

Public Access Search Tips

Simple Search

Type in a word or a phrase and press the **Enter** key or click the **Search** button. Search results appear listing relevant journal articles. You may choose to sort by relevance, or publication date (newest or latest first). To broaden or restrict the search, include fewer or more terms. To retrieve all the items in the database leave the search box blank and click the **Search button**.

Example: *laser*

Retrieves all items that have the term *laser* in any of the fields. The search will automatically also search other forms of your term, such as searching the plural/singular (e.g. laser/lasers) and noun/verb version (e.g. generate and generation)

To search for articles on laser pulses, enter *laser pulses*

Finds documents that include all your search terms, in any order (default is AND).

Phrase searching

Use "*laser pulses*" to find the terms in that specific order, also known as a phrase search.

Boolean Operators (AND, OR, NOT)

Boolean operators may be used to construct searches by using AND, NOT, or OR. If using a Boolean operator it must be in ALLCAPS. Alternatively + and - may be used in place of AND or NOT respectively.

"AND" (also written "+") Searches

By default, the search engine will search all terms as linked by an AND.

These three searches are all the same search:

naval research

naval AND research

naval +research

However *naval and research* is a different search and will only return those items with the terms *naval*, *and*, & *research*.

"NOT" (also written "-") Searches

Used when you want to exclude a term. A search for *naval NOT nuclear* will retrieve all articles with *naval* in any field but not any with *nuclear* in any field.

For example, this query:

research NOT nuclear

States that:

research must be present and *nuclear* must not be present

This same search may be written as *research –nuclear*. If using more than two terms it's best to use parentheses for clarity, see Grouping below.

“OR” Searches

Used when you want to retrieve items with either term A or term B. A search for *naval OR navy* will retrieve all articles with *naval* in any field, as well as any articles with the term *navy* in any field.

It's best to use parentheses when searching with OR, if using more than 2 terms, otherwise known as grouping, unless you want documents that contain only one of the terms.

For example: *naval OR navy OR atmosphere OR water* returns all documents that contain at least one of the words: *naval, navy, atmosphere, or water*; while *(naval OR navy) atmosphere research* returns all documents that contain *atmosphere* and *research* with either *naval* or *navy*; however, *(naval OR navy) (atmosphere OR water)* returns all documents that contain *atmosphere* or *research* with either *naval* or *navy*.

Grouping

Multiple terms or phrases can be grouped together with parentheses, to form sub-queries:

(gas OR air) AND water

States that:

gas and *water* must be present **OR** *air* and *water* must be present

("naval research" OR "air force research") AND laser

States that:

The phrase *naval research* and *laser* must be present **OR** the phrase *air force research* and *laser* must be present.

Proximity searches

While a phrase query (e.g. "john smith") expects all of the terms in exactly the same order, a proximity query allows the specified words to be further apart or in a different order. A proximity search allows us to specify a maximum edit distance of words in a phrase:

"laser acceleration"~5 yields 14 results, whereas the phrase *"laser acceleration"* yields 7 results.

Truncation

Truncation is a technique that broadens your search to include various word endings and spellings. To use truncation, enter the root of a word and put the truncation symbol "*" at the end. The database will return results that include any ending of that root word.

Examples: *child** = child, childs, children, children's, childhood

*genetic** = genetic, genetics, genetically

*lab** = lab, laboratory, laboratories, labrador, labs, labor, laboring, laborers.

Be aware that truncation queries can use an enormous amount of memory and perform badly. Use with caution.

Warning: Using a * at the beginning of a word (e.g. "**ing*") is burdensome, because all terms in the index need to be examined, just in case they match.

Wildcard

Similar to truncation, wildcards substitute a symbol for one letter of a word. This is useful if a word is spelled in different ways, but still has the same meaning. For example, *wom?n* will retrieve both women and *woman*.

Advanced Search

If searching a combination of fields, the default is AND. You may use any of the search strategies available in Simple Search above, within each field of the Advanced Search form.

All Fields

Searches all citation data and the full-text of the journal article.

Title

Searches only **article** titles.

DOI

Searches the DOI of the article.

Article Full-text Only

Searches only the full-text of the journal article and not the citation data.

Citation

Searches all citation fields, including journal article title, authors/creators, journal name, issue and volume number, keywords, abstract, sponsoring organization, and author affiliations, if available.

Creator/Author

Searches all author or creator names, including ORCID if available.

Journal Name

Searches **publication** title.

Sponsoring Org

Searches funding organizations as listed in CrossRef data.

Publication Dates

Searches for articles that were published within a specified time frame.

Select the starting date or ending date from the drop down calendar OR type MM/DD/YYYY, e.g. 1/1/2011

Examples:

Publication From: *1/1/2011* retrieves all articles published on or after 1/1/2011

Publication To: *1/1/2011* retrieves all articles published on or before 1/1/2011

Publication From: *1/1/2011* and Publication To: *1/1/2016* retrieves all articles published on or after 1/1/2011 until 1/1/2016.