

***Patents* ALERT**

This section contains abstracts of recently issued patents in the United States and published patent applications filed from over 30 countries under the Patent Cooperation Treaty and compiled in accordance with interest profiles developed by the Editors.

Further information about complete patents can be obtained from:

REEDFAX Document Delivery System
275 Gibraltar Road, Horsham, PA 19044, USA

Phone: +1 215 441-4768

Fax: +1 215 441-5463

who offer a 24-hour, 7-days a week service.

See overleaf for details of a special service for readers of
Journal of Fluorine Chemistry



Free to readers of: *Journal of Fluorine Chemistry*

REEDFAX™ Document Delivery System FAX FORM

FAX TODAY (our local international access code) **+1-215-441-5463**

As a first-time user, you are eligible to receive 5 FREE U.S. patents (*you pay only for the cost of delivery*). Complete and return to confirm your personal 24-hour REEDFAX™ account number.

Yes! By return fax, please confirm my personal 24-hour REEDFAX account number and put me on-line — without cost or obligation — for **5 FREE United States patents** (*excluding delivery charges*).

AUTHORIZED SIGNATURE _____

NAME (please print) _____

TITLE _____

COMPANY _____

ADDRESS _____

CITY _____

STATE _____

ZIP _____

PHONE _____

FAX _____

Alternate FAX (if desired) _____

Name to appear on faxed patent documents. If same as above, check box:

NAME (please print) _____

Check here if you plan to use Client Numbers (Client charge-back numbers)

Tax exempt number (For PA, FL and NY) _____

Name and address for billing. If same as above, check box:

Please list your other locations or other individuals who would be interested in REEDFAX Document Delivery System. Use additional sheets if necessary.

5516496**METAL AND FLUORINE VALUES
RECOVERY FROM FLUORIDE SALT
MATRICES**

Slage Randall Elizabethton, TN, UNITED STATES
assigned to Advanced Recovery Systems Inc

The process for converting feed materials of high mineral content and substantial radioactivity levels to concentrated radionuclide products of high radioactivity levels and to other products of discard or very low radioactivity levels, wherein the feed materials consists of a difficultly soluble matrix contain substantial metal, fluorine, and radionuclide values assaying above about 30 pCi/g, the process having the steps of contacting the feed materials with high temperature steam of from about 200°C to about 1500°C, the contacting being carried out such as to convert the metal and radionuclide values to oxide residues at commercially acceptable rates and to evolve gaseous fluorides from the feed, digesting the oxide residues in an acidic digest medium separating the radionuclide values from the resulting digest liquor and subsequently isolating the metal values from the resulting raffinate whereby the metal values have a radionuclide value assay of less than about 20% of the radioactivity level of the feed materials.

5516863**(CO)POLYMERIZATION PROCESS IN
AQUEOUS EMULSION OF
FLUORINATED OLEFINIC MONOMERS**

Abusleme Julio A; Maccone Patrizia; Colaianna Pasqua Saronno, ITALY assigned to Ausimont S p A

Radical (co)polymerization process of fluorinated olefinic monomers, optionally in association with one or more non-fluorinated olefins, in which the monomers are (co)polymerized in aqueous emulsion, in the presence of a hydrogenated chain transfer agent selected from hydrogen, aliphatic hydrocarbons and fluorohydrocarbons C1-C20 and of a branched chain aliphatic alcohol C3-C12 characterized by a ratio between the number of hydroxyl groups and the number of methyl groups lower than or equal to 0.5.

5516932**HALOGENATED CINNAMIC ACIDS AND
ESTERS THEREOF, PROCESSES FOR
THE PREPARATION THEREOF AND
HALOGENATED ARYLDIAZONIUM
SALTS**

Beller Matthias; Fischer Hartmut; Weisse Laurent; Forstinger Klaus; Pfirmann Ralf; Strutz Heinz Niedernhausen, GERMANY assigned to Hoechst Aktiengesellschaft

The present invention relates to compounds of the formula (*See Patent for Chemical Structure*) (I) in which R1 and R2 are identical or different and are hydrogen or an alkyl radical having 1 to 18 carbon atoms and optionally containing oxygen, nitrogen or halogen, the radicals X, Y and Z are identical and are a fluorine, bromine or iodine atom or if two of the radicals X, Y or Z are identical or all of the radicals X, Y, Z are different from each other, X, Y and Z are a fluorine, chlorine, bromine or iodine atom. The invention further relates to a process for the preparation of the compounds, by reacting an aryldiazonium salt of the formula (*See Patent for Chemical Structure*) (II) in which the radicals X, Y and Z are identical and are a fluorine, bromine or iodine atom or, if two of the radicals X, Y and Z are identical or all of the radicals X, Y, Z are different from each other, X, Y and Z are a fluorine, chlorine, bromine or iodine atom and A(-) is an anion of an acid having a pKa <7, with a compound of the formula (*See Patent for Chemical Structure*) (III) in which R1 and R2 are identical or different and are hydrogen or an alkyl radical having 1 to 18 carbon atoms and optionally containing oxygen, nitrogen or halogen, in the presence of a palladium-containing catalyst, if appropriate with addition of a base, and the aryldiazonium salts of the formula (II).

5516946**PRODUCING CF₃CH₂CF₃ AND/OR
CF₃CH=CF₂ BY THE CONVERSION OF
FLUORINATED ETHERS**

Jackson Scott C; Resnick Paul R; Swearingen Steven H Kennett Square, PA, UNITED STATES assigned to E I Du Pont de Nemours and Company

A process is disclosed for producing $\text{CF}_3\text{CH}_2\text{CF}_3$ and/or $\text{CF}_3\text{CH}=\text{CF}_2$ from at least one ether compound selected from the group consisting of compounds having the formula $(\text{CF}_3)_2\text{CHCF}_2\text{OR}$ and compounds having the formula $(\text{CF}_3)_2\text{C}=\text{CFOR}$ (wherein R is an alkyl group of the formula $\text{C}_n\text{H}_{2n+1}$ and n is an integer from 1 to 6) by contacting the ether compound(s) with water at an elevated temperature of at least about 75 degrees C. The reaction of ether compound(s) with water may be employed in connection with a process for producing tetrafluoroethylene and/or hexafluoropropylene by pyrolysis, where by-product perfluoroisobutylene is reacted with an alkanol to produce the ether compound(s).

5516951

**PROCESS FOR PREPARING
1,1,1,4,4,4-HEXAFLUORO-2-BUTENE AND
1,1,1,4,4,4-HEXAFLUOROBUTANE**

Aoyama Hirokazu Osaka, JAPAN assigned to Daikin Industries Ltd

PCT No. PCT/JP93/01690 Sec. 371 Date May 19, 1995 Sec. 102(e) Date May 19, 1995 PCT Filed Nov. 18, 1993 PCT Pub. No. WO94/12454 PCT Pub. Date Jun. 9, 1994. 1,1,1,4,4,4-Hexafluoro-2-butene is prepared by reacting 1,1,1-trifluoro-2,2-dichloroethane with copper and an amine, and then 1,1,1,4,4,4-hexafluorobutane is prepared by reacting 1,1,1,4,4,4-hexafluoro-2-butene with hydrogen. 1,1,1,4,4,4-Hexafluorobutane, which is used as a coolant, a blowing agent or a cleaner and can reserves the environment, is easily obtained, and 1,1,1,4,4,4-hexafluoro-2-butene, which is useful as an intermediate for the 1,1,1,4,4,4-hexafluorobutane, or as a monomer of fluorine-containing polymers is easily prepared in a good yield.

5517824

REFRIGERATING CYCLE

Konishi Hiroshige; Kawaguchi Susumu; Maruyama Hitoshi; Sumida Yoshihiro Shizuoka, JAPAN assigned to Mitsubishi Denki Kabushiki Kaisha

In a refrigerating cycle using a refrigerant containing

hydrofluorocarbon as a main component, of a refrigerant pipe arrangement constituting the refrigerating cycle, a refrigerant pipe extending upward from a lower side to an upper side is made to have an inner diameter not larger than a value which makes the flow rate of the refrigerant be not smaller than a zero penetration flow rate. It is possible to obtain a refrigerating cycle superior in oil returning to a compressor and hence high in reliability, even in the case of using refrigerator oil having no compatibility with a refrigerant containing hydrofluorocarbon as a main component.

5518643

**LUBRICATING OIL CONTAINING A
POLYVINYL ETHER COMPOUND FOR
COMPRESSION-TYPE REFRIGERATORS**

Egawa Tatsuya; Kawaguchi Yasuhiro; Mogami Kenji; Shimizu Nobuaki Sodegaura, JAPAN assigned to Idemitsu Kosan Co Ltd

A lubricating oil for compression-type refrigerators which comprises as the main component thereof a polyvinyl ether compound having excellent compatibility with a hydrofluorocarbon or a hydrochlorofluorocarbon, such as 1,1,1,2-tetrafluoroethane and the like, which can be used as the refrigerant to replace compounds causing environmental pollution, such as dichlorofluoroethane and the like, and having an excellent lubricating property is disclosed. The lubricating oil for compression-type refrigerators comprises as the main component thereof a polyvinyl ether compound having the constituting units expressed by the general formula: (*See Patent for Chemical Structure*) wherein R1, R2, R3 are H or a hydrocarbon group of C1-8, R4 is a bivalent hydrocarbon group of C2-10, R5 is a hydrocarbon group of C1-10 and m is 0-10.

5518653

**OPTICALLY ACTIVE METHYL
DIOXANES**

Buchecker Richard; Funfschilling Jurg; Schadt Martin Zurich, SWITZERLAND assigned to Hoffmann-La Roche Inc

Optically active compounds of the formula (*See Patent for Chemical Structure*) I wherein n stands for the number 0 or 1; Z1 is a single covalent bond or -CH₂CH₂-; Z2 is a single covalent bond, -CH₂CH₂-, -CH₂O-, -OCH₂-, -COO- or -OOC-; rings A1 and A2 each independently represent trans-1,4-cyclohexylene or optionally halogen-, cyano- and/or methyl-substituted 1,4-phenylene in which optionally 1 CH group or 2 CH groups is/are replaced by nitrogen; R2 is a group R4 or a group of the formula (*See Patent for Chemical Structure*) II R4 is cyano, halogen, -OCY1F2, -CY1F2 or an alkyl group in which optionally one >CH-CH< is replaced by >C double bondC< and/or optionally one methylene group or two non-adjacent methylene groups is/are replaced by -O-, -COO- and/or -OOC- and/or optionally one methylene group is replaced by -CHY2-; Y1 is hydrogen or fluorine; Y2 is halogen, cyano or methyl; R1 and R3 denote alkyl in which optionally one >CH-CH< is replaced by >C double bondC< and/or optionally one methylene group or two non-adjacent methylene groups is/are replaced by -O- and/or optionally one or more hydrogen atoms is/are replaced by fluorine; and (S*) and (R*) denote the relative configurations of the chiral carbon atoms, as well as liquid crystalline mixtures which contain such compounds and their use for optical and electro-optic purposes.

5518708

SUBSTITUTION OF SN IN PLACE OF AL IN THE FRAMEWORK OF MOLECULAR SIEVE VIA TREATMENT WITH FLUORIDE SALTS

Skeels Gary; Chapman Diane M; Flanigen Edith M
Brewster, NY, UNITED STATES assigned to UOP

Molecular sieve compositions are prepared by extracting aluminum and substituting chromium and/or tin for extracted aluminum to give molecular sieve products containing framework chromium and/or tin atoms. The process of preparing the chromium and/or tin-containing molecular sieves involves contacting a starting molecular sieve with a solution or slurry of at least one of a fluoro salt of chromium or a fluoro salt of tin under effective process conditions to provide for aluminum extraction and substitution of chromium and/or tin.

5518731

NONAQUEOUS FLUORINATED DRUG DELIVERY VEHICLE SUSPENSIONS

Meadows David L Mission Viejo, CA, UNITED STATES assigned to Allergan Inc

Nonaqueous pharmaceutical compositions for use in aqueous physiological systems are disclosed comprising drug delivery vehicles suspended in nonaqueous perfluorocarbon or fluorinated silicone liquid carriers. The suspended drug delivery vehicles may be water labile or water stable and incorporate therapeutic or diagnostic compounds which remain stable and pharmaceutically effective for extended periods. The pharmaceutical compositions have improved bioavailability, are capable of low dose volume delivery, and do not leach the incorporated therapeutic or diagnostic compounds into the liquid carriers making them well suited for multi-dose packaging and administration.

5518788

ANTISTATIC HARD COAT INCORPORATING A POLYMER COMPRISING PENDANT FLUORINATED GROUPS

Invie Judith Woodbury, MN, UNITED STATES assigned to Minnesota Mining and Manufacturing Company

An optical recording disk having an antistatic hard coat layer provided on at least one surface of the disk, wherein the hard coat layer comprises a fluorinated ionic salt; a polymer comprising a plurality of pendant fluorinated groups, and optionally a nonionic fluorinated surfactant. The polymer comprising a plurality of pendant fluorinated groups is preferably a copolymer derived from monomers comprising a nonfluorinated vinyl monomer; and a vinyl monomer comprising a fluorinated group.

5519078**FLUORINE-CONTAINING
BENZOPHENONE DERIVATIVES AND
USE THEREOF**

Osawa Ryoko; Maekawa Takashige; Momii Tatsuo;
Kamata Satoshi Yokohama, JAPAN assigned to Asahi
Glass Company Ltd

A fluorine-containing benzophenone derivative of the formula (1), (2) or (3): (*See Patent for Tabular Presentation*) PS (*See Patent for Tabular Presentation*) PS (*See Patent for Tabular Presentation*) PS wherein Phi1 is a 2-hydroxybenzophenone structure of the formula ka-1: (*See Patent for Chemical Structure*) (ka-1) (wherein Y is a hydrogen atom or a hydroxyl group, each of k and m indicates the number of bond sites, k is an integer of from 0 to 3, and m is an integer of from 0 to 3, provided that $1 < \text{or } = (k+m) < \text{or } = 4$), n corresponds to (k+m) and is an integer of from 1 to 4, each of Phi2, Phi3, Phi4 and Phi5 is a 2-hydroxybenzophenone structure of the formula ka-1 wherein (k+m) is 1, each of X1, X2, X3, X4 and X5 is a single bond or an oxygen atom, Q1 is a single bond or a bivalent linking group having a carbon atom directly bonded to X1, each of Q2 and Q3 is a single bond or a bivalent linking group, Rf1 is a monovalent polyfluorohydrocarbon group having from 2 to 22 carbon atoms, in which some of the carbon atoms may be substituted by ether oxygen atoms, Rf2 is a bivalent polyfluorohydrocarbon group having from 2 to 22 carbon atoms, in which some of the carbon atoms may be substituted by ether oxygen atoms, and Qf is a bivalent linking group having at least one Q4-Rf1 (wherein Q4 is a bivalent linking group, and Rf1 is as defined above).

5519157**FLUORINE-CONTAINING
ORGANOSILICON COMPOUNDS AND
METHOD FOR THEIR PREPARATION**

Kobayashi Hideki Chiba, JAPAN assigned to Dow
Corning Toray Silicone Co Ltd

The present invention relates to fluorine-containing organosilicon compounds and a method for their

preparation. The fluorine-containing organosilicon compounds of this invention have low surface tension, excellent solvent resistance, water-repellency, and oil-repellency characteristics. The fluorine-containing organosilicon compounds of this invention also do not easily depolymerize by hydrolysis under acidic and alkaline conditions.

5521013**PARTIALLY-FLUORINATED POLYMERS**

Griffin Anselm C; Wilson Ladislav Hattiesburg, MS,
UNITED STATES assigned to Minnesota Mining and
Manufacturing Company

Partially fluorinated polymer comprising a backbone and side-chains, in which the backbone and side-chains are each 4 atoms long and are chemically incompatible, one chain being at least predominantly hydrocarbon and the other comprising a C4+ perfluorocarbon moiety.

5521424**SEMICONDUCTOR DEVICE HAVING A
SILICON OXIDE FILM CONTAINING
FLUORINE ATOMS**

Ueno Kazuyoshi; Homma Tetsuya Tokyo, JAPAN
assigned to NEC Corporation

The semiconductor device has a multilayer structure wherein a substantially pure silicon dioxide film containing substantially no fluorine atom and a silicon dioxide film containing fluorine atoms are sequentially laminated on a substrate. Etching rate of a silicon dioxide film depends on a fluorine concentration in the film, so that a suitable etch selectivity of the silicon dioxide film containing fluorine atoms from the substantially pure silicon dioxide film can be obtained to form an oxide trench used for a trench interconnection and a via-hole used for a via-plug. The oxide film containing fluorine atoms has as good a quality as the silicon dioxide film not containing impurities has, thereby obtaining a superior characteristic of the semiconductor device. Addition of fluorine atoms reduces a specific permittivity to thereby obtain a higher speed.

5523015**AZEOTROPES OF HYDROGEN FLUORIDE WITH DICHLOROMETHANE, DIFLUOROMETHANE AND CHLOROFLUOROMETHANE**

Tsuda Takehide; Matsumoto Takeo; Tanaka Yoshinor; Komatsu Satoshi; Koyama Satoshi Osaka, JAPAN assigned to Daikin Industries Ltd

PCT No. PCT/JP93/00455 Sec. 371 Date Dec. 9, 1993 Sec. 102(e) Date Dec. 9, 1993 PCT Filed Apr. 9, 1993 PCT Pub. No. WO93/21140 PCT Pub. Date Oct. 28, 1993. Hydrogen fluoride is effectively removed from a mixture of hydrogen fluoride, dichloromethane, chlorofluoromethane and/or difluoromethane by distilling the mixture so that two-component azeotropic mixtures of hydrogen fluoride and dichloromethane, hydrogen fluoride and chlorofluoromethane and hydrogen fluoride and difluoromethane are removed, or by liquid-separating the mixture into an upper liquid phase rich in hydrogen fluoride and a lower liquid phase not rich in hydrogen fluoride before each liquid phase is distilled as described above.

5523161**WATER REPELLENT SURFACE TREATMENT WITH INTEGRATED PRIMER**

Goodwin George Mars, PA, UNITED STATES assigned to PPG Industries Inc

A method and article are disclosed wherein a glass, plastic, metal, organic polymer coated substrate or inorganic coated substrate is provided with a durable non-wetting surface by treatment with a perfluoroalkylalkylsilane and a completely hydrolyzable silane.

5523162**WATER REPELLENT SURFACE TREATMENT FOR PLASTIC AND COATED PLASTIC SUBSTRATES**

Franz Helmut; Goodwin George; Marietti Gary Pittsburgh, PA, UNITED STATES assigned to PPG Industries Inc

A method and article are disclosed wherein a plastic substrate is provided with a more durable non-wetting surface by deposition of a silica primer layer prior to treatment with perfluoroalkylalkylsilane and optionally a fluorinated olefin telomer on the surface which comprises the silica primer layer.

5523422**MONOMER PRECURSOR ISOMERIZATION**

Petrov Viacheslav A; Resnick Paul R Wilmington, DE, UNITED STATES assigned to E I Du Pont de Nemours and Company

A process is disclosed for producing a 2,2-bis-substituted-trans-4,5-dichloro-4,5-difluorodioxolane of the formula (*See Patent for Chemical Structure*) wherein Rf is selected from the group consisting of -R2f, -F, -C(O)F, -C(O)OR and R3fQ, and wherein R1f is selected from the group consisting of -F and -R2f; wherein R2f is a perfluorinated linear or branched alkyl group having 1 to 14 carbon atoms, optionally containing ether oxygen, which is terminally substituted with -F, -Cl, -Br, -OR, -OC6F5, -SO2F, -N3, -CN, -COOCH3, -COOC2H5, -SO2Cl, -C(O)Cl or -C(O)F, wherein R is selected from the group consisting of -CH3, -C2H5 and -CH2CF3, wherein R3f is a single bond or a perfluoroalkylene group having from 1 to 4 carbon atoms optionally containing ether oxygen, and wherein Q is (*See Patent for Chemical Structure*) by **i s o m e r i z i n g** a 2,2-bis-substituted-cis-4,5-dichloro-4,5-difluorodioxolane of the same formula in the presence of a catalyst of the formula AlZ3, where Z is F, Cl, and/or Br, provided that AlZ3 is not entirely AlF3. Also disclosed is a process for producing an olefinic monomer by dechlorinating the trans-isomer products produced by

5523015

**AZEOTROPES OF HYDROGEN
FLUORIDE WITH DICHLOROMETHANE,
DIFLUOROMETHANE AND
CHLOROFLUOROMETHANE**

Tsuda Takehide; Matsumoto Takeo; Tanaka Yoshinor;
Komatsu Satoshi; Koyama Satoshi Osaka, JAPAN
assigned to Daikin Industries Ltd

PCT No. PCT/JP93/00455 Sec. 371 Date Dec. 9, 1993
Sec. 102(e) Date Dec. 9, 1993 PCT Filed Apr. 9, 1993
PCT Pub. No. WO93/21140 PCT Pub. Date Oct. 28,
1993. Hydrogen fluoride is effectively removed from a
mixture of hydrogen fluoride, dichloromethane,
chlorofluoromethane and/or difluoromethane by
distilling the mixture so that two-component azeotropic
mixtures of hydrogen fluoride and dichloromethane,
hydrogen fluoride and chlorofluoromethane and
hydrogen fluoride and difluoromethane are removed, or
by liquid-separating the mixture into an upper liquid
phase rich in hydrogen fluoride and a lower liquid phase
not rich in hydrogen fluoride before each liquid phase is
distilled as described above.

5523161

**WATER REPELLENT SURFACE
TREATMENT WITH INTEGRATED
PRIMER**

Goodwin George Mars, PA, UNITED STATES
assigned to PPG Industries Inc

A method and article are disclosed wherein a glass,
plastic, metal, organic polymer coated substrate or
inorganic coated substrate is provided with a durable
non-wetting surface by treatment with a
perfluoroalkylalkylsilane and a completely hydrolyzable
silane.

5523162

**WATER REPELLENT SURFACE
TREATMENT FOR PLASTIC AND
COATED PLASTIC SUBSTRATES**

Franz Helmut; Goodwin George; Marietti Gary
Pittsburgh, PA, UNITED STATES assigned to
PPG Industries Inc

A method and article are disclosed wherein a plastic
substrate is provided with a more durable non-wetting
surface by deposition of a silica primer layer prior to
treatment with perfluoroalkylalkylsilane and optionally
a fluorinated olefin telomer on the surface which
comprises the silica primer layer.

5523422

**MONOMER PRECURSOR
ISOMERIZATION**

Petrov Viacheslav A; Resnick Paul R Wilmington, DE,
UNITED STATES assigned to E I Du Pont de Nemours
and Company

A process is disclosed for producing a
2,2-bis-substituted-trans-4,5-dichloro-4,5-difluorodiox
olane of the formula (*See Patent for Chemical
Structure*) wherein Rf is selected from the group
consisting of -R2f, -F, -C(O)F, -C(O)OR and R3fQ, and
wherein R1f is selected from the group consisting of -F
and -R2f; wherein R2f is a perfluorinated linear or
branched alkyl group having 1 to 14 carbon atoms,
optionally containing ether oxygen, which is terminally
substituted with -F, -Cl, -Br, -OR, -OC6F5, -SO2F, -N3,
-CN, -COOCH3, -COOC2H5, -SO2Cl, -C(O)Cl or
-C(O)F, wherein R is selected from the group consisting
of -CH3, -C2H5 and -CH2CF3, wherein R3f is a single
bond or a perfluoroalkylene group having from 1 to 4
carbon atoms optionally containing ether oxygen, and
wherein Q is (*See Patent for Chemical Structure*) by
i s o m e r i z i n g a
2,2-bis-substituted-cis-4,5-dichloro-4,5-difluorodioxol
ane of the same formula in the presence of a catalyst
of the formula AlZ3, where Z is F, Cl, and/or Br, provided
that AlZ3 is not entirely AlF3. Also disclosed is a
process for producing an olefinic monomer by
dechlorinating the trans-isomer products produced by

said isomerization.

5523441

**FLUOROCARBON GROUP-CONTAINING
ORGANOSILANE COMPOUND**

Kishita Hirofumi; Koike Noriyuki; Yanagisawa Hideyoshi; Takago Toshio Gunma ken, JAPAN assigned to Shin-Etsu Chemical Co Ltd

Disclosed is a novel polyfluorocarbon group-containing alkoxy silane compound useful as a silane coupling agent as represented by the general formula (*See Patent for Tabular Presentation*) PS in which each R is, independently from the others, a monovalent hydrocarbon group having 1 to 10 carbon atoms or an alkoxy group having 1 to 6 carbon atoms with the proviso that at least one of the three groups denoted by R is an alkoxy group, R1 is a divalent hydrocarbon group having 1 to 10 carbon atoms. A is a monovalent group selected from the class consisting of a hydrogen atom, a fluorine atom, an aminomethyl group and a 2-aminoethyl group. Rf is a polyfluorinated alkylene group with 1 to 20 carbon atoms or a polyfluorinated etherified alkylene group with 2 to 20 carbon atoms having at least one oxygen atom between two carbon atoms of an alkylene group forming an ether linkage, at least two of the hydrogen atoms therein being substituted by fluorine atoms, and the subscript n is 1 or 2.

5523442

**SILYLATED ACETYLCHOLINESTERASE
INHIBITORS**

Collard Jean-Noel; Hornsperger Jean-Marie Illkirch, FRANCE assigned to Merrell Pharmaceuticals Inc

PCT No. PCT/US94/00720 Sec. 371 Date Jul. 18, 1995 Sec. 102(e) Date Jul. 18, 1995 PCT Filed Jan. 25, 1994 PCT Pub. No. WO94/19356 PCT Pub. Date Sep. 1, 1994. Fluorinated silylated aromatic compounds, their intermediates, methods of use in treating diseases associated with deficiencies of cholinergic transmission in the central nervous system and methods for their preparation are disclosed.

5523476

**PROCESSES FOR PRODUCING
TETRAFLUOROPHTHALIC ANHYDRIDE
AND FLUOROBENZOIC ACIDS**

Seki Ryuji; Sugimoto Koji; Kumai Seisaku Yokohama, JAPAN assigned to Asahi Glass Company Ltd

A process for producing tetrafluorophthalic anhydride, which comprises chlorinating tetrachlorophthalic anhydride to obtain 3,3,4,5,6,7-hexachloro-1-(3H)-isobenzofuranone, then fluorinating it to obtain 3,3,4,5,6-tetrafluorophthaloyldifluoride and/or 3,3,4,5,6,7-hexafluoro-1-(3H)-isobenzofuranone, and further reacting the tetrafluorophthaloyldifluoride and/or the hexafluoro-1-(3H)-isobenzofuranone with an inorganic base or an organic acid to obtain tetrafluorophthalic anhydride.

5523496

**FLUORINATION OF ACETALS, KETALS
AND ORTHOESTERS**

Bierschenk Thomas R; Juhlke Timothy J; Kawa Hajimu; Lagow Richard J Round Rock, TX, UNITED STATES assigned to Exflour Research Corporation

Perfluoropolyethers and perhalogenated chlorofluoroether polymers are disclosed that can be prepared by fluorinating polymers made by the polymerization of acetals, ketals, polyacetals, polyketals and orthoesters with elemental fluorine.

5523497

**PROCESS FOR PREPARING
HEXAFLUROCHLORO BUTENES**

Lui Norbert; Marhold Albrecht; Bielefeldt Dietma GERMANY assigned to Bayer Aktiengesellschaft

PCT No. PCT/EP93/00980 Sec. 371 Date Oct. 25, 1995 Sec. 102(e) Date Oct. 25, 1994 PCT Filed Apr. 22,

1993 PCT Pub. No. WO93/22263 PCT Pub. Date Nov. 11, 1993. 1,1,1,4,4,4-hexafluoro-chlorobutenes are obtained by pyrolysis of 1,1,1-trifluoro-2,2-dichloroethane. The hexafluoro-chlorobutenes obtained in this way can be converted into hexafluorobutane, a CFC substitute, by hydrogenation.

5523498

PROCESS FOR REDUCING THE FLUORINE CONTENT OF HYDROFLUOROCARBONS AND HYDROHALOFLUOROCARBONS

Manzer Leo E; Rao V N Mallikajuna; Swearingen Steven H Wilmington, DE, UNITED STATES assigned to E I Du Pont de Nemours and Company

The fluorine content of an acyclic saturated compound of the formula $C_nF_aX_bH_c$ (wherein each X is independently selected from the group consisting of Cl and Br, and wherein n is 1 to 6, a is 1 to 13, b is 0 to 12, c is 1 to 9, and $a+b+c$ equals $2n+2$) is reduced by reacting the acyclic saturated compound with HCl in the vapor phase at an elevated temperature in the presence of a catalyst, the mole ratio of HCl to the acyclic saturated compound being at least about 1:1.

5523499

PURIFICATION OF HEXAFLUOROETHANE PRODUCTS

Corbin David R; Fernandez Richard E; Mahler Barry A West Chester, PA, UNITED STATES assigned to E I Du Pont de Nemours and Company

PCT No. PCT/US92/01607 Sec. 371 Date Dec. 28, 1994 Sec. 102(e) Date Dec. 28, 1994 PCT Filed Mar. 10, 1992 PCT Pub. No. WO93/17988 PCT Pub. Date Sep. 16, 1993. A process is disclosed for purifying a hexafluoroethane product containing $CClF_3$ and/or CHF_3 impurities which comprises the step of contacting the product with a sorbent for said impurities selected from activated carbons and inorganic (i.e. zeolite) molecular sieves. Also disclosed is an improvement to a process for producing CF_3CF_3 wherein $CClF_3$ and/or

CHF_3 impurities are removed from the product utilizing said sorbents.

5523500

MASS CATALYSTS BASED ON CHROMIUM AND NICKEL OXIDES AND THEIR APPLICATION TO THE FLUORINATION OF HALOGENATED HYDROCARBONS

Cheminal Bernar; Garcia Francois; Lacroix Eric; Lantz Andre Brignais, FRANCE assigned to d'Elf Atochem S A

The invention relates to mass catalysts based on chromium and nickel oxides, obtained from a sol of chromium and nickel hydroxides. These catalysts, in which the Ni/Cr atomic ratio is between 0.05 and 5, may be used from the fluorination of halogenated hydrocarbons by HF in the gas phase.

5525380

METHOD OF MAKING A DEVICE FOR CONVERTING INFRARED RADIATION

Paz-Pujalt Gustavo R; Chwalek James M; Hrycin Anna; Chatterjee Dilip; Hung Liang-Sun Rochester, NY, UNITED STATES assigned to Eastman Kodak Company

An amorphous upconversion phosphor comprising barium fluoride a combination of rare-earth fluorides including yttrium and lanthanum and dopants, and a waveguide thereof on a substrate selected to have a refractive index lower than a thin film of the phosphor material or any other substrate with an appropriate buffer layer of lower refractive index that the film wherein infrared radiation and visible light are converted to ultraviolet and visible light The amorphous upconversion phosphor is deposited at temperatures low enough to permit integration into semiconductor materials.

5525392**MAGNETIC RECORDING MEDIUM
HAVING A FLUORINATED POLYMERIC
PROTECTIVE LAYER FORMED BY AN
ION BEAM**

Baum Thomas; Comita Paul; Crowder Mark S; Tyndall George W New Fairfield, CT, UNITED STATES assigned to International Business Machines Corporation

The present invention relates to a process for coating a magnetic recording device with a lubricating polymeric film using an ion beam generator.

5525720**SYNTHESIS OF 2'- UP FLUORINATED
2'-DEOXY-ARABINOFURANOSYL
PURINES**

Watanabe Kyoichi A; Pankiewicz Krzysztof W; Krzeminski Jacek; Nawrot Barbara Rye Brook, NY, UNITED STATES assigned to Sloan-Kettering Institute for Cancer Research

The present invention provides a compound having the structure: (*See Patent for Chemical Structure*) wherein R1 is hydrogen, benzyl or a substituted benzyl group; X is hydrogen, a fluoro, an amino or a substituted amino group; Y is hydrogen, a methoxy, a methylthio, a benzylthio, a methylethyl, a chloro, an amino or a substituted amino group; and Y' is an oxo or a thio group; and Z is hydrogen, a hydroxy, a methoxy, a halogen, an amino or a substituted amino group. The present invention also provides a method of synthesizing a compound having the above-identified structure as well as the intermediate compounds produced according to that method.

5525732**POLY-PERFLUOROALKYL-SUBSTITUTE
D ALCOHOLS AND ACIDS, AND
DERIVATIVES THEREOF**

Haniff Marlon; Falk Robert; Deisenroth Te; Mueller Karl F West Orange, NJ, UNITED STATES assigned to Ciba-Geigy Corporation

Di-, tri- and poly-perfluoroalkyl-substituted alcohols and acids and derivatives thereof are described which are prepared from perfluoroalkyl iodides and di-, tri- or polyallyl alcohols or acids. These compounds contain two or more perfluoroalkyl-iodoalkyl or perfluoroalkyl-alkenyl groups and one or two alcohol or acid groups or derivatized alcohol or acid functions. They can be reacted with isocyanates, epoxy compounds, anhydrides, acids or acid derivatives to prepare a great variety of oil- and water-repellent compositions which are useful for oil- and water-repellent treatment of textiles, glass, paper, leather and other substrates.

5525739**PROCESS FOR THE PREPARATION OF
2,2-DIFLUOROBENZO(1,3)-DIOXOLE-CA
RBALDEHYDES AND NEW
INTERMEDIATE PRODUCTS**

Andres Peter; Marhold Albrecht Leichlingen, GERMANY assigned to Bayer Aktiengesellschaft

According to the invention, a new process has been found for the preparation of 2,2-difluoro-benzo (1,3)-dioxole-carbaldehydes of the formula (I) (*See Patent for Chemical Structure*) (I) in which benzo (1,3) dioxole-carbaldehydes are chlorinated, the 2,2-dichloro-dichloromethylbenzo (1,3) dioxoles formed, which are likewise new, are partly fluorinated to give the 2,2-difluoro-dichloromethyl-benzo (1,3) dioxoles, which are likewise new, and these are then reacted with urotropin to give the desired compounds.

5527612**FLUOROCARBON
COPOLYMER-INSULATED WIRE**

Ohta Yutaka; Kaide Tamotsu; Nakagawa Kiyog; Ebiike Yosikaz Amagasaki, JAPAN assigned to Mitsubishi Cable Industries Ltd

A fluorocarbon copolymer-insulated wire comprising, around a conductor, an insulating layer made of a composition comprising an ethylene-tetrafluoroethylene copolymer and an unsintered

tetrafluoroethylene-propylene copolymer, which is resistant to heat, abrasion and oil, and improved in flexibility. The wire can be efficiently installed in a narrow space in various equipments and enables easy wiring work.

5527814

**USE OF
2-AMINO-6-(TRIFLUOROMETHOXY)BENZOTHIAZOLE FOR OBTAINING A
MEDICAMENT FOR THE TREATMENT
OF AMYOTROPHIC LATERAL
SCLEROSIS**

Louvel Erik Manosque, FRANCE assigned to Rhone Poulenc Rorer S A

Use of 2-amino-6-(trifluoromethoxy)benzothiazole, or a salt of this compound with a pharmaceutically acceptable acid, for obtaining a medicament intended for the treatment of motor neuron diseases, in particular amyotrophic lateral sclerosis, and especially amyotrophic lateral sclerosis with early bulbar involvement or the bulbar form of the disease.

5527830

**DRUGS FOR THE TREATMENT OF
CARDIAC ARREST AND OTHER SHOCK
STATES**

Brown Charles G; Miller Duane D Columbus, OH, UNITED STATES assigned to The Ohio State University

The invention relates to new drugs for augmenting perfusion pressure administered during cardiopulmonary resuscitation and other shock states. The compounds include phenylethanolamines and imidazolines, and fluorinated derivatives thereof, which act on adrenergic receptors in patients. The compounds of the invention enhance neurologic outcome and survival, and decrease ventricular dysrhythmias in patients suffering cardiac arrest and other shock states, relative to the outcomes, survival, and post defibrillation ventricular dysrhythmias in conventional therapy for use in resuscitation.

5527858

MELT-PROCESSABLE FLUOROPLASTIC

Blong Thomas J; Lavallee Claude Woodbury, MN, UNITED STATES assigned to Minnesota Mining and Manufacturing Company

This invention provides a melt-processable fluoroplastic composition comprising a blend of a melt-processable thermoplastic fluoropolymer component of interpolymerized units derived from vinylidene fluoride and at least one ethylenically-unsaturated, copolymerizable, fluorinated comonomer, and a hydrocarbon polymer component comprising poly(oxyalkylene). The composition is useful for making shaped articles including tubing or film.

5527954

**PROCESS FOR THE PRODUCTION OF
2-FLUOROISOBUTYRIC ACID OR ITS
ESTER**

Adachi Ryoichi; Nishii Masahir; Kikukawa Tadash; Kotsuji Yasuhit Sodegaura, JAPAN assigned to Idemitsu Kosan Co Ltd

PCT No. PCT/JP94/00588 Sec. 371 Date Jan. 26, 1995 Sec. 102(e) Date Jan. 26, 1995 PCT Filed Apr. 7, 1994 PCT Pub. No. WO92/24086 PCT Pub. Date Oct. 27, 1994. Provided is a process for the production of 2-fluoroisobutyric acid or its ester, which comprises reacting 2-hydroxyisobutyric acid or its ester with thionyl chloride and a hydrogen fluoride source.

5527960

**FLUORINATING REAGENTS AND
METHOD OF FLUORINATION**

Aoyama Hirokazu Settsu, JAPAN assigned to Daikin Industries Ltd

PCT No. PCT/JP93/01014 Sec. 371 Date Jan. 24, 1995 Sec. 102(e) Date Jan. 24, 1995 PCT Filed Jul. 19, 1993 PCT Pub. No. WO94/03414 PCT Pub. Date Feb. 17, 1994. Fluorinating reagents expressed in a general

formula; (*See Patent for Chemical Structure*) (In the general formula, R is an alkyl group having 1 to 5 carbons or a dialkylamino group in which each alkyl group has 1 to 3 carbons.), and a fluorinating method to fluorinate an alcoholic hydroxyl group by using the reagent. Raw materials of the aforesaid fluorinating reagents can be easily converted to object products and are less poisonous and corrosive. Their procurement and preparation are also easy. Further, it is easy to fluorinate compounds containing an alcoholic hydroxyl group by using this fluorinating reagents.

5527962

AMPHIPHILIC FLUORINE DERIVATIVES WITH TELOMERIC STRUCTURES

Pavia Andre A; Pucci Bernard; Riess Jean G; Zarif Leil Villeneuve lez Avignon, FRANCE assigned to Alliance Pharmaceutical Corp

New fluorinated derivatives useful as surfactants or in the transport of drug or markers, or in drug targeting, and preparations containing the derivatives, for medical, cosmetic and veterinary uses, having the formula: (*See Patent for Chemical Structure*) (I) wherein RF is a fluorinated radical, X is a linear or branched alkylene, R1 is H or CH₃, R2 is a radical having at least one OH group, R3 is a radical derived from an amino acid or a peptide, $1 < \text{or} = n < \text{or} = 50$ and $0 < \text{or} = m < \text{or} = 200$ with $0.2 < \text{or} = n/n+m < \text{or} = 1$. These derivatives can be used as prodrugs or in formulating pharmaceutical, cosmetic and veterinary preparations, in biology and medicine, notably in compositions acting as carriers of oxygen and other gases, of contrast agents, or as carriers of substances used in therapy, or as carriers of markers.

5527980

REGENERATION OF HYDROGEN FLUORIDE ALKYLATION CATALYST

Carlson LeRoy Bartlesville, OK, UNITED STATES assigned to Phillips Petroleum Company

An improved process for the regeneration of an ASO-containing HF catalyst by the removal of ASO from said catalyst through the utilization of a separation column equipped with fixed valve fractionation trays.

The separation column defines a separation zone having a top zone, an intermediate zone, and a bottom zone wherein contained within the bottom zone is a series of vertically spaced, fixed valve fractionation trays, wherein each of the fixed valve fractionation trays includes a plate defining a plurality of apertures and wherein fixedly spaced above each of the apertures is a valve having a shape substantially the same as the apertures for directing the flow of gas passing upwardly through the apertures of the plate into the direction substantially parallel to the plate. One important aspect of the invention includes the use of the fixed valve fractionation trays in combination with the recycling of the bottoms stream in order to minimize the amount of hydrogen fluoride that passes with the ASO of the bottoms stream of the separation column. Further embodiments of the process include the formation and provision of multiple liquid phases in the bottom zone of the separation column with the liquid phases each having a different concentration of HF. The liquid phase with the lowest HF concentration is withdrawn as a product and the liquid phase with the larger HF concentration is recycled to the intermediate zone of the separation column.

5530066

MONOMERS DERIVED FROM PERHALOGENATED SULTONES AND POLYMERS OBTAINED FROM THESE MONOMERS

Armand Miche; Sanchez Jean-Yve; Sylla Salime Saint Martin D'Uriage, FRANCE assigned to Centre Nationale de la Recherche Scientifique; Hydro Queb

The invention relates to monomers derived from perhalogenated sultones, to a process for their preparation, to the polymers obtained from the said monomers and to their use for the production of ion-conductive materials. The monomers are compounds corresponding to the formula A-CFX-SO₂Z in which A denotes one group R₃-O-CF₂- or R₃- or R₁R₂N-CO-; Z denotes F, Cl, -OSi(CH₃)₃ or an ionic group, Z being other than F when A denotes R₃-O-CF₂- or R₃-; X denotes F, Cl, H or RF, X being RF when A denotes R₃-; the radicals R₁, R₂ and R₃ are chosen from polymerizable nonperfluorinated organic radicals; RF is chosen from perfluoroalkyl radicals and

perfluoroaryl radicals. The polymers obtained from these monomers can be employed for the production of ion-conductive materials.

5530077

**MULTI-PHASE POLYMERIZATION
PROCESS**

DeSimone Joseph M; Romack Timoth Chapel Hill, NC, UNITED STATES assigned to The University of North Carolina at Chapel Hill

The present invention provides a multi-phase polymerization process for making a water insoluble polymer. The process includes (1) providing a mixture comprising carbon dioxide and an aqueous phase, and containing a monomer and a polymerization initiator, and (2) polymerizing the monomer in the reaction mixture. The monomer may be a hydrocarbon or a fluorinated monomer. The polymerization initiator may be soluble in the aqueous phase, soluble in carbon dioxide, or insoluble in both the aqueous phase and carbon dioxide, such that the initiator forms a separate phase. The present invention also provides multi-phase polymerization reaction mixtures useful in the process of making water insoluble polymers.

5530158

**2,4,5-TRIHALOGENO- AND
2,3,4,5-TETRAHALOGENOBENZENE
DERIVATIVES**

Klauke Erich; Petersen Uwe; Grohe Klaus Odenthal, GERMANY assigned to Bayer Aktiengesellschaft

2,4,5-Trihalogenobenzene derivatives of the formula (*See Patent for Chemical Structure*) in which R is -COOH, -COCl, -COF, -CN, -CONH₂, -CH₂OH, -CH₂Cl, -CHCl₂, -CCl₃ or -CHO, R₁ is H, Cl or F, and R₂ is Cl or F, it only being possible for R₁ or R₂ to be F, and processes for their preparation starting from benzonitriles reacted with potassium fluoride. The novel compounds are intermediates for antibacterials such as quinolone carboxylic acids.

530169

**PROCESS FOR THE PREPARATION OF
SATURATED, FLUORINE-CONTAINING
AND CHLORINE-FREE HYDROCARBONS**

Bielefeldt Dietmar; Braden Rudolf; Negele Michael; Ziemann Heinz Ratingen, GERMANY assigned to Bayer Aktiengesellschaft

Saturated, fluorine-containing and chlorine-free hydrocarbons are prepared by catalytically hydrogenating unsaturated, fluorine- and chlorine-containing hydrocarbons at temperatures above 80 degrees C. in the gas phase.

5531975

**PROCESS FOR THE PRODUCTION OF
PHOSPHORIC ACID AND CALCIUM
FLUORIDE**

Erickson William R; Bouffard Leif E Lakeland, FL, UNITED STATES assigned to Phosphate Engineering and Construction Co Inc

Fluosilicic acid is reacted with phosphate rock in order to produce wet process phosphoric acid and calcium fluoride which is later reacted with sulfuric acid to produce hydrogen fluoride and calcium sulfate. The hydrogen fluoride is then stripped from the phosphoric acid and recovered as either anhydrous hydrogen fluoride or concentrated hydrofluoric acid or reacted with aluminum trihydrate to produce aluminum fluoride; with sodium carbonate to produce sodium fluoride/bifluoride; or with ammonia to produce ammonium fluoride/bifluoride.

5532418

**METHOD OF PRODUCING
1,1,1,2,3,3-HEXAFLUOROPROPANE AND
TETRAFLUOROCHLOROPROPENE**

Nakada Tatsuo; Aoyama Hirokazu Settsu, JAPAN assigned to Daikin Industries Ltd

PCT No. PCT/JP93/01117 Sec. 371 Date Mar. 1, 1995
 Sec. 102(e) Date Mar. 1, 1995 PCT Filed Aug. 9, 1993
 PCT Pub. No. WO94/05611 PCT Pub. Date Mar. 17,
 1994. A method of producing 1,1,1,2,3,3-hexafluoropropane in a characteristic process in which tetrafluorochloropropene is first obtained from the dechlorofluorination (removing ClF) of 1,1,1,2,2-pentafluoro-3,3-dichloropropane and/or 1,1,2,2,3-pentafluoro-1,3-dichloropropane by hydrogen in the presence of a metal oxide catalyst and then the product olefin is fluorinated in the presence of a catalyst. By this method, 1,1,1,2,3,3-hexafluoropropane, which is useful as an action fluid and so on and has a property to help preserving the environment, and an intermediate in its synthesis can be easily produced at low cost.

5532419

**PROCESSES FOR THE PREPARATION OF
 FLUORINATED OLEFINS AND
 HYDROFLUOROCARBONS USING
 FLUORINATED OLEFIN**

Van Der Puy Michael; Bindu Madhavan G; Thenappan Alagappa; Tung Hsueh S Cheektowaga, NY, UNITED STATES assigned to AlliedSignal Inc

The invention relates to a cost effective and convenient process for the manufacture of fluorinated olefins of the formula $\text{RCF}_2\text{CH}=\text{double bondCH}_2$ where R is $\text{C}_x\text{Cl}_y\text{F}_z$ and $y+z=2x+1$. The invention is also directed to a practical process for converting these olefins to hydrofluorocarbons via the catalyzed fluorination with hydrogen fluoride. Hydrofluorocarbons produced via this process have application as solvents among other uses.

5536754

**FLUORINATED ION-EXCHANGE
 POLYMERS AND INTERMEDIATES
 THEREFOR**

Feiring Andrew E Wilmington, DE, UNITED STATES assigned to E I Du Pont De Nemours and Company

Disclosed herein are partially fluorinated (co)polymers containing sulfonic acid or sulfonate salt groups, processes for making those polymers, and intermediates for those (co)polymers. The (co)polymers are useful as ion-exchange resins and (in the sulfonic acid form) acid catalysts.

5536885

**PRODUCTION OF PERFLUORO(ALKYL
 VINYL ETHERS)**

Hung Ming-Hong; Rozen Shlomo Wilmington, DE, UNITED STATES assigned to E I Du Pont de Nemours and Company

Disclosed herein is a process for making perfluoro(alkyl vinyl ethers) by fluorination with elemental fluorine of selected novel partially fluorinated (di) chloroethyl ethers, followed by dehalogenation to the corresponding perfluoro(alkyl vinyl ether). The perfluoro(alkyl vinyl ethers) are useful as monomers for molding resins and elastomers.

5536892

**PROCESSES FOR THE PREPARATION OF
 OCTAFLUORO-(2,2)PARACYCLOPHANE**

Dolbier William R; Rong Xiao X Gainesville, FL, UNITED STATES assigned to Specialty Coating Systems Inc

A process for the preparation of octafluoro-(2,2)paracyclophane includes contacting a reactant selected from the group consisting of 1,4-bis(bromodifluoromethyl)benzene (dibromide), 1,4-bis(chlorodifluoromethyl)benzene (dichloride), and 1,4-bis(iododifluoromethyl)benzene (diiodide) with trimethylsilyltributyltin (TMSTBT) (a reducing agent) and fluoride ions in a refluxing solution of hexamethylphosphoramide (HMPA) or dimethylsulfoxide (DMSO) in tetrahydrofuran (THF) at conditions effective to promote a reaction product comprising octafluoro-(2,2)paracyclophane.

5545775

**LIQUID PHASE PROCESS FOR THE
PREPARATION OF
1,1-DIFLUOROETHANE**

Thenappan Alagappan; Swain Charles F; Luly Matthew H Cheektowaga, NY, UNITED STATES assigned to AlliedSignal Inc

1,1-difluoroethane is produced by the reaction of 1,2-dichloroethane with anhydrous hydrogen fluoride in a liquid phase and in the presence of a Lewis acid. Preferably the Lewis acid is tin, antimony, titanium, molybdenum, tungsten, niobium or tantalum halide or a mixture thereof.

5546182

**METHOD FOR DETERMINATION OF
TRACE METAL IMPURITY IN
FLUORINE-CONTAINING POLYMER
AND PROCESS FOR PRODUCTION OF
FLUORINE-CONTAINING POLYMER
USING THE METHOD**

Sota Tomizo Osaka, JAPAN assigned to Daikin Industries Ltd

PCT No. PCT/JP94/00809 Sec. 371 Date Mar. 9, 1995 Sec. 102(e) Date Mar. 9, 1995 PCT Filed May 20, 1994 PCT Pub. No. WO94/28394 PCT Pub. Date Dec. 8, 1994. In order to quantitatively determine a metal impurity contained in a fluorine-containing polymer directly, and also to improve a detection limit of the metal quantitative determination, there is provided a method for the quantitative determination of a trace amount of a metal impurity contained in a fluorine-containing polymer using a flameless atomic absorption spectrophotometer wherein a predetermined amount of a sample of the polymer containing the metal to be quantitatively determined is incinerated under incineration conditions including an incineration temperature in the range of about 400° to 1200°C and an incineration period of at least about 100 seconds, and then an absorbance of the incinerated sample as such is measured using the flameless atomic absorption spectrophotometer. In addition, there are provided a process for the production of the fluorine-containing

polymer characterized in that the trace amount of the metal impurity contained in the fluorine-containing polymer is quantitatively monitored by means of the method, and a process for the production of the fluorine-containing polymer characterized in that the trace amount of the metal impurity contained in the fluorine-containing polymer is quantitatively determined by means of the method according to the method.

5547807

PHOTOSTIMULABLE PHOSPHORS

Leblans Paul; Adriaensens Albert D; Tecotzky Melvin; Van den Bogaert Jan A Berchem, BELGIUM assigned to AGFA-Gevaert N V

A photostimulable phosphor of which the emission intensity at the stimulation wavelength of 550 nm is higher than the emission intensity at the stimulation wavelength of 600 nm, characterized in that said phosphor is a divalent europium activated barium fluorobromide containing as codopant samarium, and wherein the terminology barium fluorobromide stands for an empirical formula wherein (1) a minor part of the barium (less than 50 atom %) is replaced optionally by at least one metal selected from the group consisting of a monovalent alkali metal, a divalent alkaline earth metal other than barium, and a trivalent metal selected from the group consisting of Al, Ga, In, Tl, Sb, Bi, Y, and a rare earth metal selected from the group consisting of Ce, Pr, Nd, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu, (2) a minor part (less than 50 atom %) of the bromine is replaced by chlorine, and/or iodine, and (3) wherein fluorine is present stoichiometrically in a larger atom % than bromine taken alone or bromine combined with chlorine and/or iodine.

5550184

**HYDROLYZED SILANE EMULSIONS AND
THEIR USE AS SURFACE COATINGS**

Halling Robert A Wilmington, DE, UNITED STATES assigned to E I Du Pont de Nemours & Company

Novel and highly reactive hydrolyzed silane emulsions are achieved by emulsifying a hydrolyzable alkoxy silane (e.g., perfluoroalkylethyltris

(2-(2-methoxyethoxy)ethoxy)silane, 2-perfluoroalkylethyltris(2-(2-(2-methoxyethoxy)ethoxy)silane), 2-Perfluoroalkylethyltris(polyoxyethyleneglycolmonomethylether)silane or the like) in water in the presence of an effective amount of an emulsifier of sufficiently high HLB value (preferably 14 or greater) to simultaneously retain said hydrolyzable alkoxy silane compound in a substantially totally hydrolyzed state and inhibit said resulting hydrolyzed alkoxy silane compound from self-condensation. Such reactive emulsions containing fluorocarbon silanes are useful to produce durable coatings that impart oil and water repellency to substrates having siliceous, cellulosic or proteinaceous surfaces.

5550277

**PERFLUOROALKYL AND
PERFLUOROALKYLETHER
SUBSTITUTED AROMATIC
PHOSPHATES, PHOSPHONATES AND
RELATED COMPOSITIONS**

Paciorek Kazimiera J L; Lin Wen-Huey; Masuda Steven R; Nakahara James Corona Del Mar, CA, UNITED STATES

Perfluoroalkyl and perfluoroalkylether substituted aromatic phosphates, phosphonates and related compositions prepared by reaction of perfluoroalkyl or perfluoroalkylether substituted phenols with mono- and dihalophosphite and primary and secondary phosphonyl halides are disclosed. These materials are useful as antioxidant, anticorrosion, antirust, and lubricity enhancing agents for perfluoropolyalkylether fluids.



REEDFAX Document Delivery System
A service of Reed Technology and Information
Services Inc.
275 Gibraltar Road, Horsham
PA 19044, USA

Phone: 1 800-422-1337
Fax: 1 800-421 5585

International Numbers:
Phone: 1 215-441-4768
Fax: 1 215-441-5463

REEDFAX™ Document Delivery System

We can begin fax transmission of patents **within 15 minutes — 24 hours a day — 7 days a week.**

We have over 1.9 million patents (1971 forward) and EP and PCT applications on our automated REEDFAX™ Document Delivery System which allows you to use a touchtone phone to order these patents without being limited to business hours

You can now get the patents you need **before hours...after hours...over the weekend...on holidays...even when the US PTO is closed because of inclement weather!.**

In addition to the patents on our automated system, we are able to deliver **all U.S. patents** beginning with #1 to the current week of issue. Patents not on our automated system are delivered from our second location with fax transmission beginning about 1½ hours, Monday-Friday, 8:30am–7:00pm ET. (13.00pm–24.00GMT).

We have no hidden charges at REEDFAX: no sign-on fees, no monthly fees and no minimum charges. You pay only for each patent delivered. Whatever your patent needs are - U.S. or foreign patents, file histories/wrappers, printed or faxed — we can fulfill them easily and promptly.

P.S. To experience your incredibly fast service, complete and return the FAXForm and we will provide your **FIRST FIVE U.S. PATENTS ABSOLUTELY FREE** (*you pay only for the cost of delivery!*)