The intelligent online tool for scientific and technical research

User guide

www.theiet.org/inspecdirect
About Inspec Direct

Inspec Direct is a powerful research tool that provides access to the Inspec Database via the Web. Designed specifically for science and engineering researchers, students, and professionals from all backgrounds, Inspec Direct allows you to quickly find and analyse information from your desk.

The Inspec Direct search interface has a number of search options. These are accessed via tabs across the top of the screen. These allow you to choose between Quick Search, Advanced Search and Expert Search options and also to search Inspec’s Thesaurus, Classification scheme and List of Journals to find terms to enhance search strategies. A comprehensive context-sensitive help system is available throughout Inspec Direct.

Key features:

- Inspec, Inspec Archive (1898 – 1968) and Ozone files
- Three different search levels: Quick, Advanced and Expert
- Search Aids and Index Browser to help pinpoint relevant search terms
- A range of sort and record display options
- Analysis of search results
- Export search results in multiple formats
- Updated weekly
- Personalisation features
- ‘Custom Alerts’ feature
- DOI linking to full-text articles
- Provides usage statistics
- OpenURL compatible
- Metasearch compatible

With Inspec Direct, users can find the relevant information to:

- Keep track of latest research
- Discover new product information
- Forecast technology and monitor industry trends
- Gain competitive intelligence
- Evaluate prior art for a patentability assessment

Inspec is the leading English language abstracting and indexing service providing information from the world’s literature in:

- Physics
- Electrical engineering
- Electronics
- Communications
- Control engineering
- Computing
- Information technology
- Manufacturing
- Production engineering
- Mechanical engineering

Inspec scans over 4,000 journals and 2,000 conference proceedings, as well as numerous books, reports and dissertations, adding 700,000 records to the database each year. The database dates back to 1969 and contains nearly 11 million records.
The Inspec Archive

The Inspec Archive contains the historical scientific records produced for the Science Abstracts series of journals during the period 1898-1968, which were the precursor to the Inspec Database. Initially they were available only in printed format, but the entire collection has been digitised and is available on Inspec Direct.

The Archive contains:
- Over 873,700 records
- Longer abstracts than today and tables, graphs and figures from the original source document in many cases
- The original value-added indexing and classifications
- Enhancements in the form of the nearest equivalent current Inspec Controlled Indexing Terms, Inspec Thesaurus and Inspec Classification Codes
- Conference proceedings, books, journals, reports and dissertations

The fully searchable electronic Inspec Archive Database represents the 176 volumes (and over 140,000 pages) of the printed Science Abstracts series of journals.

Customer support

A range of training options is available to help you get the best out of Inspec Direct, including an international programme of workshops, tailored in-house training or remote training sessions via the Internet.

To request training or to discuss your needs further please contact your local Inspec office.
Getting Started

Searching Inspec Direct

Register and log in - To create a personal account to access a host of personalisation features (see the Personalisation page 12 for details of these features).

To search choose one of the 3 search tabs, Quick, Advanced or Expert Search. We recommend that you use Advanced Search which provides the best balance of ease of use and powerful functionality.

Online Help

Online help is available from any page by clicking the ‘Help’ button located in the upper right corner.

Detailed context-sensitive help is also available for each function. Click on any of the small question-mark icons on the screen to access help on the relevant topics.

Search Tips

On the Advanced Search and Expert Search pages, there is a comprehensive list of search tips which can be accessed using the hyperlinks.

Inspec Database Record

A typical Inspec record contains an English language title and descriptive abstract, together with full bibliographic details to enhance search elements such as the Inspec Thesaurus, Classification Codes and Treatment Codes. Each of these are explained in detail on later pages.

Where available there are links to the full text article on the publisher’s website via the DOI (Digital Object Identifier) link (see page 18).
Searching

Introduction
By using a combination of keywords (words to search for) and Boolean operators (AND, OR, NOT), you can narrow or broaden your searches to include or exclude particular concepts.

The Quick Search form will search all fields. If you wish to search in specific fields, you should use the Advanced Search or Expert Search pages.

Search Operators
The Inspec Direct search operators are used to link search terms or fields. Depending on the operators used, your search will be broadened or narrowed:

- **OR** operator finds records that contain at least one or more of the search terms. It is used to broaden a search.
- **AND** operator finds records that contain all of the search terms and thus is used to narrow a search.
- **NOT** operator finds records that contain one term but not another. It is used to narrow a search by excluding specific terms.
- **<NEAR>** operator locates records in which the search terms are in close proximity within the same bibliographical record. This operator can be used to connect words or phrases within a search field but not between search fields.

Example
If you enter (mercury <NEAR> liquid) NOT planet into the ‘SEARCH FOR’ text box, the records retrieved will be those that contain the word mercury near to the word liquid, but which do not contain the word planet.

Searching Inspec’s Value-Added Indexes
These include the following fields:

- Controlled Indexing (Thesaurus Terms)
- Classification Codes
- Specialised Indexing Fields
  (Chemical, Numerical & Astronomical)
- Uncontrolled vocabulary
- Treatment types
See the relevant pages 16-17 in this guide for more information.

Truncation/Wildcard
Truncation * serves as a substitute for zero or more characters. Only right hand truncation is allowed.

Example
To search for any word beginning with ‘comput’ (e.g. computer, computing, computerised, computation), enter comput* into the text box.

Wildcard ? can be used to substitute a single character.

Example
To search for either computerized or computerised, you could enter computeri?ed into the text box.

Literal Searching
In addition to their meaning within a record, some words also have a meaning in terms of searching, such as the word ‘and’, which is used as a Boolean operator. The word ‘and’ also occurs in some thesaurus terms, proper names, etc. There are also other common words (stop words) and punctuation – that cannot be searched for directly.

Except for the text fields, file and abstract, to search for a phrase including the word ‘and’, you should enclose the phrase in double quotes, e.g. “town and country planning”.

Searching for Bibliographic Information

Example
To search for the author A.C. Smith, enter “Smith, A.C.” into the text box (including the quotation marks, to ensure that only those records with the author Smith, A.C. are retrieved, while those records with Smith and A.C. mentioned separately are excluded).
Advanced Search

Advanced Search allows greater flexibility in searching than Quick Search. It is possible to specify the fields to be searched and to restrict the results set using criteria such as time range and language of original document.

Use the "SEARCH INDEXES" boxes to select which fields you wish to search. If you click on the drop-down arrow next to the field, a full scrollable list of the search fields available will be displayed.

**Browse Index**

For some fields, browsable indexes are available to assist in constructing a search (those fields for which index browsing is available are highlighted).

- Click on the 'Browse Index' button to display the Index’s dialogue box.
- Type the first few letters of the phrase you wish to search.
- Click on the 'Browse' button. Tick the boxes corresponding to the terms you wish to include in your search.
- Click on 'Go to Search' to paste those details into the 'SEARCH INDEXES' boxes on the main screen.

**Limit By**

You can restrict the results set using criteria such as time range, language of original document, etc.

**Sort By**

You can sort your search results using various criteria, e.g. publication date, relevance, document type, author name and accession number.

**Example:**

Let’s assume you are interested in articles of an experimental nature on the subject of viscoelasticity that were published in conferences which took place in 2007.

1. Enter viscoelastic* into the first SEARCH FOR box.
2. Change the next drop-down box from ‘Basic Index’ to ‘Conference Year’ and enter 2007 into the corresponding SEARCH FOR box.
3. In the ‘LIMIT BY’ section, change the ‘All Treatment types’ drop-down to Experimental.
4. Then simply click on the ‘Search’ button.
Quick Search

The **Quick Search screen** is designed for those who want to carry out a simple search. Simply enter any combination of keywords you wish to search for in the **“SEARCH FOR”** text box and click on the **“Search”** button.
Expert Search

**Expert Search** is the most powerful and flexible search option. Queries are constructed in a single dialogue box using the Inspec Direct command language. Searches can be easily restricted to particular time ranges or updates using the ‘**LIMIT BY**’ pull-down menus, and search results can be sorted in various ways.

**Build From Indexes**

It is possible to construct your search string from the browsable indexes that are available, by clicking on the ‘**Build from Indexes**’ button. Alternatively, you can type your search criteria directly into the box, e.g.:

(data-analysis <in> CT) AND (b8* OR c7410B) <in> CC

Here, ‘CT’ is the two-letter search code for ‘Controlled Term’ and CC is the code for ‘Classification Code’. See page 19 for a full list of all the search codes.
Managing Your Search Results

Once you have created a set of results there is a variety of management options that you can use. Use the check boxes for selecting records that you wish to keep.

Display Formats
This drop-down box enables you to select the record format in which your search results are displayed. The record formats that available are:
- Headline details only
- Brief bibliographic details
- Abstract plus bibliographic details
- Extended details (including classification and indexing)

Results per Page
This drop-down box enables you to select how many search results you want to be shown on each screen.

Save Records*
You need to be logged into your personal account to save records on the Inspec Direct server.

Download
Enables you to save records on your own computer. The formats available are:
- Text
- PDF
- RIS
- RefWorks
- BibTex

Print
Enables you to print records in any of the four display formats.

Email
Enables you to email records either to yourself or to others.

Analyse
Enables you to create charts, tables and/or download the data in CSV (comma-separated values) format.

Refine Results
Enables you to refine your search results using an exhaustive list of criteria.

Search History
All successful searches are stored in a Search History for the duration of your current session. You can:
- Display the search criteria for your previous searches
- Re-run searches
- Edit searches
- Save searches
- Create an alert

Sort By
You can sort your search results using various criteria e.g. relevance, publication date etc.

* You need to be logged into your personal account
Data Analysis

Inspec Direct contains a sophisticated tool to allow two types of analysis of search results:

- Ranked list (e.g. the number of articles written by given authors)
- Two-field analysis (e.g. the number of articles per year per Classification Code)

Analysis results can be downloaded in CSV (comma-separated values) format for further evaluation.

By clicking on the ‘Analyse’ icon which appears on the Search Results, Selected Records, Current Record and My Records/My Folders pages, you can analyse the list of record(s) that are displayed there.

- **Chart Type.** Choose a chart or a type

Click on the “Create Report” button to use the analysis results in a chosen chart type. From here you can:

- **Download CSV**. Click on this button and a report is generated in CSV format, which you can download to your computer
- **New Report**. Click on this button and the previous dialogue page is displayed so that you can create another report
- **Create Chart**. Click on this button and a chart will be displayed showing the analysed results.

* You need to be logged into your personal account
Creating Automated Alerts

You can keep yourself up to date by saving your search and sending new results to your email box once a week, as more records are added to the Inspec Database.

The Alert Preferences page allows you to view and maintain your email alert preferences and Address Book. See the Personalisation section of this guide for further information.

Setting up Searches for Alerts*

1. Click on the ‘Save Search’ button.
2. A dialogue box will be displayed in which the name of the search can be changed to a search name of your choice.
3. Click on the Alert Frequency drop-down list to change the setting to weekly.
4. Click on the ‘Confirm’ button to save the search. Alerts will normally only be sent to yourself.
5. To add further recipients:
   Click on the My Searches tab.
   Click on Self only in the Alert Recipients column of the search. A dialogue box lists the email addresses from the Address Book. You can add or remove recipients.

* You need to be logged on to your personal account
Personalisation

It is a good idea to log in and create your own user space – this gives access to a whole host of features. If you have not already set up a personal account you must register. Click on the Register link under the Login box on the Inspec Direct homepage. Once you login, the following tabs can be accessed from the top of any Inspec Direct page.

My Searches
Saved Searches
You may save a search by clicking on the ‘Save Search’ button which appears on the Search Results, Selected Records, Current Records and Refine Results pages.

Shared Searches
This section is used to see which searches you and other users have made available to all users.

Search History
By default, a maximum of 25 searches will be displayed, although you can re-set this maximum to 10, 50 or 100 on the Search Preferences page.

Combine Searches
You may combine searches that are listed in My Searches using Boolean operators.

My Records
My Folders page
This page allows you to view and maintain the records previously saved to your folders.

Current Record page
This page is accessed when you click on a record on the My Folders page. The page allows you to view the details for a record which you have previously saved to your folders.

My Inspec
Personal Information page
This page allows you to view and maintain your Personal Information details, including:
- Your password
- Your email address

Search Preferences page
This page allows you to view and maintain your search page preferences, including:
- How many searches you wish to see in your ‘Search History’ list
- The default settings for ‘LIMIT BY’ and ‘SORT BY’

Alerts Preferences page
This page enables you to choose:
- Default alert setting when saving a new search. All options are given here
- The maximum number of records to send in an email alert
- To be alerted even if your search does not retrieve any new records

Address Book
This section of the Alerts Preferences page enables you to collaborate with your colleagues and to add or remove email addresses from the ‘Address Book’.

You can use the ‘Address Book’ to maintain a list of email addresses which you wish to send alerts

A maximum of 20 email addresses may be entered into your ‘Address Book’

Display Preferences page
This page allows you to view and maintain your record display page preferences, including:
- How many records you wish to display on the Search Results page
- The default display formats for the Search Results page, the Selected Records page and the Current Record page
- The file format in which search results records should be exported
- Choosing the record display format in which search results records should be printed, emailed and exported.
Search Aids: Thesaurus

Inspec Controlled Indexing Terms

Controlled terms are indexing terms that are applied to each document in the Inspec Database from a dynamic and evolving controlled vocabulary of over 10,000 scientific terms called the Inspec Thesaurus. These controlled terms provide accuracy and quality to search results.

The Inspec Thesaurus is thus a subject key to the Inspec Database. Each Inspec record is typically assigned several Controlled Indexing Terms. These are searchable in the Controlled Indexing Terms field.

From this page, it is possible to search for controlled terms. To find suitable terms, click on the ‘Search Thesaurus’ tab under the Search Aids. Enter the term to be searched in the dialogue box. Once you have entered a search term in the box, you can then select whether to:

- Search the Thesaurus to produce a list of terms which contains both the entered search term and also any Controlled terms that describe similar aspects
- Limit the search indexing to produce a list containing the exact search term (tick the box - ‘Search for exact word(s)’)
- Limit the search to produce a list of terms that are actively used at present (tick the ‘Search current terms only’ box)

Click on the ‘Search Thesaurus’ button to begin your search.

A list of terms is displayed under Search Results. Click on any of these to display details about that term and its associated terms. All such terms are hyperlinked, so you can click on them directly to navigate around the Thesaurus.

When you have found a term relevant to your search, click on the ‘Select’ button.

When you have selected all the terms required for your search, click on ‘Go to search’. The selected terms are automatically entered into the ‘SEARCH FOR’ text box.

You may then edit the contents of the text box (e.g. by changing the default OR to AND), and then click on the ‘Search’ button to search for Inspec records containing your selected Controlled Indexing terms.
Search Aids: Classification

The Inspec Classification tool is a powerful search aid which can enable you to improve your search strategy quickly. In particular, it will enable you to:

- Familiarise yourself very quickly with the overall subject coverage by browsing through the main subject areas
- Pinpoint your areas of interest by browsing through any of the sub-sections
- Identify Classification Codes of interest to you by searching for keywords within the Classification heading

The Inspec Classification is divided into five sections. Codes begin with A, B, C, D and E, where:

- A = Physics
- B = Electrical Engineering and Electronics
- C = Computers and Control Engineering
- D = Information Technology
- E = Mechanical and Production Engineering

At least one Classification Code is assigned to the main subject matter of each record, and additional codes may be assigned for subsidiary subjects. Codes are always assigned to the most specific level possible and can be assigned from one or more of the five sections of the Inspec Database.

**Browsing the Classification**

- To browse the Classification scheme (by homing in on your area of interest via sub-sections), click on the 'Browse Classification' tab under Search Aids, then on one of the + toggles to expand the database section in which you are interested.

- Keep expanding the hierarchy in this way until you reach the code(s) you are interested in.

- Tick the boxes next to those codes you wish to search for and then click on the 'Select' button. This will enter the codes you have selected into the 'Term(s) selected' box below.

- Finally, click on the 'Go to Search' button to run the search.

**Searching the Classification**

To search for specific Classification Codes, click on the 'Search Classification' tab and enter a search term (i.e. a word or phrase from the Classification headings) into the text box.

For example, entering the word 'database' into the 'SEARCH FOR' box will show all the Classification Codes that contain this word in the Classification heading.
Search Aids: List of Journals

The Inspec List of Journals contains a list of all the journals scanned from 1969 onwards for inclusion in the Inspec Database.

The Search List of Journals has great functionality. You can search the database to find such things as:

- Journals currently covered by Inspec
- Journals abstracted completely by Inspec
- The coverage time span of journals previously scanned
- Former titles of journals
- The language in which articles are published
- The country of publication
- Publisher contact details

The Search List of Journals has a choice of the following searchable fields:

- Global Word Search: Searches all fields of the Journals database.
- Country of publication: Contains the country in which the journal is published.
- CODEN: Contains the CODENs, where they exist, for all journals covered by Inspec.
- ISSN: Contains the International Standard Serial Numbers, where they exist, for journals covered by Inspec.

- Journal title: This field includes all current titles and also titles no longer covered by Inspec.
- Language: Indicates the language in which journal articles and/or article summaries are written.
- Publisher: Contains the publisher name for each journal.
- URL: Contains the journal URL (Uniform Resource Locator) for electronic journals on the World Wide Web.

Enter the term in the appropriate search box and click ‘Search Journals’. Clicking on any journal titles that are displayed in the list of Search Results on the Search List of Journals page to view details for that particular journal, including the journal’s status (i.e. whether the journal is currently covered by Inspec), and the publisher.
Specialised Indexing

Inspec’s Specialised Indexing fields are designed to overcome problems associated with searching Chemical, Numerical and Astronomical data contained in the database. They are available in both Advanced Search and Expert Search. All search examples below are carried out using Advanced Search.

Chemical Indexing

Search for chemical information in fields as diverse as semiconductors, battery technology and medical devices etc. Inspec’s unique Chemical Indexing allows you to effectively search for this information by using chemical formula and optional roles.

Use element el, binary bin and system ss roles to specifically search for elements, compounds and blends.

Use interface system int, surface or substrate sur, adsorbate ads and dopant dop roles to search for substances with a specific function in solid state physics.

To search using chemical indexing select Chemical Indexing from the drop down menu of search fields; Enter the chemical formula you wish to search, optionally with roles; and click on ‘Search’.

Example

Find records where elemental Silicon plays an important role.
- Enter Si/el in the search box.

Find records where Aluminium Gallium Nitride plays an important role.
- Enter AlGaN/ss in the search box

Find records where the element Erbium is used as a doping agent.
- Enter Er/el AND Er/dop in the search box

Numerical Data Indexing

Inspec’s numerical data Indexing allows you to search effectively for numerical data independently of the author’s own description. This overcomes problems that result from the variety of ways in which authors may express particular values, quantities and units. Examples of these problems include; temperature, which may be expressed in units of Kelvin, Fahrenheit, degrees centigrade etc.; and power output, which may be expressed in mW, W, KW, MW etc.

Inspec’s Numerical Data Indexing standardises the values and units that a range of quantities are expressed in so that accurate retrieval of this type of information can be achieved.

To search numerical data indexing, select ‘Numerical Data Indexing’ from the drop down menu of search fields. From the additional drop down menus that appear, select the quantity to be searched (e.g. Power) along with the units of measurement to be used (e.g. Watts). Enter the desired range of values; and Click on ‘Search’.

Example

Find references to power stations generating between 20 and 30 MW.
- Select ‘Power’ and ‘Watts (W)’ from the drop-down menu.
- Enter 20000000 in the ‘From’ box and 30000000 in the ‘To’ box.
- Click on ‘Search’.
**Astronomical Object Indexing**

Search for named or numbered astronomical objects from outside the solar system using Inspec’s Astronomical Object Indexing. A searchable index is available.

Designations are of the following types:

- **Name-based acronyms.** For example, LMC is an acronym for the Large Magellanic Cloud. Objects in constellations, such as R Sct, appear with the IAU-approved three-letter abbreviation for the constellation.

- **Catalogue-based acronyms.** A designation containing an acronym for the catalogue followed by the catalogue entry number.

- **Positional information only.** For example, 013022+30233.

To search Astronomical Object Indexing, select ‘Astronomical Object Indexing’ from the drop down menu of search fields. Enter a designation in the search box. Click on ‘Browse Index’ and select entries from the list of terms displayed. Click on ‘Go to Search’ to return to search page.

**Example**

Find records containing information specific to the binary star system Algol.

Algol has several catalogue designations Beta Per, HIC 14576, HD19356 etc. For completeness it is necessary to search all of these.

1. Click on ‘Browse index’.
2. Enter HIC in the text box and click ‘Browse’.
3. Select HIC 14576 from the list and repeat 2 for the other catalogue designations.
4. Once all the desired terms are selected, click on ‘Go to Search’ to return to the Advanced Search page and click on ‘Search’.

**Further Information**

For further information on Inspec’s Specialised Indexing fields, see www.theiet.org/publishing/inspec/support
The Inspec Database contains several million links to full-text documents where they are available via the Web (provided that you have access to the publisher’s Web site).

In any record, simply click on the link in full text and you will be taken to the full document. (DOI refers to the Digital Object Identifier that is used to retrieve the full-text document).

Some institutions also offer links to local holdings using link server (resolver) to access full-text content; see your librarian for details.

If no full-text link is available, ask your librarian for details of document delivery options.
Search Fields

Fields that are searchable within Inspec Direct include:

**Bibliographic Fields**
- **Accession Number (AN):** Unique identifier for record
- **Affiliation (AF):** Author's or editor's institution for Journal, Article and Book
- **Affiliation Country (AC):**
- **Title (TI):**
- **Author (AU):**
- **Book Title (BT):**
- **CODEN (CO):**
- **Conference Country (MC):**
- **Conference Dates (MD):**
- **Conference Location (ML):**
- **Conference Sponsors (SP):**
- **Conference Title (MT):**
- **Conference Year (MY):**
- **Contract Number (RN):**
- **Corporate Source (CS):** Includes Affiliation (AF), Issuing Organisation (IO) and Patent Assignee (AS)
- **Country of Publication (CP):**
- **Date Filed or Submitted (SD):**
- **Document Collection URL (UR):**
- **Document Type (DN):**
- **Document Type Code (DT):**
- **DOI (DO):**
- **Editor (ED):**
- **ISBN (BN):**
- **ISSN (IS):**
- **Issue Number (IN):**
- **Issuing Organisation (IO):** Name of the issuing organization for Dissertation, Report and Standard
- **Journal Title (JT):**
- **Language (LA):**
- **Original Patent Application Number (PN):**
- **Page Numbers (PG):**
- **Patent Assignee (AS):**
- **Patent Data (PA):** Includes Patent Numbers (PN), Assignee (AS) and Country of Patent (CP)
- **Patent Number (PN):**
- **Publication Date (PD):**
- **Publication Title (HT):**
- **Publisher (PU):**
- **Report Number (RN):**
- **Report Title (RT):**
- **SICI (SI):**
- **U.S. Government Clearing House Number (RN):**
- **Update (UD):** The Inspec Database issue date
- **URL (UR):**
- **Volume (VO):**

**Indexing Subject Fields**
- **Abstract (AB):** Summary of article's content; written by the document's author or, created, edited or translated by Inspec editors
- **Astronomical Object Indexing (AO):** Controlled designations for astronomical objects discussed in the document
- **Basic Index (BI):** Includes Title (TI), Abstract (AB), Controlled Indexing (CT) and Uncontrolled Indexing (UT)
- **Chemical Indexing (CI):** Standardised data for inorganic substances and their specific roles
- **Classification (CC):**
- **Controlled Indexing (CT):** Subject headings assigned by Inspec editors, which provide consistent and precise access to search topics
- **Numerical Data Indexing (various fields):** Structured numeric data from the document, such as experimental parameters
- **Primary Classification (FC):** Most significant Classification Codes for that item. Subfile (SF): One of the five sections of the Inspec Database, A, B, C, D, or E
- **Treatment Codes (TC):** indicate the approach taken to a subject by the author of a source document
- **Uncontrolled Indexing (UT):** Free language- words or phrases expressing significant concepts in the original document

**Note:** The two-letter codes given in parentheses above are the search codes that you can use when searching on the Expert Search page.