

**Description**

Inspec®, a bibliographic database, is comprised of abstracts and specialized indexing of the world's quality research literature in the fields of physics and engineering from journals and serials, conference papers and proceedings, books and book chapters, and technical reports. Some standards, dissertations and a small number of UK and US patents (published between 1968 and 1976) are included. All abstracts are in English; author-prepared abstracts are used when available. The database is produced by the Institution of Engineering and Technology (IET).

**Subject Coverage**

Inspec covers five main subjects, organized by Subfile.

**Subfile A - Physics:** elementary particles and fields, atomic, molecular and nuclear physics, phenomenology, fluids, plasmas and electric discharges, condensed matter: structure, thermal and mechanical properties, electronic structure, electrical, magnetic, and optical properties, cross-disciplinary physics and related areas, geophysics, astronomy and astrophysics.

**Subfile B - Electrical engineering and electronics:** engineering mathematics, materials science, circuits and circuit theory, components, electron, magnetic and superconducting devices and materials, optical materials and applications, electro-optics and optoelectronics, electromagnetic fields, communications, instrumentation, power systems and applications.

**Subfile C - Computers and control:** management topics, systems and control theory and technology, numerical analysis and theoretical computer topics, computer hardware, software and applications.

**Subfile D - Information technology for business:** management aspects, applications, systems and equipment, and office automation for communications and computing.

**Subfile E - Mechanical and production engineering:** general topics in manufacturing and production engineering, manufacturing and production, engineering mechanics, and industrial sectors.

**Date Coverage**

- 1898 - 1968
- 1898 - present
- 1969 - 1982
- 1969 - present
- 1983 - present

**Update Frequency**

Weekly

**Geographic Coverage**

International

**Document Types**

- Reports
- Book Chapters
- Books and Monographs
- Conferences, Symposia, Meetings
- Journal Articles
- Theses and Dissertations
- Patents
- Standards

## Publisher

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Notes:

Field codes may be used in searches entered on the Basic Search, Advanced Search and Command Line Search pages. The tools available for searching are [Search Fields](#), [Limit Options](#), [Browse Fields](#), [Thesaurus](#), ["Narrow Results By" Limiters](#), [Look Up Citation](#), [Chemical Indexing Roles](#), and [Numeric Indexing](#). Each is listed separately below. Some data can be searched using more than one tool.

## SEARCH FIELDS

Field	Field code	Example	Selectable from Advanced Search Form drop-down menu	Available as Limit Option	Available Look up / Browse	Displayed in Document View	Description and Notes
Abstract	AB	ab(colloid*) ab(hydrophobic AND colloid*) ab(hydrophobic NEAR/3 colloids) ab("hydrophobic colloids")	Yes	Yes	No	Yes	
Accession number	AN	an(12177306)	No	No	No	Yes	A unique document identification number assigned by the information provider.
All Fields	ALL	all(si near/5 "glass substrates")  all(Takahashi OR Berntzen)	Yes	No	No	Yes	Editor names may also be search using this tag
Astronomy indexing, Astronomical Object Indexing	ASI	asi("ngc 3393") asi(3393) asi("IRAS 18264-1152" OR "IRAS 05358+3543") asi("18264-1152" OR "05358+3543")	Yes	No	No	Yes	Available in some records from 1995 on.
Author	AU	au("Aitken, R")	Yes	No	Yes	Yes	Includes all Author names.  Author name is searched with an implied proximity operator of NEAR: peter smith-jones" is searched as "peter near/1 smith near/1 jones"
First author	FAU	fau("Aitken, R")	No	No	No	Yes	
Author affiliation	AF	af(cal* inst* of technol*) af(univ* PRE/2 michigan)	Yes	No	No	No	Includes as much data as is available in the original document, such as organization, department, address, city, state, country, author email, etc.
Chemical indexing	CI	ci("si-al-au int") ci("ce - el") ci("Si - int" AND "Si - el") ci(fe and si) ci(gaas bin)	Yes	No	No	Yes	See also Substance. Displays with label Substance. Available in some records from January 1987 on, chemical indexing searches both the substance(s) and/or role(s). Refer to "Chemical Indexing Roles" below.
Classification	INSPCC	inspcc(A2000*) inspcc("nuclear physics")	Yes	No	Yes	Yes	

Major classification	MJCC	mjcc("Magnetic thin film devices") mjcc(B3120N)	Yes	No	Yes	Yes	Displays in Classification field
CODEN	CD	cd(TACLEK)	No	No	No	Yes	
Conference information	CF	cf("xii international scientific colloquium")	Yes	No	No	Yes	
Conference country	CNT	cnt(Brazil)	No	No	No	Yes	
Conference event end date	EVDT	evdt(2011-08-05)	No	No	No	Yes	
Conference event start date	CDT	cdt(2011-07-31)	No	No	No	Yes	
Conference location	CG	cg("San Jose, CA")	No	No	No	Yes	
Conference title	CFTI	cfti(2011 AND "Neural Networks")	No	No	No	Yes	
Digital object identifier	DOI	doi(10.1109/TMAG.2011.2147287)	No	No	No	Yes	
Document title	TI	ti(nanotubes) ti("carbon nanotubes") ti(nanosheets AND nanotubes)	Yes	No	No	Yes	
Document treatment	DTX	dtx(P) dtx(Practical) dtx(X and T) dtx(experimental and theoretical)	No	Yes	No	Yes	First used in 1971, multiple treatment codes may apply to a single document.
Document type	DTYPE	dtype(journal pre/1 paper*) dtype("conference paper") dtype(report not "report section") dtype(dissertation)	No	Yes	No	Yes	
Editor							See All fields
Identifier (keyword)	IF	if("electric vehicle")	Yes	No	No	Yes	
Images		ftany(yes)	No	No	No	Yes	A small number of images are present in records from 1897 to 1968. Records with images may be identified by adding ftany(yes) to the query.
International patent classification code, IPC8	IPC	ipc(G11C15/00)	No	No	No	Yes	Present in records after 1969. Search without spaces. Use of truncation may not retrieve all results.
ISSN	ISSN	issn(0177-798X) issn(0177798X)	No	No	No	Yes	Also searchable in the Look Up Citation tool.
Issue	ISS	iss(1)	No	No	No	Yes	Also searchable in the Look Up Citation tool.
Language	LA	la(French)	No	Yes	No	Yes	LA searches for language of original publication; all Inspec abstracts are in English.
Last update date	LUPD	lupd(20111021) lupd(>=20111015)	No	Yes	No	Yes	

		lupd(20110901:20110930)					
Number of references	NR	nr(49)					
Numeric indexing	NI	ni(2.5e4) ni(6.0e+00)	Yes	No	No	Yes	Available in some records from February 1987 on.  Numeric Indexing – NI searches a single numeric value of any type.  Specific numeric indexing fields are available for more precise retrieval. Refer to <i>Numeric Indexing</i> below.
Pagination	PG	pg(61-79) pg(61)	No	No	No	Yes	Also searchable in the Look Up Citation tool.
Publication date	PD	pd(20110415) pd(20110401-20110415)	No	Yes	No	Yes	
Publication year	YR	yr(2011) yr(2010-2011)	No	Yes	No	Yes	
Publication title	PUB	pub("Applied Mathematics and Computation") pub(Nature)	Yes	No	Yes	No	
Publisher name	PB	pb(ACM) pb(Springer*) pb(Wuhan Near/2 University)	No	No	No	Yes	For Dissertation records the publisher field contains the school name.
References cited	REF	ref("Abraham, J." AND 2007 AND Science)	No	No	No	Yes	
Report number	DISNUM	disnum(iet-tv.44.9563)	No	No	No	Yes	
Subfile	SU	su("Computing and Control") su("Electrical and Electronic Engineering") su("Information Technology for Business") su("Mechanical and Production Engineering") su(Physics)	No	Yes	No	Yes	Multiple Subfiles may apply to a single record.
Subject	SU	su("wind turbine")	Yes	No	No	Yes	Displays with label "Identifier/keyword"
Substance	SUBST	See also Chemical Indexing, CI. subst("si-al-au int") subst("ce - el") subst("Si - int" AND "Si - el") subst(fe and si) subst(gaas bin)	Yes, as CI	No	No	Yes	See also Chemical Indexing, CI.  Available in some records from January 1987 on.  Chemical indexing is structured to search both the substance(s) and/or role(s). Refer to "Chemical Indexing Roles" below.

Summary Language	SL	sl(english)	No	No	No	Yes	Language of abstract. All abstracts are in English.
URL	URL	url(http://www.dlib.org/dlib/december02/rauber/12rauber.html) av(http://www.dlib.org/dlib/december02/rauber/12rauber.html)					Also included using AV
Volume	VOL	vol(91)					Also searchable on the Look Up Citation page.
<b>Patent information is relevant for a small number of US and GB patents published between 1968 and 1976</b>							
Patent application date	PAD	pad(1972-10-04)	No	No	No	Yes	
Patent assignee	AP	ap(otis) ap("otis elevator") ap("Thomson CSF")	No	No	No	Yes	
Patent priority application number	PAN	pan(191677)	No	No	No	Yes	
Patent publication date	PDA	pda(1975-07-30)	No	No	No	Yes	
Patent publication number	PN	pn(1407517) pn(1165196)	No	No	No	Yes	
Patent publication country	PC	PC(UK) PC(USA)					

## LIMIT OPTIONS

Limit options are quick and easy ways of searching certain common concepts. Check boxes are available for:

### Abstract included

Short lists of choices are available for:

### Document type, Language of original publication, Document treatment, Subfile

**Date limiters** are available in which you can select single dates or ranges for date of **publication**.

## BROWSE FIELDS

You can browse the contents of certain fields by using Look Up lists. These are particularly useful to validate spellings or the presence of specific data. Terms found in the course of browsing may be selected and automatically added to the Advanced Search form. Look Up lists are available in the fields drop-down:

### Author, Classifications, Major Classifications, Publication title

## THESAURUS

The Inspec Thesaurus is available by clicking on the “Thesaurus” hyperlink on the right-hand side of the Advanced and the Command Line search pages. Thesaurus terms may be searched within the thesaurus, then selected to be added automatically to the search form.

### “NARROW RESULTS BY” LIMITERS

When results of a search are presented, the results display is accompanied by a list of “Narrow Results by” options shown on the right-hand panel. Click on any of these options and you will see a ranked list showing the most frequently occurring terms in your results. Click on the term to apply it to (“narrow”) your search results. “Narrow Results by” Limiters in Inspec include:

**Classification, Subject, Document type, Language of original publication, Publication title, Publication date**

### LOOK UP CITATION

If you need to trace a particular bibliographic reference, use the Look Up Citation feature. Find a link to this towards the top left-hand corner of the Advanced Search page; click this and you will go to a form where you can enter any known details of the citation, including document title, author, journal name, volume, issue, page, publication date, ISSN.

### CHEMICAL INDEXING ROLES

The following roles are searchable:

ADS	Adsorbate or any sorbate (i.e., any species being (ad)sorbed onto a substrate)
BIN	Binary system (2 elements, whether compound or alloy, and regardless of the relative proportions of the two)
DOP	Dopant
EL	Element
INT	Interface system
SS	System with three or more components
SUR	Surface or substrate

### NUMERIC INDEXING

Numeric data, such as temperature, pressure, frequency, etc., are indexed for many records added to Inspec from February 1987 on. The field Numeric Indexing – NI, selectable from Advanced Search Form drop-down menu, searches a single numeric value. For more precise retrieval the following specific numeric indexing fields, shown with field code, units of measure, and examples, are available:

Field	Field code	Example
A single numeric value, any type	ni	ni(2.00E+06) , ni(2)
Numeric indexing type	nitype	nitype(altitude), nitype("Apparent power"), nitype("galactic distance"), nitype("electron volt energy"), nitype(mass not "stellar mass"), nitype(resistivity), etc.
Age (yr; Year)	niag	niag(2 - 5)
Altitude (m; Meter)	nial	nial(2E4 - 9E5)
Apparent power (VA; Volt-amp)	niap	niap(3E6)
Bit rate (Bit/s; Bits per Second)	nibi	nibi(64000)
Bandwidth (Hz; Hertz)	nibw	nibw(4.0E+08)
Byte rate (Byte/s; Bytes per Second)	niby	niby(10E6)
Capacitance (F; Farad)	nica	nica(3.0E-11)
Conductance (S; Siemens)	nicd	nicd(1.0E-07 - 1.0E-04)
Computer execution rate (IPS; Instructions/Second)	nice	nice(1E7)

Computer speed (FLOPS)	nicm	nicm(1.5E+10)
Current (A; Ampere)	nicu	nicu(5.6E-03)
Distance (m; Meter)	nidi	nidi(0.002), nidi(2E-03)
Depth (m; Meter)	nidp	nidp(2E4 - 9E5)
Efficiency (Percent)	nief	nief(1.0E+01), nief(10)
Electrical conductivity (S/m; Siemens per Meter)	niel	niel(1.0E+01)
Energy (J; Joule)	nien	nien(0.5)
Electrical resistivity (ohmm; Ohm meter)	nier	nier(5.0E-03), nier(0.005)
Electron volt energy (eV; Electron Volt)	niev	nien(1.07 - 1.82)
Frequency (Hz; Hertz)	nifr	nifr(5.2E+09)
Gain (dB; Decibel)	niga	niga(2.03E+01)
Galactic distance (pc; Parsec)	nigd	nigd(1.2E+05)
Geocentric distance (m; Meter)	nige	nige(3E+07)
Heliocentric distance (AU; Astronomical Unit)	nihd	nihd(5E1)
Loss (dB; Decibel)	nils	nils(1.5E+01)
Mass (kg; Kilogram)	nima	nima(2.4E-03 - 2.42E-01)
Magnetic flux density (T; Tesla)	nimd	nimd(1E-2)
Memory size (Byte)	nims	nims(>=3E7)
Noise figure (dB; Decibel)	ninf	ninf(5 - 7)
Power (W; Watt)	nipo	nipo(5.0E+02), nipo(500)
Pressure (Pa; Pascal)	nipr	nipr(1.3E-3), nipr(0.0013)
Printer speed (cps; Characters per Second)	nips	nips(2.7E+02)
Picture size (pixel; Picture Element)	nipx	nipx(1.28E+02)
Radiation absorbed dose (Gy; Gray)	nira	nira(2)
Radiation dose equivalent (Sv; Sievert)	nird	nird(1.0E-03)
Resistance (ohm)	nire	nire(7E-5)
Reactive power (VAR; Volt-Amp Reactive)	nirp	nirp(<=3.0E+08)
Radiation exposure (C/kg; Coulomb per Kilogram)	nirx	nirx(<=0.1)
Radioactivity (Bq; Becquerel)	niry	niry(4.0E+04)
Size (m; Meter)	nisi	nisi(1.0E-06)
Stellar mass, Msol; Solar Mass)	nism	nism(1.1E+01), nism(11)
Storage capacity (Bit)	nisr	nisr(1.0E+06)
Temperature (K; Kelvin)	nite	nite(3.26E2)
Time (s; Second)	nitm	nitm(1.35E-01)
Velocity (m/s; Meters per Second)	nive	nive(1.0E+04)
Voltage (V; Volt)	nivo	nivo(>=10000)
Wavelength (m; Meter)	niwa	niwa(1.1E-06)
Word length (Bit)	niwl	niwl(32 - 128)

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