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STN[®]

Science from every
perspective

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A key technology
in the 21st century

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Nanotechnology is fast becoming one of the “hottest” technologies of the 21st century. It involves integrating knowledge from several disciplines, e.g., biology, chemistry, physics, materials science, to find applications and solutions that are already revolutionizing everyday life.

Examples of consumer products that have been improved through the use of nanotechnology and nanomaterials include:

- Clothing
- Cosmetics
- Dental bonding agents
- Paints
- Tennis balls and racquets

Nanotechnology involves structures smaller than 100 nm that can be produced or manipulated in a controlled manner. To illustrate how small a nanometer actually is, this chart compares the diameters of various everyday and scientific items:

Size in nanometers	
Hair	50,000
<i>E. coli</i> cell	1,000
Influenza virus	100
Ribosome	25
DNA	2
Nanotube	1
H atom	0.1

Example: A record from INSPEC describing one of nanotechnology’s fundamental inventions, the scanning tunneling microscope (STM).

```
L7 ANSWER 2 OF 2 INSPEC (C) 2004 IEE on STN
AN 1982:1910465 INSPEC DN A82086987 Full Text
TI Surface studies by scanning tunneling microscopy.
AU Binning, G.; Rohrer, H.; Gerber, Ch.; Weibel, W. (IBM Zurich Res. Lab., Ruschlikon, Switzerland)
SO Physical Review Letters (5 July 1982) vol.49, no.1, p.57-61. 14 refs. CODEN: PRLTAO ISSN: 0031-9007
DT Journal
TC Experimental
CY United States
LA English
AB Surface microscopy using vacuum tunneling is demonstrated for the first time. Topographic pictures of surfaces on an atomic scale have been obtained. Examples for resolved monoatomic steps and surface reconstructions are shown for (110) surfaces of CaIrSn4 and Au.
CC A6820 Solid surface structure
CT CALCIUM ALLOYS; GOLD; IRIIDIUM ALLOYS; SURFACE STRUCTURE; TIN ALLOYS; TUNNELLING
ST surface topography; surface structure; Au (110); CaIrSn4 (110); scanning tunneling microscopy; vacuum tunneling; resolved monoatomic steps; surface reconstructions
ET Ca*Ir*Sn; Ca sy 3; sy 3; Ir sy 3; Sn sy 3; CaIrSn4; Ca cp; cp; Ir cp; Sn cp; Au
```

Whether you work in academia, research, or industry, STN’s databases are an indispensable source for:

- Basic research on technology
- Applications of nanotechnological research
- Patents associated with nanotechnologies
- Nanotechnology-oriented business information and news

Because nanotechnology is a new and growing field, the indexing and thesauri available in various databases on STN are helpful for determining appropriate search terms for your query. Thesauri are available in many databases on STN,

including BIOSIS®, CAPlus, EMBASE, INSPEC, and WPIDS/WPINDEX/WPIX.

This article discusses several types of nanotechnology applications and information that can be found on STN:

- Electronics
- Business information
- Materials science
- Automotive industry
- Life sciences and biomedical
- Pharmacology

For a list of some STN databases that contain nanotechnology information, see the table on page 6.

Although nanotechnology is considered to be a relatively new science, it is making its impact today and will continue to have an influence in the future.

Electronics

Electronics is a field in which nanotechnology applications have already had an impact.

Carbon nanotubes are excellent conductors, and research using carbon nanotubes for the production of three-dimensional electronic chips has been conducted and is ongoing.

Another nanotechnology application is the development of self-charging power supplies for portable devices, e.g., laptop computers. Because this market is growing, sci-tech as well as patent and business databases should be searched to get a complete picture of competitors' activities.

Business information

Tracking business information is vital for any company competing in a nanotechnology field.

Business information available on STN can help you monitor your competitors' corporate news and announcements, technologies, marketing, and patents.

Images reused from the study "Molecular Dynamics Simulation of Carbon Nanotube Based Gears" by Jie Han, Al Globus, Richard Jaffe, and Glenn Deardorff at NASA Ames Research Center.

Example: A nanotechnology-oriented record from CAPLUS relating to the electronics field.

```
L5 ANSWER 2 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:227869 CAPLUS Full Text
ED Entered STN: 21 Mar 2004
TI Large-scale assembly of carbon nanotube-based circuit structures
AU Hong, Seunghun; Rao, Saleem; Huang, Ling
CS School of Physics, Seoul National University, Seoul, S. Korea
SO Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), PHYS-264 Publisher: American Chemical Society, Washington, D. C. CODEN: 69FGKM
DT Conference; Meeting Abstract
LA English
AB Nanoscale electronic devices made from carbon nanotubes, such as transistors and sensors, are much smaller and more versatile than those that rely on conventional microelectronic chips, but their development for mass prodn. has been thwarted by difficulties in aligning and integrating the millions of nanotubes required. Inspired by biomol. self-assembly processes, we have created chem. functionalized patterns on a surface, to which pre-grown nanotubes in soln. can align themselves in huge nos. This method allows us to assemble millions of carbon nanotube-based circuit structures in a matter of minutes, and it is suitable for industrial applications. Future prospect and possible impact of this method also will be discussed.
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Example: A business-oriented nanotechnology record from PROMT relating to a company in the electronics field.

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L1 ANSWER 1 OF 1 PROMT COPYRIGHT 2004 Gale Group on STN
AN 2004:233984 PROMT Full Text
TI GEMZ Corp. to Develop Solar-Powered Laptop Solution Using Nanofilms Which Combine Photovoltaic and Nanotechnology to Operate under Normal, Indoor Lighting Conditions.
SO Business Wire, (10 Jun 2004) pp. 5189.
PB Business Wire
DT Newsletter
LA English
WC 533
TX Business Editors/High-Tech Writers

NEW YORK--(BUSINESS WIRE)--June 10, 2004
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GEMZ Corp., (OTC: GMZP - News) announced today that its wholly-owned subsidiary, International Nanotechnology Corporation (INC) is planning to develop a solar-powered solution for powering laptop computers. INC previously announced that it had signed a letter of intent with Terra Solar Development Corp., a leading developer of photovoltaic and nanocell technology to acquire substantially all of its nanotechnology assets and certain photovoltaic assets as well. The solar-powered laptop charger will be the first product resulting from the planned combination.

While laptop users everywhere need a cost-effective device that can continually power or recharge laptops without plugging them in, previous products use crystalline or polycrystalline silicon photovoltaic cells don't do the job, as they work only when they are recharged in direct sunlight. The INC product is believed to be the first to use PV Nanofilms, which combine thin films and nanotechnology so they it can also work indoors in most lighting situations. Nanofilms have elements below 1000 and even below 100 nanometers...

Materials science

Nanotechnology developments in the materials science field are of importance to many other branches of technology.

New materials developed through nanotechnology may, for example, reduce the weight of vehicles or provide specially coated surfaces with self-cleaning properties for sanitary equipment, windows, etc.

A wealth of materials science information can be found on STN. To search in the Materials Science database cluster (MATERIALS), enter INDEX MATERIALS at an arrow prompt.

Automotive industry

Nanotechnological developments will likely influence future vehicles:

- New materials may reduce weight and improve driving dynamics
- Sensors may monitor weather, traffic density, and other factors, improving safety for vehicle occupants
- Energy conversion and recycling potential may be optimized for less environmental impact
- Esthetics may be enhanced, e.g., lacquers with changeable colors

Example: A materials science-oriented nanotechnology record from METADEX relating to research on self-cleaning metal surfaces.

```
L3 ANSWER 4 OF 10 METADEX COPYRIGHT 2004 CSA on STN
AN 2002(1):57-162 METADEX Full Text
TI Generation of ultrahydrophobic properties of aluminium - A first step
to self-cleaning transparently coated metal surfaces.
AU Thieme, M. (Technische Universitat Dresden); Frenzel, R. (Institut fur
Polymerforschung (Dresden)); Schmidt, S. (Institut fur Polymerforschung
(Dresden)); Simon, F. (Institut fur Polymerforschung (Dresden));
Hennig, A. (Institut fur Polymerforschung (Dresden)); Worch, H.
(Technische Universitat Dresden); Lunkwitz, K. (Technische Universitat
Dresden); Scharnweber, D. (Technische Universitat Dresden)
SO Advanced Engineering Materials (Sept. 2001) 3, (9), 691-694,
Photomicrographs, Numerical Data, Graphs, 10 ref. ISSN: 1438-1656
DT Journal
CY Germany, Federal Republic of
LA English
AB In the last few years, significant efforts have been made to provide
surfaces with self-cleaning properties. This approach utilizes
principles which have been discovered in nature, like the well known
'Lotus-effect'. The transformation of this strategy to metallic
surfaces is a scientifically and technologically challenging target.
This publication focuses on the investigation of different routes for
the generation of the necessary micro-morphological properties of Al.
CC 57 Finishing
CT Journal Article; Aluminum: Surface finishing; Embossing; Ablation;
Cleaning
ET Al
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Example: A nanotechnology record from COMPENDEX relating to future developments in the automotive industry.

```
L1 ANSWER 2 OF 2 COMPENDEX COPYRIGHT 2004 EEI on STN
AN 2004(1):570 COMPENDEX Full Text
TI Future nanotechnology developments for automotive applications.
AU Presting, Hartmut (Department FT2/CS Daimler Chrysler Research,
Ulm D-89081, Germany); Konig, Ulf
SO Materials Science and Engineering C v 23 n 6-8 Dec 15 2003 2003.
p 737-741 ISSN: 0928-4931
PY 2003
DT Journal
TC Theoretical
LA English
AB In the automotive industry, nanotechnology applications are manifold.
They reach from power train, light-weight construction, energy
conversion, pollution sensing and reduction, interior cooling, wear
reduction, driving dynamics, surveillance control, up to recycle
.
.
.
CC 714.2 Semiconductor Devices and Integrated Circuits; 525.5 Energy
Conversion; 454.2 Environmental Impact and Protection; 931.2 Physical
Properties of Gases, Liquids and Solids; 454.3 Ecology and Ecosystems;
933.1 Crystalline Solids
CT *Nanotechnology; Nanostructured materials; Hardness; Carbon nanotubes;
Strength of materials; Windshields; Ecology; Automotive industry; Light
weight equipment; Energy conversion; Pollution detection; Pollution
control; Wear of materials
ST Self healing bodies; Surveillance control
ET C*O; CO; C cp; cp; O cp
```

Life sciences and biomedical

Nanotechnology helps in the exploration of the microcosm of the single cell, shrinking the chemical and biological laboratory to the size of a chip, i.e., "lab-on-a-chip" technology and test-arrays.

Microfluidic capillaries on small glass plates are used to mix, dilute, and separate chemicals and fluids. Lab-on-a-chip techniques are important for research, e.g., single cell analysis, and are already being used for some medical diagnostics, e.g., pregnancy tests.

For a broad-based life science search, use the BIOSCIENCE or MEDICINE database clusters on STN.

Pharmacology

Researchers in the medical field and at pharmaceutical companies use nanotechnology to develop new pharmaceuticals, therapeutics, and drug delivery methods.

Methods for using nanoparticles to transport drugs within the body to the place where they are needed have already been patented.

For searches specific to pharmacology, use the PHARMACOLOGY database cluster on STN.

Additional resources

Additional information on databases is available at:

www.cas.org/ONLINE/DBSS/dbsslist.html

For search examples and indexing information, refer to the *Nanotechnology on STN* presentation available at:

www.stn-international.com/archive/presentations/online_information03/nanotech.pdf

Example: A nanotechnology record from BIOSIS relating to microfluidic technologies that can be used in a "lab-on-a-chip" environment.

```
L1 ANSWER 1 OF 96 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AN 2004:290135 BIOSIS Full Text
DN PREV200400289947
TI Microfluidic device for bio analytical systems.
AU Min, Junhong [Reprint Author]; Kim, Joon-Ho; Kim, Sanghyo
CS BioMEMS TG Digital Bio Lab, Samsung Adv Inst Technol, POB 111, Suwon,
440600, South Korea junhong.min@samsung.com
SO Biotechnology and Bioprocess Engineering, (March 2004) Vol. 9, No. 2,
pp. 100-106. print. ISSN: 1226-8372 (ISSN print).
DT Article General Review; (Literature Review)
LA English
ED Entered STN: 16 Jun 2004 Last Updated on STN: 16 Jun 2004
AB Micro-fluidics is one of the major technologies used in developing
micro-total analytical systems (mu-TAS), also known as "lab-on-a-chip".
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IT Methods & Equipment
bio analytical systems: laboratory equipment; biological analysis:
laboratory techniques; micro-total analytical systems: laboratory
equipment; microfluidic device: laboratory equipment
IT Miscellaneous Descriptors
applicable materials; bioMEMS; chamber modules; lab-on-a-chip;
micro-fluidics; mixer modules; sample prep modules
```

Example: A nanotechnology-oriented patent from WPINDEX relating to the transportation of a pharmaceutically active substance.

```
L2 ANSWER 3 OF 3 WPINDEX COPYRIGHT 2004 THOMSON DERWENT on STN
AN 1992-433344 [52] WPINDEX Full Text
DNC C1992-192346
TI Carrier for admin. of a pharmaceutically active substance - comprises
matrix of a complex of a sterol e.g. cholesterol, and one or more
saponin(s) having inert structure.
DC B01
IN LOEVGREN, K; MOREIN, B; LOVGREN, K
PA (KABI) KABI PHARMACIA AB; (BRTE-N) BRITISH TECHNOLOGY GROUP LTD;
(ISCO-N) ISCOVENT AB
CYC 37
PI WO 9221331 A1 19921210 (199252)* EN 38 A61K009-51
RW: AT BE CH DE DK ES FR GB GR IT LU MC NL OA SE
W: AT AU BB BG BR CA CH CS DE DK ES FI GB HU JP KP KR LK LU MG MN MW
NL NO PL RO RU SD SE US
SE 9101665 A 19921201 (199304) A61K009-51
AU 9219251 A 19930108 (199315) A61K009-51
FI 9305314 A 19931129 (199406) A61K000-00
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.
.
AB WO 9221331 A UPAB: 19950314
The use of an inert, structive-giving, deadjuvanted matrix of a
complex of a sterol and one or more saponins, as a carrier for admin,
of a pharmaceutically active substance, not intended for immunisation
.
.
.
USE/ADVANTAGE - It has recently been discovered that nano
particles can penetrate the microns membrane of the intestines, so a
good absorption should be obtained after oral admin. of drugs which
are sparingly soluble.
```

Some STN databases containing nanotechnology information.

Database	Subject coverage
ABI-INFORM	Business and management issues
AEROSPACE	Aerospace research and development
APOLLIT	Polymer and plastics chemistry and technology
BABS	Organic chemistry
BEILSTEIN	Organic chemistry
BIOSIS	Biomedicine and bioscience
BIOTECHNO	Biotechnology
CAplus	Chemistry, biochemistry, chemical engineering
CASREACT®	Single- and multi-step chemical reactions
CEABA-VTB	Chemical engineering and biotechnology
COMPENDEX	All areas of engineering
DGENE	Amino acid and nucleic acid sequences
DRUGU/DDFU*	Pharmaceuticals
EMA	Polymers, ceramics, and composites
EMBASE	Biomedicine and pharmaceuticals
ENERGY	Energy research and technology
ESBIOBASE	Current-awareness database covering biological research worldwide
EUROPATFULL	European patent applications and granted patents published by the European Patent Office
GENBANK®	Nucleic acid sequence data
IFIPAT	U.S. patents covering all areas of technology
INPADOC	International patents covering all areas of science and technology
INSPEC	Computing, electronics, engineering, physics
JAPIO	Japanese patent applications covering all areas of science and technology
JICST-EPLUS	Japanese literature covering chemistry and the chemical industry, engineering, life sciences, medical sciences, and pharmacology
MEDLINE®	Medicine
METADEX	Metallic materials
NLDB	Business and industry newsletters
PASCAL	Multidisciplinary, e.g., applied sciences, chemistry, earth sciences, information sciences, life sciences, physics
PATDPAFULL	German patents covering all areas of technology
PCTFULL	Patents from the World Intellectual Property Organization covering all areas of technology
PROMT	Sci-tech business information
RAPRA	Rubber and plastics industries
REGISTRY	Organic and inorganic substances; sequences
SCISEARCH®	Science and technology
TEMA**	Technology and management
TOXCENTER SM	Toxicology
USPATFULL/USPAT2	U.S. patents covering all areas of technology
WPIDS/WPINDEX/WPIX*	International patents covering all areas of science and technology
WPIFV	Current-awareness database covering international patents in all areas of science and technology

* DRUGU, WPIDS, and WPIX are for subscribers only. DDFU and WPINDEX are for non-subscribers.

** TEMA is not available to customers in Austria, Germany, and Switzerland.

ANTE **Abstracts in New Technologies and Engineering** *–new technology and engineering database available*

A new database, Abstracts in New Technologies and Engineering (ANTE), is now available on STN. Produced by Cambridge Scientific Abstracts (CSA), ANTE monitors approximately 350 academic and trade publications from the United Kingdom and United States. Coverage includes new technologies such as information technology and computing, electronics, biotechnology, and medical technology, as well as engineering (including construction, electrical, and chemical engineering) and allied subject areas.

The database contains over 335,000 records from 1981 to the present, and is updated monthly. Abstracts are available for records from 1993 to the present. Approximately 13,000 records are added per year. Automatic current-awareness searches (SDIs) are available monthly.

Simultaneous left and right truncation is available in the Basic Index (/BI).

ANTE participates in the STN Information Keep & Share Program.

For pricing information, see HELP COST in the database.

The ANTE Database Summary Sheet is included with this issue of *STNews* and is available at:

www.cas.org/ONLINE/DBSS/antess.html

AQUALINE *–new water resources and environmental effects database available*

A new bibliographic database, Aqualine (AQUALINE), is now available on STN. Produced by Cambridge Scientific Abstracts (CSA), it provides a comprehensive focus on trade, technical, and scientific literature concerning all aspects of water resources. Major subjects covered include water resources and supplies management, water legislation, water quality, potable water distribution, wastewater collection, water treatment technologies, wastewater and sewage treatment, and the ecological and environmental effects of water pollution.

Records come from approximately 300 journals, as well as from conference proceedings, scientific reports, books, and theses.

AQUALINE contains about 240,000 records from 1960 to the present, and is updated monthly. Automatic current-awareness searches (SDIs) are available monthly.

Simultaneous left and right truncation is available in the Basic Index (/BI).

AQUALINE participates in the STN Information Keep & Share Program.

For pricing information, see HELP COST in the database.

The AQUALINE Database Summary Sheet is included with this issue of *STNews* and is available at:

www.cas.org/ONLINE/DBSS/aqualiness.html

BEILSTEIN *–new display and select options available; database updated*

BEILSTEIN has been enhanced with new display and select options.

Three new display formats have been added:

- ALLP, which displays all patent references for a compound only
- ALLREF, which displays all references, including those from reaction documents, for a compound. Corresponding properties do not display.
- BABSAN, which displays all BABS Accession Numbers for a compound

BEILSTEIN Abstracts (BABS) contains bibliographic data, titles, and abstracts for the references given in BEILSTEIN from 1980 to the present.

Patent Numbers (PN) and BABS Accession Numbers (BABSAN) are now available for use with the search and select commands.

Select term fees have also been introduced for the BEILSTEIN Source (BSO), CAS Registry Number® (RN), and Patent Number (PN) fields.

By making the BABSAN in BEILSTEIN selectable, BEILSTEIN and BABS now work more closely together.

BEILSTEIN has also been updated. Approximately 65,000 new compounds have been added, and recent information for approximately 36,000 compounds has been supplemented.

BEILSTEIN now contains almost 9 million organic compounds. Reactions are available for over 7.8 million substances.

The BEILSTEIN Database Summary Sheet is available at:

www.cas.org/ONLINE/DBSS/beilsteinss.html

BIOENG **Biotechnology and Bioengineering** **Abstracts** *–new biotechnology and bioengineering* *database available*

A new bibliographic database, Biotechnology and Bioengineering Abstracts (BIOENG), is now available on STN. Produced by Cambridge Scientific Abstracts (CSA), it is a bibliographic database that provides access to international research on all aspects of biochemical and microbial technology as applied to bioengineering.

Information comes from journals, conference proceedings, directories, and other sources.

BIOENG contains over 466,000 records from 1982 to the present, and is updated monthly. Automatic current-awareness searches (SDIs) are available monthly.

Simultaneous left and right truncation is available in the Basic Index (/BI).

BIOENG participates in the STN Information Keep & Share Program.

For pricing information, see HELP COST in the database.

The BIOENG Database Summary Sheet is included with this issue of *STNews* and is available at:

www.cas.org/ONLINE/DBSS/bioengss.html

CASM/CAplus *–improved currency for BIB ABS data* *for patents from five additional countries;* *Danish patent applications now covered* *as basic patent documents*

Bibliographic information and abstracts in English are now available more quickly for patents from the Czech Republic, Latvia, Lithuania, Romania, and Slovakia. This information is available for documents selected as related to chemistry or the chemical sciences. Previously, this information was not available until indexing was complete.

Danish patent applications are now eligible to be covered as basic patent documents, retroactive to January 1, 2004. In the past, the granted Danish patent had been covered as the basic patent.

CAS patent coverage information is available at:

www.cas.org/EO/patyear.html

The CA/CAplus Database Summary Sheets are available at:

www.cas.org/ONLINE/DBSS/cass.html

www.cas.org/ONLINE/DBSS/caplusss.html

CAplus *–new super update code available*

A new super update code, Update Code Maximum (UPM), is available in CAplus for patent-oriented current-awareness alerts (SDIs). Results from a current-awareness alert run against UPM include records from both:

- Update Date (UP) – new patents, addition of abstracts or indexing to existing records
- Update, Patent Family (UPP) – new patent family members

For update information, enter HELP UPDATE at an arrow prompt in the database.

The CAplus Database Summary Sheet is available at:

www.cas.org/ONLINE/DBSS/caplusss.html

CASREACT[®] *–additional enzymatically catalyzed organic* *reactions available*

Over 18,000 reactions have been added to CASREACT, resulting in more comprehensive coverage of enzymatically catalyzed organic reactions. These biotransformation reactions were reported in approximately 4,000 documents published from 1971-1998. With the addition of these biotransformation reactions, CASREACT covers over 22,000 enzymatically catalyzed reactions from more than 8,000 documents.

The new reactions are searchable and displayable using the same fields and features available for the pre-existing CASREACT information and are seamlessly integrated. This means:

- CAS Registry Numbers are assigned to reaction participants
- Reaction roles are assigned to all reaction participants
- Reaction sites and atom mapping are assigned in each reaction
- Functional group search terms are generated
- Each reaction is linked to the CAplus document from which it was indexed
- Multi-step reactions are generated from the single-step reactions occurring in the same document record

The CASREACT Database Summary Sheet is included with this issue of *STNews* and is available at:

www.cas.org/ONLINE/DBSS/casreactss.html

CIVILENG

Civil Engineering Abstracts

–new civil engineering database available

A new bibliographic database, Civil Engineering Abstracts (CIVILENG), is now available on STN. Produced by Cambridge Scientific Abstracts (CSA), it provides information on civil engineering and its complementary fields, including forensic engineering, management and marketing of engineering services, engineering education, theoretical mechanics and dynamics, and mathematics and computation.

CIVILENG provides international coverage with the monitoring of over 3,000 serial titles, as well as numerous non-serial publications.

CIVILENG contains over 310,000 records from 1966 to the present, and is updated twice a month. Automatic current-awareness searches (SDIs) are available every update (default) or monthly.

Simultaneous left and right truncation is available in the Basic Index (/BI).

CIVILENG participates in the STN Information Keep & Share Program.

For pricing information, see HELP COST in the database.

The CIVILENG Database Summary Sheet is included with this issue of *STNews* and is available at:

www.cas.org/ONLINE/DBSS/civilengss.html

ENVIROENG

Environmental Engineering Abstracts

–new environmental engineering database available

A new bibliographic database, Environmental Engineering Abstracts (ENVIROENG), is now available on STN. Produced by Cambridge Scientific Abstracts (CSA), it covers worldwide literature pertaining to technological and engineering aspects of air and water quality, environmental safety, and energy production.

More than 700 primary journals are thoroughly indexed and abstracted. Over 2,500 additional sources, including monographs and conference proceedings, are also monitored for relevant articles.

ENVIROENG contains over 155,000 records from 1990 to the present, and is updated monthly. Automatic current-awareness searches (SDIs) are available monthly.

Simultaneous left and right truncation is available in the Basic Index (/BI).

ENVIROENG participates in the STN Information Keep & Share Program.

For pricing information, see HELP COST in the database.

The ENVIROENG Database Summary Sheet is included with this issue of *STNews* and is available at:

www.cas.org/ONLINE/DBSS/enviroengss.html

FOMAD

Foodline®: Market Sight

–full database name changed

The full name for FOMAD is no longer Foodline®: International Food Market Data. It is now Foodline®: Market Sight.

The FOMAD Database Summary Sheet is available at:

www.cas.org/ONLINE/DBSS/fomadss.html

FOREGE

Foodline®: Legal Sight

–full database name changed

The full name for FOREGE is no longer Foodline®: Current Food Legislation. It is now Foodline®: Legal Sight.

The FOREGE Database Summary Sheet is available at:

www.cas.org/ONLINE/DBSS/foregess.html

FROSTI

Foodline®: Science Sight

–full database name changed

The full name for FROSTI is no longer Foodline®: Food Science and Technology. It is now Foodline®: Science Sight.

The FROSTI Database Summary Sheet is available at:

www.cas.org/ONLINE/DBSS/frostiss.html

MECHENG

Mechanical and Transportation Engineering Abstracts

–new mechanical and transportation engineering database available

A new bibliographic database, Mechanical and Transportation Engineering Abstracts (MECHENG), is now available on STN. Produced by Cambridge Scientific Abstracts (CSA), it provides information on the serial literature in mechanical and transportation engineering and their complementary fields, including forensic engineering, management and marketing of engineering services, engineering education, theoretical mechanics and dynamics, and mathematics and computation.

MECHENG provides in-depth coverage of the international engineering literature with the monitoring of over 2,600 serial titles, as well as numerous non-serial publications.

MECHENG contains over 403,000 records from 1966 to the present, and is updated twice a month. Automatic current-awareness searches (SDIs) are available every update (default) or monthly.

Simultaneous left and right truncation is available in the Basic Index (/BI).

MECHENG participates in the STN Information Keep & Share Program.

For pricing information, see HELP COST in the database.

The MECHENG Database Summary Sheet is included with this issue of *STNews* and is available at:

www.cas.org/ONLINE/DBSS/mechengss.html

REGISTRY/ZREGISTRY

–CAplus super roles and document types added; additional experimental properties added

REGISTRY/ZREGISTRY has been enhanced with information from CAplus:

- Super roles from the indexing field for the substances
- Document types

This information can be used to refine a REGISTRY/ZREGISTRY substance search, whether it is a structure, sequence, name, or other dictionary term-based search.

Use this information to:

- Find substances reported in patents or non-patent literature
- Find substances used as reagents or reactants
- Find substances whose preparation was disclosed in patents
- Reduce the size of REGISTRY/ZREGISTRY answer sets for more efficient crossover to other databases
- Create database subsets for structure searching

Standard search and display costs apply. For pricing information, see HELP COST in the database.

For more information and search examples, refer to STNote No. 34, *Searching CAplus Super Roles and Document Types in REGISTRY*, included with this issue of *STNews* and available at:

www.cas.org/ONLINE/STN/STNOTES/stnotes34.pdf

More than 143,000 additional experimental properties that had been collected by CAS on a non-systematic basis during the 1960s have been added. The experimental properties include almost 120,000 melting points (MP) and over 27,000 boiling points (BP).

For more information and search examples, refer to STNote No. 27, *Searching Properties in the CAS RegistrySM File*, available at:

www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

The REGISTRY/ZREGISTRY Database Summary Sheets are available at:

www.cas.org/ONLINE/DBSS/registryss.html

www.cas.org/ONLINE/DBSS/zregistryss.html

WATER

Water Resources Abstracts

–new water resources database available

A new bibliographic database, Water Resources Abstracts (WATER), is now available on STN. Produced by Cambridge Scientific Abstracts (CSA), it provides summaries of the world's technical and scientific literature on water-related topics covering the characteristics, conservation, control, pollution, treatment, use, and management of water resources.

Information in WATER comes from journals, books, conference proceedings, and technical reports in the physical and life sciences, as well as from engineering, legal, and government publications.

WATER contains over 396,000 records from 1967 to the present, and is updated monthly. Automatic current-awareness searches (SDIs) are available monthly.

Simultaneous left and right truncation is available in the Basic Index (/BI).

WATER participates in the STN Information Keep & Share Program.

For pricing information, see HELP COST in the database.

The WATER Database Summary Sheet is included with this issue of *STNews* and is available at:

www.cas.org/ONLINE/DBSS/waterss.html

WPIDS/WPINDEX/WPIX

Derwent World Patents Index®

–improved currency for major patent-issuing authorities

The timeliness of the full value-added content for major patent-issuing authorities within WPIDS/WPINDEX/WPIX has greatly improved, with timeliness of EP, GB, and WO patents now averaging 30 days or less.

Continuing improvements in the timeliness of patents from the DE, JP, and US authorities mean an overall average turnaround of 41 days for patents from the DE, EP, GB, JP, US, and WO patent-issuing authorities. The 2004 year-end goal is to have value-added content available for these major patent-issuing authorities completed within 30 days of publication.

The WPIDS/WPINDEX/WPIX Database Summary Sheets are available at:

www.cas.org/ONLINE/DBSS/wpidsss.html

www.cas.org/ONLINE/DBSS/wpindexss.html

www.cas.org/ONLINE/DBSS/wpixss.html

WPIFV

Derwent World Patents Index First ViewSM

–improved currency

WPIFV, the fast-alerting companion database to Derwent World Patents Index, is now updated within days of publication for key authorities. Typically, JP-A documents, complete with English-language titles and abstracts, are now added to WPIFV within 1 week.

The WPIFV Database Summary Sheet is available at:

www.cas.org/ONLINE/DBSS/wpifvss.html

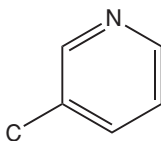
Using CPlus super roles and document type information in structure searches exceeding iteration limits



Q. How can I use CPlus super roles and document type information in structure searches exceeding iteration limits in REGISTRY?

A. Consider creating a REGISTRY subset using roles. Then conduct your structure search in the subset of the database.

Example: Find patents issued since 2001 on the preparation of substances sharing the following common substructure.



```
=> FILE REGISTRY
=>
L1  STRUCTURE UPLOADED
=> S L1
      .
      .
FULL FILE PROJECTIONS:  ONLINE  **INCOMPLETE**
                        BATCH  **INCOMPLETE**
PROJECTED ITERATIONS:   659828 TO  681692
PROJECTED ANSWERS:      426501 TO  444145
L2          50 SEA SSS SAM L1
=> S PREP/RL.P
L3  6735053 PREP/RL.P
    75% OF LIMIT FOR TOTAL ANSWERS REACHED
=> S L1 SUB=L3 SAMPLE
      .
      .
PROJECTIONS (WITHIN SPECIFIED SUBSET): ONLINE **COMPLETE**
PROJECTED ITERATIONS (WITHIN SPECIFIED SUBSET): 285833 TO
300327
PROJECTED ANSWERS (WITHIN SPECIFIED SUBSET): 177441 TO
188909
L4          50 SEA SUB=L3 SSS SAM L1
```

Create or upload the structure in REGISTRY.

Conduct a sample substructure search.

Full file projections are incomplete because iteration limits would be exceeded.

A search of PREP/RL.P finds substances whose preparation was reported in patents.

Conduct a sample search in the subset (L3).

File projections are complete.

Conduct a full search in the subset (L3).

```
=> S L1 SUB=L3 FULL
FULL SUBSET SEARCH INITIATED 15:03:18

L5      295447 SEA SUB=L3 SSS FUL L1 EXTEND

CANDIDATE STRUCTURE SEARCH COMPLETED - 295447 TO ITERATE

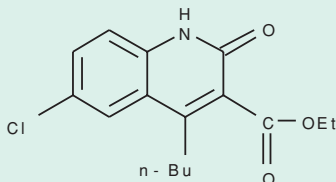
100.0% PROCESSED 295447 ITERATIONS      186242 ANSWERS
SEARCH TIME: 00.00.02
```

Display answers in IDE format. IDE includes the CAPlus document type (DT.CA) and Roles from patents (RL.P) fields.

```
L6      186242 SEA SUB=L3 SSS FUL L1

=> D IDE

L6      ANSWER 1 OF 186242  REGISTRY COPYRIGHT 2004 ACS
        on STN
RN      685540-01-6  REGISTRY
CN      INDEX NAME NOT YET ASSIGNED
MF      C16 H18 Cl N O3
SR      CA
LC      STN Files:  CAPLUS
DT.CA   CAPlus document type:  Patent
RL.P    Roles from patents:  BIOL (Biological study); PREP
        (Preparation); USES (Uses)
```



****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

Enter CAPlus.

```
=> FILE CAPLUS
```

Refine the search to limit answers to basic patents issued since 2001.

```
=> S L6 AND PY.B>2000
        3161122 PY.B>2000
L7      19188 L6 AND PY.B>2000
```

Display an answer.

```
=> D L7 TI HIT

L7      ANSWER 1 OF 19188  CAPLUS  COPYRIGHT 2004 ACS on STN
TI      Insecticide smoke agent of acetamiprid or composite
        of acetamiprid and isoprocarb
PI      CN 1395834 A  20030212
IT      144-55-8, Sodium carbonate (NaHCO3)  497-19-8, Sodium
        carbonate (Na2CO3)  1066-33-7, Ammonium bicarbonate
        3811-04-9, Potassium chlorate  6484-52-2, Ammonium
        nitrate  7722-64-7, Potassium permanganate
        7757-79-1, Potassium nitrate  9004-32-4, CMC
        9004-53-9, Dextrin  9005-25-8, Starch  12125-02-9,
        Ammonium chloride  13397-24-5, Gypsum  14807-96-6,
        Talc 160430-64-8, Acetamiprid  685136-05-4
RL:     AGR (Agricultural use); BIOL (Biological study);
        USES (Uses)
        (insecticide smoke agent of acetamiprid or
        composite of acetamiprid and isoprocarb)
```

Additional resources

For additional information, refer to STNote No. 34, *Searching CAPlus Super Roles and Document Types in REGISTRY*, available at:

www.cas.org/ONLINE/STN/STNOTES/stnotes34.pdf



Working smartly offline with STN Express with *Discover!*

STN Express[®] with *Discover!*[™]

Using the Command Window in STN Express with *Discover!* can help you efficiently carry out online searches that have been prepared previously, minimizing your connect time and online session costs.

You can use the Command Window to upload a search strategy and conduct it either one line at a time or all in one step. You can also use the Command Window to save the commands from your current online session for reuse in the future.

This article describes:

- The Command Window and its buttons
- Creating and saving a search strategy offline
- Creating and saving a search strategy using the Command Window
- Editing your search strategy file
- Running your search strategy using the Command Window

The Command Window and its buttons

To display the Command Window, log on using STN Express and click the **CW** button located on the toolbar. The Command Window displays near the bottom of the STN Online and Results window.



While the Command Window is open, the cursor is active only within that window.

The six buttons located at the sides of the Command Window allow you to perform tasks within the Command Window.

	Button	Function
Open		Opens a previously prepared file in the Command Window
Save		Saves the strategy currently displayed in the Command Window
Clear		Clears all commands from the Command Window
Lock/Unlock		In "locked" mode, commands do not enter your online session until you send them. In "unlocked" mode, commands immediately enter your online session.
Send current line		Sends the current line (the line in which your cursor is located) to your online session
Send multiple lines		Sends the current line and all following lines to your online session

To close the Command Window, click the **CW** button again.



Creating and saving a search strategy offline

No special syntax or scripting language is required to create a search strategy file for use in the Command Window.

To create and save your strategy offline:

1. Plan your strategy by determining the databases and steps you will use.
2. In the STN Express window, select **Query > Prepare Command File**.
3. Click **New**.

The Scripts (.sc) file format is chosen by default. Text (.txt) format may also be used.

4. Enter the appropriate commands for your search strategy. (See Example.)

Tips:

- Begin with DEL HIS Y to clear previous L-numbers.
- Do not include system prompts.
- If L-numbers are used in your strategy, ensure that they are appropriate.
- Use simple strategies.
- For alerts, include a time range parameter.
- Test your search strategy thoroughly online.

5. Save and exit the file.

Example: A researcher within your organization is interested in the relationship between obstructive sleep apnea and cardiac arrhythmia, and wants to receive information on this topic every 3 months.

```
C:\Program Files\stnexp\Uscripts\script3.sc
DEL HIS Y
FIL MEDLINE
S 20040401-20040630/UP
QUE (SLEEP APNEA (L) OBSTRUCT?) AND (CARDIA? (L) ARRHYTH?)
S L2 AND L1
FIL SCISEARCH
S L1 AND L2
FIL BIOSIS
S L1 AND L2
FIL EMBASE
S L1 AND L2
FIL PASCAL
S L1 AND L2
SET DUPORDER FILE
DUP REM L3 L6 L7 L4 L5
D BIB HIT 1 FROM EACH
D HIS NOF
```

The date range in the third line may be easily modified each time the query is rerun.

DUPLICATE REMOVE creates a single set of unique answers.

Creating and saving a search strategy using the Command Window

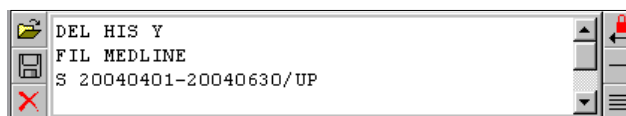
To create and save your strategy with the Command Window:

1. Plan your strategy by determining the databases and steps you will use.
2. Ensure that your STN Online and Results Preferences are set so that the Command Window automatically records the commands used during your online session.

The "Autoload command history into Command Window" preference is located within the Online tab.

3. Log on to STN Express and enter your search strategy at the command line. The Command Window automatically records your commands.

4. Click the **CW** button to view your commands in the Command Window.



5. Click the **Save** button at the left of the Command Window.



6. Enter a file name, and click **Save**. The file is saved in the .sc format.

7. Close the Command Window.

Editing your search strategy file

Before you reuse your search strategy, you may need to make minor changes to your saved search strategy file. You can make those changes either offline or in the Command Window.

To make changes offline using STN Express:




1. In the STN Express window, select **Query > Prepare Command File**.
2. Enter the file name and click **Open**.
3. Make the appropriate changes to the search strategy.
4. Save and exit the file.

Alternatively, you can make changes in the Command Window right before running your search strategy.

Running your search strategy using the Command Window

Now that your search strategy has been updated, you are ready to rerun it in the Command Window.

To rerun your strategy:

1. Log on to STN Express and click the **CW** button. 
2. In the Command Window, click the **Open** button. 
3. Select the saved search strategy file and click **Open**. Make any final changes that are needed.
4. Click the **Send current line** button to send command lines one at a time. 

Or, click the **Send multiple lines** button to send all the command lines at once.



Your search strategy is run. To return to the arrow prompt, click the **CW** button, which closes the Command Window.



Additional resources

For additional information on how to use the Command Window, refer to Chapter 4, *Online Session on STN*, of the STN Express with *Discover!* User Guide.

Or, watch the upcoming e-Seminar, *STN: Automating Your Search*, on August 31 and September 16. To register, visit casevents.webex.com/.



What's this? Options on the STN Easy Display Page

This is the third in a series of articles that describe helpful tools within STN Easy. Watch for additional articles in future issues of STNews.

Accessing additional information from the STN Easy Display Page

The STN Easy Display Page provides many ways to access additional information related to the reference or substance record being displayed. The Display Page for the sample reference record shown here allows you to:

- Find documents citing the reference
- Retrieve substances indexed from the reference
- Link to information in other STN databases
- Link to cited references
- View full-text options
- Search the Web with eScience®

On the Display Page, you can also:

- Use highlighting to locate search terms
- Purchase STN Information Keep & Share rights

Note: If you use STN Easy® for IntranetsSM, some or all of the linking features described in this article may have been disabled by your Site Administrator.

STN Easy Display Page

ANSWER 2 © 2004 ACS on STN
[Find documents citing this reference \[\\$2.00\]](#)
[CAS indexed 2 chemical substances from this document. \[\\$2.00\]](#)

Title
 Catnip essential oil as a barrier to subterranean termites (Isoptera: Rhinotermitidae) in the laboratory

Author
 Peterson, C. J.; Ems-Wilson, J.

Organization
 Wood Products Insect Research Unit, United States Department of Agriculture-Forest Service, Starkville, MS, 39759, USA

Publication Source
 Journal of Economic Entomology (2003), 96(4), 1275-1282

Identifier-CODEN
 JEENAI

ISSN
 0022-0493

Publisher
 Entomological Society of America

Abstract
 The essential **oil of catnip**, *Nepeta cataria* (Lamiaceae) was evaluated for behavioral effects on two populations of subterranean termite, *Reticulitermes flavipes* (Kollar) and *R. virginicus* (Banks) (Isoptera: Rhinotermitidae). The **catnip essential oil** contained approx. 36: 64 E,Z-nepetalactone and Z,E-nepetalactone, resp. The time to 50% dissipation (DT50) of the isomers in sand was dependent on dose, and ranged from 5.7 to 12.6 d for the E,Z-isomer and 7.7-18.6 d for the Z,E-isomer. For *R. flavipes*, the 24-h topical LD50 value was approx. 8200 .mu.g/g termite. The 24-h fumigation LC50 value for *R. flavipes* was between 36 and 73 .mu.g/mL air, and the 7-d fumigation LC50 value was between 14 and 36 .mu.g/mL air. Exposure of *R. virginicus* to treated sand resulted in a 24-h LC50 value (95% F.L.) of 84 (67.6, 112) .mu.g/cm2 and a 7-d LC50 value of 21.1 (16.4, 26.8) .mu.g/cm2; for *R. flavipes* these values were 63.2 (53.7, 73.9) and 44.4 (34.6, 58.1) .mu.g/cm2, resp. Vertical tunneling through treated sand was eliminated at 500 ppm for *R. virginicus* and at 250 ppm for *R. flavipes*. Horizontal tunneling was stopped at 250 ppm for *R. virginicus* and reduced at doses above 250 ppm for *R. flavipes*. Although tunneling ceased in these tests, mortality was not high, indicating that the termites avoided the treated sand. Efficacy of **catnip oil** was equiv. to other monoterpenoids reported in the literature.

IT Related Fields
Indexing
Registry Number and Structure
CAS Registry Number
 17257-15-7
Role
 ANT (Analyte); BSU (Biological study, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
Text Modification
 (catnip essential oil component; catnip essential oil as barrier to subterranean termites)

Accession Number
 2003:766395 CAPLUS

Document Number
 140:24477

Cited Reference or Reference
 Show All References (20)
 (1) Abbott, W; A method of computing the effectiveness of an insecticide; J Econ Entomol 1925, V18, P265 CAPLUS [\$4.25]
 (2) Baskaran, S; Degradation of bifenthrin, chlorpyrifos and imidacloprid in soil and bedding materials at termiticidal application rates; Pestic Sci 1999, V55, P1222 CAPLUS [\$4.25]
 (3) Blaske, V; Repellent and toxic effects of plant extracts on subterranean termites (Isoptera: Rhinotermitidae); J Econ Entomol 2001, V94, P1200 MEDLINE [\$.25]
 (4) Cornelius, M; Toxicity of monoterpenoids and other natural products to the Formosan subterranean termite (Isoptera: Rhinotermitidae); J Econ Entomol 1997, V90, P320 CAPLUS [\$4.25]
 (5) Forschler, B; J Entomol Sci 1994, V29, P43

Full-Text Options **STN Keep & Share** **Search the Web**
 with **eScience**



Find documents citing the reference

The STN Easy Display Page helps you quickly find documents citing the reference that is currently displayed. Click the **Find documents citing this reference** link, located near the top of the page in many STN Easy database records, to search both SCISEARCH and CAplus.

The search fee is displayed next to the link and applies even when no documents are found.

For more information about citation searching, see the STN Easystreet article in the July/August 2000 issue of *STNews*.

Retrieve substances indexed from the reference

When one or more substances have been indexed for a CAplus record, a **CAS indexed X chemical substances from this document** link is provided near the top of the Display Page. Click the link to display a list of substances, as well as links to Commercial Sources and REGISTRY records.

When one or more reactions have been indexed for a CAplus record, a link to the reactions is also provided. Click the link to view the reaction diagram, which includes links to the REGISTRY records for participants in the reaction.

The number of substances or reactions indexed is provided within the link, and the search fee is displayed next to the link. If no substances or reactions are available, a link is not provided.

Link to information in other STN databases

Some records include links to information in other database records. For example, the indexing portion of CAplus records includes links to individual substance records in REGISTRY.

Other links to additional information include:

- CFR regulations (e.g., in CHEMLIST®)
- U.S. patents (e.g., in USPATFULL)

Click one of these links to automatically search the data without paying a search fee. The display fees are noted next to each link.

Link to cited references

CAplus records added from 1998 to the present contain a list of references cited in the document. The first five cited references are listed near the end of the record. To see additional cited references, if available, click the **Show All References** button. The total number of cited references is displayed on the button. There is no cost for displaying the list of all cited references.

Cited references that have records in CAplus or MEDLINE® are followed by a CAplus or MEDLINE link. If a reference appears in both databases, then only the CAplus link is shown. Click the **CAplus** or **MEDLINE** link to display the detailed record for the reference. The cost for linking to a cited reference is displayed next to the link.

For more information about citation searching, see the STN Easystreet article in the July/August 2000 issue of *STNews*.

View full-text options

The STN Easy Display Page provides easy access to all the options for retrieving full documents via the ChemPort® ConnectionSM. Click the **Full-Text Options** button near the bottom of the Display Page to access your full-text options via ChemPort.

Several options are provided at the ChemPort web site, some with no additional charge and some with additional charges. For example, you can:

- Link directly to full text at publisher's web sites and patent offices
- Request documents from your library or technical information center (requires setup by your Site Administrator)
- Purchase single articles from many journals
- Purchase hard copies from a document delivery service, e.g., CAS Document Detective ServiceSM (DDS)
- E-mail bibliographic information to a colleague

Help for full-text options is available via the ChemPort web site at:

chemport.cas.org/html/english/fts_help.html

For more information about full-text options, see the Feature article in the July/August 2003 issue of *STNews*.

Search the Web with eScience

STN Easy lets you extend your scientific research to the Web with eScience. Click the **Search the Web** button for quick access to eScience. eScience lets you choose from search engines such as chemistry.org, Google®, ChemIndustry.com, and ChemGuide and provides access to several popular sci-tech web sites.

For more information about eScience, see the STN Easystreet article in the March/April 2001 issue of *STNews*.

Use highlighting to locate search terms

STN Easy indicates where occurrences of your search terms are located within the record.

In the STN Easy display style, terms that match your search question are highlighted in bold. In the STN display style, terms that match your search question are highlighted by surrounding the term with three asterisks (***)

Search-term highlighting is on by default, but you may turn it off in your Preferences.

Note: Sometimes your search term appears in a field that is not displayed in the Standard display format. In these cases, no search terms will be highlighted in your results. However, in most cases, the search term will appear with the Standard Plus display format.

Purchase STN Information Keep & Share rights

The STN Information Keep & Share Program allows you to purchase the right to archive (keep) and redistribute (share) search results from many STN Easy databases. Each STN database has a use policy which states that a single, individual user may copy and use information from STN and keep it indefinitely for his or her own individual use. The STN Information Keep & Share Program allows you to purchase the right to keep and/or share the STN records in excess of this use policy.

STN Easy offers two ways to purchase archival and redistribution rights:

- On-Demand
- After-the-Fact

For complete details on using the STN Information Keep & Share feature, see the Custom Features portion of the STN Easy Help files.

You can learn more about the STN Information Keep & Share Program at:

www.cas.org/copyright/

Additional resources

Full details about all of these features are available in the STN Easy Help files, available at:

stneasy.cas.org/html/english/helps/TOC.htm

In addition, quick tips, examples, and information about STN Easy databases can be found within the **Help** section on the left-hand Navigation Frame.

For information on...	See...
Citing and Cited References	STN Easystreet article in July/August 2000 (www.cas.org/STNEWS/JULAUG00/easyst.html)
STN Full-Text Solution	Feature article in July/August 2003 (www.cas.org/STNEWS/JULAUG03/feature.html)
eScience	STN Easystreet article in March/April 2001 (www.cas.org/STNEWS/MARAPR01/easystreet.html)
STN Information Keep & Share Program	STN Information Keep & Share Program web page (www.cas.org/copyright/)

Patent citation searching to find related patents

Patent citation searching may be used to find patents that cite one or more of the same patents. The following example illustrates this technique in DPCI, a database that provides extensive access to cited patents.

This can also be done in CAplus and other databases with citations. For coverage information, refer to the Patent Interchange article, *Searching for patents and journals citing patents*, in the May/June 2004 issue of *STNews*.

To find related patents, follow these steps:

1. Find one or more key patents of interest.
2. Use the TRANSFER (or SELECT) command to extract patents cited by the key patent and search for other patents that also cite one or more of the patents cited by the key patent.

In DPCI, cited patents are extracted and searched in the Cited Patent Number (/PN.D) field. In CAplus, use the Referenced Patent Number (/RPN) field code for extracting and searching cited patents.
3. Remove the record for the original key patent from the answer set to isolate additional patent records.

Example: Find patents related to U.S. patent 6,645,455, which discloses a method for separating and chemically modifying carbon nanotubes.

```
=> FILE DPCI

=> S US6645455/PN
L1          1 US6645455/PN

=> D

L1 ANSWER 1 OF 1 DPCI COPYRIGHT 2004 THOMSON DERWENT on STN
AN 2000-292804 [25] DPCI Full-text
DNC C2000-088417
TI Preparation of single wall carbon nanotube involves
recovering derivatized carbon that results from reaction
with fluorine gas, and reacting the derivatized carbon
with a nucleophile.
DC E36 F01 L02
IN BOUL, P; COLBERT, D T; HAUGE, R; HUFFMAN, C B; LIU, J;
MARGRAVE, J L; MICKELSON, E T; SMALLEY, R E; SMITH, K;
HUFFMAN, C; HAGUE, R
PA (UYRI-N) UNIV RICE WILLIAM MARSH; (BOUL-I) BOUL P; (COLB-
I) COLBERT D T; (HAUG-I) HAUGE R; (HUFF-I) HUFFMAN C;
(LIUJ-I) LIU J; (MARG-I) MARGRAVE J L; (MICK-I) MICKELSON
E T; (SMAL-I) SMALLEY R E; (SMIT-I) SMITH K; (HAGU-I)
HAGUE R
.
.

CDP CITED PATENTS          UPD: 20040115
-----
CITING PATENT  BY CAT CITED PATENT  ACCNO          PACO
-----
EP 1112224    A N          No Citations
US 6645455    B2 Ex       JP 8325008      A 1997-083269/08 NIDE
                Ex       US 5300203      A 1994-109295/13 UYRI-N
                Ex       US 5346683      A 1994-293455/36 GASR-N
                Ex       US 5424054      A 1995-223647/29 IBMC
                Ex       US 5698175      A 1996-112394/12 NIDE
                Ex       US 6129901      A 1999-357595/30 HASL-I
                Ex       WO 9618059      A1 1996-287290/29 HYPE-N
                Ex       WO 9732571      A1 1997-457306/42 HYPE-N
                Ex       WO 200073205    A1 2001-032146/04 UYOK-N
WO 200017101 A Ex A       JP 8325008      A 1997-083269/08 NIDE
                Ex A      US 5346683      A 1994-293455/36 GASR-N
                Ex A      US 5698175      A 1996-112394/12 NIDE
                Ex A      WO 9618059      A 1996-287290/29 HYPE-N
                Ex A      WO 9732571      A 1997-457306/42 HYPE-N
.
.
.
```

Enter DPCI.

Search for U.S. patent 6,645,455.

The default display format includes cited patents.

Patent Interchange

Use **TRANSFER** to extract cited patents (PN.D) and search them in the /PN.D field for other patents.

Remove the record for the original U.S. patent from the answer set.

Use **SORT OCC** to sort the answers in the order of occurrence of hit terms (highest to lowest).

Display an answer.

ANALYZE the answer set by Patent Assignee Code (PACO) to find the top patent assignees for the related patents.

Display the top patent assignees for the related patents.

```

=> TRANSFER L1 1- PN.D
L2          TRANSFER L1 1- PN.D :      10 TERMS
L3          116 L2

=> S L3 NOT L1
L4          115 L3 NOT L1

=> SORT L4 1- OCC
L5          115 SORT L4 1- OCC

=> D
L5 ANSWER 1 OF 115  DPCI  COPYRIGHT 2004 THOMSON DERWENT
   on STN
AN 1997-192805 [17]  DPCI  Full-text
DNC C1997-061632
TI Carbon single wall nanotube manufacture giving higher
   conductivity than multiwall types - by forming mixture
   of carbon and group-VIII transition metal vapour with
   laser pulse, then condensing to give nanotube with
   live end.
   .
   .
   .
CDP CITED PATENTS          UPD: 20021009
-----
CITING PATENT  BY CAT  CITED PATENT  ACCNO          PACO
-----
EP 854839      B1 Ex    US 5300203  A  1994-109295/13  UYRI-N  <-
US 6183714     B2 Ex    EP 591595   A1 1994-119854/15  IBMC
               Ex      US 4663230  A  1986-169407/26  HYPE-N
               Ex      US 5165909  A  1987-362669/51  HYPE-N
               Ex      US 5171560  A  1987-362669/51  HYPE-N
               Ex      US 5227038  A  1993-235014/29  UYRI-N
               Ex      US 5300023  A  1993-136280/17  IMAG-N
               Ex      US 5300203  A  1994-109295/13  UYRI-N  <-
               Ex      US 5336360  A  1994-255191/31  UYCL-N
               Ex      US 5338571  A  1994-263245/32  NOUN
               Ex      US 5346683  A  1994-293455/36  GASR-N  <-
               Ex      US 5424054  A  1995-223647/29  IBMC  <-
               Ex      US 5457343  A  1994-299543/37  NIDE
               Ex      US 5500200  A  1990-224546/29  HYPE-N
               Ex      US 5578543  A  1987-362669/51  HYPE-N
               Ex      US 5589152  A  1987-362669/51  HYPE-N
               Ex      US 5591312  A  1997-086545/08  UYRI-N
               Ex      US 5698175  A  1996-112394/12  NIDE  <-
               .
               .
               .
=> ANALYZE L5 PACO 1-
L6          ANALYZE L5 1- PACO :      160 TERMS

=> D
L6          ANALYZE L5 1- PACO :      160 TERMS

TERM #      # OCC  # DOC  % DOC  PACO
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1           11    11    9.57  NIDE
2            8     5    4.35  HYPE-N
3            8     4    3.48  LEEC-I
4            6     6    5.22  ILJI-N
5            5     5    4.35  AGEN
               .
               .
               .

```



In addition, you can sort or analyze the additional patent records:

- Sort the answers in the order of occurrence of hit terms (highest to lowest) using SORT OCC.

This moves the top patents sharing the greatest number of cited patents in common with the original key patent to the top of the list.

- ANALYZE related patents in DPCI by Patent Assignee Code (PACO) to find the top patent assignees.

Additional resources

For additional information on patent citation searching, refer to the recorded CAS e-Seminar, *STN: Patent Citation Searching*, available at:

www.cas.org/training/eseminars/eventdes.html#patentcitation

Polymer and plastics information in APOLLIT, RAPRA, and CAplus/REGISTRY

This article is based on a lecture given by Dr. Sabine Angel, Head of the Polymer Information Group, BASF AG, Germany, at the STN User Meeting in London, United Kingdom, on December 1, 2003.

STN offers a variety of databases containing information on all aspects of polymers and plastics. The following databases are included in the POLYMERS cluster:

- APOLLIT
- BABS
- CAplus
- CBNB
- CEN
- CIN®
- DISSABS
- EMA
- IFIPAT
- JICST-EPLUS
- PASCAL
- PLASNEWS
- PROMT
- RAPRA
- SCISEARCH®
- TEXTILETECH
- USPATFULL/USPAT2
- WPIDS/WPINDEX
- WPIFV
- WTEXTILES™

By using the POLYMERS cluster, you can search in a predefined group of databases to answer these types of questions:

- How can the impact strength of polystyrene be improved?
- What is the market volume of polyacrylic acid?
- What are the best technologies in polyethylene blow molding?
- Which polymerization technologies for PVC are claimed by a competitor?
- Which polymers are used in cosmetics?
- Which halogen-free flame retardants are new to ABS blends?

Key polymer reference databases include APOLLIT, RAPRA, and CAplus, which can be used in conjunction with REGISTRY. This article provides a comparison of the sources, indexing, and coverage of these databases.

APOLLIT (Applied Polymers Literature) and RAPRA (RAPRA Abstracts) exclusively cover information on all aspects of rubbers, plastics, and polymeric composites. Both include thesauri for

precisely matching the query terms against the words in a document.

REGISTRY, the world's largest and most current source of information on polymers, contains more than 1 million polymeric substances. A CAS Registry Number is assigned to each polymer, and can be used to search CAplus and access journal and patent references, that are indexed with the CAS Registry Number for the polymer. Polymer names in REGISTRY may be extracted to search for recent references that have not yet been indexed.

Each database contains some sources that are abstracted and indexed only in that database, e.g.,

- APOLLIT – several German-language journals, e.g., *Kunststoffberater*, *Neue Verpackung*, *Material-prufung*, *Kunststoffe Plast Europe*, *Kautschuk-Gummi-Kunststoffe*
- RAPRA – several trade journals with business information, e.g., *Japan Chemical Week*, *Plastic News*, *Plastics and Rubber Weekly*, *Packaging*
- CAplus – *Journal of Chemical Physics*, *Langmuir*, and several Chinese journals, e.g., *Zhongguo Suliao*



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Coverage in key polymer databases.

Database	Years of coverage	Sources	Indexing	Content focus
APOLLIT	1973 to the present	Journals, books, conference proceedings, reports, standards, grey literature	Controlled Terms, Classification Codes	Industrial production, processing and applications of plastics, rubbers, and fibers, and production technology, including the chemical, physical, and engineering properties of polymers
RAPRA	1972 to the present	Patents, journals, reports, books, conference proceedings, company publications, standards	Key Term Thesaurus	Plastics, rubbers, and adhesives, including business information
CAplus	1907 to the present, with selected references from earlier years	Patents, journals, reviews, books, conference proceedings, dissertations	Index Terms, CAS Registry Numbers, CA Lexicon	Chemistry, biochemistry, chemical engineering, and related sciences

Example: Records published on the impact strength of ABS compositions (1989 to the present).

	APOLLIT	RAPRA	CAplus
Answer set	675	516	327
Journal articles	455	409	308
Conference articles	183	90	18
Company publications	n/a	13	n/a
Books	44	2	0
Dissertations	0	n/a	1
Reports	1	2	0
Relevance	~80%	~60%	~90%
Duplicates	APOLLIT/RAPRA: 52 APOLLIT/CAplus: 89	RAPRA/CAplus: 62	
Comments	Easily searchable via the thesaurus	Easily searchable via the thesaurus; sometimes difficult to determine relevancy due to very short abstracts	Easily searchable via the CAS Registry Number and Basic Index

Coverage, indexing, and retrieval possibilities vary by database and are complementary to each other. Use APOLLIT, RAPRA, and CAplus/REGISTRY in conjunction to retrieve the most comprehensive polymer information on STN.

Additional resources

For additional information, refer to the *Polymer Information on STN* Quick Reference Guide, available at:

www.cas.org/ONLINE/QRGUIDES/polymer.pdf

Example: Records published on the finite element methods in injection molding (1989 to the present).

	APOLLIT	RAPRA	CAplus
Answer set	377	384	281
Journal articles	234	286	240
Conference articles	129	90	37
Company publications	n/a	7	n/a
Books	11	0	0
Dissertations	3	n/a	2
Reports	1	1	2
Relevance	~90%	~90%	~90%
Duplicates	APOLLIT/RAPRA: 56		RAPRA/CAplus: 57
	APOLLIT/CAplus: 64		
Comments	Easily searchable via the thesaurus	Easily searchable via the thesaurus; sometimes difficult to determine relevancy due to very short abstracts	Difficult search strategy; no equivalent controlled terms available

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- STN: “Biotextology” – Text Search Techniques for Biological Information
- STN: Customizing Your STN Account
- STN: Patent Citation Searching
- STN: Searching for Patent Families
- STN: Post-processing Search Results with the Analysis Edition of STN Express with *Discover!*
- STN: All About MARPAT®
- STN: Structure and Substructure Searching Tips
- STN: Highlights from the NE Regional PIUG Patent Forum
- STN: Expanding Your Prior Art Search with Controlled Terminology
- STN: Biotech Patent Validity Tips
- STN: Increasing Confidence in Search Results

For a description of each CAS e-Seminar or to view one or more, visit:
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STN Easy and STN Easy for Intranets enhanced with additional databases and search and display fields

Both STN Easy and STN Easy for Intranets have been enhanced with access to:

- Two additional databases
- Patent Assignee Code search field in five Thomson Derwent databases
- Data from the Organism (ORG) display field in NAPRALERT

Two additional databases

The following databases are now available in STN Easy and STN Easy for Intranets.

Database	Category
LITALERT	Patents
WPIFV	Patents; Patents International

This addition brings the total number of databases available via STN Easy to 102, and the total number of databases available via STN Easy for Intranets to 114.

Patent Assignee Code search field in five Thomson Derwent databases

The Patent Assignee Code search field is available when using Advanced Search in the following Thomson Derwent databases:

- DPCI
- WPIDS (subscriber-only database available via STN Easy for Intranets)
- WPINDEX
- WPIX (subscriber-only database available via STN Easy for Intranets)
- WPIFV

Data from the Organism (ORG) display field in NAPRALERT

Data included in the Organism (ORG) display field, e.g., class, family, genus, species, subspecies, organism part, geographic area, displays for NAPRALERT records when the Standard Plus display option is selected.

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North Carolina

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9/16	8:30am-9:30am	STN: Automating Your Search
9/28	1:00pm-2:00pm	STN: Visualization Tools in STN Express with <i>Discover!</i> Analysis Edition (Version 7.01)
10/14	8:30am-9:30am	STN: Visualization Tools in STN Express with <i>Discover!</i> Analysis Edition (Version 7.01)
10/26	1:00pm-2:00pm	STN: Advanced MARPAT Techniques
11/11	8:30am-9:30am	STN: Advanced MARPAT Techniques
11/30	1:00pm-2:00pm	STN: Using the Cambridge Scientific Abstracts (CSA) Databases
12/9	8:30am-9:30am	STN: Using the Cambridge Scientific Abstracts (CSA) Databases
12/14	1:00pm-2:00pm	STN: Reaction Searching

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9/20	9:00am-12:00pm	STN Basics
9/20	1:00pm-4:00pm	STN Intermediate
9/21	9:00am-12:00pm	Basic CPlus Subject Search Techniques
9/21	1:00pm-4:00pm	Structure Searching in REGISTRY

Washington, DC

10/18	9:00am-12:00pm	STN Basics
10/18	1:00pm-4:00pm	Basic Substance Search Techniques
10/19	9:00am-4:00pm	Structure Searching in REGISTRY
10/20	9:00am-12:00pm	Basic Patent Search Techniques

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In case you missed it:

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- Searching for metallic materials information
- Using the CA Lexicon in the Analysis Edition
- What's this? Display options in STN Easy
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