Dialog®

2, 3, 4, 202

INSPEC
ONTAP® INSPEC (FILE 213)

FILE DESCRIPTION

The **Inspec** databases provide over 11 million abstract and index records from more than 4,000 journals and serials, over 2,200 conference proceedings and thousands of books and book chapters, reports and dissertations. Over 20,000 U.S. and U.K. patents published between 1968 and 1976 are included.

Inspec content is drawn from quality or peer reviewed scientific and engineering literature written in any language that falls within the subject scope of the database. Approximately 12% of the source publications are in languages other than English, but all articles are abstracted and indexed in English. Author-prepared abstracts are used when available.

Inspec uses controlled vocabulary from the *Inspec Thesaurus*. DIALOG's online thesaurus feature is available to assist searchers in determining appropriate subject terms and codes. From January 1987 on, Inspec records also include chemical substance and numerical indexing terms. From January 1995 on, Inspec records also included astronomical object indexing terms.

SUBJECT COVERAGE

Inspec consists of five subject sections, 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. Not in File 202.

Subfile E - Mechanical and production engineering: general topics in manufacturing and production engineering, manufacturing and production, engineering mechanics, and industrial sectors. Not in File 202.

TIPS

USE EXPLODE (!)

to search narrower and related terms:

S OPTICAL FIBRES!

USE THE ONLINE THESAURUS

to check and select the thesaurus terms:

EXPAND (SOLID LASERS)

USE RANK

to find additional descriptors:

SELECT SEEBECK EFFECT
RANK DE

USE LIMITS

to narrow subject coverage:

/PHYS for Physics Subfile A
/TECH for other Subfiles

DIALOG FILE DATA

Inclusive Dates: 1898 - present (File 2)
1969 - present (File 3)
1983 - present (File 4)
1898 - 1968 (File 202)

Update Frequency: Closed (Files 202,213)
Weekly (Files 2,3,4)

File Size: 11,407,599 records as of April 2009 (File 2)
10,349,878 records as of November 2008 (File 3)
8,390,360 records as of November 2008 (File 4)
873,700 records (File 202)
37,667 records from 1924 to 1988 (File 213)

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Hong Kong		

SAMPLE JOURNAL PAPER RECORD

```
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AZ=             11506571
/TI             Title: Thermoelectric properties of p-type Fe2(V1-x-yTixTay) Al alloys
AU=             Author(s): Mori, T.; Ide, N.; Nishino, Y.
CS=             Author Affiliation: Dept. of Mater. Sci. & Eng., Nagoya Inst. of
                Technol., Nagoya, Japan
JN=,VL=         Journal: Journal of the Japan Institute of Metals, vol.72,
NO=,PP=         no.8, pp.593-8
PU=             Publisher: Aboba Aramaki
CP=             Country of Publication: Japan
PD=             Publication Date: Aug. 2008
SN=             ISSN: 0021-4876
CO=             CODEN: NIKGAV
                Item Identifier (DOI): http://dx.doi.org/10.2320/jinstmet.72.593
LA=             Language: Japanese
DT=             Document Type: Journal Paper (JP)
TC=             Treatment: Experimental (X)
/AB             Abstract: We report on the temperature dependence of the electrical
                resistivity and the Seebeck coefficient for the p-type Fe2(V1-x-yTixTay)Al
                alloys with compositions 02VAl (x = 0, y = 0) exhibits a (...)
NR=             ( 20 refs.)
SF=             Subfile(s): A (Physics)
/DE,/DF         Descriptors: aluminium alloys; doping; electrical resistivity;
                iron alloys; Seebeck effect; tantalum alloys; thermal conductivity;
                titanium alloys; vanadium alloys
/ID,/IF         Identifiers: thermoelectric properties; p-type alloys; electrical
                resistivity; Seebeck coefficient; lattice thermal conductivity; (...)
CC=             Classification Codes: A7215J (Thermoelectric effects (metals/alloys));
                A6170T (Doping and implantation of impurities); A7215E (Electrical
                and thermal conduction in crystalline metals and alloys)
CI=             Chemical Indexing:
                Fe2VTiTaAl/ss - Fe2/ss - Al/ss - Fe/ss - Ta/ss - Ti/ss - V/ss
NI=, TE=        Numerical Indexing: temperature: 2.93E+02 to 2.98E+02 K
UI=             INSPEC Update Issue: 2009-013
                Copyright: 2009, The Institution of Engineering and Technology
```

SAMPLE TRANSLATION JOURNAL RECORD

```
AZ=             08819672
/TI             Title: Controlled magnetoresistance in Y3/4Lu1/4Ba 2Cu3O7-CuO composites at 77K
AU=             Author(s): Balaev, D.A.; Shaihutdinov, K.A.; Popkov, S.I.; Petrov, M.I.
CS=             Author Affiliation: Kirensky Inst. of Phys., Russian Acad. of Sci.,
                Krasnoyarsk, Russia
JN=,VL,NO=      Journal: Pis'ma v Zhurnal Tekhnicheskoi Fizika, vol.29, no.7
CP=             Country of Publication: Russia
PD=             Publication Date: July 2003
SN=             ISSN: 0320-0116
CO=             CODEN: PZTFDD
JN=             Translation Journal: Technical Physics Letters, pp.578-81
PU=             Publisher of Translation Journal: MAIK Nauka
CP=             Country of Publication of Translation Journal: Russia
CO=             CODEN of Translation Journal: TPLEED
SN=             ISSN of Translation Journal: 1063-7850
                U.S. Copyright Clearance Center Code of Translation Journal:
                1063-7850/03/2907-0578$24
UR=             URL of Translation Journal: HTTP://OJPS.AIP.ORG/DBT/DBT.JSP
                DOI of Translation Journal: http://dx.doi.org/10.1134/1.1598555
LA=             Language: English
DT=             Document Type: Journal Paper Translation Abstracted (JP)
TC=             Treatment: Experimental (X)
/AB             Abstract: We have studied the low-temperature magnetoresistance of
                Y3/4 Lu1/4Ba2Cu3O7-CuO composites obtained by fast sintering technique
NR=              (...) ( 17 refs.)
SF=             Subfile(s): A (Physics)
/DE,/DF         Descriptors: barium compounds; composite superconductors; critical
                current compounds; magnetic sensors; magnetoresistance; sintering;
                yttrium compounds
ID,IF           Identifiers: controlled magnetoresistance; composites; fast sintering;
                critical current density; electric resistance; threshold value; magnetic
                field strength; (...)
```

SAMPLE TRANSLATION JOURNAL RECORD (cont'd)

CC= **Classification Codes:** A7430F (Transport properties of superconductors); A7430C (Magnetic properties of superconductors); A7470V (Perovskite phase superconductors); (...)
CI= **Chemical Indexing:** Y0.75Lu0.25Ba2Cu3O7CuO/ss - Lu0.25/ss - Y0.75/ss - Ba2/ss - Cu3/ss - Ba/ss - Cu/ss - Lu/ss - O7/ss - O/ss - Y/ss
NI,TE= **Numerical Indexing:** temperature: 7.7E+01 K
UI= **INSPEC Update Issue:** 2004-001
Copyright: 2004, IEE

SAMPLE CONFERENCE PROCEEDINGS RECORD

AZ= 11478910
/TI **Title: Third International Conference on Digital Society. ICDS 2009**
PU= **Publisher:** IEEE, Piscataway, NJ
CP= **Country of Publication:** USA
PD= **Publication Date:** 2009
CT= **Conference Title:** Third International Conference on Digital Society. ICDS 2009
CY= **Conference Date:** 1-7 Feb. 2009
CL= **Conference Location:** Cancun, Mexico
SP= **Conference Sponsor:** IARIA
AU= **Editor(s):** Takahashi, Y.; Berntzen, L.; Smedberg, A.
BN= **ISBN:** 978-0-7695-3526-5
U.S. Copyright Clearance Center Code: 978-0-7695-3526-5/09/$25.00
LA= **Language:** English
DT= **Document Type:** Conference Proceedings (CP)
/AB **Abstract:** The following topics are dealt with: e-government services; radio networks; Internet; Web services; electronic commerce; e-defense; software engineering; intelligent computation; digital analysis, and digital processing. *(0 refs.)*
SF= **Subfile(s):** B (Electrical & Electronic Engineering); C (Computing & Control Engineering)
/DE,/DF **Descriptors:** government; Internet; radio networks; software engineering; Web services
/ID,/IF **Identifiers:** e-government services; radio networks; Internet; Web services; electronic commerce; e-defense; software engineering; intelligent (...)
CC=, CN= **Classification Codes:** B0100 (General electrical engineering topics); B6250 (Radio links and equipment); C0000 (General and management topics); C6110B (Software engineering techniques); (...)
UI= **INSPEC Update Issue:** 2009-011
Copyright: 2009, The Institution of Engineering and Technology

SEARCH OPTIONS

BASIC INDEX

SEARCH SUFFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
—	—	All Basic Index Fields	Word	S FAST(W)SINTERING
/AB	AB	Abstract	Word	S (FISSION(W)PRODUCTS)/AB
/DE	DE	Descriptor[1]	Word & Phrase	S (SEEBECK(W)EFFECT)/DE S BARIUM COMPOUNDS/DE S ENERGY GAP/DF
/ID	ID	Identifier[2,3]	Word & Phrase	S (P(W)TYPE(W)ALLOYS)/ID S THRESHOLD VALUE/ID S THRESHOLD VALUE/IF
/TI	TI	Title	Word	S (AL(W)ALLOYS)/TI

[1] Also /DF.
[2] Also /IF.
[3] Includes astronomical object indexing.

ADDITIONAL INDEXES

SEARCH PREFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
AC=	AC	Patent Application Country[4]	Phrase	S AC=USA
AD=	AD	Patent Application Date[4]	Phrase	S AD=19700818
AN=	AN	Patent Application Number[4]	Phrase	S AN=US 64758 S AN=A10806/68
AU=	AU	Author	Phrase	S AU=MORI, T.
AV=	AV	Availability[5]	Word	S AV=(UNIV(W)MICROFILMS)
AZ=	AZ	DIALOG Accession Number	Phrase	S AZ=11506571
BN=	BN	International Standard Book Number (ISBN)[5]	Phrase	S BN=978-1-4244-2838-0 S BN=9781424428380

ADDITIONAL INDEXES (cont'd)

SEARCH PREFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
CC=	CC	Classification Code	Phrase	S CC=A6855
CL=	CL	Conference Location[6]	Word	S CL=(SANTIAGO(2W)COMPOSTELA) S CL=SPAIN
CN=	CN	Classification Name	Word & Phrase	S CN=(FILM AND EPITAXY) S CN=BETA DECAY?
CO=	CO	CODEN[5]	Phrase	S CO=TPLEED
CP=	CP	Country of Publication	Word & Phrase	S CP=(SOUTH(W)AFRICA) S CP=RUSSIA
CS=	CS	Corporate Source	Word & Phrase	S CS=(NAGOYA(3W)TECH?) S CS=UNIWERSYTET WROCLAWSKI?
CT=	CT	Conference Title[6]	Word	S CT=(ELECTRON(W)DEVICES)
CY=	CY	Conference Date[6,7]	Phrase	S CY=20090211 S CY=(20090211 AND 20090213)
DN=	DN	Document Number[5]	Phrase	S DN='S 0010-4655(01)00314-9'
DT=	DT	Document Type	Phrase	S DT=JOURNAL PAPER S DT=JP
IC=	IC	Z39.56 Serial Item Contribution Identifier Code[5]	Phrase	S IC='1041-1135(200704)19:8L.628:CCSP'
—	II	Digital Object Identifier		
JN=	JN	Journal Name[8]	Phrase	S JN=PIS?MA V ZHURNAL TEKH?
LA=	LA	Language	Phrase	S LA=ENGLISH
NI=	NI	Numeric Information[9,10]	Phrase	S NI=TEMPERATURE
NO=	SO	Issue Number[11]	Phrase	S NO=7
NR=	NR	Number of References[12]	Numeric	S NR=17
PA=	PA	Patent Assignee[4]	Word & Phrase	S PA=(ACRON(W)CORP) S PA=ACRON CORP?
PC=	PC	Patent Country[4]	Phrase	S PC=USA
PD=	PD	Publication Date, Patent Publication Date[13]	Phrase	S PD=20080800
PN=	PN	Patent Number[4]	Phrase	S PN=US 3703607
PP=	SO	Pagination[11]	Phrase	S PP=593-8
PU=	PU	Publisher	Word	S PU=(ABOBA(W)ARAMAKI)
PY=	PY	Publication Year[14]	Phrase	S PY=2008
RN=	RN	Report or Contract Number	Word & Phrase	S RN=(JAEA(3W)2007) S RN=JAEA-RESEARCH 2007-068
SF=	SF	Subfile	Phrase	S SF=A
SN=	SN	International Standard Serial Number (ISSN)[5]	Phrase	S SN=0021-4876 S SN=00214876
SO=	SO	Source Information	Word	S S SO=(IEEE(F)LETTERS and 4)
SP=	SP	Conference Sponsor	Word	S SP=IARIA
TC=	TC	Treatment Code[5]	Phrase	S TC=PRACTICAL S TC=P
UD=	—	Dialog File Update	Phrase	S UD=9999
UI=	UI	Inspec Update Issue[15]	Phrase	S 2009-013
UR=	UR	Uniform Resource Locator (URL)[5]	Phrase	S UR="HTTP://OJPS.AIP.ORG/"?
VL=	SO	Volume of publication[11]	Phrase	S VL=29
CHEMICAL INDEXING FIELDS (available since January 1987)[16]				
CI=	CI	Substance (including role modifier)[16]	Word & Phrase	S CI=SI-AL-AU INT S CI=(SI(S)AL(S)AU)
NUMERICAL INDEXING FIELDS (available since January 1987)[9,10]				
HI=	HI	Highest value[9,10]	Word & Phrase	S HI=2.5E4(S)NI=FREQUENCY S HI<=9.7E-7(S)NI=WAVELENGTH
LO=	LO	Lowest value[9,10]	Word & Phrase	S LO=100(S)NI=TEMPERATURE S LO>=3.16E7(S)NI=AGE
NUMERICAL INDEXING FIELDS (available since January 1987)[10]				
AG=	NI	Age (yr; Year)	Numeric	S AG=0:5 S AG>=1E9
AL=	NI	Altitude (m; Meter)	Numeric	S AL=2E4:9E5 S AL=>20000
AP=	NI	Apparent Power (VA; Volt-amp)	Numeric	S AP=3E6
BI=	NI	Bit Rate (Bit/s; Bits per Second)	Numeric	S BI=64000
BW=	NI	Bandwidth (Hz; Hertz)	Numeric	S BW=0.3:260 S BW=5E7
BY=	NI	Byte Rate (Byte/s; Bytes per Second)	Numeric	S BY=2.5E6
CA=	NI	Capacitance (F; Farad)	Numeric	S CA=2E-13
CD=	NI	Conductance (S; Seimen)	Numeric	S CD=2:5
CE=	NI	Computer Execution Rate (IPS; Instructions/Second)	Numeric	S CE>=1E6
CM=	NI	Computer Speed (FLOPS)	Numeric	S CM>=3.5E6
CU=	NI	Current (A; Ampere)	Numeric	S CU=0.051
DI=	NI	Distance (m; Meter)	Numeric	S DI=0.002
DP=	NI	Depth (m; Meter)	Numeric	S DP=2E4:9E5
EF=	NI	Efficiency (Percent)	Numeric	S EF=60

ADDITIONAL INDEXES (cont'd)

SEARCH PREFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
EL=	NI	Electrical Conductivity (S/m; Siemen per Meter)	Numeric	S EL=7.0E4
EN=	NI	Energy (J; Joule)	Numeric	S EN=0.5
ER=	NI	Electrical Resistivity (ohmm; Ohm meter)	Numeric	S ER=1.7E-4 S ER=0.00017
EV=	NI	Electron Volt Energy (eV; Electron Volt)	Numeric	S EV=-0.5:0
FR=	NI	Frequency (Hz; Hertz)	Numeric	S FR=0:1
GA=	NI	Gain (dB; Decibel)	Numeric	S GA=14
GD=	NI	Galactic Distance (pc; Parsec)	Numeric	S GD>=10000000 S GD>=1E7
GE=	NI	Geocentric Distance (m; Meter)	Numeric	S GE=>3.7E10
HD=	NI	Heliocentric Distance (AU; Astronomical Unit)	Numeric	S HD=5E1 S HD=1.0:9.0E1
LS=	NI	Loss (dB; Decibel)	Numeric	S LS=-60:0
MA=	NI	Mass (kg; Kilogram)	Numeric	S MA=500 S MA=5E2
MD=	NI	Magnetic Flux Density (T; Tesla)	Numeric	S MD=1E-2 S MD=2
MS=	NI	Memory Size (Byte)	Numeric	S MS>=3E7
NF=	NI	Noise Figure (dB; Decibel)	Numeric	S NF=1:2
PO=	NI	Power (W; Watt)	Numeric	S PO=4E-5:2E-4
PR=	NI	Pressure (Pa; Pascal)	Numeric	S PR=1.3E-3
PS=	NI	Printer Speed (cps; Characters per Second)	Numeric	S PS>=2E2
PX=	NI	Picture Size (pixel; Picture Element)	Numeric	S PX=512
RA=	NI	Radiation Absorbed Dose (Gy; Gray)	Numeric	S RA=2 S RA=0:4.0
RD=	NI	Radiation Dose Equivalent (Sv; Sievert)	Numeric	S RD=1E-6:1E-2
RE=	NI	Resistance (ohm)	Numeric	S RE=7E-5:0.1
RP=	NI	Reactive Power (VAr; Volt-Amp Reactive)	Numeric	S RP=1E5
RX=	NI	Radiation Exposure (C/kg; Coulomb per Kilogram)	Numeric	S RX<=0.1 S RX=2.58E-1:1.29
RY=	NI	Radioactivity (Bq; Becquerel)	Numeric	S RY=1E8:1E12
SI=	NI	Size (m; Meter)	Numeric	S SI=0.7:15
SM=	NI	Stellar Mass (Msol; Solar Mass)	Numeric	S SM=1E-2:3000
SR=	NI	Storage Capacity (Bit)	Numeric	S SR=4.2E6
TE=	NI	Temperature (K; Kelvin)	Numeric	S TE=3.26E2
TM=	NI	Time (s; Second)	Numeric	S TM=2E-11:4E-11
VE=	NI	Velocity (m/s; Meters per Second)	Numeric	S VE=500:1000 S VE=5E2:1E3
VO=	NI	Voltage (V; Volt)	Numeric	S VO>=1000 S VO>=1E03
WA=	NI	Wavelength (m; Meter)	Numeric	S WA=8.8E-7:1E-1
WL=	NI	Word Length (Bit)	Numeric	S WL=32

[4] Patent records only.

[5] Not in File 202.

[6] Use CF display code for conference details.

[7] CY= conference start and end dates as YYYYMMDD.

[8] Searchable as full or abbreviated name; displays full name.

[9] Use LO= and HI= to specify minimum or maximum values. Qualify HI= or LO= searches by adding the desired quantity using the NI= prefix. The smallest and largest searchable numbers are 5.4E-79 and 7.2E+75.

[10] Numeric data is indexed into separate numeric fields; see the Numerical Indexing Fields section. Each quantity and its matching abbreviated unit of measure are also searchable using NI=. Truncation is not allowed when searching numeric data; range searching is recommended.

[11] Volume (VL=), Issue (NO=), and Page (PP=) details are also Word parsed into the SO index, and are displayed using SO.

[12] Not available for RANK.

[13] PD= Publication Date and Patent Publication Date as YYYYMMDD. To isolate patent records use S DT=Patent.

[14] PY= Publication Year does not include patent records. For Patent Publication Date see PD=.

[15] UI= Inspec Update Issue is the year and Inspec issue number in which the record was released by Inspec.

[16] Role modifiers include: EL (element), DOP (dopant), BIN (binary system), SS (system with 3 or more components), INT (interface system), SUR (surface or substrate), ADS(adsorbate, or any sorbate).

INSPEC

SPECIAL FEATURES

For command descriptions, enter HELP LIMIT, HELP SORT, HELP RANK, HELP DUP, HELP CURRENT online.

LIMIT	/**ART** -- Journal Article /**ENG** -- English Language /**NAR** -- Non-Journal Article /**NONENG** -- Non-English Language /**PHYS** -- Physics Subfile /**TECH** -- Electronics, Computing, and Information Technology Subfiles /**YYYY** -- Publication Year	S S2/ART S S9/ENG S AMPLIFIER?/NAR S LASERS/NONENG S SEMICONDUCTOR?/PHYS S HOLOGRAPHY/TECH S STELLAR?/2005:2006
SORT	**AU, AZ, CC, CS, CY, JN, NR, PD, PY, TI**	SORT S3/ALL/JN,D SORT S4/ALL/AU
RANK	All phrase- and numeric-indexed fields in the Additional Indexes can be ranked. Other RANK codes include: DE	RANK ID S2 RANK AU S1
RD, ID	Remove duplicates (RD) or identify duplicates (ID,IDO).	RD S5
CURRENT	Search only the most recent year plus one (CURRENT1) to five (CURRENT5) years.	B 2 CURRENT2

PREDEFINED FORMAT OPTIONS

NO.	DIALOGWEB FORMAT	RECORD CONTENT
1	--	DIALOG Accession Number
2	--	Full Record except Abstract
3	Medium	Bibliographic Citation
4	--	Full Record with Tagged Fields
5	--	Full Record
6	Short	Title and Publication Date
7	Long	Full Record except Indexing
8	Free	Title, Indexing, and Publication Date
9	Full	Full Record
K	--	KWIC (Key Word In Context) displays a window of text; may be used alone or with other formats

OTHER OUTPUT OPTIONS

For an explanation, enter HELP TYPE, HELP UDF, HELP TAG online.

USER DEFINED FORMATS	Display codes listed in the Search Options table can be used to customize output.	TYPE S3/AU,TI,SO/1-5 TYPE S2/TI, AB/ALL
TAG	Output can be displayed with tags identifying each display field.	TYPE S2/9/1-5 TAG
DIRECT RECORD ACCESS	If the accession number of a specific record is known, it can be used to display the record directly.	TYPE 9581561/5 DISPLAY 9574895/5 PRINT 4764942/3

FOR ONLINE HELP:

See HELP FIELDS 2 for searchable fields; HELP FORMAT 2 for output formats; HELP LIMIT 2 for limits; HELP RATES 2 for cost information; HELP SORT 2 for sorts.