

The logo consists of the letters 'S', 'T', and 'N' in a bold, blue, sans-serif font. The letters are three-dimensional with a dark blue shadow on the left side and a lighter blue shadow on the right side. The 'S' is the largest, followed by 'T' and 'N'. A registered trademark symbol (®) is located at the top right of the 'N'.

STN®

Searching for non-patent literature

Martine MICHEL

November 2009

Agenda

- Why searching non-patent literature (NPL)?
- Cluster searching on STN
- Going into details of the databases
- Search examples:
 - Automotive

Why searching Non-patent literature (NPL)

- Scientific Research
 - Pre-research background
 - state of the art, reviews
 - may not be patentable or patented, therefore not in the patent literature
 - Current awareness
 - Latest developments
- Patent related
 - prior art
 - potential licensees,
 - infringers
- Technological forecasting
- Competitor intelligence

Why searching Non-patent literature (NPL) (cont.)

- Resources are:
 - Journal articles
 - Books
 - On-going research at universities, theses
 - Publications within countries with low patent frequency
 - Research disclosure publications
 - Conference proceedings
 - Company reports
 - Grey literature
 - Open access sources (like internet)

Agenda

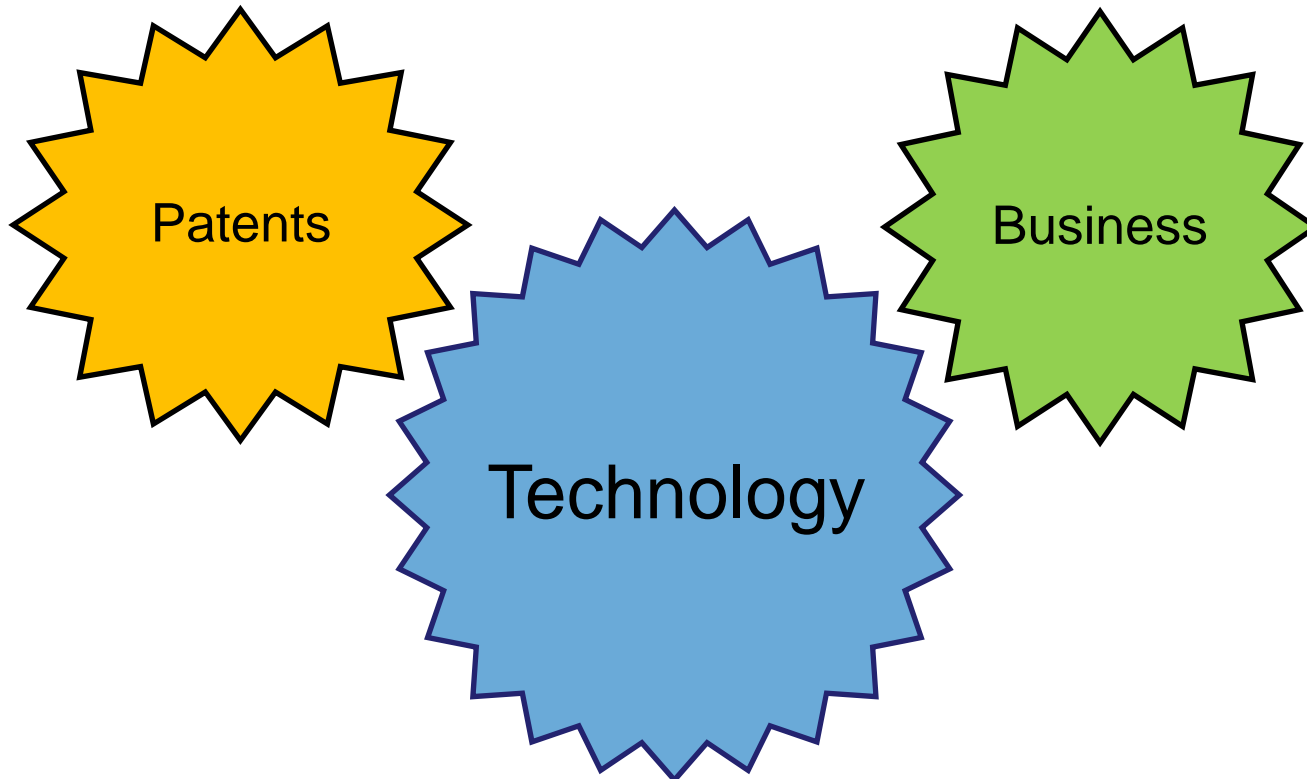
- Why searching non-patent literature (NPL)?
- **Cluster searching on STN**
- Going into details of the databases
- Search examples:
 - Automotive

Database Cluster in Engineering and Materials

Name	Definition	No of Databases
AEROTECH	Aerospace and Related Technology Cluster	21
COMPUTER	Computer Science Cluster	19
CONSTRUCTION	Building and Construction Cluster	14
ELECTRICAL	Electrical Engineering	25
ENGINEERING	Engineering and Technology Cluster	63
ENVIRONMENT	Environment Cluster	58
FUELS	Energy Sources Cluster	29
GEOSCIENCE	Earth and Geo-sciences Cluster	25
MATERIALS	Materials Science Cluster	45
METALS	Metals Cluster	20
MOBILITY	Mobility Engineering Cluster	05
PETROLEUM	Petroleum Cluster	20
PHYSICS	Physics Cluster	17
POLYMERS	Polymer Science Cluster	23

Use HELP CLUSTER or DISPLAY CLUSTER to view more details. Or visit:
<http://www.stn-international.com/clusters.html>

ENGINEERING: composed of multiple database categories



ENGINEERING

63 databases:

1MOBILITY, 2MOBILITY, ABI-INFORM, AEROSPACE, ALUMINIUM, ANTE, APOLLIT, BIOENG, BIOTECHNO, CAPLUS, CEABA-VTB, CIN, **CIVILENG**, **COMPENDEX**, CONFSCI, COPPERLIT, CORROSION, DISSABS, **DKF**, ELCOM, **EMA**, ENCOMPLIT, ENCOMPLIT2, ENCOMPAT, ENCOMPAT2, ENERGY, ENVIROENG, EPFULL, FRFULL, GBFULL, GEOREF, HEALSAFE, IFIPAT, INIS, **INSPEC**, **INSPHYS**, ITRD, MDF, **MECHENG**, **METADDEX**, NLDB, NTIS, OCEAN, **PASCAL**, PCTFULL, PIRA, POLLUAB, PROMT, RAPRA, RDISCLOSURE, SCISEARCH, TEMA, TRIBO, TULSA, TULSA2, USPATFULL, USPATOLD, USPAT2, WELDASEARCH, WPIDS, WPIFV, WPINDEX, WSCA

Databases presented

Agenda

- Why searching non-patent literature (NPL)?
- Cluster searching on STN
- **Going into details of the databases of your choice:**
 - INSPEC, INSPYS, COMPENDEX, METADEX, EMA, CIVILENG, MECHNEG, DKF, MOBILITY, PASCAL
 - Value add and special STN features
- Search examples

What Is Inspec?

- Information Service for Physics, Electronics and Computing
- Multidisciplinary Database
 - Physics
 - Electrical & Electronics Engineering
 - Computing & Control Engineering
 - Information Technology
 - Manufacturing, Production & Mechanical Engineering New 2004, 2005
- Wide range of cross-disciplinary topics

Inspec Database

- Over 10.5 million records (March 2009)
 - Over 640,000 added in 2008. 700,000 to be added in 2009
- 1969 to date
- Optional Archive extends coverage back to 1898 and adds 873,699 records
- Over 4,000 journals and 3,000 other publications
 - Includes over 140 Open Access Journals
 - 93 countries covered
- Full text linking via DOIs
 - Up to 60% of current records
- Added Value Fields
 - Diverse indexing with thesaurus functionality
 - Element Terms
 - Enhanced titles

STN option:**FILE INSPEC**

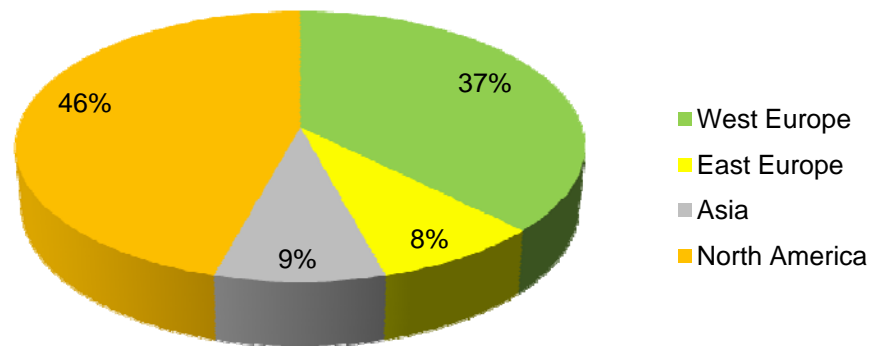
includes all data from 1898 onwards.

FILE 69INSPEC

contains data from 1969 onwards.

Countries covered

93 countries covered

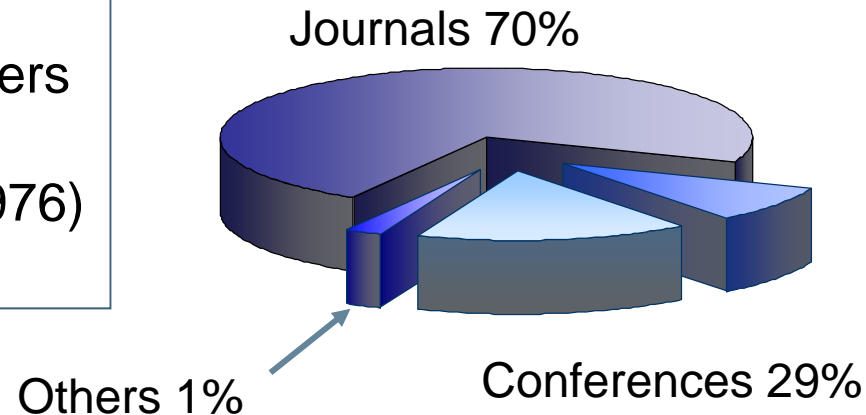


Document Types

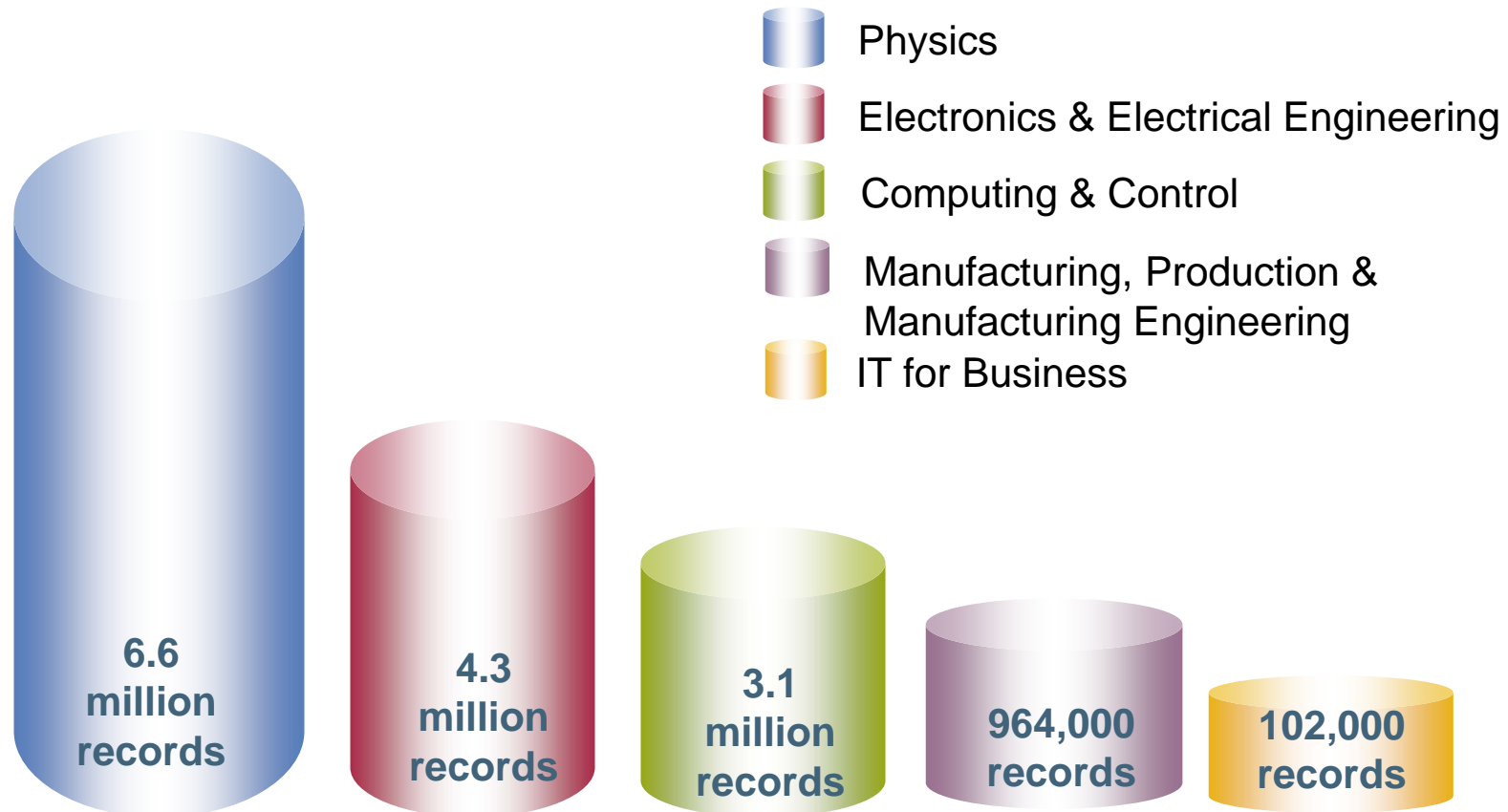
- Journal articles 70 %
 - Conference proceedings 20 %
 - Conference papers in Journals 9 %
 - Others 1%
- } 29 %

Others include:

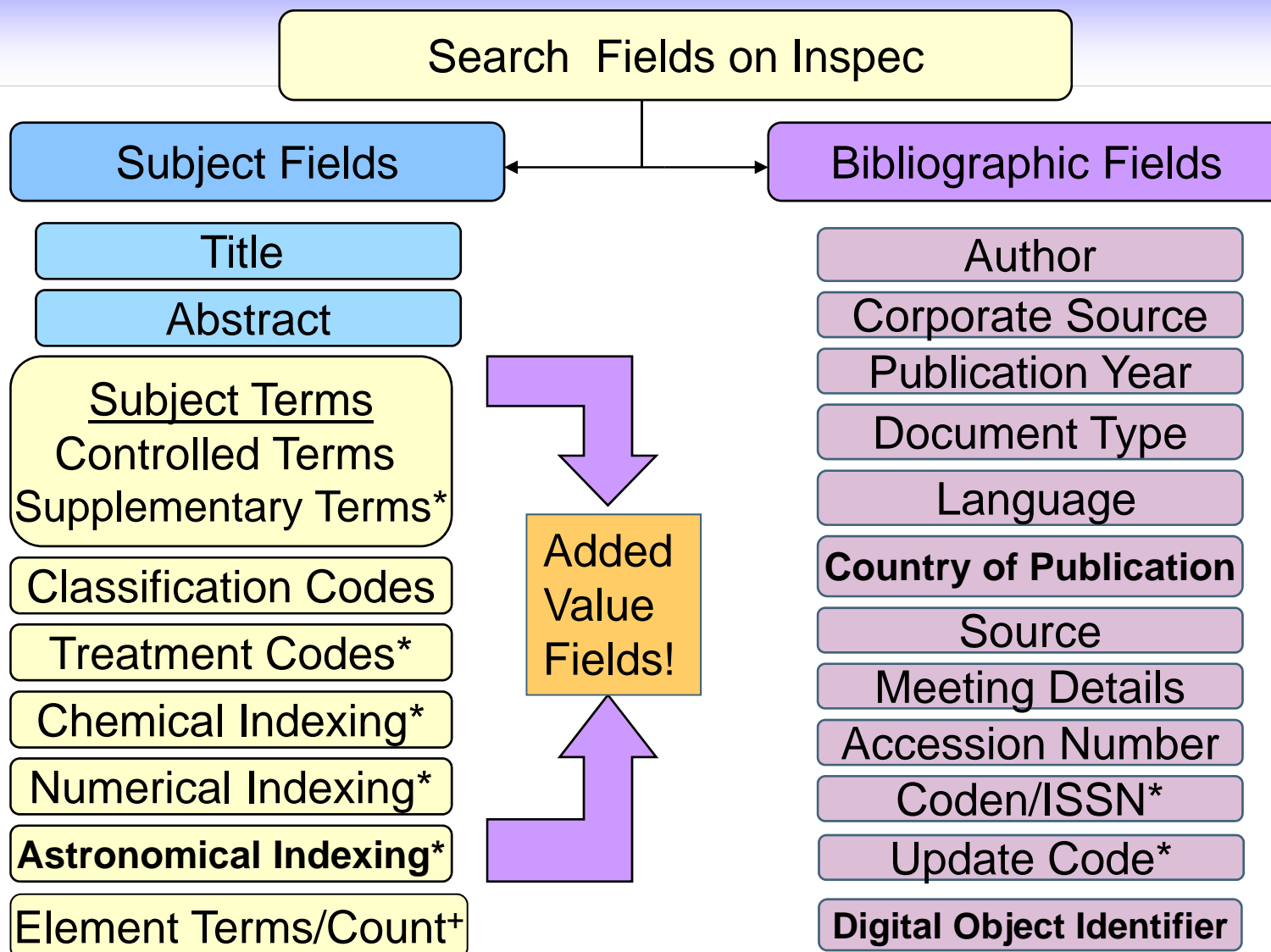
- Books/Book Chapters
- Reports
- Patents (1968/9-1976)
- Dissertations



Inspec Database Subjects



Figures correct for 1898 to August 2006.



*These fields are not present within Inspec Archive Records, 1898 to 1968.

+STN features

Extended Title Examples

**Didahdidit dit didah didahdit dahdit dah didididit dit dahdidahdit
dahdahdah dahdidit dit!** [Morse code program]

Soft targets [Internet security]

New service or bust? [broadband revenue]

Knowledge is power [bank enterprise content management]

A love/hate relationship [Google search engine]



AN 2004:8173631 **INSPEC**

TI **A love/hate relationship** [Google search engine]

AU Kennedy, S.D.

SO Information Today (April 2004), vol.21, no.4, p. 15-19

AN 2004:67301 **ABI-INFORM**

TI **A Love/Hate Relationship**

AU Kennedy, Shirley Duglin^{October 2009}

SO Information Today, (2004) Vol. 21, No. 4, pp. 15,19.

Inspec Sample Record

LI ANSWER 2 OF 23 INSPEC (C) 2009 IET on STN
 AN 2008:10320431 INSPEC
 TI Knowledge is power [nuclear power plant] ←
 AU Gauthier, B.
 SO InTech (Oct. 2008), vol.55, no.10, p. 46-8, 50, 52, 0 refs.
 CODEN: INTCDD, ISSN: 0192-303X
 Published by: Instrument Society of America, USA
 DT Journal
 TC Practical
 CY United States
 LA English
 AB Nuclear plants use online monitoring for critical machinery. Electricite De France (EDF) has been operating electrical power plants in France to increase the safety and availability of traditional and nuclear power plants. The company installed monitoring systems on primary circuits and turbo-generators of nuclear power plants to detect and investigate possible incidents. EDF has thus acquired a large knowledge base describing the behavior of the main elements of a nuclear power plant: reactor coolant pumps, turbines, generators, inlet valves, internal structures, and reactors. One specific advantage of the system is its capacity to monitor a fleet of nuclear power plants. It provides a maintenance knowledge database that can compare equipment behavior in different nuclear power plants and support feedback loop applied to the fleet. This is especially important for aging plants in managing equipment related to the extended lifetime of nuclear installations. User-friendly analysis tools and user interface help facilitate the work of maintenance operators and remote experts. In addition to generic graphic tools adapted to vibration monitoring, the system provides dedicated tools for critical equipment monitoring in a nuclear power plant.
 CC A2843F Fission reactor maintenance and outages; B8220B Nuclear reactors; B0160 Plant engineering, maintenance and safety; B7210B Computerised instrumentation; B8300 Power apparatus and electric machines; C7410B Power engineering computing; C7410H Computerised instrumentation; C6180 User interfaces; C6160 Database management systems (DBMS)
 CT computerised monitoring; condition monitoring; database management systems; maintenance engineering; nuclear power stations; nuclear reactor maintenance; power apparatus; user interfaces
 ST electrical power plant; nuclear power plant; equipment monitoring system; turbo-generator; large knowledge base acquisition; reactor coolant pump; inlet valve; turbine; user-friendly analysis tool; user interface; generic graphic tool

Extended title

Bibliographic information

English language abstract taken from original document if suitable. If necessary, abstract will be produced by Inspec.

Value-added indexing from Inspec and STN

Insphys Database

Additional File: INSPEC PHYS

- Supplementary backfile database
- Closed file 1979 to 1994
- 613, 260 records that are not in Inspec

•Coverage: Worldwide literature on all fields of:

- Physics
- Astronomy
- Astrophysics and related area

•Special emphasis:

- Non-conventional literature
- East European literature

Contains only those records which are not included in INSPEC: Use both files for the mentioned coverage!!

What Is Compendex?

- **COMP**uterized **EN**gineering in **DEX**
- Engineering Database, covers all engineering disciplines:
 - Chemical
 - Computing
 - Electrical
 - Civil
 - Mechanical

Compendex Database

- Over 8,8 million records (March 2009)
 - Over 650,000 records added annually (weekly with about 12,000 citations)
- 1969 to date
- Over 5,600 journals, books, reports, conference contributions and other non-conventional literature
 - Publications from over 55 countries
- Engineering Index Thesaurus (English / German edition)

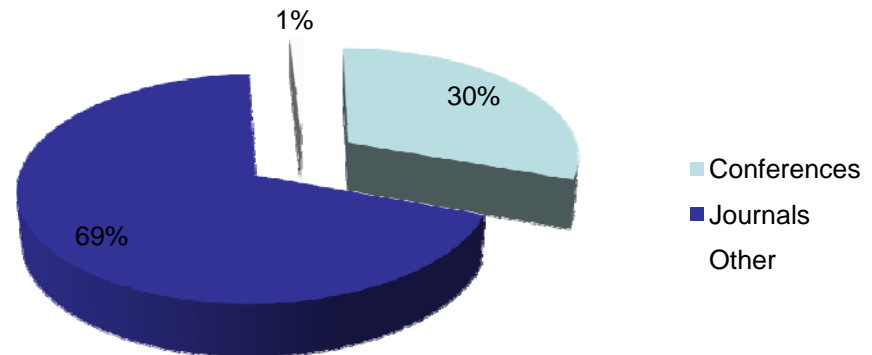
Database has been reloaded and enhanced in Feb. 2009

Document Types

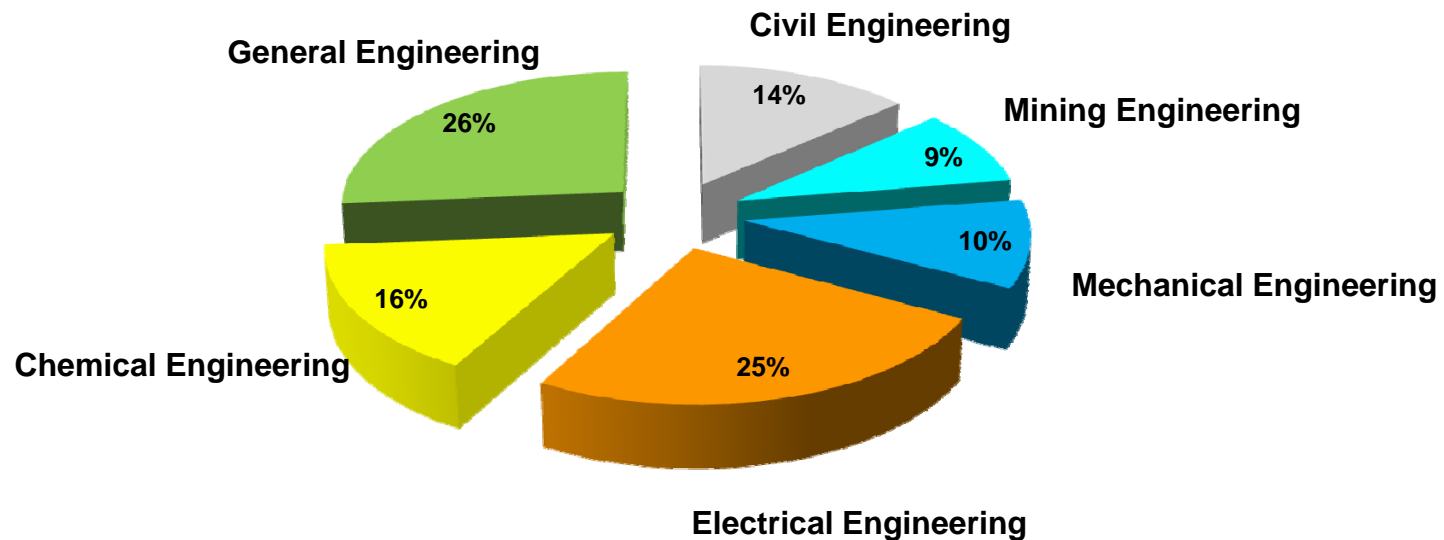
- Journal articles 69 %
 - Conference proceedings
 - Conference papers in Journals
 - Others 1%
- } 30 %

Others include:

- Books/Book Chapters
- Reports



Compendex Subject Coverage



March 2009

Search Fields on Compendex

Subject Fields

Title

Abstract

Subject Terms

Controlled Terms

Supplementary Terms

Classification Codes

Treatment Codes

Element Terms/Count

Bibliographic Fields

Author

Corporate Source

Publication Year

Document Type

Language

Country of Publication

Source

Meeting Details

Accession Number

Coden/ISSN*

Update Code*

Digital Object Identifier

Added
Value
Fields!

Compendex Sample Record

L5 ANSWER 1 OF 3938 COMPENDEX COPYRIGHT 2009 EEI on STN Full-text
 AN 2007-4710935419 COMPENDEX
 TI An overview of positive-electrode materials for advanced lithium-ion
 batteries
 AU Ohzuku Tsutomu; Brodd Ralph J.
 CS Ohzuku Tsutomu (Department of Applied Chemistry, Graduate School of
 Engineering, Osaka City University (OCU), Sugimoto 3-3-138, Sumiyoshi,
 Osaka, 558-8585 (JP)); Brodd Ralph J. (Broddarp of Nevada, Inc., 2161
 Fountain Springs Dr, Henderson, NV 89074 (US))
 EMAIL: ohzuku@a-chem.eng.osaka-cu.ac.jp
 SO Journal of Power Sources 11th International Meeting on Lithium Batteries
 (6 Dec 2007) Volume 174, Number 2, pp. 449-456, 81 refs.
 CODEN: JPSODZ ISSN: 0378-7753
 DOI: 10.1016/j.jpowsour.2007.06.154
 Published by: Elsevier
 PUI S037877530701289X
 CV Netherlands
 DT Journal; Article; (Literature Review, Bibliography); Theoretical
 LA English
 SL English
 ED Entered STN: 4 Jan 2009
 Last updated on STN: 4 Jan 2009
 AB Positive-electrode materials for lithium and lithium-ion batteries
 are briefly reviewed in chronological order. Emphasis is given to
 lithium insertion materials and their background relating to the "birth"
 of lithium-ion battery. Current lithium-ion batteries
 consisting of LiCoO₂ and graphite are approaching a critical limit in
 energy densities, and new innovating materials are needed in order to
 continue the advance of lithium-ion batteries. In particular, the
 recent trends on material researches for advanced lithium-ion
 batteries, such as layered lithium manganese oxides, lithium
 transition metal phosphates, and lithium nickel manganese oxides with or
 without cobalt, are described. Trials on new applications of lithium
 insertion materials for high-power lithium-ion batteries as well
 as hybrid capacitors leading for 12 V lead-free accumulators are also
 highlighted. .COPYRGT. 2007 Elsevier B.V. All rights reserved.
 CC 702.1.1 Primary Batteries; 704.1 Electric Components; 804.1 Organic
 Compounds; 804.2 Inorganic Compounds
 CT *Cathodes; Capacitors; Lithium batteries; Lithium compounds; Phosphates
 ST Energy densities; Lithium insertion materials; Lithium ion batteries;
 Lithium nickel manganese oxides
 ET Co*Li*O; Co sy 3; sy 3; Li sy 3; O sy 3; LiCoO; Li cp; cp; Co cp; O cp

Bibliographic information

Full-text delivery via direct
Chemport link to the
publisher!

Value-added indexing from
Elsevier and STN

CSA on STN

Lifescience

Aqualine
 Aquascience
 Bioeng
 Healthafe
 Lifescience
 Lisa
 Ocean
 Polluab
 Confscience

Technology

Materials

Aluminium
 Cerab
 Corrosion
 Copperlit
Ema
 Matbus
Metadex

High Tech

Ante
 Aerospace
 Compuab
 Elcom

Engineering

Civileng
 Environeng
Mecheng

Producer: ProQuest – Cambridge Scientific Abstracts

Benefits: Indexed by a common list of controlled vocabulary

Author e-mails, published URLs

What Is Metadex?

- **MET**als/**A**lloys in**DEX**
- The only comprehensive source for
 - Metals
 - Alloys
- Subject coverage:

Properties
Manufacturing
Applications
Development

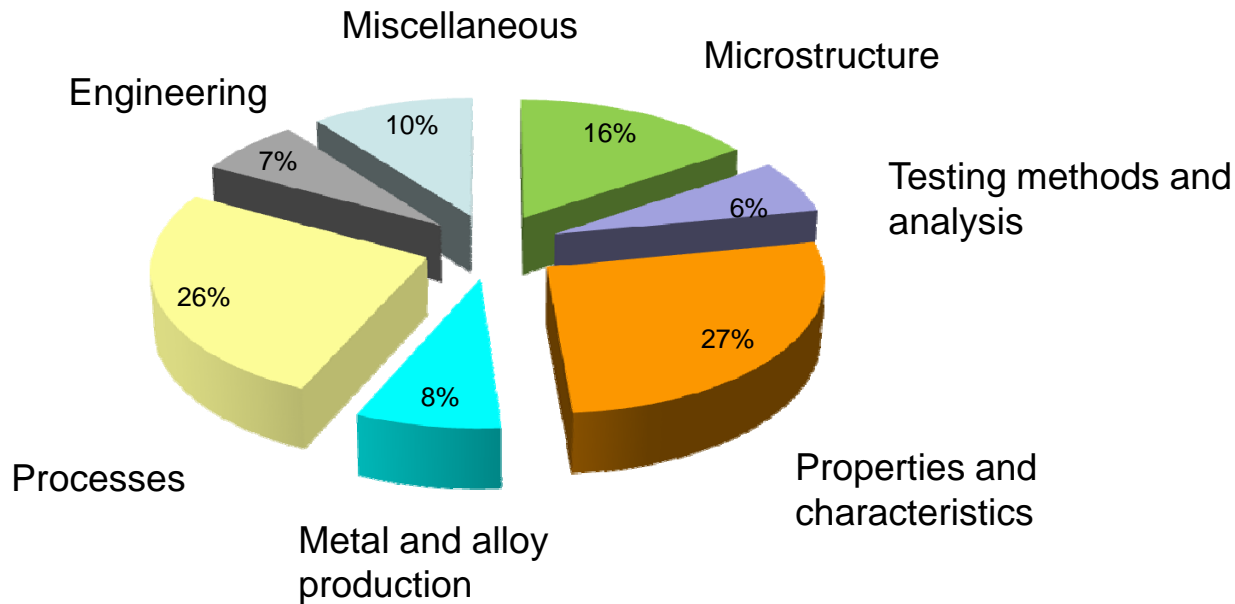
Steel
Microstructure
Strength
Refining
Casting
Coatings
Heat Treatment
Metal Matrix Composites

Nonferrous metals
Corrosion
Extracting and Smelting
Blast Furnaces
Machining
Welding
Testing and Analysis
Environmental and Safety Issues

Metadex Database

- Over 2,06 million records (Jan 2009)
 - Updated montly with about 3,500 citations
- 1966 to date
- Journals, conference contributions, books, reports, and other non-conventional literature
- Speciality: Alloy Indexing Thesaurus
- **Companion files:**
 - [EMA](#): Engineering materials
 - MATBUS: technlco-commercial developments in metals and materials
 - MDF: numeric data on ferrous and non-ferrous alloys

Metadex Subject Coverage



March 2009

Metadex Sample Record

L8 ANSWER 1 OF 7 METADEX COPYRIGHT 2009 CSA on STN Full-text
 AN 2005(10):34-24499 METADEX
 TI Electroless Cu-plated Ni₃Sn₄ alloy used as anode material for lithium ion battery.
 AU Cheng, Xin-Qun (Department of Applied Chemistry, Harbin Institute of Technology, Harbin 150001, PR China); Shi, Peng-Fei
 mailto: chengxq@hit.edu.cn
 SO Journal of Alloys and Compounds (20050405), volume 391, 1-2, pp. 241-244, Diffraction Patterns, Photomicrographs, Graphs
 Published by: Elsevier Science SA, P.O. Box 564, Lausanne 1, CH-1001, URL: http://www.elsevier.com. 20050405
 ISSN: 0925-8388
 DT Journal
 CY Switzerland
 LA English
 AB The rechargeable Li-ion battery is an important energy source for many portable applications. Carbon materials are currently used as anode materials, with a theoretical capacity of 372 mAh/g. The need for smaller and lighter products demands larger capacities, and that promotes the search for new materials. Sn-based alloys are a new kind of anode material for lithium ion battery because of their high specific capacity. Ni₃Sn₄ alloy was prepared by high-energy ball-milling and was electroless plated with copper to form a composite. The powder X-ray diffraction (XRD) pattern showed that the ball-milled alloy was composed of Ni₃Sn₄ and a small amount of SnO and Ni. Scanning electron microscope (SEM) observation showed that Cu electroless-plated on the surface of Ni₃Sn₄ alloy were particles. The electrochemical performance of Cu-plated alloy was superior to that of ball-milled one. Due to the formation of solid electrolyte interphase (SEI) and the reduction of the oxide, the coulombic efficiency was 46% for the first cycle. But the efficiency keep over 99% in the following 100 cycles, and the specific capacity was stable. The Cu-plated Ni₃Sn₄ alloy will be a promising anode material for lithium ion battery.
 CC 34 Chemical and Electrochemical Properties
 CT Lithium batteries; Electrode materials; Anodes; Intermetallics; Nickel compounds; Stannides; Electroless copper plating; Surface structure; Efficiency; Electrochemistry; COPPER (PURE); ELECTROLESS PLATING; NICKEL ALLOYS (50 TO 99 NI); BATTERIES;
 ALI Ni sub 3 Sn sub 4
 CCA CPD Intermetallic compounds
 ET Li; Sn; Ni*Sn; Ni sy 2; sy 2; Sn sy 2; Ni₃Sn; Ni cp; cp; Sn cp; O*Sn; SnO; O cp; Ni; Cu; Cu; Ni*Sn; Ni sy 2; sy 2; Sn sy 2; Ni₃Sn; Ni cp; cp; Sn cp; Ni; Sn

Bibliographic information

Value-added indexing from CSA and STN including alloy indexing and element terms.

Engineering databases: Overview

INSPEC

- Physics
- Electrical & electronic engin.
- Computing & control engin.
- Information technology
- Manufacturing, production & mechanical engineering

- Journals
- Grey literature, dissertations
- Reports, books, standards
- Conference proceedings

- Classification codes
- Controlled terms, words
- Supplementary terms
- Chemical index, phys. prop.
- Element terms
- Thesauri (CT, PHP)

COMPENDEX

- Chemical engineering
- Computing
- Electrical engineering
- Mechanical engineering
- Civil engineering

- Journals
- Reviews, books, reports
- Conference proceedings

- Classification codes
- Controlled terms, words
- Supplementary terms
- Element terms
- Thesauri (CT, CTDE)

METADEX

- Metals & alloys:
 - Properties
 - Manufacturing
 - Applications
 - Development

- Journals, conference reports
- Reports, books, patents
- Conference proceedings

- Classification codes
- Controlled terms, words
- Alloy index
- Element Terms

Engineering databases: Overview(2)

EMA

- Development, processing, production of :
 - Ceramic materials
 - Composite materials
 - Polymeric materials

- Journals
- Reports, books, dissertations
- patents
- Conference proceedings

- Classification codes
- Controlled terms
- Element terms

MECHENG

- Mechanical & transportation engineering:
 - Aircraft
 - Automotive
 - Robots

- Journals
- Reports
- books
- Conference proceedings

- Classification codes
- Controlled terms

CIVILENG

- Civil engineering:
 - Buildings
 - Highways & roads
 - Railways & mass transit
 - Water ways

- Journals
- Reports
- books
- Conference proceedings

- Classification Codes
- Controlled Terms

Engineering databases: Overview(3)

DKF

- Motor vehicle design
- Construction
- Manufacturing

- Grey literature >50%
- Journals,
- Reports, dissertations
- Conference proceedings

- Classification codes
- Controlled Terms
- Supplementary Terms

1MOBILITY

- Technology for self-propelled vehicles for:
 - Land
 - Sea
 - Air
 - Space

- Journals,
- Books
- Conference proceedings

- Controlled terms
- Supplementary terms

PASCAL

- Medical, Pharmaceutical and Psychological Sciences
- Life Sciences, Biology
- Engineering Sciences
- Physics and Mathematics
- Earth and Space
- Chemical Sciences

- Journal articles
- Conference proceedings
- Dissertations, books
- Reports

- Classification codes
- Controlled terms
- CT and CC in EN, FR, DE, ES

Agenda

- Why searching non-patent literature (NPL)?
- Cluster searching on STN
- **Going into details of the databases:**
 - INSPEC, INSPYS, COMPENDEX, METADEX, EMA, CIVILENG, MECHENG, DKF, MOBILITY, PASCAL
 - Value add and special STN features
- Search examples

Multiple STN search tools allow enhanced precision in engineering queries

- **Controlled terminology thesauri**

- INSPEC Thesaurus, EI Thesaurus, (CA Lexicon)

- **Numeric property searching**

- Preferred unit systems, Physical Property Thesaurus

- **Chemical Indexing**

- INSPEC Chemical Indexing, **Element Terms**, (CAS REGISTRY)

- **Alloy Indexing**

- METADEX Alloy Indexing and Alloy Classification

Multiple STN search tools allow enhanced precision in engineering queries (cont.)

- **Special content fields**
 - Controlled terms and supplementary terms
 - Classification codes and treatment codes
- **Left and right hand truncation**
- **(T) proximity search**
- **SET spellings, SET plurals, SET abbreviations**
- **Crossfile / multiframe search strategies**

Agenda

- Why searching non-patent literature (NPL)?
- Cluster searching on STN
- Going into details of the databases
- **Search examples:**
 - OLED display devices
 - Automotive

Search example using special content fields

Search Question:

What research has recently been reported on developments of organic light emitting diodes (OLED) for display devices?

Evaluating the variety of controlled and non-preferred terms across multiple databases opens up possibilities for additional free-text search terms.

Identify OLED terms in INSPEC

- Sometimes it's easy to locate terms in a thesaurus – as long as there are associated terms present.

```
=> FIL INSPEC; E OLED/CT
```

E#	FREQUENCY	AT	TERM
--	-----	--	----
E1	0	1	OLDROYD/CT
E2	0	2	OLDROYD FLUIDS/CT
E3	0	2 -->	OLED/CT
E4	0	2	OLFACTION/CT
E5	0	2	OLIGOMERS/CT

```
=> E E3+ALL
```

E13	0	-->	OLED/CT
E14	4913	USE	organic light emitting diodes/CT
***** END *****			

Identify OLED terms in INSPEC (cont.)

=> E E14+ALL

E15	467	BT3	emission/CT
E16	1580	BT2	light emitting devices/CT
E17	5866	BT2	optoelectronic devices/CT
E18	2596	BT3	diodes/CT
E19	10683	BT3	semiconductor devices/CT
E20	12476	BT2	semiconductor diodes/CT
E21	17232	BT1	light emitting diodes/CT
E22	4913	-->	organic light emitting diodes/CT
		DA	January 2003
E23	0	UF	OLED/CT
E24	0	UF	polymer LED/CT
E25	1277	RT	LED displays/CT
E26	18172	RT	conducting polymers/CT
E27	14673	RT	electroluminescence/CT
E28	13	RT	flexible displays/CT
E29	564	RT	flexible electronics/CT
E30	3062	RT	molecular electronics/CT
E31	265191	RT	organic compounds/CT
E32	13811	RT	organic semiconductors/CT
E33	17232	PT	light emitting diodes/CT
E34	21948	CC	B4260D/CT
E35	23140	CC	B7260/CT
E36	14453	CC	E1780/CT
E37	20353	CC	E3644N/CT
***** END *****			

BT= Broader terms

DA= Date of introduction of descriptor

UF= Allowed property name

RT= Related terms

Related classifications

Classifications in INSPEC

=> E B4260D/CC

E1	6645	B4260/CC
E2	6645	B4260 ELECTROLUMINESCENT DEVICES/CC
E3	21948	--> B4260D/CC
E4	21948	B4260D LIGHT EMITTING DIODES/CC

=> E E1780/CC

E13	65235	E1710/CC
E14	65235	E1710 ENGINEERING MATERIALS/CC
E15	14453	--> E1780/CC
E16	14453	E1780 PRODUCTS AND COMMODITIES/CC

=> E E3644N/CC

E25	496	E3644L/CC
E26	496	E3644L COMMUNICATIONS EQUIPMENT MANUFACTURING/CC
E27	20353	--> E3644N/CC
E28	20353	E3644N OPTOELECTRONICS MANUFACTURING/CC

Identify OLED terms in COMPENDEX

- Other times it requires more patience, or relying on terms derived from other databases

=> FIL COMPENDEX

=> E OLED/CT 5

E#	FREQUENCY	AT	TLANG	TERM
--	-----	--	-----	----
E38	17			OLE/CT
E39	2			OLECULAR STRUCTURE/CT
E40	0		-->	OLED/CT
E41	1			OLEFIN/CT
E42	1			OLEFIN HYDROGENATION/CT

o

o

Identify OLED terms in COMPENDEX(cont.)

=> E LIGHT EMITTING DIODES/CT 5

E#	FREQUENCY	AT	TLANG	TERM
---	-----	---	-----	----
E48	1			LIGHT EMISSION DETECTION/CT
E49	1			LIGHT EMITTING/CT
E50	21808	44	EN -->	LIGHT EMITTING DIODES/CT
E51	1			LIGHT EMITTING TUBES/CT
E52	1			LIGHT EMMITTING DIODES/CT

=> E E50+ALL

. . .

E81	12384	BT1	EN	Semiconductor diodes/CT
E82	0		DE	Halbleiterdioden/CT
E83	21808	-->	EN	Light emitting diodes/CT
E84	0		DE	Leuchtdioden/CT
		DA	EN	January 1993
			DE	Januar 1993
E85	14	UF	EN	LED/CT
E86	14		DE	LED/CT
E87	0	UF	EN	Semiconductor diode light emitters/CT
E88	0		DE	Halbleiterleuchtdioden/CT
E89	2317	OLD	EN	Semiconductor diodes, Light emitting/CT
E90	0		DE	Halbleiterdioden, Lumineszenz-/CT
E91	15108	RT	EN	Display devices/CT
E92	0		DE	Anzeigegeraete/CT
E93	6129	RT	EN	Integrated optoelectronics/CT
E94	0		DE	integrierte Optoelektronik/CT
E95	0	CC	EN	714.2/CT
E96	0	CC	EN	741.1/CT

BT= Broader terms

DA= Date of introduction of descriptor

UF= Allowed property name

RT= Related terms

OLD= Old term

Terms in English and German

Related classifications

Combine identified terms into a single search statement

```
=> FIL INSPEC COMPENDEX
```

```
=> SET MSTEPS ON
```

```
=> S (OLED OR (ORGAN?(A)(LIGHT?(W)EMIT? OR LED OR ELECTROLUM?)))/ST,CW
```

```
L1          6808 FILE INSPEC
```

```
L2          5593 FILE COMPENDEX
```

```
TOTAL FOR ALL FILES
```

```
L3          12401 (OLED OR (ORGAN?(A)(LIGHT?(W) EMIT? OR LED OR ELECTROLUM?)))/ST,CW
```

```
=> S L3 OR E14
```

```
L4          6808 FILE INSPEC
```

```
L5          5593 FILE COMPENDEX
```

```
TOTAL FOR ALL FILES
```

```
L6          12401 L3 OR "ORGANIC LIGHT EMITTING DIODES"/CT
```

```
=> S L6 AND PY>=2008
```

```
L7          993 FILE INSPEC
```

```
L8          1387 FILE COMPENDEX
```

```
TOTAL FOR ALL FILES
```

```
L9          2380 L6 AND PY>=2008
```

Use SET MSPEPS ON to get individual file results

To increase precision, we will limit to cases indexed in the Supplementary Terms and / or Controlled Words. Use Controlled Words (/CW) field to capture all variations.

Supplementary Terms (/ST)

(aka Free Term Indexing, Identifiers or Uncontrolled Indexing)

- Single words or phrases from title & abstract (or from full article text) to show **all significant concepts** of document.
- Includes
 - inorganic formulae
 - organic compound names
 - acronyms or full names
 - manufacturer/brand names
 - British & US English
- Benefit
 - Index for new technologies, etc that do not yet have a Thesaurus entry.

Consider further refinement of terms or removal of duplicate references

=> DUP REM L9

```
PROCESSING IS APPROXIMATELY 18% COMPLETE FOR L9
PROCESSING IS APPROXIMATELY 37% COMPLETE FOR L9
PROCESSING COMPLETED FOR L9
L10      1857 DUP REM L9 (523 DUPLICATES REMOVED)
          ANSWERS '1-993' FROM FILE INSPEC
          ANSWERS '994-1857' FROM FILE COMPENDEX
```

=> SORT L10 1-993 OCC

```
PROCESSING COMPLETED FOR L10
L11      993 SORT L10 1-993 OCC
```

=> D OCC

```
L11      ANSWER 1 OF 993  INSPEC  (C) 2009 IET on STN
          FORMAT          COUNT
          PY              1
          CT              4
          ST              7
```

Use SET DUPORDER FILE
to get individual file results

You may SORT the individual
answer sets by occurrence
count of hit terms or other
fields and re-use the L-number
for further refinement in the
individual file.

Display results

=> **D L11 ALL**

L11 ANSWER 1 OF 993 INSPEC (C) 2009 IET on STN
 AN 2009:10435910 INSPEC [Full-text](#)
 TI Organic Light Emitting Materials and Devices XII
 SO Proceedings of the SPIE - The International Society for Optical
 Engineering (2008), vol.7051
 CODEN: PSISDG, ISSN: 0277-786X
 Published by: SPIE - The International Society for Optical Engineering,
 USA
 Conference: Organic Light Emitting Materials and Devices XII, San Diego,
 CA, USA, 10 Aug. 2008
 DT Conference; Conference Proceeding; Journal
 CY United States
 LA English
 AB The following topics are dealt with: organic light emitting materials and devices;
 processing; degradation; device physics; displays; interfaces; transport; OLED; solid
 state lighting; charge injection; solar cells; and organic lasers.
 CC A0130C Conference proceedings; A4270J Optical polymers and other organic
 optical materials; A4272 Optical sources and standards; A4255R Lasing
 action in other solids; A8630J Photoelectric conversion; solar cells and
 arrays; B0100 General electrical engineering topics; B4260D Light
 emitting diodes; B7260 Display technology; B4320G Solid lasers; B4110
 Optical materials; B8530B Light sources; B8420 Solar cells and arrays
 CT charge injection; LED displays; light sources; optical materials; organic
 compounds; **organic light emitting diodes**; solar cells; solid lasers
 ST **organic light emitting** materials; **organic light emitting**
 devices; degradation; device physics; displays; interfaces; charge
 injection; transport; **OLED**; solid state lighting; solar cells; organic
 lasers

Search example Automotive

Search Question:

Searching for regenerative brakes in hybrid electric vehicles (HEVs)

Search in Patent and non-patent literature:

Patents are searched in WPINDEX, Non-patent literature is searched in DKF, 1MOBILITY, INSPEC, COMPENDEX, MECHENG and PASCAL

Search example Automotive: Patent search WPINDEX

=> **FIL WPINDEX**

=> **SET SFIELDS BI BIEX**

=> **QUE (?HYBRID? AND (CAR? OR VEHICLE?)) OR PHEV OR HEV**

L1 **QUE (?HYBRID?/BI,BIEX AND (CAR?/BI,BIEX OR
VEHICLE?/BI,BIEX)) OR PHEV/BI, BIEX OR HEV/BI,BIEX**

=> **QUE (X21-A01D OR X22-P04A)/MC**

X21-A01D HYBRID VEHICLE

X22-P04A HYBRID-ELECTRIC

L2 **QUE (X21-A01D OR X22-P04A)/MC**

=> **QUE B60K0006-20+NT/IPC**

L3 **QUE B60K0006-20+NT/IPC**

SET SFIELDS to BI and
BIEX to search also in the
member level of WPINDEX

Enlarge your search using
Derwent Manual Codes. Use
MC Thesaurus to get text
information.

Use **IPC: Thesaurus**
available!

Search example Automotive: Patent search WPINDEX (2)

=> QUE (B60K0006-2? OR B60K0006-3? OR B60K0006-4? OR
B60K0006-5?)/EPC

L4 QUE (B60K0006-2? OR B60K0006-3? OR B60K0006-4? OR B60K0006-
5?)/EPC

Use **ECLA**: no online Thesaurus
available but PDF link!

=> QUE 180/065.200/NCL

L5 QUE 180/065.200/NCL
(180065200/NCL)

Use **NCL**: online Thesaurus available
in CAPLUS and USPATFULL

=> QUE REGENERATIV? (W) BRAK?

L6 QUE REGENERATIV?/BI,BIEX (W) BRAK?/BI,BIEX

=> QUE (X21-A03C)/MC

X21-A03C ELECTRODYNAMIC

L7 QUE (X21-A03C)/MC

Search example Automotive: Patent search WPINDEX (3)

=> QUE (B60L0007-10 OR H02P0003-14)/IPC

L8 QUE (B60L007-10 OR H02P0003-14)/IPC

=> QUE (B60L0007-1? OR H02P0003-14)/EPC

L9 QUE (B60L007-1? OR H02P0003-14)/EPC

=> QUE (303/152.000 OR 318/376.000)/NCL

L10 QUE (303/152.000 OR 318/376.000)/NCL
(303152000 OR 318376000/NCL)

=> S L1 AND L6

L11 572 L1 AND L6

=> S L1-5 AND L6-10

L12 1036 (L1 OR L2 OR L3 OR L4 OR L5) AND (L6 OR L7 OR L8
OR L9 OR L10)

Important: Keyword search only
retrieves 567 answers, while the
combined search with
classifications retrieves 1036!

Search example Automotive: Patent search WPINDEX (4)

=> D FULL

L12 ANSWER 1 OF 1096 WPINDEX COPYRIGHT 2009 THOMSON REUTERS on STN

AN 2009-F79475 [20] WPINDEX

TI Braking control apparatus for **hybrid vehicle**, has control unit changing allocation with pressurization braking force by pressurizing unit, and **regenerative-braking** force by motor generator based on deviation of estimated deceleration

DC T01; X21

IN TSUMORI C

PA (TOYT-C) TOYOTA JIDOSHA KK

CYC 1

PI JP 2009051383 A 20090312 (200920)* JA 17[7]

ADT JP 2009051383 A JP 2007-220865 20070828

PRAI JP 2007-220865 20070828

IPCI B60K0006-00 [I,C]; **B60K0006-445** [I,A]; B60L0007-00 [I,A]; B60T0008-17 [I,A]; B60T0008-17 [I,C]; B60W0010-08 [I,A]; B60W0010-08 [I,C]; B60W0010-18 [I,A]; B60W0010-18 [I,C]; B60W0010-30 [I,A]; B60W0010-30 [I,C]; B60W0020-00 [I,A]; B60W0020-00 [I,C]

FCL Main: **B60T0008-17 C** (ZHV)

Secondary: **B60K0006-20** 320; B60K0006-20 370; B60K0006-20 380; B60K0006-445; B60L0007-14

FTRM **3D246**; **5H115**; 3D246/AA09; 3D246/BA02; 3D246/DA01; 3D246/EA05; 3D246/GA05; 3D246/HA01.A; 3D246/HA03.A; 3D246/HA93.A; 3D246/JA03; 3D246/JB05; 3D246/LA52.Z; 5H115/PA01; 5H115/PC06; 5H115/PG04; 5H115/PI16; 5H115/PI29; 5H115/PO06; 5H115/PO17; 5H115/PU08; 5H115/PU25; 5H115/PV09; 5H115/QE10; 5H115/QI04; 5H115/QI15; 5H115/RB22; 5H115/TO26

Sure that IPC, ECLA, NCL and MC are sufficient? Use the **Japanese FI- and F-terms** in addition! Japanese automakers are leading in this area!

Search example Automotive: Patent search WPINDEX (4)

=> D FULL

L12 ANSWER 1 OF 1096 WPINDEX COPYRIGHT 2009 THOMSON REUTERS on STN

AN 2009-F79475 [20] WPINDEX

TI Braking control apparatus for **hybrid vehicle**, has control unit changing allocation with pressurization braking force by pressurizing unit, and **regenerative-braking** force by motor generator based on deviation of estimated deceleration

DC T01; X21

IN TSUMORI C

PA (TOYT-C) TOYOTA JIDOSHA KK

CYC 1

PI JP 2009051383 A 20090312 (200920)*

ADT JP 2009051383 A JP 2007-220865 2007082

PRAI JP 2007-220865 20070828

IPCI B60K0006-00 [I,C]; **B60K0006-445** [I,A]; B60L0007-00 [I,C]; B60L0007-14 [I,A]; B60T0008-17 [I,A]; B60T0008-17 [I,C]; B60W0010-08 [I,A]; B60W0010-08 [I,C]; B60W0010-18 [I,A]; B60W0010-18 [I,C]; B60W0010-30 [I,A]; B60W0010-30 [I,C]; B60W0020-00 [I,A]; B60W0020-00 [I,C]

FCL Main: **B60T0008-17 C** (ZHV)

Secondary: **B60K0006-20** 320; B60K0006-20 370; B60K0006-20 380; B60K0006-445; B60L0007-14

FTRM **3D246**; **5H115**; 3D246/AA09; 3D246/BA02; 3D246/DA01; 3D246/EA05; 3D246/GA05; 3D246/HA01.A; 3D246/HA03.A; 3D246/HA93.A; 3D246/JA03; 3D246/JB05; 3D246/LA52.Z; 5H115/PA01; 5H115/PC06; 5H115/PG04; 5H115/PI16; 5H115/PI29; 5H115/PO06; 5H115/PO17; 5H115/PU08; 5H115/PU25; 5H115/PV09; 5H115/QE10; 5H115/QI04; 5H115/QI15; 5H115/RB22; 5H115/TO26

=> HELP JPC

...

Definitions and hierarchy for Japanese FI and F Term classifications are available in English at the JPO IPDL web

site

http://www5.ipdl.inpit.go.jp/pmgs1/pmgs1/pmgs_E

Search example Automotive

** F-term List **

This screen shows the F-term list of the theme "3D246".

(Remarks)

(Not Translation)

3D246

BRAKE SYSTEM OR ADJUSTABLE BRAKING POWER

B60T7/12-8/1769;8/32-8/96

Viewpoint	F-term										FI Cover Range	
AA	AA00	AA01	AA02	AA03		AA05	AA06		AA08	AA09	AA10	B60T7/12-8/1769;B60T8/8/96
	USE	. Four, or more, wheel drive vehicles	. . Mechanical distribution of driving power, e.g. centre differential gears	. . Motor drive of parts of wheels only		. Front-wheel drive vehicles	. Rear-wheel-drive vehicles		. Electric vehicles	. Hybrid vehicles	. Hydraulic drive vehicles	
	AA11	AA12	AA13	AA14	AA15		AA17	AA18				
		. Bicycles or tricycles	. Coupled vehicles	. Heavy vehicles or multi-axle vehicles	. Industrial Vehicles	. . Agricultural vehicles		. Railway vehicles	. Aircraft			
BA	BA00	BA01	BA02	BA03		BA05	BA06		BA08			
	TYPE OF BRAKE	. Mechanical brakes	. Hydraulic brakes	. Pneumatic brakes		. combined brakes	. Air-over-hydraulic brakes		. Electric brakes			
CA	CA00	CA01	CA02	CA03	CA04	CA05						
	NUMBER OF	. Single	. Two systems	. . Piping for	. . Cross	. More than two						

Search example Automotive: Patent search WPINDEX (5)

AB JP 2009051383 A UPAB: 20090401

NOVELTY - The apparatus has an acceleration sensor (201) that detecting actual deceleration generated in a **vehicle**. A main electronic control unit (ECU) (112) estimates the deceleration generated in the **vehicle** based on a damping operating quantity of a brake pedal (11). The ECU changes allocation with the pressurization braking force by the pressurizing unit, and the **regenerative-braking** force by the motor generator based on a deviation of the estimated deceleration from real deceleration. The ECU estimates decreased part of master cylinder pressure in the master cylinder.

USE - Braking control apparatus for a **hybrid vehicle**. Can also be used for an electric **vehicle**.

ADVANTAGE - The apparatus provides highly accurate braking force control, and improves the drivability of the **hybrid vehicle**. The apparatus suppresses the master cylinder pressure by the operating the pressurizing unit. The apparatus freely controls the torque of a hydraulic brake.

DESCRIPTION OF DRAWINGS - The drawing shows a block diagram of a braking control apparatus for a **hybrid vehicle**.'(Drawing includes non-English language text)'

Brake pedal (11)

Brake booster (12)

Master cylinder (13)

Main electronic control unit (112)

Acceleration sensor (201)

FS EPI

MC EPI: T01-J07D1; X21-A01D1; X21-A01F; **X21-A03C**

Search example Automotive: Patent search WPINDEX (6)

=> ANA L12 PC

L13 ANALYZE L12 1- PC : 66 TERMS

=> D TOP10

L13 ANALYZE L12 1- PC : 66 TERMS

TERM #	# OCC	# DOC	% DOC	PC
1	955	645	62.26	JP/PC
2	711	457	44.11	US/PC
6	360	277	26.74	DE/PC
7	293	186	17.95	EP/PC
9	190	153	14.77	WO/PC
10	182	117	11.29	KR/PC
11	173	139	13.42	CN/PC
16	71	48	4.63	CA/PC
18	61	37	3.57	GB/PC
20	35	35	3.38	FR/PC

Most patent publications
for this topic are published
in Japan, followed by the
US and Germany!

Search example Automotive: NPL citations in INPAFAMDB

```
=> FIL INPAFAMDB
```

```
=> S (REGENERATIV? (S) (BREMS? OR BRAK?))/REN
```

```
L14          32 (REGENERATIV? (S) (BREMS? OR BRAK?))/REN
```

```
=> S L12 AND ?HYBRID?
```

```
L15          9 L12 AND ?HYBRID?
```

```
=> D REN 1-2
```

```
L15  ANSWER 1 OF 9          INPAFAMDB COPYRIGHT 2009 EPO/FIZ KA on STN
REN  MAHSHID AMIRABADI ET AL: "Fuzzy Control of a Hybrid Power Source for
Fuel Cell Electric Vehicle using Regenerative Braking Ultracapacitor"
12TH INTERNATIONAL POWER ELECTRONICS AND MOTION CONTROL CONFERENCE, IEEE,
PI, 1. August 2006 (2006-08-01), Seiten 1389-1394, XP031009112 ISBN:
978-1-4244-0120-8 (SEA, Cat: X)
```

```
...
```

```
L15  ANSWER 2 OF 9          INPAFAMDB COPYRIGHT 2009 EPO/FIZ KA on STN
```

```
...
```

```
REN  Hybrid Electric Vehicle Program-Components, Regenerative Braking,
http://www.hev.doe.gov/components/regen.html, Aug. 1999, 1 pp. (APP)
```

```
...
```

Citations in INPAFAMDB are
also a useful search tool for
NPL!

Citation of internet source!

Search example Automotive: Search NPL - DKF

=> **FIL DKF**

=> **? COST**

Start the NPL in file **DKF**, a database specialized in the field of automotive engineering.

STN International Fees and Prices, Effective Jan 1, 2009

DKF File	Euro
-----	-----
Connect Hour Fee (per hour) .	185,00
SDI Search Fee (monthly). . .	7,26
SDI PACKAGE Component Fee 1)	7,26
SDI PACKAGE Component Frequency: monthly	
Display Fee (per answer)	
- ALL, IALL, DALL, BIB, IBIB	3,26
- AU, AV, CS, ISN, JT, ON, SO	3,26
- IND, Trial, SAM, SCAN, ABS	FREE
- AB, AN, CC, CT, CY, DT, ED, LA, PY, SH, ST, TI	FREE

Note that the display of TI, AB and IND is free, this can be used for **translation** of search terms and **relevance check** of your answer set.

Search NPL – DKF (2)

```
=> S (HYBRID? AND VEHICLE#)/TI
      2464 HYBRID#/TI
      15641 VEHICLE#/TI
L13      913 (HYBRID? AND VEHICLE#)/TI
```

```
=> D TI 1-10
```

```
L13 ANSWER 1 OF 913 DKF COPYRIGHT 2009 DKF on STN
TI Electric energy storage systems for future hybrid vehicles
Elektrische Energiespeichersysteme fuer zukuenftige Hybridfahrzeuge.
```

...

```
=> S REGENERATIVE(W)BRAK#/TI
```

```
L14      39 REGENERATIVE(W)BRAK#/TI
```

```
L14 ANSWER 1 OF 39 DKF COPYRIGHT 2009 DKF on STN
TI Regenerative braking strategy for hybrid electric vehicles based on
regenerative torque optimization control
Regenerative Bremsstrategie fuer Elektrohybridfahrzeuge auf Grundlage
der optimierten Regelung des regenerativen Drehmoments.
```

Since DKF contains only German abstracts, your keyword search needs to include German search terms! However, **titles are available in English and German**, this can be used to translate your search query.

Search example Automotive: Search NPL – DKF (3)

=> QUE (?HYBRID? AND (?FAHRZEUG? OR AUTO? OR KFZ OR
VEHICLE?)) OR PHEV OR HEV

L15 QUE (?HYBRID? AND (?FAHRZEUG? OR AUTO? OR KFZ OR VEHICLE?))
OR PHEV OR HEV

=> QUE (REGENERATIV? (W) (BREMS? OR BRAK?)) OR NUTZBREMS?
OR HILFSKRAFTBREMS?

L16 QUE (REGENERATIV? (W) (BREMS? OR BRAK?)) OR NUTZBREMS? OR
HILFSKRAFTBREMS?

=> S L15 AND L16

L17 140 L15 AND L16

=> D 1-3 TI AB IND

Search with your improved
search query!

Check your answers for
relevance using free display
fields and formats.

Search NPL – DKF (4)

L17 ANSWER 2 OF 140 DKF COPYRIGHT 2009 DKF on STN

TI **Hybrid** einmal anders - Bosch entwickelt ein hydrostatisch **regeneratives Bremssystem** fuer **Nutzfahrzeuge**
Bosch develops a hydrostatic regenerative braking system for commercial **vehicles**.

AB Die Bremsenergieerueckgewinnung ist besonders bei schweren **Fahrzeugen** interessant. Geschickt im **Fahrzeug** umverteilt, kann der zum wieder Anfahren erforderliche Energiebedarf deutlich reduziert werden. Dazu sind nicht in jedem Fall ein Generator und Batterien erforderlich, wie unlaengst bei der Bosch Tochter Rexroth bewiesen wurde. Die Hydraulikspezialisten stellten einen Versuchstraeger vor, der die Bremsenergie hydraulisch zwischenspeichert. Zwei Varianten des sogenannten HRB wurden entwickelt. Waehrend sich das HRB parallel fuer Lkw mit konventionellem mechanischem Antrieb eignet, ist das HRB seriell fuer Lkw mit hydrostatischem Antrieb.

AN 200809223778 DKF

SH Nutzfahrzeuge; Alternative Kraftstoffe, nichtkonventionelle Antriebe

CC TAD Lastkraftwagen, Lieferwagen, Wohnmobile
YDD Elektrische Fahrzeugantriebe, Elektrohybridantriebe

CT LASTKRAFTWAGEN; **HYBRIDANTRIEB**; BREMSE; ENERGIERUECKGEWINNUNG;
ENERGIESPEICHER

NPL – Other relevant databases

```
=> FIL 1MOBILITY INSPEC COMPENDEX MECHENG PASCAL
```

```
=> SET MSTEPS ON
```

```
=> S L15 AND L16
```

```
FILE '1MOBILITY'
```

```
LEFT TRUNCATION IGNORED FOR FILE '1MOBILITY'
```

```
L18          194 L15 AND L16
```

```
FILE 'INSPEC'
```

```
L19          205 L15 AND L16
```

```
FILE 'COMPENDEX'
```

```
L20          197 L15 AND L16
```

```
FILE 'MECHENG'
```

```
L21          133 L15 AND L16
```

Expand your non-patent search to other relevant databases.

Left truncation is not available in all files. However, it will just be ignored in these files and the search runs to completion.

Search example Automotive: Search NPL – Other relevant databases (2)

62

```
FILE 'PASCAL'  
L22          53 L15 AND L16
```

```
TOTAL FOR ALL FILES  
L23          782 L15 AND L16
```

```
=> SET DUPORDER FILE  
SET COMMAND COMPLETED
```

```
=> DUP REM  
ENTER L# LIST OR (END):117 118 121 119 120 122
```

```
L24          724 DUP REM L17 L18 L21 L19 L20 L22 (198 DUPLICATES REMOVED)  
ANSWERS '1-140' FROM FILE DKF  
ANSWERS '141-325' FROM FILE 1MOBILITY  
ANSWERS '326-407' FROM FILE MECHENG  
ANSWERS '408-578' FROM FILE INSPEC  
ANSWERS '579-710' FROM FILE COMPENDEX  
ANSWERS '711-724' FROM FILE PASCAL
```

SET DUPORDER FILE before duplicate removal to keep answers in file order.

With the order of the L numbers you can specify the order in which the answers will be kept.

NPL – DKF

=> D ALL 1 FROM EACH

Display results in preferred format. One answer from each file is displayed as an example.

L24 ANSWER 1 OF 724 **DKF** COPYRIGHT 2009 DKF on STN
AN 200806221580 DKF ON 0806DKF221580 [Full text](#)
TI **Regenerative braking** strategy for hybrid electric vehicles based
on regenerative torque optimization control
Regenerative Bremsstrategie fuer Elektrohybridfahrzeuge auf
Grundlage der optimierten Regelung des regenerativen Drehmoments.
AU Wang, F.; Zhuo, B.
CS Shanghai Jiao Tong University, CN
SO Proc.of the Institution of Mech. English Part D; 222(2008)4; p. 499-513, pp.
15, Zeichng./drwgs. 2, Diagr. 21, Tab. 2, Reference 12; Original bei/available
from DKF
CODEN: PIMED
DT Zeitschrift; Journal
CY China; China
LA Englisch; English
AB Vorstellung einer Verteilungsstrategie des regenerativen Drehmoments (Regenerative
Torque Distribution - RTD) mit dem Ziel der Rueckgewinnung und Speicherung von so viel wie
moeglich Bremsenergie bei **Hybridfahrzeugen**. Fuer das Ausrollen wird eine emulierte ...
SH Alternative Kraftstoffe, nichtkonventionelle Antriebe; Ladungswechsel,
Gemischbildung, Verbrennung, Katalysator; Fahrmechanik, Fahrdynamik
CC YDD Elektrische Fahrzeugantriebe, Elektrohybridantriebe
VLK Kraftstoffverbrauch
TP Fahrmechanik (auch Fahrzeugaerodynamik)
CT **ELEKTROHYBRIDANTRIEB**; ENERGIERUECKGEWINNUNG; BREMSMOMENT
ST RUECKGEWINNUNG DER BREMSENERGIE

Chinese publication from a
Chinese university.

NPL – 1MOBILITY

L24 ANSWER 141 OF 724 **1MOBILITY** COPYRIGHT 2009 SAE on STN DUPLICATE 10
AN 2008:3955 1MOBILITY [Full-text](#)
DN 11-16-4-41
TI **Hybrid** Innovations for Hydraulic Braking
AU Fritz, Darlene(SAE International)
SO (2008 Jun 01) Off-highway Engineering, Volume 16, Number 4; p. 41 (3 pages).
SAE International, Warrendale, Pennsylvania, USA.
ISSN: 1074-6919.
CY United States
DT Journal
FS SAE
LA English
AB Exploring new technologies for recovering kinetic energy from braking.
CC Land or Sea
CT Electrohydraulics; Energy recovery; **Off-road Vehicles**; Hydrostatic drives; Lift trucks; **Regenerative braking; Vehicles**

SAE International: American Society of Automotive Engineers

NPL – INSPEC

L24 ANSWER 408 OF 724 **INSPEC** (C) 2009 IET on STN DUPLICATE 1
AN 2009:10449337 INSPEC [Full-text](#)
TI Lead-acid batteries for micro- and **mild-hybrid** applications
AU Valenciano, J. (Exide Technol., R&D Centre, Azuqueca de Henares, Spain),
Fernandez, M. (Exide Technol., R&D Centre, Azuqueca de Henares, Spain),
Trinidad, F. (Exide Technol., R&D Centre, Azuqueca de Henares, Spain),
Sanz, L. (Exide Technol., R&D Centre, Azuqueca de Henares, Spain)
SO Journal of Power Sources (15 Feb. 2009), vol.187, no.2, p. 599-604, 10
refs.
CODEN: JPSODZ, ISSN: 0378-7753
Doc.Number: S0378-7753(08)02181-2
Published by: Elsevier Sequoia S.A, Switzerland
DT Journal
TC Practical; Experimental
CY Switzerland
LA English
AB Car manufactures have announced the launch in coming months of **vehicles** with reduced emissions due to the introduction of new functions like stop-start and **regenerative braking**. Initial performance request of **automotive** lead-acid batteries are becoming more and more demanding and, in addition to this, cycle life with new accelerated ageing profiles are being proposed in order to determine the influence of the new functions on the expected battery life.
...
CC B8520B Automobile electronics; B8410E Secondary cells
CT automotive electronics; lead acid batteries
ST spiral wound valve regulated lead acid battery; hybrid applications; automotive batteries; flooded SLI battery; depth of discharge cycling conditions; high temperature behaviour; engine compartment
ET DoD; D cp; cp; C

Practical, Experimental
publication!!

NPL – COMPENDEX

L24 ANSWER 579 OF 724 **COMPENDEX** COPYRIGHT 2009 EEI on STNDUPLICATE 44
AN 2005-289199412 COMPENDEX [Full-text](#)
TI Energy management strategies for vehicular electric power systems
AU Koot Michiel; de Jager Bram; Steinbuch Maarten; Kessels J.T.B.A.; van
den Bosch P.P.J.; Heemels W.P. Maurice H.
CS Koot Michiel; de Jager Bram; Steinbuch Maarten (Dynamics and Control
Technology Group, Department of Mechanical Engineering, Technische
Universiteit Eindhoven, 5600 MB Eindhoven (NL)); Kessels J.T.B.A.; van
den Bosch P.P.J. (Control Systems Group, Department of Electrical
Engineering, Technische Universiteit Eindhoven, 5600 MB Eindhoven (NL));
Heemels W.P. Maurice H. (Embedded Systems Institute, 5600 MB Eindhoven
(NL))
EMAIL: M.W.T.Koot@tue.nl; A.G.de.Jager@wfw.wtb.tue.nl;
M.Steinbuch@tue.nl; J.T.B.A.Kessels@tue.nl; P.P.J.v.d.Bosch@tue.nl;
Maurice.Heemels@embeddedsystems.nl
SO IEEE Transactions on Vehicular Technology (May 2005) Volume 54, Number
3, pp. 771-782, 33 refs.
CODEN: ITVTAB ISSN: 0018-9545
DOI: 10.1109/TVT.2005.847211
Published by: Institute of Electrical and Electronics Engineers Inc.
CY United States
DT Journal; Article; Theoretical
LA English
SL English
ED Entered STN: 4 Jan 2009
Last updated on STN: 4 Jan 2009

Research Group at a Dutch
university, including contact
information.

NPL – COMPENDEX (2)

AB In the near future, a significant increase in electric power consumption in **vehicles** is expected. To limit the associated increase in fuel consumption and exhaust emissions, smart strategies for the generation, storage/retrieval, distribution, and consumption of electric power will be used. Inspired by the research on energy management for **hybrid electric vehicles (HEVs)**, this paper presents an extensive study on controlling the vehicular electric power system to reduce the fuel use and emissions, by generating and storing electrical energy only at the most suitable moments. For this purpose, both off-line optimization methods using knowledge of the driving pattern and on-line implementable ones are developed and tested in a simulation environment. Results show a reduction in fuel use of 2%, even without a prediction of the driving cycle being used. Simultaneously, even larger reductions of the emissions are obtained. The strategies can also be applied to a mild **HEV** with an integrated starter alternator (ISA), without modifications, or to other types of HEVs with slight changes in the formulation. .COPYRGT. 2005 IEEE.

CC 612.1 Internal Combustion Engines, General; **661.2 Automotive Engine Components**; **662.1 Automobiles**; 702.1 Electric Batteries; 921.5 Optimization Techniques; 921.6 Numerical Methods

CT ***Electric vehicles**; Algorithms; Braking; Dynamic programming; Electric batteries; Electric power supplies to apparatus; Energy management; Fuel consumption; Internal combustion engines; Mathematical models; Optimization; Quadratic programming; Starters

ST Fuel reduction; **Hybrid electric vehicles (HEVs)**; **Regenerative braking**; Vehicular electric power system

Very precise Supplementary
Terms!

NPL – MECHENG

L24 ANSWER 326 OF 724 **MECHENG** COPYRIGHT 2009 CSA on STN DUPLICATE 4
AN 2009009407 MECHENG [Full-text](#)
DN 200901-60-0000935
TI **Regenerative Braking** for Diesel **Hybrid** City Bus Based on Fuzzy
Logic Control
AU Guo, Jin-Sheng; Wang, Jia-Ming; Yang, Lin; Zhuo, Bin
eMail: yanglin@sjtu.edu.cn
CS Institute of Automotive Electronics Technology, Shanghai Jiaotong
University, Shanghai 200240, China
SO Shanghai Jiaotong Daxue Xuebao (Journal of Shanghai Jiaotong University),
volume 42, number 8, pp. 1344-1348, Aug. 2008, 20080800
Published by: Shanghai Jiaotong University, Number 1954 Huashan Rd.,
Shanghai, 200030, China, [shjt@chinajournal.net.cn]
ISSN: 1006-2467
DT Journal
LA Chinese
OS Metadex; Engineered Materials Abstracts; Engineered Materials Abstracts;
Engineered Materials Abstracts; Civil Engineering Abstracts; Computer &
Information Systems Abstracts; Electronics & Communications Abstracts;
Solid State & Superconductivity Abstracts
AB A **regenerative braking** strategy based on fuzzy logic control was put forward based on
vehicle control strategy for integrated starter/generator(ISG) diesel **hybrid** city bus. The
strategy follows the principle of fuzzy control, determining the braking torque distribution
...
CC 60 Design Principles, Theory, and Analysis
CT Buses (**vehicles**); Braking; Strategy; Fuzzy control; Fuzzy logic;
Regenerative; Diesel; Diesel fuels; Logic; Fuzzy; Variance; Brakes; Fuzzy
set theory; Starters; Simulation; Torque; Pedals; Disc brakes

Publication from a Chinese
university including email contact!

NPL – PASCAL

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AN 2008-0530005 PASCAL [Full-text](#)

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TIEN Thermoelectrics as elements of hybrid-electric vehicle thermal energy systems
Industrial and commercial applications of smart structures technologies
2008 : 10-11 March 2008, San Diego, California, USA

AU HEADINGS Leon; WASHINGTON Gregory; JAWORSKI Christopher M.
DAVIS L. Porter (ed.); HENDERSON Benjamin Kyle (ed.); MCMICKELL M. Brett (ed.)

CS The Ohio State University, 201 W. 19 th Avenue, Columbus, OH 43110, United States
SPIE, United States (org-cong.); American society of mechanical engineers, United States (org-cong.); Intelligent Materials Forum, Mito Kagaku Gijutsu Kyokai, Japan (org-cong.); Jet Propulsion Laboratory, United States (org-cong.); National Science Foundation, United States (org-cong.)

SO Proceedings of SPIE - The International Society for Optical Engineering, (2008), 6930, 69300C.1-69300C.12, 16 refs.
Conference: Industrial and commercial applications of smart structures technologies, San Diego CA (United States), 2008
ISSN: 0277-786X
ISBN: 978-0-8194-7116-1

DT Journal; Conference

BL Analytic

CY United States

LA English

Conference Proceeding.

NPL – PASCAL

AV INIST-21760, 354000172871870070

AB Despite vast technological improvements, the traditional internal combustion powered **vehicle** still achieves only 25-30% efficiency, with the remainder lost primarily as heat. While the load leveling offered by **hybrid-electric vehicle** technology helps to improve this overall efficiency, part of the efficiency gains are achieved by making new systems such as **regenerative braking** viable. In a similar fashion, thermoelectric (TE) energy recovery has long been considered for traditional **vehicles** with mixed results, but little has been done to consider thermoelectrics in the framework of the unique energy systems of **hybrid vehicles**. Systems that may not have been viable or even possible with traditional **vehicles** may offer improvements to system efficiency as well as emissions, vehicle durability, passenger comfort, and cost. This research describes a simulation developed for evaluating and optimizing thermoelectric energy recovery systems and results for four different system configurations. Two novel system configurations are presented which offer the potential for additional benefits such as emissions reduction that will soon be quantified. In addition, a test setup is presented which was constructed for the testing and validation of various thermoelectric recovery systems. Actual test performance was near the expected theoretical performance and supported the conclusions reached from the computer simulations.

CC 001D03F13; Applied sciences; Electronics; Microelectronics, Solid state devices

001B00A30C; Physics

001D17; Applied sciences

CT Intelligent system; Thermoelectric effect; Thermoelectric properties; **Hybrid vehicle**; Electric **vehicle**; Thermal energy; Energy recovery; Durability; Comfort

NPL – Analyze country coverage

=> ANA L36 CY

L37 ANALYZE L36 1- CY : 25 TERMS

=> D TOP15

L37 ANALYZE L36 1- CY : 25 TERMS

TERM #	# OCC	# DOC	% DOC	CY
1	357	357	52.97	UNITED STATES/CY
2	62	62	9.20	UNITED KINGDOM/CY
3	43	43	6.38	JAPAN/CY
4	38	38	5.64	CHINA/CY
5	35	35	5.19	GERMANY, FEDERAL REP
6	29	29	4.30	SWITZERLAND/CY
7	14	14	2.08	ITALY/CY
8	7	7	1.04	FRANCE/CY
9	6	6	0.89	AUSTRALIA/CY
10	6	6	0.89	BELGIUM/CY
11	5	5	0.74	GERMANY/CY
12	5	5	0.74	KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF/CY
13	5	5	0.74	KOREA, REPUBLIC OF/CY
14	4	4	0.59	NETHERLANDS/CY
15	3	3	0.45	AUSTRIA/CY

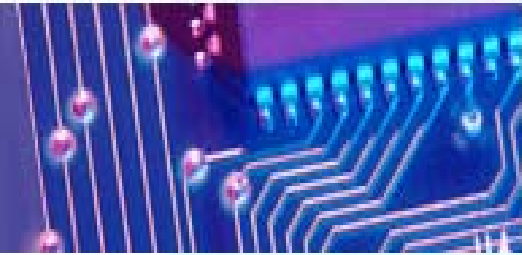
Analysing the country of publication most publications are coming from the US, followed by UK, JP and CN

Summary

- STN is a host with a great variation of specialized databases for searching engineering information in addition to patent searching!
- STN offers a big number of materials and engineering databases with:
 - Unique content (CT, ST, ET field)
 - Unique search and display possibilities

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