usually providing some groundbreaking information
- Can usually be identified by the high number of citations
- Via **citation databases** (reliable journals and proceedings)

→ ("waste water" OR "grey water") sorted via number of citations in Web of Science or Scopus

Chaudhuri, L. (n.d.). *Seminal Works. EdD Executive Leadership*
<https://resources.library.lemoyne.edu/guides/EdD/Systematic-Review/Seminal-Works>

Scopus (@ NTK)

Analyze search results Show all abstracts Sort on: Cited by (highest)

All Export Download View citation overview View cited by Add to List ... Print Email PDF

	Document title	Authors	Year	Source	Cited by
<input type="checkbox"/> 1	Pseudo-second order model for sorption processes	Ho, Y.S., McKay, G.	1999	Process Biochemistry 34(5), pp. 451-465	10449

View abstract SFX View at Publisher Related documents

Web of Science (@ NTK)

Refine results 0/117,893 Add To Marked List Export Citations: highest first 1 of 2,000

1 Pseudo-second order model for sorption processes 10,998 Citations

[Ho, Y.S. and McKay, G.](#)
Jul 1999 | [PROCESS BIOCHEMISTRY](#) 34 (5) , pp.451-465

A literature review of the use of sorbents and biosorbents to treat polluted aqueous effluents containing dyes/organics or metal ions has been conducted. Over 70 systems have been reported since 1984 and over 43 of these reported the mechanism as being a pseudo-first order kinetic mechanism. Three sorption kinetic models are presented in this pa... [Show more](#)

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→ Learn more about Citation Databases on our [website](#)

Seminal Articles (2)

Other search engines for academic resources that enable sorting results by number of citations:

- [Semantic Scholar](https://www.semanticscholar.org/) (a free search engine developed by the [Allen Institute for AI](https://allenai.org/))
- [Dimensions](https://app.dimensions.ai/discover/publication) (a commercial scholarly search platform, the free version includes searching in publications and datasets only)

Consider:

- Number of citations vs. time
- Difference: citation count in different tools (different set of content for analysis)

Semantic Scholar (<https://www.semanticscholar.org/>)

Search results for "waste water" OR "grey water" on Semantic Scholar. The interface shows 65,300 results, sorted by citation count. A red box highlights the "Sort by Citation Co..." dropdown menu. The top result is "Life cycle assessment of municipal waste water systems" by A. Tillman, M. Svingby, and Henrik Lundström, published in Environmental Science in May 1998. The second result is "Anaerobic treatment as a core technology for energy, nutrients and water recovery from source-separated domestic waste(water)." by G. Zeeman, K. Kujawa, and 9 authors, published in Environmental Science, Biology in April 2008.

Dimensions (<https://app.dimensions.ai/discover/publication>)

Search results for "waste water" OR "grey water" on Dimensions. The interface shows a summary of results: 453,634 publications, 2,088 datasets, 4,347 grants, 904,189 patents, 13 clinical trials, and 13,694 policy documents. A red box highlights the "Sort by: Citations" dropdown menu. The top result is "Standard methods for the examination of water and waste water." by F W Gilcreas, published in the American Journal of Public Health and the Nations Health in 1966. The interface also shows options for "Show abstract", "Citations" (11k), "Open Access", and "Add to Library".

Google Scholar – number of citation, but does not enable sorting

Search results for "grey water" OR "waste water" on Google Scholar. The interface shows about 18,600 results. A red box highlights the "Cited by 720" link. The top result is "Review of the technological approaches for grey water treatment and reuses" by F Li, K Wichmann, and R Otterpohl, published in Science of the total environment in 2009. The interface also shows options for "Save", "Cite", "Related articles", "All 12 versions", and "Web of Science: 347".

How Do You Stay Aware of Recent Research Trends?

- A. Automatic alerts (email, RSS feeds) from a database or search engine (e.g., Google Scholar)
- B. Via social media (ResearchGate, Twitter, and so on)
- C. Checking a particular journal or website on a regular basis
- D. Receiving a newsletter from an institution or website
- E. Other (chat)

The Most Up-to-date, State-of-the-art Search

- Follow key scholars and institutions in your research field
- Preprint servers ([arXiv](#), [bioRxiv](#), others): articles published before peer review
- Conference papers, conference proceeding books
- Informal exploration of early-stage ideas: blogs, social networks, lectures

Cornell University

arXiv.org

Search... All fields Search

Help | Advanced Search

arXiv is a free distribution service and an open-access archive for 1,799,817 scholarly articles in the fields of physics, mathematics, computer science, quantitative biology, quantitative finance, statistics, electrical engineering and systems science, and economics. Materials on this site are not peer-reviewed by arXiv.

Subject search and browse:

Computer Science Search Form Interface Catchup

Physics

Mathematics

Quantitative Biology

Quantitative Finance

Statistics

Electrical Engineering and Systems Science

Economics

Physics (astro-ph new, recent, search)
includes: Astrophysics of Galaxies; Cosmology and Nongalactic Astrophysics; Earth and Planetary Astrophysics; High Energy Astrophysical Phenomena; Instrumentation and Methods for Astrophysics; Solar and Stellar Astrophysics

Condensed Matter (cond-mat new, recent, search)
includes: Disordered Systems and Neural Networks; Materials Science; Mesoscale and Nanoscale Physics; Other Condensed Matter; Quantum Gases; Soft Condensed Matter; Statistical Mechanics; Strongly Correlated Electrons; Superconductivity

General Relativity and Quantum Cosmology (gr-qc new, recent, search)

High Energy Physics - Experiment (hep-ex new, recent, search)

High Energy Physics - Lattice (hep-lat new, recent, search)

High Energy Physics - Phenomenology (hep-ph new, recent, search)

High Energy Physics - Theory (hep-th new, recent, search)

Mathematical Physics (math-ph new, recent, search)

Nonlinear Sciences (nlin new, recent, search)
includes: Adaptation and Self-Organizing Systems; Cellular Automata and Lattice Gases; Chaotic Dynamics; Exactly Solvable and Integrable Systems; Pattern Formation and Solitons

Nuclear Experiment (nucl-ex new, recent, search)

Nuclear Theory (nucl-th new, recent, search)

Physics (physics new, recent, search)
includes: Accelerator Physics; Applied Physics; Atmospheric and Oceanic Physics; Atomic and Molecular Clusters; Atomic Physics; Biological Physics; Chemical Physics; Classical Physics; Computational Physics; Data Analysis, Statistics and Probability; Fluid Dynamics; General Physics; Geophysics; History and Philosophy of Physics; Instrumentation and Detectors; Medical Physics; Optics; Physics and Society; Physics Education; Plasma Physics; Popular Physics; Space Physics

Quantum Physics (quant-ph new, recent, search)

COVID-19 Quick Links

See COVID-19 SARS-CoV-2 preprints from

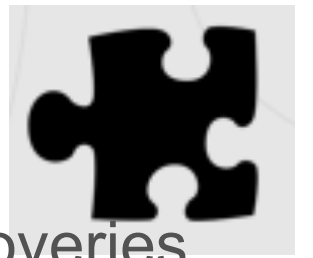
- arXiv
- medRxiv and bioRxiv

Important: e-prints posted on arXiv are not peer-reviewed by arXiv; they should not be relied upon without context to guide clinical practice or health-related behavior and should not be reported in news media as established information without consulting multiple experts in the field.

<https://arxiv.org/>

5. READING & ORGANIZING SOURCES

Reading: Smart, Careful, Mindful



- Essential part of keeping up-to-date with current research (new discoveries, leading authors, context of one's own research)
- Prerequisites for writing (writing habits in the field, argumentation, citing)

TIPS

- Be smart and picky; focus on abstract, conclusion, and specific issues before deciding to read the whole paper carefully
- Make notes from the very beginning; it will save your time later
- Managing sources: create your own system to organize materials and thoughts, be systematic

Managing Sources – Tips & Tricks

- Notes (electronic vs. written): important information, relationship to your work (methodology, contradictory or confirmatory conclusions, and so on)
- Folders, tags, or ranking system to differentiate between documents
- Citation management tools

Research paper
An evaluation and explanation of (in)efficiency in higher education institutions in Europe and the U.S. with the application of two-stage semi-parametric DEA
Joanna Wolszczak-Derlacz
Gdańsk University of Technology, Faculty of Management and Economics, Narutowicza 11/12, 80-233 Gdańsk, Poland

ARTICLE INFO
JEL classification:
I23
I24
I22
Keywords:
Higher education institutions
Efficiency
Two-stage DEA
European-US comparison

ABSTRACT
In this study the technical efficiency of number of public European and American HEIs is assessed over a decade. Efficiency scores are determined using nonparametric DEA with different input-output sets and considering different frontiers: global frontier (all HEIs pooled together), global frontier (Europe and the U.S. having their own frontiers) and country-specific ones. The external factors affecting the degree of HEI inefficiency are also investigated, e.g. institutional settings (size and department composition). Specifically, the results indicate a positive association between both regional departments and an institution's efficiency (for both the European and European HEIs are more efficient, but this is not confirmed for American HEIs). However, some country heterogeneity at the European level is found in support, resulting in the need to seek additional resources and to provide first-class teaching and research in order to survive amid local and global competition.³

1. Introduction
Numbers are meaningful: according to the Academic Ranking of World Universities' 2016 fifteen of the top twenty universities were in the U.S., Americans published 23% of the total number of scientific articles in the period 1996–2015, counting 33% of the total citations.⁴ This is perceived in the literature as the transatlantic gap – referring to the differences between Europe and the U.S. in the quality of academic research (Bonaccorsi et al., 2017). Because of this, it is not surprising that the American system of higher education is perceived to be pre-eminent and when higher education institutions (hereafter, HEIs) around the world are searching to improve their performance they look to universities in the U.S. as their benchmark model, while scholars from the whole world are attracted to American academia (Clotfelter, 2010). However, from the internal American perspective, the higher education sector is not free of problems, and its worldwide dominance has also recently been challenged (Altbach et al., 2011). Nowadays, HEIs in both continents are under pressure due to declining public support, resulting in the need to seek additional resources and to provide first-class teaching and research in order to survive amid local and global competition.³

This study has three main aims: firstly, to compare the technical efficiency of European and U.S. higher education institutions. Secondly, to evaluate the main factors that determine the efficiency of HEIs and to test whether these factors might have varying impacts on the European and U.S. efficiency. Thirdly, to address an evaluation problem, introducing DEA techniques as an analytic tool which can serve both HEI's managers and policymakers.

Data envelopment analysis (DEA) is used in this study – a methodology which constructs a production frontier in the multi-input/multi-output case – in order to evaluate the relative efficiency of a sample of 500 higher education institutions (in ten European countries and the U.S.) for the period between 2000 and 2012. Different models are estimated for different input-output sets and assumed frontier: global, regional and country-specific ones.

The research is motivated by the fact that most previous studies

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Nadezda Firsova Options
Zkontrolovat zdroje pro řešerši

Example of electronic notes

When stereotypes meet robots: The double-edge sword of robot gender and personality in human-robot interaction
Benedict Tay^a, Younbo Jung^b, Taezoon Park^{a,*}

ARTICLE INFO
Article history:
Available online 14 June 2014

Keywords:
Human-robot interaction
Social robot
User acceptance
Social stereotypes
Robot gender
Robot personality

ABSTRACT
With the emerging application of social and psychological effects of occupational roles (security [extrovert vs. introvert]) on user acceptance of a so two different roles of a healthcare and security t. During the task, the robot manifested different p showed that participants (n = 164) preferred the socially-occupational role stereotypes. This first robots do not monotonically influence user response types to affect user acceptance of social robot showed a stronger effect on users' responses t results lay a foundation for designers to reduce t various parameters under the big umbrella of so

1. Introduction
The role of social robots has increasingly become diversified when compared to industrial robots that perform monotonous and repetitive tasks in factory settings. In accordance with the rapid development of relevant technologies and the increasing demand for human resources in social settings, robots are expected to play roles that are generally filled by humans in a variety of social contexts—including the home, museums, subways, airports, and hospitals (Lee, Kwon, & Park, 2013). Public acceptance of social robots, however, is not simple since successful social robots require a good mixture of state-of-the-art technology and a capacity for friendly social interaction. Among various issues concerning human-robot interaction, user acceptance has been identified as a key element for successful implementation of social robots (Ezer, Fisk, & Rogers, 2009; Heerik, Kise, Evers, & Wielinga, 2010). Along these lines, interest has recently been rising for the development of socially interactive robots that can accurately mimic human characteristics. This dimension of research aims to develop natural and intuitive human-robot interactions to facilitate user acceptance. One such attempt is to design humanoid robots with human features as well as androids that are aesthetically similar to real human beings. In addition, researchers have started to apply social characteristics in the design of social robots, including exhibiting a natural gaze, gestures, and distinctive personalities (Hwang, Park, & Hwang, 2013; Looije, Neerincx, & Cnossen, 2010).

In spite of the preliminary success in anthropomorphizing robots, simply applying human characteristics to social robots may cause aversive and repugnant psychological responses. For instance, Mori's Uncanny Valley (1970) suggests that human responses toward human-like robots can be revolting when these robots look and act almost, but not perfectly, like human beings. In other words, when robots become or behave human-like, people start to pay more attention to the subtle differences between the robots and human beings rather than the great resemblance between the two, and this tends to trigger negative responses from people. As such, human social characteristics blindly applied to social robots could negatively influence people's perceptions toward social robots, under certain circumstances (Eyssele & Hegel, 2012).

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NEZNAM PŘEEST
ROZPADEJ V NITCEJ MŮU MŮJENŮU
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Example of written notes

Citation Management Tools

- Download and manage citations
- Create personal library
- Insert tags and notes
- Collaboration
- Generation of reference list
- Integrate with word processing software tools for easy insertion of citations into documents

Zotero

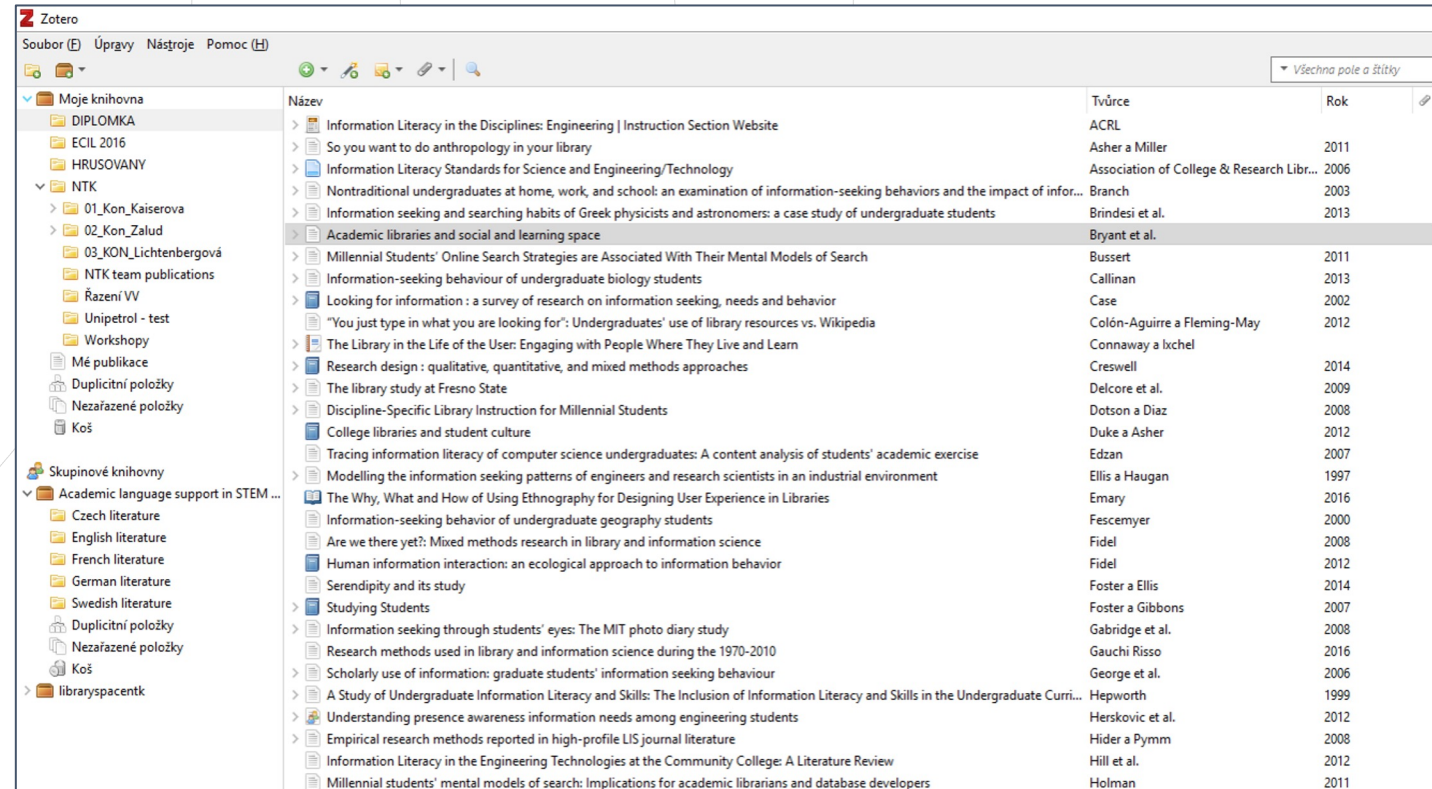
CitacePRO

Mendeley

Citavi

JabRef (integrated with LaTeX)

EndNote (subscription for UCT students)



Use them, but don't trust them absolutely!

6. PUBLISHING AND PRESENTING RESEARCH OUTPUTS

Have You Ever Published in a Scientific Journal or Conference Proceedings?

- A. Yes, as the first author
- B. Yes, as a co-author
- C. Not at all

Searching High-quality Journals and Conferences

- Ask your mentor and/or peers
- Use citation and analytical databases to identify reliable journals and conferences:
[Web of Science](#), [Scopus](#), [Inspec Analytics](#)
- Try recommender services such as [Elsevier JournalFinder](#), [WoS Manuscript Matcher](#)
- Review the quality & reputation (journal metrics, editorial board, conference organizers, mentor recommendations), [peer-review process](#) and author services provided; read tips about [avoiding predatory and questionable conferences](#)
- Consider relevance of the conference to your field as well as its intended audience
- [Open Access](#), [Open Data](#)
- Article processing charge (APC) and other costs and benefits
- Learn whether you can submit the same content to multiple journals or conferences at the same time (or not)

Searching High-quality Journals and Conferences

Eaton, S.E. (2018). Avoiding predatory journals and questionable conferences: A resource guide. *University of Calgary*. <https://files.eric.ed.gov/fulltext/ED579189.pdf>

Palmer, J. C. (2016). Navigating your first academic conference. *Psychological Science Agenda*. <https://www.apa.org/science/about/psa/2016/10/academic-conference>

Northcentral University Library (2021). *Research Process: Scholarly Publication*. <https://ncu.libguides.com/researchprocess/scholarlypublication>

Berkeley Library. (n.d.) *Scholarly Publishing*. <https://www.lib.berkeley.edu/scholarly-communication/publishing>

UNC University Libraries. (2021). Measure Your Research Impact: Where to Publish. <https://guides.lib.unc.edu/measure-impact/publish>

Summary

- Activate **Library links on Google Scholar**
- Always make sure you are logged into the library web for **off-campus access to full-text articles**
- Contact your librarian for materials that are hard-to-find
- Make notes and create your own system to organize materials from the very beginning of a project
- Use citation managers, but don't trust them absolutely
- Critically consider journals and conferences and be aware of the publishing and conference submission process

Get Assistance

1) Schedule a consultation

- Please don't be shy; our team includes doctoral students who know, the issues you face
- LaTeX support, Bibliometric services

2) Attend a webinar

3) Explore by yourself

- STEMskiller: comprehensive skills set map for early career researchers
- Tutorials: NTK instructional materials and recordings, further resources
- Subject guides



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Thank you

Questions?