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ScienceDirect LibGuide: ScienceDirect AI

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What is ScienceDirect AI?

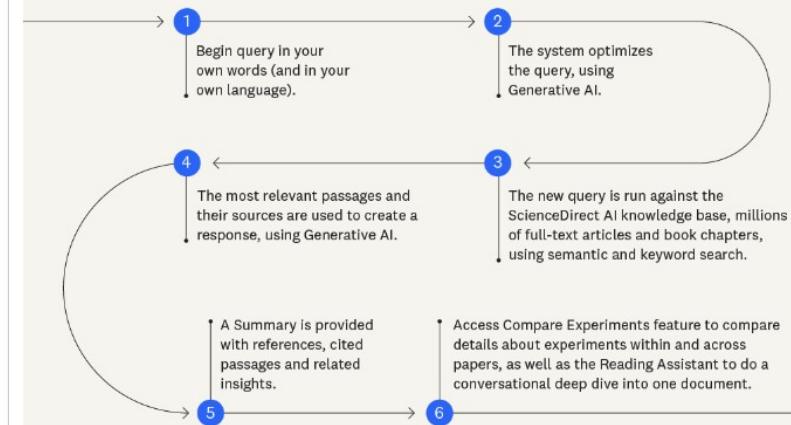
ScienceDirect AI (SD AI) is the companion that enables researchers to explore, compare and uncover insights from deep within the full-text of quality peer-reviewed literature, with one click.

Built on the most trusted peer-reviewed journal articles and book chapters, ScienceDirect AI surfaces critical evidence and ties it back directly to its original source, enabling traceability and reproducibility – a must for trustworthy research – so you can go from question to evidence in seconds, not days.

How does it work?



How does it work?



What are the top features?



What are the top features of Scie...

Später ans...

Teilen

ScienceDirect AI

Welcome to ScienceDirect AI.

Ansehen auf YouTube

Responsible AI principles

ScienceDirect AI was developed employing Elsevier's responsible AI principles:

- We consider the real-world impact of our solutions on people.

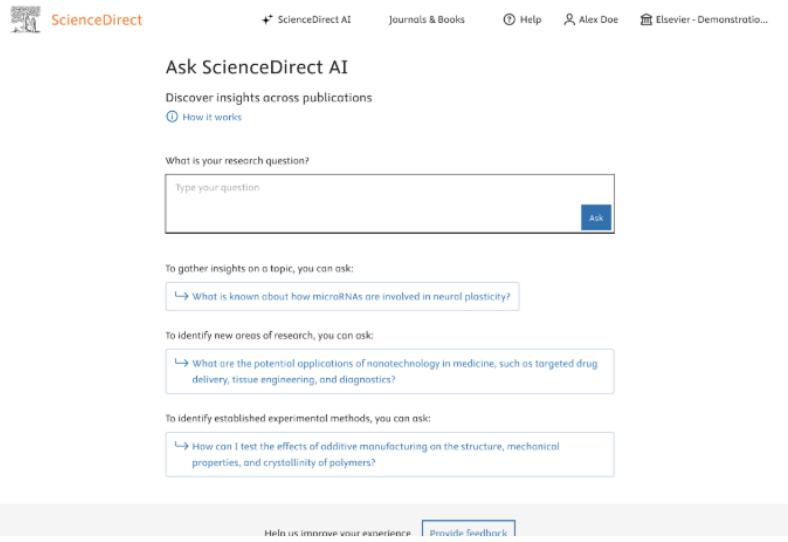
Getting started with Ask ScienceDirect AI

Ask ScienceDirect AI provides insights from across the underlying corpus of full-text, peer-reviewed scientific articles and book chapters.

Start your journey at sciedirect.com/ai

1. Enter your query by describing what you are looking for in your own words and the system will optimize your query to return the most relevant results.
2. Click on Ask

If you aren't sure where to start, view the pre-selected questions to explore the features on **ScienceDirect AI** or get inspired.



The screenshot shows the Ask ScienceDirect AI interface. At the top, there's a navigation bar with the ScienceDirect logo, a search bar containing '+ ScienceDirect AI', and links for 'Journals & Books', 'Help', 'Alex Doe', and 'Elsevier - Demonstratio...'. Below the navigation is a section titled 'Ask ScienceDirect AI' with the sub-instruction 'Discover insights across publications'. It includes a link '(?) How it works'. A large input field is labeled 'What is your research question?' with a placeholder 'Type your question' and a blue 'Ask' button. Below this are three examples of pre-selected questions: 'What is known about how microRNAs are involved in neural plasticity?', 'What are the potential applications of nanotechnology in medicine, such as targeted drug delivery, tissue engineering, and diagnostics?', and 'How can I test the effects of additive manufacturing on the structure, mechanical properties, and crystallinity of polymers?'. At the bottom of the interface, there are buttons for 'Help us improve your experience' and 'Provide feedback'.

- We take action to prevent the creation or reinforcement of unfair bias.
- We can explain how our solutions work.
- We create accountability through human oversight.
- We respect privacy and champion robust data governance

[Read more](#)

Reading Assistant

The **Reading Assistant** is a versatile tool designed for responding to questions, analysis, or summarization of individual articles and book chapters.

It is available on all full-text articles and book chapters on **ScienceDirect** that the user has access to, including entitled subscription content, open access, open archive and promo access articles.

Use the reading tool to:

- Receive a summary of the individual article
- Ask questions in your own words or use the suggested questions (available on a selection of articles) as a guide.

Responses from the reading assistant include **source references**. When the user clicks on the numbered references, ScienceDirect AI will highlight the information snippets that were used to respond to the question in the text.

Compare experiments

Use the **Compare experiments** function to view a table of all studies related to your query. The table compares each study's goals, materials, methods, results and conclusions.

If multiple experiments exist within the article, they will each be populated into the table respectively.



Search tools to improve your results

The query optimization tool was developed to support specific and complex queries. This tool employs a variety of techniques to generate the best possible response.

- Agentic Approach:** The query optimizer tool on ScienceDirect AI helps by fixing any typos, expanding abbreviations, translating and rephrasing where necessary, and more.
- Hybrid Search:** The tool then decides whether to use a natural language version of the query, a keyword version, or both, to retrieve the most relevant content to generate a summary from.
- You can see the process for the query optimization tool in the **summary steps** of your generated response.

Ask ScienceDirect AI

Discover insights across publications [\(i\) How it works](#)

methods for encapsulation of flavonoids to increase stability

[Ask](#)

[\(i\) Hide summary steps](#) Not happy with the summary? [Regenerate without optimization](#)

- ✓ Analyzing and optimizing your question
- ✓ Searching most relevant research for:
"What are the methods for encapsulating flavonoids to enhance their stability?"
- ✓ Searching keywords:
"Encapsulation methods for flavonoids"
- ✓ Finalizing summary

AI-generated content may vary in quality. Verify important information. [Learn more](#)

Summary

Methods for Encapsulation of Flavonoids to Increase Stability

If you want to compare experiments within the search results on **ScienceDirect**, select the papers you want to use before selecting **Compare experiments**.

Once the results are populated, you can export your results into a CSV file.

The screenshot shows a comparison table for two research articles. The columns are labeled: ARTICLE, EXPERIMENT / STUDY, GOAL, MATERIALS, and METHODS.

ARTICLE	EXPERIMENT / STUDY	GOAL	MATERIALS	METHODS
Article Towards innovative food processing of flavonoid compounds: insights into stability and bioactivity Yu Fu, Wenling Liu, Oluigbenega P. Soladoye LWT - Volume 150 • 2021 Export article as CSV	Review of existing literature	To discuss the impacts of structure on the stability of flavonoids	Flavonoids, hydroxyl groups, glycosyl groups, methyl groups, acyl groups, lecithin, Tween-20, metal ions, proteins, dietary fiber, carbohydrates	Reviewed the existing literature on the impacts of different structural features of flavonoids on their stability, including the effects of hydroxyl groups, glycosyl groups, methyl groups, acyl groups, and the influence of external factors like colloidal structures, metal ions, proteins, dietary fiber, and carbohydrates.
	Review of existing literature	To summarize the impacts of different thermal processing methods on the stability and bioactivity of flavonoids	Flavonoids, microwave, radio frequency, ohmic heating	Reviewed the existing literature on the effects of different thermal processing methods like microwave heating, radio frequency heating, and ohmic heating on the retention of flavonoid contents and antioxidant activities in various food sources.

[Export table to CSV](#)

My Library

The [My Library page](#) on **ScienceDirect** is your personal reference space, designed to streamline your reference management. Save and view the documents you discovered on ScienceDirect AI, in one convenient place.

This is a mirror of your **Mendeley** library, which you can access with the same login you use for **ScienceDirect**. Anything you save in **Mendeley** will appear in **My Library** and vice versa.

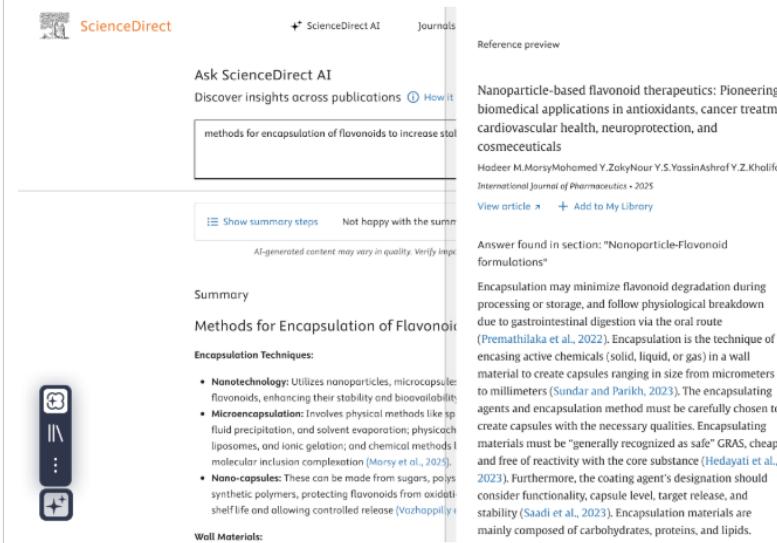
Users can always choose to regenerate the response without optimization.

Understanding your results

ScienceDirect AI uses millions of full-text articles and book chapters to deliver your results.

The **Summary** will provide a response to your question citing specific sources. Every assertion references one or more specific passages and their respective source-documents.

Click on the citations to view **source snippets**, taken directly from the full text of the original document. With one click, you are then redirected to the source content of the snippet.



The screenshot shows the ScienceDirect AI interface. At the top, there's a navigation bar with the ScienceDirect logo, a search bar containing '+ ScienceDirect AI', and a 'Journals' link. Below the search bar, a button says 'Ask ScienceDirect AI'. A text input field contains the query 'methods for encapsulation of flavonoids to increase stability'. To the right of the input field, a 'Reference preview' section displays a snippet from an article about nanoparticle-based flavonoid therapeutics. The snippet includes author names (Hadeer M.Morsy, Mohamed Y.Zaky, Nour Y.S.Yassin, Ashraf Y.Z.Khalifa), the journal ('International Journal of Pharmaceutics'), and the year (2025). Below the snippet are buttons for 'View article' and 'Add to My Library'. Further down, under 'Answer found in section: "Nonoparticle-Flavonoid formulations"', there's a detailed explanation of encapsulation techniques, mentioning nonotechnology, microencapsulation, and nano-capsules. At the bottom left, there's a 'Wall Materials:' section with a small icon. On the far left, a vertical sidebar has icons for a magnifying glass, a list, three dots, and a plus sign.

Expand the "**References from summary**" section to view a generated description of each reference

Navigation

Use the navigation widget to jump to other features on ScienceDirect AI

A. Ask ScienceDirect AI

B. My Library

C. Information, Help, and Frequently Asked Questions

D. Minimize navigation widget



More information

For more information, [visit the support center](#).

[View the FAQs](#)

[View the quick reference guide](#)

[Empowering Research Through Responsible AI on ScienceDirect](#) webinar: Learn about Generative AI (GenAI) developments on ScienceDirect and meet the team enabling researchers to explore, compare, and uncover evidence from deep within peer-reviewed literature.

material used. Understand how specific insights in the document relate to what you need to know. Add these references to your library to read later or copy the citation information.

Rate the quality of the AI-generated snippets using the star-rating – we are working to improve them every day!

[References from summary \(8\)](#)

Oral delivery of hydrophobic flavonoids and their incorporation into functional foods: Opportunities and challenges

Ruvonathi Premothiloka, Ali Roshidnejad, ...
Jaspreet Singh

Food Hydrocolloids • 2022

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Towards innovative food processing of flavonoid compounds: Insights into stability and bioactivity

Yu Fu, Wanning Liu, Olugbenga P. Soladoye
LWT • 2021

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Preparation and characterization of zein-lecithin-total flavonoids from *Smilax glabra* complex nanoparticles and the study of their antioxidant activity on HepG2 cells

Jing Li, Yingxiu Zhang, ... Zhigang Yan
Food Chemistry: X • 2023

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Recent encapsulation techniques for hydrophobic flavonoids utilize wall materials like lipids, polysaccharides, and proteins. The document discusses various aspects of encapsulation systems that improve bioavailability and stability.

How relevant is this answer? [☆](#) [☆](#) [☆](#)

Hydroxyl group modification and physical encapsulation using liposomes can enhance flavonoid stability. The presence of certain food components may negatively impact bioavailability, while others can improve it.

How relevant is this answer? [☆](#) [☆](#) [☆](#)

Chemical modification of flavonoids can improve stability, but safety concerns exist. Nanomaterials like nanoparticles and microcapsules are often used for effective flavonoid delivery.

How relevant is this answer? [☆](#) [☆](#) [☆](#)

Discover related insights, experiments and recommendations for further searching below your Summary.

Develop your AI literacy skills

Gain a deeper understanding of generative AI (GenAI) with Library Connect Academy's [GenAI Literacy Program](#), a self-paced professional development course for librarians.

In three courses, you will learn:

- Key GenAI tools and underlying technologies
- Core benefits and limitations for librarians, students and faculty
- Best practices for using GenAI tools
- Top considerations for choosing GenAI tools

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