RDISCLOSURE (Research Disclosure)

Subject Coverage

- All areas of science and technology, i.e., all classes of the International Patent Classification.

File Type

Full text

Features

Thesaurus	International Patent Classification (/IPC)				
Alerts (SDIs)	Monthly				
CAS Registry Number® Identifiers	☐	Page Images	☐	STN® AnaVist™	☐
Keep & Share	☑	SLART	☑	STN Easy®	☑
Learning Database	☐	Structures	☐		

Record Content

- Full text, including images, of technical disclosures of inventions published as an alternative to the patent system.
- Records contain the title, patent assignee (company and individual inventors as well as the statement 'anonymous'), patent, priority and source information, and the full text.
- About 40% of the records contain the International Patent Classification, about 30% contain additionally the European Patent Classification.

File Size

- 46,468 records (03/2018)

Coverage

1960-present

Updates

Monthly

Language

English

Database Producer

Questel Ireland Ltd.
Killernan,
Kilmaine
Co. Mayo
Republic of Ireland
Phone: +353 93 33870
Copyright Holder

Database Supplier	FIZ Karlsruhe STN Europe P.O. Box 2465 76012 Karlsruhe Germany Phone: +49 7247 808-555 Fax: +49 7247 808-259 Email: helpdesk@fiz-karlsruhe.de
Sources	• Monthly Journal 'Research Disclosure'
User Aids	• Online Helps (HELP DIRECTORY lists all help messages available) • STNGUIDE
Clusters	• ALLBIB • BIOSCIENCE • CHEMISTRY • ENGINEERING • FULLTEXT • HPATENTS • MATERIALS • PATENTS • PHARMACOLOGY • PNTTEXT STN Database Clusters information (PDF)
Pricing	Enter HELP COST at an arrow prompt.

Search and Display Field Codes

Fields that allow left truncation are indicated by an asterisk (*).

General Search Fields

Search Field Name	Search Code	Search Examples	Display Codes
Basic Index* (contains single words from title (TI), and the full text)	None or /BI	S SOFTWARE? S HERBICIDE# S ?LASER?	TI, TX
Accession Number	/AN	S 324009/AN	AN
Document Type (code and text)	/DT (or /TC)	S PATENT/DT	DT
Entry Date **(1)**	/ED	S ED=MARCH 2007	ED
EPC, Keyword **(2)**	/EPC.KW (or /ECLA.KW)	S B2A1/EPC.KW	EPC
European Patent Classification **(2)**	/EPC (or /ECLA)	S A01D/EPC S A01D0034-49/EPC	EPC
Field Availability	/FA	S REN/FA	FA
Graphic Image, Number **(1)**	/GIN	S GIN<5	GIN
Graphic Image, Size **(1)**	/GIS	S GIS=30000	GIS
Graphic Image, Type	/GIT	S TIF/GIT	GIT
International Patent Classification (IPCI, IPCR) **(2,3)**	/IPC	S G06F/IPC S G06F0017-30/IPC	IPCI, IPCR
International Standard (Document) Number (CODEN) and ISSN)	/ISN	S RSDSBB/ISN S 0374-4353/ISN	ISN, SO
IPC, Keyword Term **(2)**	/IPC.KW	S ADVANCED/IPC.KW	IPC.TAB
IPC, Version **(1,2)**	/IPC.VER	S 20100101/IPC.VER	IPC.TAB
Language (ISO code and text)	/LA	S FRENCH/LA S FR/LA	LA
Patent Assignee (includes inventors) **(4)**	/PA (or /CS)	S INTERNATIONAL BUSINESS CORPORATION/PA S M? MCDERMOTT/PA	PA
Patent Number **(5)**	/PN (or /PATS)	S RD430009/PN	PI
Priority Date **(1)**	/PRD	S PRD>=20021000	PRAI
Priority Number **(5)**	/PRN (or /APPS)	S RD2002-456008/PRN	PRAI
Priority Year **(1)**	/PRY	S 1991/PRY	PRAI
Publication Date **(1)**	/PD	S PD=JAN-FEB 2002	PI
Publication Year **(1)**	/PY	S PY>1999	PI
Referenced Non-Patent Literature **(2)**	/REN	S XP000001356/REN	REN
Source (contains volume, year, and number of the printed publication, ISSN, and CODEN)	/SO	S 463/SO	SO
Title*	/TI	S ?COMPOSITE?/TI S INTERFACE/TI	TI
Update Date **(1)**	/UP	S UP=MAR 2007	UP

(1) Numeric search field that may be searched using numeric operators or ranges.
(2) Field available for data until May 2008.
(3) An online thesaurus is available in this field.
(4) Search with implied (S) proximity is available in this field.
(5) Either STN or Derwent format may be used.

International Patent Classification (/IPC) Thesaurus

The classifications, validity and catchwords for the main headings and subheadings from the current (8th) edition of the WIPO International Patent Classification (IPC) manual are available. The classifications from the previous editions (1-7) are also available as separate thesauri. To EXPAND and SEARCH in the thesauri for editions 1-7, use the field code followed by the edition number, e.g., /IPC2, for the 2nd edition. Catchwords are included only in the thesauri for the 8th, 7th, 6th, and 5th editions.

Code	Content	Examples
ADVANCED (ADV)	Advanced Codes for the Core Level IPC Code	E A61K0066-02+ADVANCED/IPC
ALL	All Associated Terms (BT, SELF, NT, RT)	E C01C003-00+ALL/IPC
BRO (MAN)	Complete Class	E C01C+BRO/IPC
BT	Broader Term (SELF, BT)	E C01F001-00+BT/IPC
CORE (COR)	Core Codes for the Advanced Level IPC Code	E G08C0019-22+CORE/IPC
ED	Complete title of the SELF term and IPC manual edition	E C01F001-00+ED/IPC
HIE	Hierarchy Term (Broader and Narrower Term) (BT, SELF, NT)	E C011003-00+HIE/IPC
INDEX	Complete title of the SELF term	E C01F001-00+INDEX/IPC
KT	Keyword Term (catchwords) (SELF, KT)	E CYANOGEN+KT/IPC
NEXT	Next Classification	E C01C001-00+NEXT5/IPC
NT	Narrower Terms (SELF, NT)	E C01C+NT/IPC
PREVn	Previous Classification (n =1,2,...)	E C01C001-12+PREV10/IPC
RT (SIB)	Related Terms (SELF, RT)	E C01C003-20+RT/IPC
TI	Complete Title of the SELF Term and Broader Terms (BT, SELF)	E C01F001-00+TI/IPC

DISPLAY and PRINT Formats

Any combination of formats may be used to display or print answers. Multiple codes must be separated by spaces or commas, e.g., D L1 1-5 TI AU. The fields are displayed or printed in the order requested.

Hit-term highlighting is available for all fields. Highlighting must be ON during SEARCH to use the HIT, KWIC, and OCC formats.

Format	Content	Examples
AN	Accession Number	D 1-5 AN
DT (TC)	Document Type	D DT
ED **(1)**	Entry Date	D ED
EPC (ECLA) **(2)**	European Patent Classification	D EPC
FA **(1)**	Field Availability	D FA
GI	Graphic Image	D GI
GIN	Graphic Image, Number	D GIN
GIS	Graphic Image, Size	D GIS
GIT **(1)**	Graphic Image, Type	D GIT
IPC **(2)**	International Patent Classification (IPCI, IPCR)	
IPCI **(2)**	IPC, Initial	D IPCI
IPCR **(2)**	IPC, Reclassified	D IPCR
ISN **(1)**	International Standard (Document) Number	D ISN
LA	Language	D LA TI
PA (CS)	Patent Assignee	D PA
PI (PN) **(3)**	Patent Information	D PI
PRAI (PRN) **(3)**	Priority Information	D PRAI
REN	Referenced Non-Patent Literature	D REN
SO	Source	D SO
TI	Title	D TI 1-10
TX	Text	D TX
UP **(1)**	Update Date	D UP

DISPLAY and PRINT Formats (cont'd)

Format	Content	Examples
ABS	TX	D ABS
ALL (MAX) **(3)**	AN, TI, PA, PI, PRAI, REN, SO, LA, DT, GIN, GIS, IPC, EPC, TX	D 1-3 ALL
ALLG (MAXG) **(3)**	BIB, plus graphic Image	D ALLG
IALL **(3)**	ALL, indented with text labels	D IALL
IALLG **(3)**	ALLG, indented with text labels	D IALLG
BIB (STD) **(3)**	AN, TI, PA, PI, PRAI, REN, SO, LA, DT, GIN, GIS, IPC, EPC (BIB is the default)	D BIB
IBIB **(3)**	BIB, indented with text labels	D IBIB
IND	IPC, EPC	D IND
IPC.TAB **(2)**	IPC, IPC.KW, IPC.VER, Tabular Version	D IPC.TAB
SCAN **(4)**	TI (random display without answer numbers)	D SCAN
TRIAL (TRI, SAMPLE, SAM, FREE)	TI	D TRIAL
HIT	Hit term(s) and field(s)	D HIT
KWIC	Up to 50 words before and after hit term(s) (KeyWord-In-Context)	D KWIC
OCC	Number of occurrences of hit term(s) and field(s) in which they occur	D OCC

(1) Custom display only.
(2) Field available for data until May 2008.
(3) By default, patent numbers, and priority numbers are displayed in STN Format. To display them in Derwent format, enter SET PATENT DERWENT at an arrow prompt. To reset display to STN Format, enter SET PATENT STN.
(4) SCAN must be specified on the command line, i.e., D SCAN or DISPLAY SCAN.

SELECT, ANALYZE, and SORT Fields

The SELECT command is used to create E-numbers containing terms taken from the specified field in an answer set.

The ANALYZE command is used to create an L-number containing terms taken from the specified field in an answer set.

The SORT command is used to rearrange the search results in either alphabetic or numeric order of the specified field(s).

Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
Accession Number	AN	Y	N
Document Type	DT (TC)	Y	Y
Entry Date	ED	Y	N
European Patent Classification	EPC (ECLA)	Y	N
Graphic Image, Number	GIN	Y	N
Graphic Image, Size	GIS	Y	Y
Graphic Image, Type	GIT	Y	N
International Patent Classification	IPC	Y	N
IPC, Advanced Level Symbols	IPC.A	Y **(2)**	N
IPC, Advanced Level Symbols for Invention	IPC.AI	Y **(2)**	N
IPC, Core Level Symbols	IPC.C	Y **(2)**	N
IPC, Core Level Symbols for Invention	IPC.CI	Y **(2)**	N
Language	LA	Y	Y
Occurrence Count of Hit Terms	OCC	N	Y
Patent Assignee	PA (CS)	Y	Y
Patent Information	PI (PN)	Y	Y
Priority Date	PRD	Y	Y

SELECT, ANALYZE, and SORT Fields (cont'd)

Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
Priority Information	PRAI (PRN)	Y	Y
Priority Year	PRY	Y	Y
Referenced Non-Patent Literature	REN	Y	Y
Source	SO	Y	Y
Text	TX	Y **(3)**	N
Title	TI	Y (default)	Y
Update Date	UP	Y	N

(1) HIT may be used to restrict terms extracted to terms that match the search expression used to create the answer set, e.g., SEL HIT TI.
(2) Appends /IPC to the terms created by SELECT.
(3) Appends /BI to the terms created by SELECT.

Sample Records

DISPLAY ALL

```
AN   453062   RDISCLOSURE
TI   Improved method for preparation of bicyclic orthoester functional
     compounds
PA   Anonymous
PI   RD 453062   20020110
PRAI RD 2001-453062 20011220
REN  XP001127230; XP007129599
SO   Research Disclosure, Volume 453, 01 2002, p. 38
     CODEN: RSDSBB; ISSN: 0374-4353
LA   English
DT   Patent
GIN  3
GIS  37252; 41444; 23582
IPCI C07D
IPCR C07D0493-08 [I,A]; C07D0493-00 [I,C*]
EPC  C07D0493-08; C07D0493-08+319C+319C+2
TX   453062
     Improved method for preparation of bicyclic orthoester functional
     compounds
     Disclosed is an improved method for the preparation of bicyclic orthoester
     (BOE) -functional compounds. BOE-functional compounds are described, for
     example, in patent publication WO 97/31703.
     BOE-functional compounds can be prepared in several ways. One such way is
     the transesterification of a polyol in an appropriate solvent. The
     transesterification agent can be a trialkyl orthoester. Such a process is
     described in T. Endo et al.t Polymer Journal. Volume 13 (1981), p. 715. A
     disadvantage of this method is the need to use trialkylorthoesters, which
     are expensive raw materials.
     Also, BOE-functional compounds can be prepared by converting the
     corresponding ester-functional oxetane compounds with a Lewis acid
     catalyst, e.g. BF3Et2O, as described by E.J. Corey et a]., Tetrahedron
     Letters. 24 (1983), pp. 5571-5574. A drawback to this route is the use of
     a homogeneous Lewis acid catalyst, which has to be removed prior to
     further process steps, e.g. purification of the crude product by
     distillation. Removal of the catalyst can be carried out by precipitation
     of an insoluble complex of e.g. BF3 e.g. by addition of a suitable amine,
     followed by filtration. Apart from the disadvantage of this additional
     step, the removal of the insoluble complex of BF3 generates waste, since
     the precipitate cannot be reused.
     Furthermore, polymeric material is formed by side reactions during the
```

rearrangement step. The proportion of polymeric material formed often exceeds 20% of the starting material. It is desirable to minimize this polymer forming side reaction, since it will lower the yield of BOE-functional compound.

It has now been found that the disadvantages of the previously known methods for the preparation of BOE-functional compounds can be overcome when the rearrangement of the corresponding ester-functional oxetane compound is carried out by contacting said ester-functional oxetane compound with an acidic catalyst on a solid support or with a solid acidic catalyst.

Suitable solid supports can be organic or inorganic supports. Examples of inorganic supports are silica, silica-alumina, such as conventional silica-alumina, silica coated alumina and alumina coated silica, alumina such as (pseudo)boehmite, or gibbsite, titania, titania coated alumina, zirconia, clays such as saponite, bentonite, kaolin, sepiolite or hydrotalcite, or zeolites, or mixtures thereof. Some materials may act as support and catalyst at the same time.

Suitable organic supports can be crosslinked polymeric resins. The acids can be Lewis acids or Bronsted acids. Examples of suitable Lewis acids are AICI3, SbCI6, BF3, BCI3l BeCI2, FeCI3, FeBr3, SnCI4, TiCI4, ZnCI2, and ZrCI4 and complexes thereof, e.g., BF3Et2O, BF3-2CH3COOH, BF3-2H2O, BF3-H3PO4, BF3-(CH3)2O, BF3-THF, BF3-2CH3OH, BF3-2C2H5OH, and BF3-C6H5CH2, and halides and sulphonates of lanthanide metals, for example LaCI3 or YbCI3, and La(CF3-SO3)3, Sc(CF3-S03)3 or Yb(CF3-S03)3..

Examples of suitable Bronsted acids are mono- or dialkyl phosphates, a carboxylic acid having at least one chlorine and/or fluorine atom, an alkyl or aryl sulphonic acid or an (alkyl)phosphoric acid, more particularly methane sulphonic acid, paratoluene sulphonic acid, optionally substituted naphthalene sulphonic acids, dodecyl benzene sulphonic acid, dibutyl phosphate, trichloroacetic acid, phosphoric acid, and mixtures thereof. Examples of Bronsted acids on organic supports are commercially available acidic ion exchange resins. Numerous types of acidic ion exchange resins are commercially available, for example under the trade names Amberlyst, Amberlite or Dowex. The conversion takes place in the range of -100 to 200C, preferably in the range of 0 to 120C, The reaction may be carried out in the presence of one or more suitable solvents. Examples of suitable solvents are chlorinated hydrocarbons, such as dichloromethane, chloroform, or trichloroethane, cyclic and acyclic ethers, such as tetrahydrofuran, dioxan, diethylether, diisopropylether and the like, aliphatic and aromatic hydrocarbons, such as pentane, hexane, heptane, toluene, xylene, or trimethylbenzene, and ester functional solvents, such as ethylacetate, butylacetate or propylacetate.

An advantage of the current method is that it enables easy removal of the rearrangement catalyst by filtration and employment of the catalyst in subsequent batches of BOE-functional compound preparation. A further advantage of this method is the lower proportion of side reactions during the rearrangement reaction. This reduces the amount of undesirable polymeric by-product, while the yield of BOE-functional compound is increased. Since the purity of the crude product is higher than according to methods of the prior art, purification steps, e.g. distillation, may become unnecessary. Preferably, a continuous process is used, wherein the ester-functional oxetane compound is contacted with a rearrangement catalyst on a solid support by pumping the ester-functional oxetane compound, or a solution thereof, through a reactor which contains said rearrangement catalyst on a solid support. Either the flow rate through the reactor is adjusted in such a way that the desired degree of conversion is reached during one passage, or the mixture of ester-functional oxetane compound and BOE-functional compound is recycled into the reactor until the desired degree of conversion is reached. The optimum flow rate through the reactor as well as the reaction temperature

depends on the particular type of reactor, the type of ester-functional oxetane compound to be converted to BOE-functional compound, and the type and amount of rearrangement catalyst on a solid support employed. The optimum conditions for converting an ester-functional oxetane compound to a BOE-functional compound can be easily determined by experimentation.
The method is further illustrated by the following non-limiting example:
A double-walled glass column of 1.5 cm inner diameter and 15 cm length was filled with 7 g of Amberlyst* 15 dry acidic ion exchange resin. The column was held at 75C by circulating thermostated oil between the walls.
3-Ethyloxetan-3-yl-methyl laurate was pumped through the column at a rate of 0.04 ml/min. The composition of the reaction
material at the exit of the column was analyzed by gas chromatography and by size exclusion chromatography.
The composition of the reaction product was found to be:
4-Ethyl-1-undecyl-2,6,7-trioxabicyclo[2.2.2]octane (BOE): 89.4 %
3-Ethyloxetan-3-yl-methyl laurate: 6.8 %
Polymer: 3.8 %
Disclosed anonymously
453062

DISPLAY STD

```
AN   498013   RDISCLOSURE
TI   Applying metadata to scanned images
PA   Virgil K. Russon, Michael L Rudd, and Tina-Marie Leja
PI   RD 498013   20051010
PRAI RD 2005-498013 20050920
REN  XP007135500
SO   Research Disclosure, Volume 498, 10 2005, p. 1132
     CODEN: RSDSBB; ISSN: 0374-4353
LA   English
DT   Patent
GIN  5
GIS  70016; 59850; 566798; 238584; 59652
IPCI G06F
IPCR G06F0017-30 [I,A]; G06F0017-30 [I,C*]
EPC  G06F0017-30M2
```

DISPLAY IPC.TAB

IPC	CODE	VERSION	POS	INV	LEVEL	CC	ASSIGNMENT	DATE	STAT
IPCI	G06F								O
IPCR	G06F0017-30	(200801)	F	I	Advanced	EP	Machine		R
	G06F0017-30	(2006)	L	I	Core*	RC	Machine		R