



Claim text in CAplus

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STNext[®]

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 **CAS**[®]
A DIVISION OF THE
AMERICAN CHEMICAL SOCIETY

Claim Text in CAplus

- Launched September 27th, CAplus now also include the full text of the claims
- Currently full text from WO, US and CN basics are available. More offices will be coming in the near future. Currently over 8 mil records have searchable claims
 - CN and non-English WO documents are available in English through machine translation
- Claim text can be searched in the /CLM or the /BIEX field
 - Number of claims can be searched in the /CLMN field
- Paragraphs from the claims will be part of the CLM, KWIC and HIT
- Claims are available on STNext and STN Express, but not on new STN
- Claim text can be useful to expand the recall of your search or the precision as shown in the separate presentation



Implementation of claim text

- The CLM field contains the text of all claims for the Basic Patent
- Proximity operators (nW), (nA), (nS) allow for combining terms within a number of words or sentences
- As an additional display format ECLM will display just the first exemplary claim
- Embedded chemical or mathematical formulas are available for display
- WO claims are complete back to 2004, US back to 1999, CN back to 1999
 - Older years have partial claims coverage
 - Claims are available 2 weeks after the publication date of the patents

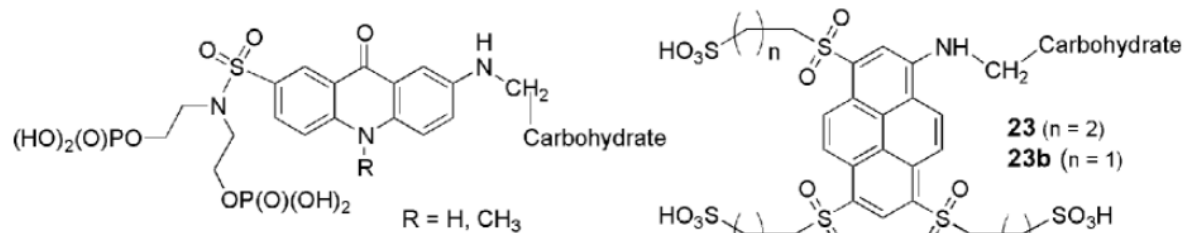


Chemical and mathematical formulas are displayable

CLM What is claimed is:

10. A method for calibration of a multi wavelength fluorescence detection system, in particular, a capillary-gel electrophoresis system, with acridone and/or pyrene based fluorescent dyes which may optionally be present as conjugates with a substrate moiety including carbohydrates, whereby the method includes the detection of at least one of the compounds according to Formula A or B as defined in claim 1 together with additional fluorescent dyes and their carbohydrate conjugates emitting at different wavelengths, preferably including at least one of the compounds: APTS, 6-R, 8-H, 15, 19, 20, 23 or 23b, as shown in the following scheme:

8-H-carbohydrate: $q = -6$ 15-carbohydrate: $q = -6$



6-R-carbohydrate: $q = -4$ 23, 23b-carbohydrate: $q = -311$. The method according to claim 10 wherein the acridone and/or pyrene based dyes, which may optionally be present as conjugates with a substrate moiety includ-

CLM What is claimed is:

1. I. A global vision-based trajectory tracking control method for mobile robots, which is characterized in that a global camera located in the space above the robot is used to capture images of the mobile robot and the reference robot, and the following process is used to determine the trajectory of the mobile robot tracking reference robot according to the image. Tracking control parameters: The trajectory tracking control parameters of the mobile robot tracking reference robot are the rotational speeds ω_L and ω_R of the left and right wheels of the mobile robot, which are determined by the following formula:

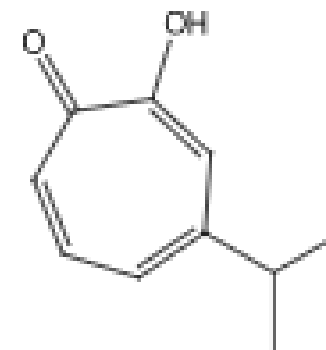
$$\begin{cases} \omega_R = \frac{1}{r}(v + \omega b) \\ \omega_L = \frac{1}{r}(v - \omega b) \end{cases}$$

$2b$ is the distance between the left and right wheels of the mobile robot, $2r$ is the wheel diameter of the mobile robot, and the speed V and angular velocity ω of the mobile robot are determined by the global asymptotic stability controller:

$$\omega = \omega_r + k_2(\tilde{\theta}_e - \alpha_{\tilde{\theta}_e}) + \alpha v_r \eta(t) y_e - \alpha \frac{\partial \alpha_{\tilde{\theta}_e}}{\partial y_e} v_r \sin \tilde{\theta}_e - \alpha \frac{\partial \alpha_{\tilde{\theta}_e}}{\partial v_r} \dot{v}_r$$

Finding hand soaps/sanitizers with Hinokitiol

- Search Hinokitiol via the REGISTRY file
- Options to search soaps and/or hand terminology also in the claims
- Option to find if Hinokitiol is claimed
- Various display capabilities



Search strategy

=> FILE REG

=> S HINOKITIOL/CN

L1 1 HINOKITIOL/CN

=> D

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2020 ACS ON STN

RN 499-44-5 REGISTRY

ED Entered STN: 16 Nov 1984

CN 2,4,6-Cycloheptatrien-1-one, 2-hydroxy-4-(1-methylethyl)- (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2,4,6-Cycloheptatrien-1-one, 2-hydroxy-4-isopropyl- (6CI, 8CI)

CN 2-Hydroxy-4-(1-methylethyl)-2,4,6-cycloheptatrien-1-one

OTHER NAMES:

CN β -Isopropyltropolon

CN β -Thujaplicin

CN β -Thujaplicine

CN 2-Hydroxy-4-(propan-2-yl)cyclohepta-2,4,6-trien-1-one

CN 2-Hydroxy-4-isopropyl-2,4,6-cycloheptatrien-1-one

CN 2-Hydroxy-6-(propan-2-yl)cyclohepta-2,4,6-trien-1-one

CN 2-Hydroxy-6-propan-2-ylcyclohepta-2,4,6-trien-1-one

CN 4-Isopropyltropolone

CN 6-Isopropyltropolone

CN beta-Thujaplicin

CN beta-Thujaplicine

CN H 0142

CN **Hinokitiol**

CN Hinokitiol S-HT

CN HT-SF

CN Hyka 1

CN IPT

CN Kisei Pro-Sol N

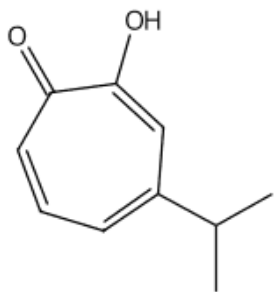
CN NSC 18804

CN S-HT

DR 772-41-8, 333760-35-3, 1411673-73-8

Continue search strategy

MF C10 H12 O2
CI COM
SR CA
LC STN Files: ANABSTR, BIOSIS, BIOTECHNO, CA, CAPLUS, CASFORMULTNS,
CASREACT, CHEMCATS, CHEMLIST, CIN, DDFU, DRUGU, EMBASE, IFIALL, IPA,
MEDLINE, NAPRALERT, PIRA, REAXYSFILE*, RTECS*, TOXCENTER, USPAT2,
USPATFULL, USPATOLD
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2268 REFERENCES IN FILE CA (1907 TO DATE)
130 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2320 REFERENCES IN FILE CAPLUS (1907 TO DATE)

Crossing-over to CPlus

```
=> FILE CAPLUS
```

```
=> S L1 AND (SOAP OR CLEAN? OR WASH? OR STERILI? OR DISINFECT?) AND (HAND OR SKIN)
L2          93 L1 AND (SOAP OR CLEAN? OR WASH? OR STERILI? OR DISINFECT?) AND
           (HAND OR SKIN)
```

```
=> S L1 AND (SOAP OR CLEAN? OR WASH? OR STERILI? OR DISINFECT?) AND (HAND OR SKIN) /BI, BIEX
L3          96 L1 AND (SOAP OR CLEAN? OR WASH? OR STERILI? OR DISINFECT?) AND
           (HAND OR SKIN) /BI, BIEX
```

```
=> S L1 AND (SOAP OR CLEAN? OR WASH? OR STERILI? OR DISINFECT?) /BI, BIEX AND (HAND OR SKIN) /BI, BIEX
L4          101 L1 AND (SOAP OR CLEAN? OR WASH? OR STERILI? OR DISINFECT?) /BI, BIEX
           AND (HAND OR SKIN) /BI, BIEX
```

```
=> S L4 NOT L2
```

```
L5          8 L4 NOT L2
```


Not all additional hits are highly relevant

TI Head pillow type suspended anesthetic device for anesthesia department
PA The Second People's Hospital of Nantong, Peop. Rep. China
PATENT NO. KIND DATE

CN 109125869 A 20190104
CLM What is claimed is:
4. . . . mounted on the side wall of the casing (1201) through a bearing, and the first driving screw (1202) has a **hand** wheel fixed at the end end (1203) The **hand** wheel (1203) is located outside the casing (1201), and the first driving screw (1202) is fixed with a minutes; 55, finished product: then reduce the temperature inside the digital thermostat magnetic stirrer to make the antibacterial liquid; 56, **cleaning**: the respiratory mask (96) with pure **Washing** the water **cleanly**; 57. **Disinfecting**: The breathing hood (96) after the **cleaning** in step S6 is dried by the ultraviolet drying oven; 58. spraying: then spraying the antibacterial liquid prepared in step. . . .
IT 110-44-1, Sorbic acid **499-44-5**, Hinokitiol 9012-76-4, Chitosan
RL: MOA (Modifier or additive use); USES (Uses)
(head pillow type suspended anesthetic device for anesthesia department)

Some are more interesting

L5 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2020 ACS on STN
TI Synergistic active preparations comprising diphenylmethane derivatives and further **skin** and/or hair lightening and/or senile keratosis reducing compounds
PA Symrise G.m.b.H. & Co. K.-G., Germany

PATENT NO.	KIND	DATE
-----	----	-----
WO 2007077259	A1	20070712
WO 2007077259	A9	20070920
EP 1973518	A1	20081001
JP 2009522337	T	20090611
US 20090148391	A1	20090611

CLM What is claimed is:
9. . . . to any of claims 1 to 8, furthermore comprising a cooling active compound in an amount sufficient to achieve a **skin**-cooling effect.

10. Preparation according to any of claims 1 to 9, furthermore comprising one or more compounds for care and/or **cleansing** of (a) **skin** and/or (b) hair.

IT Chelating agents
Skin moisturizers
Skin-lightening cosmetics
499-44-5, Hinokitiol 501-30-4, Kojic acid 533-75-5, Tropolone
RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
USES (Uses)

It is often desired to search compounds in claims

```
=> S L4 AND (HINOKITIOL OR THUJAPLICIN? OR ISOPROPYLTROPOLONE OR HYDROXY (5A) (PROPAN## OR ISOPROP### OR
METHYLETHYL) (5A)CYCLOHEPTATRIEN####) /CLM
    166 HINOKITIOL/CLM
    23 THUJAPLICIN?/CLM
    7 ISOPROPYLTROPOLONE/CLM
138998 HYDROXY/CLM
  82717 PROPAN##/CLM
103461 ISOPROP###/CLM
  5137 METHYLETHYL/CLM
  216 CYCLOHEPTATRIEN####/CLM
    11 HYDROXY (5A) (PROPAN## OR ISOPROP### OR METHYLETHYL) (5A)CYCLOHEPTA
    TRIEN####
L6    17 L4 AND (HINOKITIOL OR THUJAPLICIN? OR ISOPROPYLTROPOLONE OR
    HYDROXY (5A) (PROPAN## OR ISOPROP### OR METHYLETHYL) (5A)CYCLOHEPTA
    TRIEN####) /CLM
```

Expand on key tradenames for further variation

- There were many spelling variations for Hinokitiol in other documents:
- Use the good old Expand command to find these

```
=> E HINO/CLM
E3          19 --> HINO/CLM
E10         1    HINOK/CLM
E12         92   HINOKI/CLM
E17         1    HINOKIIIOL/CLM
E22         2    HINOKITHIOL/CLM
E23         1    HINOKITIATE/CLM
E26        166   HINOKITIOL/CLM
E27         15   HINOKITOL/CLM
E28         1    HINOKKI/CLM
E29         1    HINOKTIOL/CLM
```

Some claim descriptions need to be interpreted manually

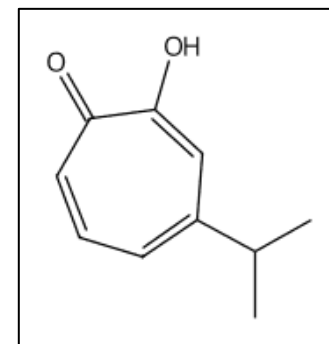
WO 2006103757

CLM What is claimed is:

1. [1] A cooling liquid composition for cooling a fuel cell has a ring-shaped atomic arrangement in which a carbonyl group is introduced in the structural formula, and an unsaturated bond is contained in the ring-shaped atomic arrangement.

2. The fuel cell cooling liquid composition according to claim 1, wherein the number of carbon atoms in the cyclic atomic arrangement of the compound is 3 to 35.

3. Compounds include oxazolone, pyrazolone, jasmon, benzoquinone, pyrone, γ -pyridone, uracil, tropone, trovone, chromone, naphthoquinone, oxinedonore, phthalide, oxanthrone, anthrone, anthraquinone, arizarin, ataridone, and them. 3. The fuel cell cooling liquid composition according to claim 2, which is a derivative of



Patent claim text searching to find more specific details

- Find patent with a specific particle size of talc applied in antifoaming agents
- Include also relevant IPC and CPC symbols for antifoaming
- Compare aspect of particle size being captured in CAplus indexing or the claim text
- Search specific claims where talc and particle size are found in the claims in proximity
- Compare the results to searches in full text files and WPINDEX

Searching a defoaming composition comprising of talc at a specific particle size

```
=> FILE CAPLUS

=> S (ANTIFOAM? OR ANTI-FOAM? OR DEFOAM? OR B01D0019-02+NT/IPC,CPC)
    61293 ANTIFOAM?
    2595 ANTI-FOAM?
    61560 DEFOAM?
    5177 B01D0019-02+NT/IPC (2 TERMS)
    2833 B01D0019-02+NT/CPC (23 TERMS)
L1   94049 (ANTIFOAM? OR ANTI-FOAM? OR DEFOAM? OR B01D0019-02+NT/IPC,CPC)

=> S L1 AND (TALC OR TALCUM OR 14807-96-6)
L2   8419 L1 AND (TALC OR TALCUM OR 14807-96-6)
```


Adding the concept of particle size

- The effect of searching particle size also the claim text is significant
 - Truncation also allows for particulate size
 - Mesh is a unit to describe the particle size distribution
- The /BIEX field is identical to the /CLM field in CAplus

```
=> S L2 AND (PARTIC?(2A)SIZE OR FINENESS OR MESH)
L3          718 L2 AND (PARTIC?(2A)SIZE OR FINENESS OR MESH)

=> S L2 AND (PARTIC?(2A)SIZE OR FINENESS OR MESH)/BI,BIEX
L4          3183 L2 AND (PARTIC?(2A)SIZE OR FINENESS OR MESH)/BI,BIEX
```

Refining the results to claims that specifically link the particle size to talc

```
=> S L2 AND (PARTIC?(2A)SIZE OR FINENESS OR MESH)/CLM(3S) (TALC OR TALCUM)/CLM
    912763 PARTIC?/CLM
    741539 SIZE/CLM
    42937 FINENESS/CLM
    494627 MESH/CLM
    48866 TALC/CLM
    30104 TALCUM/CLM
    10657 (PARTIC?(2A)SIZE OR FINENESS OR MESH)/CLM(3S) (TALC OR TALCUM)/CLM
L5      1512 L2 AND (PARTIC?(2A)SIZE OR FINENESS OR MESH)/CLM(3S) (TALC OR
        TALCUM)/CLM

=> S L2 AND (PARTIC?(2A)SIZE OR FINENESS OR MESH)/CLM(9A) (TALC OR TALCUM)/CLM
L6      810 L2 AND (PARTIC?(2A)SIZE OR FINENESS OR MESH)/CLM(9A) (TALC OR
        TALCUM)/CLM
```

Example from CAPLUS

=> D BIB KWIC

AN 2019:1374622 CAPLUS Full-text

TI Coating systems and formulations with high hide and holdout

PA James Hardie Technology Limited, Ire.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 10351724	B1	20190716	US 2016-15188715	20160621

CLM What is claimed is:

9. The composition of claim 5, wherein the fillers comprise a **talc** having an oil absorption of about 53 and a **particle size** of about 1.2 µm.

IT Absorbents

Antifoaming agents

Surfactants

(coating systems and formulations with high hide and holdout)

IT 13463-67-7, Titania, uses **14807-96-6**, Talc, uses

RL: MOA (Modifier or additive use); USES (Uses)

(coating systems and formulations with high hide and holdout)

Capture patents that do not have claim text available in CAplus and search their claims in full text files

```
=> S L2 AND P/DT NOT CLM/FA
      15904610 P/DT
      8007165 CLM/FA
L7          709 L2 AND P/DT NOT CLM/FA

=> FILE JPFUL KRFUL EPFUL DEFUL FRFUL PCTFUL
=> TRANSFER L7 1- PN.B /PN
L8          TRANSFER L7 1- PN.B :      706 TERMS
L9          71 FILE JPFULL
L10         128 FILE KRFULL
L11         67 FILE EPFULL
L12         51 FILE DEFULL
L13         31 FILE FRFULL
L14         27 FILE PCTFULL

TOTAL FOR ALL FILES
L15         375 L8
L16         QUE TERMS FROM L8 WITH NO HITS:  358 TERMS
```

Review those records for which no patent claim text is available (709 out of 8419)

Transfer those patent numbers over to a selection of the patent full text files

Refining these documents with the claims search

```
=> L15 AND (TALC OR TALCUM OR TALK OR TALKUM)/CLM(3S) (PARTIC?(3A) (SIZE OR TAILLE) OR  
PARTIKELGRO? OR GRANULOMET?)/CLM
```

```
L17          1 FILE JPFULL  
L18          12 FILE KRFULL  
L19          6 FILE EPFULL  
L20          5 FILE DEFULL  
L21          7 FILE FRFULL  
L22          2 FILE PCTFULL
```

TOTAL FOR ALL FILES

```
L23          33 L15 AND (TALC OR TALCUM OR TALK OR TALKUM)/CLM(3S) (PARTIC?(3A) (S  
           IZE OR TAILLE) OR PARTIKELGRO? OR GRANULOMET?)/CLM
```

Example from a full text file

```
AN      5133893  DEFULL  ED 20190820 UP 20200807 EDTX 20190820 UPTX 20191120
        DED 20121004 DUPD 20200722 Full-text
TIEN    Apparatus and method for manufacturing a multi-casing paper
PAS     PAPIERFABRIK HAMBURGER RIEGER
PI      DE 102011001617          A1      20121004

CLMEN.  . . .
        60 with a particle size distribution of the particles is in the range of
        55 to 80% less 2 µm, talc, calcium carbonates, particularly calcium
        carbonates with a particle size distribution of the particles is
        in the range 50 to 90% less 2 µm, , titanium dioxide, aluminum. . .

CLMDE.  . . .
        im Bereich von 10 bis 60 mit einer Partikelgroessenverteilung der
        Partikel im Bereich von 55 bis 80% kleiner 2 µm, Talkum,
        Calciumcarbonate, insbesondere Calciumcarbonate mit einer
        Partikelgroessenverteilung der Partikel im Bereich 50 bis 90% kleiner
        2 µm, Calziumsilikate, Titandioxid, Aluminiumhydroxide,
```

Extending the search to WPIndex

```
=> FILE WPINDEX

=> TRA L6 PNK.B /PNK

L24          TRANSFER L6 1- PNK.B :      810 TERMS
L25          805 L24/PNK
L26          QUE  TERMS FROM L24/PNK WITH NO HITS:      3 TERMS

=> TRA L23 PN

L27          TRANSFER L23 1- PN :      35 TERMS
L28          33 L27
ALL TERMS IN L27 RETRIEVED.

=> S L25 OR L28

L29          837 L25 OR L28
```

Transfer the basic patent numbers from CPlus to WPIndex

Transfer the patent numbers from the full-text files to WPIndex

Running the search in WPIIndex either in just the claims or also in the added value text

```
=> S L2 AND (PARTIC?(2A)SIZE OR FINENESS OR MESH) /CLM(9A) (TALC OR TALCUM) /CLM
L30          800 L2 AND (PARTIC?(2A)SIZE OR FINENESS OR MESH) /CLM(9A) (TALC OR
              TALCUM) /CLM
```

```
=> S L2 AND (PARTIC?(2A)SIZE OR FINENESS OR MESH) /BI,BIEX(9A) (TALC OR TALCUM) /BI,BIEX
L31          1005 L2 AND (PARTIC?(2A)SIZE OR FINENESS OR MESH) /BI,BIEX(9A) (TALC
              OR TALCUM) /BI,BIEX
```

```
=> S L31 NOT L29
L32          341 L31 NOT L29
```

Unique answers in WPIIndex

```
=> S L29 NOT L31
L33          173 L29 NOT L31
```

Unique answers in CPlus

An example from WPIIndex

L32 ANSWER 5 OF 341 WPIINDEX COPYRIGHT 2020 CLARIVATE ANALYTICS on STN

AN 2020-77206K [2020070] WPIINDEX [Full-text](#)

TI Organic-inorganic hybrid modified cement-based sealant used in prefabricated building sealing materials, comprises sodium silicate, silane coupling agent, polyacrylate, ethylene-vinyl acetate copolymer emulsion, ethylene glycol and cement

PA (UNNS-C) UNIV NORTH CHINA SCI & TECHNOLOGY

PIA CN 111500224 A 20200807 (2020070)* ZH 11[2]

TECH

INORGANIC CHEMISTRY - Preferred Components: The inorganic filler comprises heavy calcium powder and/or **talc** powder, where the average **particle size** of the inorganic filler is 200-400 mesh.

ORGANIC CHEMISTRY - Preferred Components: The plasticizer comprises butyl phthalate and/or dioctyl phthalate.

POLYMERS - Preferred Components: The **defoamer** comprises silicone type **defoamer**. The water reducing agent comprises polycarboxylic acid water reducing agent and/or naphthalene-based water reducing agent. Preferred Conditions: In step (a),... . .

Conclusions

- The additional claim text provides an opportunity to expand the recall of the search
- The claim text fields can also be used to qualify that certain aspects have to be claimed
- The power of STNext allows for expanding the search to full text files and WPIndex
- CAS will be adding more claim text from other authorities
- CAS will explore adding the numeric property search (NPS) to CPlus, including the CLM text
 - NPS is available in WPIndex and most patent full text files (not in EPFUL)



Contact Us



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FIZ Karlsruhe

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www.stn-international.de