

# CA SELECTS Topics

## AGROCHEMICALS

See also *Biochemistry*

### Fungicides

**Service Code 047**

- preparation, mechanism of action, and effects of antifungal agents
- slimicides, seed dressings, seed disinfectants

ISSN: 0160-9068

### Herbicides

**Service Code 049**

- preparation, mechanism of action, and effects of herbicides
- plant growth inhibitors and defoliants

ISSN: 0160-9084

### Insecticides

**Service Code 050**

- preparation, mechanism of action, and effects of insecticides
- virucides, acaricides, aphicides, miticides, parasitocides, larvicides
- insect control and repellants

ISSN: 0160-9092

### Novel Pesticides & Herbicides

**Service Code 05N**

- newly prepared or published compounds that have activity, are being tested, or are to be tested as pesticides
- antibacterials, fungicides, acaricides, herbicides

Not routinely covered: penicillins, peptides

ISSN: 0749-7318

### Pesticide Analysis

**Service Code 08A**

- analysis of pesticides, e.g., insecticides, herbicides, fungicides
- chemical and physical analysis of preparations used for controlling plant and animal pests

ISSN: 1047-8140

## ANALYTICAL CHEMISTRY

See also *Chromatography, Spectroscopy*

### Analytical Electrochemistry

**Service Code 040**

- analytical electrochemistry involving organic and inorganic compounds
- amperometric, conductometric, coulometric, and potentiometric titrations
- stripping voltammetry, polarographic analysis
- electroanalysis using ion-specific electrodes

ISSN: 0160-8959

### Chelating Agents

**Service Code 04V**

- chelating agents and complexing agents in analytical procedures, separation processes, isolation of metals, industrial processes

ISSN: 0734-8797

### Chemical Instrumentation

**Service Code 02C**

- use of analyzers, detectors, and meters in chemistry related areas
- construction and modification of such instrumentation

Not routinely covered: computers and processing apparatus

Excluded: instrumentation involved in nuclear phenomena and nuclear technology

ISSN: 0195-4938

### Drug Analysis in Biological Fluids & Tissues

**Service Code 07L**

- newly developed methods (e.g., gas chromatography, HPLC, mass spectrometry, immunoassay) for the analysis of drugs in biological fluids (e.g., blood, urine, saliva) and tissues (e.g., liver, lungs, kidneys)

ISSN: 0145-8530

## Food & Feed Analysis

**Service Code 03I**

- methodology for determining natural components (e.g., amino acids, fats, mineral elements, and sugars), additives, and contaminants in food and feed
- analysis of alcoholic and nonalcoholic beverages
- determination of impurities

Not routinely covered: compositional studies on food or feed analyzed by established procedures

ISSN: 0895-5913

## Inorganic Analytical Chemistry

**Service Code 03P**

- methods and reagents for detection and determination of elements, radicals, and compounds in inorganic materials
- analysis of inorganic coordination compounds
- analytical apparatus and techniques
- analysis of nuclear materials, water, sewage, wastes, agrochemicals, soils, cement, concrete products

ISSN: 0275-7087

## Ion Exchange

**Service Code 06I**

- theory and applications including material and equipment for ion exchange
- ion-exchange chromatography
- ion-exchange processes, techniques, procedures

ISSN: 0146-4493

## Membrane Separation

**Service Code 06U**

- theory and technology of dialysis, electrodialysis, electroosmosis, gas separation by membrane permeation and pervaporation
- permeable and porous membranes, modules, separators, plants, and liquid membranes

ISSN: 1040-7197

# CA SELECTS Topics

## Organic Analytical Chemistry

### Service Code 03Y

- methods, reagents, apparatus
- detection and determination of elements, radicals, and compounds in organic materials
- analysis of organometallic compounds

Not routinely covered: forensic analysis and toxicology, analysis of polymers and macromolecular substances, fertilizers, soils, agrochemicals, pharmaceuticals, organic substances primarily of biological interest

ISSN: 0275-7117

## Surface Analysis

### Service Code 02Y

- analytical chemistry of surfaces technology
- analytical use of ESCA, Auger spectroscopy, photoelectron spectroscopy

ISSN: 0195-5152

## Thermal Analysis

### Service Code 03B

- DTA, thermogravimetry, differential scanning calorimetry
- evolved-gas analysis, thermodilatometry, thermoelectrometry, thermomagnetometry, thermosonimetry

ISSN: 0195-5187

## Trace Element Analysis

### Service Code 081

- detection and determination of trace elements found in solid, liquid, or gaseous environments (e.g., food, rocks, soils, petroleum products, sewage): aluminum, antimony, arsenic, barium, boron, cadmium, calcium, cesium, chromium, cobalt, copper, gold, iridium, iron, lead, magnesium, manganese, mercury, molybdenum, nickel, niobium, palladium, platinum, selenium, silver, sodium, tin, titanium, zinc

ISSN: 0160-919X

## X-Ray Analysis & Spectroscopy

### Service Code 036

- x-ray techniques in chemical analysis, e.g., electron microprobe
- x-ray emission and absorption spectra, scattering phenomena

Not routinely covered: diffractometric structure studies, x-ray photoelectron spectroscopy

ISSN: 0162-7872

**APPLIED CHEMISTRY**  
*See also Materials, Polymers*

## Chemical Engineering Operations

### Service Code 053

- theory and technology of unit operations including flow, heat transfer, mass transfer, material handling, size modification, and mixing
- separation by absorption, adsorption, crystallization, drying, evaporation, and sedimentation

Excluded: apparatus and plants, distillation, extraction, fluidized solids, chromatography, and ion exchange

ISSN: 1040-712X

## Chemical Processing Apparatus

### Service Code 02D

- apparatus for absorption, crystallization, distillation, extraction, filtration, purification, separation, chemical processing
- construction, modification, and application of such apparatus

Not routinely covered: computers, analyzers, detectors, meters

Excluded: apparatus involved in nuclear phenomena and nuclear technology

ISSN: 0195-4946

## Chemical Vapor Deposition (CVD)

### Service Code 05X

- CVD processes, with emphasis on device fabrications
- epitaxial growth of semiconductors
- deposition of thin films for recording and memory devices

ISSN: 0885-0119

## Coal Science & Process Chemistry

### Service Code 024

- coal liquefaction
- coal gasification and coal combustion
- coal mine gases
- brown coal, carbonization
- coal properties, analysis, and composition
- fossil fuel energy
- synthetic fuels derived from coal
- coke by-products

ISSN: 0146-4426

## Corrosion

### Service Code 025

- corrosion, rusting, tarnishing of metals and alloys
- corrosion of industrial plant and equipment
- marine corrosion
- corrosion inhibition and prevention
- anticorrosive coatings
- surface treatment

Excluded: glasses, refractories, ceramics

ISSN: 0146-4434

## Detergents, Soaps, & Surfactants

### Service Code 089

- preparation, properties, and uses of soaps and synthetic detergents
- formulations
- dry-cleaning solvents
- use of surfactants in petroleum recovery

Not routinely covered: detergent additives for fuels and lubricants

ISSN: 1083-2807

# CA SELECTS Topics

## Distillation Technology

### Service Code 03K

- distillation as a unit process
- design of distillation equipment
- extractive distillation, molecular distillation
- applications of distillation technology

ISSN: 0275-7052

## Drilling Muds

### Service Code 05M

- formulation, properties, and performance of aqueous suspensions used in the drilling of oil and gas wells

ISSN: 0749-730X

## Electrodeposition

### Service Code 09I

- electroplating and electroforming
- electrorefining, electrowinning, and electrolytic recovery
- anodization and passivation
- electrophoretic and electrostatic coating
- plasma coating, sputtering film deposition

ISSN: 0162-7783

## Fluidized Solids Technology

### Service Code 02H

- apparatus design and engineering
- fluidized combustion for energy production and waste disposal
- fluidized-bed drying

ISSN: 0195-4989

## Laser Applications

### Service Code 02M

- interactions of laser radiation with materials
- physicochemical and biochemical effects of laser radiation
- applications of lasers and laser radiation

Excluded: Raman scattering, photolysis and photodegradation, materials and components for laser devices

ISSN: 0195-5039

## Paper Chemistry

### Service Code 07I

- chemical aspects of paper manufacture
- stock preparation, various additives, sizing, and coating

ISSN: 1040-7200

## Solar Energy

### Service Code 080

- solar-energy conversion devices, materials, and processes
- biosolar energy processes and solar sea thermal energy conversion systems
- photoelectric solar cells, photoelectrochemical cells, photogalvanic cells

ISSN: 0148-236X

## Solvent Extraction

### Service Code 065

- chemical applications of solvent extraction
- solvent properties, solvent recovery, fuel reprocessing

ISSN: 0146-4531

## BIOCHEMISTRY

*See also Agrochemicals, Health Hazards, Pathology*

## Biogenic Amines & The Nervous System

### Service Code 084

- involvement of biogenic amines in the nervous system and neurotransmission
- monoamines
- catecholamines
- indoleamines
- neurotransmitters
- neurotransmitter agonists and antagonists
- histamine and antihistaminics
- enzymes in the metabolism of biogenic amines
- receptors for biogenic amines
- nervous system effects of natural and synthetic compounds structurally or functionally related to biogenic amines

Not routinely covered: involvement and function of biogenic amines outside the nervous system

ISSN: 0162-7716

## Fermentation Chemicals

### Service Code 05E

- compounds prepared by fermentation processes
- compounds routinely used in fermentation processes

ISSN: 0740-0713

## Free Radicals (Biochemical Aspects)

### Service Code 03L

- reactions and interactions of free radicals, including activated oxygen species, in biological systems
- formation, metabolic aspects, and toxicity of free radicals in intact organisms, isolated organs, tissues, and cells, and subcellular systems, as well as in model biological systems

ISSN: 0895-5905

## Metallo Enzymes & Metallo Coenzymes

### Service Code 052

- preparation, analysis, and biochemical effects of enzymes and coenzymes that contain metals (e.g., cobalt, copper, iron, zinc, and molybdenum); metallo-proteins, metal-containing vitamins
- mechanisms by which metals are bound to enzymes

ISSN: 0160-9114

## Molecular Modeling (Biochemical Aspects)

### Service Code 08Z

- design of pharmaceuticals, agrochemicals, and other bioactive agents
- modeling studies on structures of enzymes, proteins, and other macro-molecules
- pharmacophores
- quantitative structure-activity relationships

ISSN: 1059-2784

# CA SELECTS Topics

## Novel Natural Products

### Service Code 04G

- new natural products
- isolation, detection, or discovery of previously unknown natural products
- synthesis of new derivatives or compounds of new or known natural products
- synthesis of analogs of known natural products

Not routinely covered: synthetic penicillins and prostaglandins

ISSN: 0734-872X

## Photobiochemistry

### Service Code 076

- photochemistry of biological materials, their constituents, and molecules of biological interest
- photosynthesis, vision, bioluminescence, photosensitization, photo-reactivation, photodynamic action, ultraviolet light-induced mutation
- biological aspects of fluorescence and phosphorescence

Not routinely covered: photochemical techniques (e.g., spectrophotometry and fluorometry) for analysis and characterization

ISSN: 0148-2335

## Porphyryns

### Service Code 02W

- chemical and biochemical aspects of porphyryns
- porphyrin analogs (e.g., phthalocyanines)
- porphyrin complexes (e.g., chlorophylls)

Not routinely covered: polymeric porphyryns, especially proteins

ISSN: 0195-5136

## Prostaglandins

### Service Code 077

- chemistry of prostaglandins, prostacyclins, thromboxanes, leukotrienes
- enzymes of prostaglandin metabolism
- arachidonic acid cyclooxygenase and 15-hydroxyprostaglandin dehydrogenase

ISSN: 0148-2343

## Psychobiochemistry

### Service Code 020

- pathological and pharmacological aspects of mental function, human and animal behavior, emotion
- learning, memory, sleep, dreaming, hallucination, imprinting, anxiety, aggression, brain electrical activity, mental retardation, senility, personality disorders, pathological conditions with strong psychological components
- pharmaceuticals affecting these conditions involving the brain and nervous system
- general metabolism or structure-activity relationships of biogenic amines, psychopharmaceuticals and psycho-therapeutic agents

ISSN: 0362-9848

## Steroids (Biochemical Aspects)

### Service Code 058

- pharmacology, toxicology, general biochemistry, and nutritional uses of steroids
- etiocholanolone, aldosterone, androsterone, cholesterol and common sterols, corticosterone, cortisol, cortisone, DHA, DOC, estrone, estradiols, estriol, progesterone, testosterone

ISSN: 0160-9173

## Steroids (Chemical Aspects)

### Service Code 059

- isolation and synthesis of steroids and their chemical reactions and transformations
- in vitro analysis of steroids (e.g., determination of steroid content of pharmaceutical preparations)

Not routinely covered: in vivo analysis (e.g., determination of blood cholesterol)

ISSN: 0160-9181

## CHEMICAL REACTIONS

### Alkylation & Catalysts

#### Service Code 02E

- alkylation of such compounds as alkanes, alkenes, benzenes, and amines with agents such as alcohols and olefins
- catalysts used to affect alkylations

Not routinely covered: biochemical alkylations, protective alkylations without synthetic interest

ISSN: 0895-5964

### Crosslinking Reactions

#### Service Code 05D

- formation of three-dimensional polymer networks by various means (e.g., polymerization of monomers with functionality greater than two, reaction of functional linear polymers with multifunctional agents, irradiation of linear polymers to generate free radicals)
- vulcanization of rubbers
- curing of coatings by chemical reaction

ISSN: 0740-0721

### Electrochemical Organic Synthesis

#### Service Code 04C

- organic synthesis in which the starting material, one or more intermediates, or the final product is prepared by a specific electrochemical process

ISSN: 0734-8770

# CA SELECTS Topics

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## Electrochemical Reactions

### Service Code 026

- electrolysis, electrooxidation, electroreduction, polarography
- electrochemical reactions in biochemistry, organic, macromolecular, applied, and inorganic chemistry
- polarographic reactions

Not routinely covered: analytical electrochemistry

ISSN: 0146-4442

## Emulsion Polymerization

### Service Code 02G

- polymerizations carried out in emulsion to produce plastics, elastomers, coating materials
- preparation of emulsifiers for use in such polymerizations

ISSN: 0195-4970

## Initiation of Polymerization

### Service Code 04W

- preparation of polymerization catalysts or initiators, characterization and use in polymerization
- kinetic and mechanistic aspects
- anionic, cationic, coordination, free radical polymerization

ISSN: 0734-8843

## Inorganic Chemicals & Reactions

### Service Code 03Q

- synthesis, chemical properties, reactions, nonindustrial preparation and applications of inorganic compounds
- properties of metal carbonyls, cyanides, carbides, cyanates, and carbonates
- metal oxides, acids, bases, and double salts
- synthetic minerals

Not routinely covered: organometallic compounds with carbon-metalloidal bonds, industrial inorganic chemicals, patents dealing with inorganic chemical preparation

ISSN: 0275-7095

## Inorganic & Organometallic Reaction Mechanisms

### Service Code 02K

- mechanistic and kinetic aspects of reactions of inorganic compounds

ISSN: 0195-5012

## Laser-Induced Chemical Reactions

### Service Code 06D

- laser-induced processes
- photochemical reactions initiated by laser radiation
- thermal reactions induced by laser heating
- laser-induced ionization and plasma
- laser-radiation in isotope separation
- laser-induced nuclear fusion

ISSN: 0885-0178

## Natural Product Synthesis

### Service Code 05F

- laboratory synthesis of known natural products
- partial and total synthesis, unsuccessful attempts at synthesis

Not routinely covered: synthesis of analogs of known natural products

ISSN: 0740-0691

## Optimization of Organic Reactions

### Service Code 02Q

- parameters and variables that affect reaction selectivity, product yield, and product quality
- computer-based and other simulation models

ISSN: 0195-5071

## Organic Reaction Mechanisms

### Service Code 097

- organic reaction pathways
- organic reaction intermediates

Not routinely covered: mass spectral fragmentation paths

ISSN: 0162-7848

## Organometallics in Organic Synthesis

### Service Code 044

- uses of organometallic compounds and complexes in the synthesis of organic compounds, generally those containing no carbon-metal bonds
- only abstracts published in CA Sections 21-34 (Organic Chemistry)

Not routinely covered: the standard metalation reactions used in the synthesis complexes of porphyrins and related compounds or silylation

ISSN: 0895-5859

## Oxidation Catalysts

### Service Code 07G

- new catalysts for known oxidation processes as well as catalysts for new oxidations

Not routinely covered: uses of known catalysts for well-established oxidations where no novelty is reported

ISSN: 1040-7170

## Phase Transfer Catalysis

### Service Code 06G

- reactions deliberately carried out in systems containing two or more phases, in the presence of agents that promote contact of materials in the phases

ISSN: 0885-0194

## Photocatalysts

### Service Code 08J

- preparation and uses of photocatalysts
- photocatalyzed reactions

ISSN: 1051-3949

# CA SELECTS Topics

## Polymer Degradation

### Service Code 04Q

- chemical, photochemical, radiochemical, mechanical, thermal, and oxidative degradation of polymers
- kinetics and mechanisms of degradative reactions

ISSN: 0734-8835

## Polymerization Kinetics & Process Control

### Service Code 06K

- kinetic studies on addition, condensation, and other types of polymerization
- the engineering of polymerization processes
- determination of rate constants for initiation, propagation, and termination, as well as chain transfer
- automated and nonautomated methods for monitoring and changing conditions to assure product uniformity
- optimization of reaction conditions

ISSN: 0885-0224

## Radiation Chemistry

### Service Code 064

- radiation chemistry and biochemistry
- radiation chemistry in aqueous and non-aqueous systems
- energy transfer and ionic reactions

Excluded: photochemical, spectral, and laser aspects

ISSN: 0146-4523

## Radiation Curing

### Service Code 05R

- treatment of polymers with electron beams, gamma rays, and other forms of ionizing radiation
- crosslinking of plastics, vulcanization of elastomers, hardening of coatings by radiochemical methods

Not routinely covered: treatment of polymers with visible, IR, or UV radiation

ISSN: 0749-7342

## CHROMATOGRAPHY

*See also Analytical Chemistry*

### Ion Chromatography

#### Service Code 06W

- principle and application of ion chromatography in analytical procedures

ISSN: 0890-1899

### Paper & Thin-Layer Chromatography

#### Service Code 063

- theory and applications
- paper chromatography
- plate chromatography
- thin-layer chromatography
- equipment and materials

ISSN: 0146-4515

## ENERGY

### Fuel & Lubricant Additives

#### Service Code 02I

- manufacture, development, and use of additives for fuels and lubricants
- petroleum-based and nonpetroleum-based products

ISSN: 0195-4997

### Synfuels

#### Service Code 02Z

- production of fuels from new sources
- gasohol
- gasification of coal, oil shale, tar sands, biomass
- processes and equipment for synfuel production

ISSN: 0195-5160

## GENERAL CHEMISTRY

### Computers in Chemistry

#### Service Code 043

- online and offline uses of computers in chemistry
- data processing, information retrieval
- process control, programmed calculations, computer simulation models

ISSN: 0160-9025

### New Books in Chemistry

#### Service Code 075

- all new books in chemistry and chemical engineering cited in CA
- monographs, series publications, conference proceedings containing at least 49 pages

ISSN: 0148-2416

## HEALTH HAZARDS, SAFETY, & TOXICITY

### Drug & Cosmetic Toxicity

#### Service Code 090

- toxic manifestations of drugs, cosmetics, and ingredients of drug and cosmetic preparations (e.g., mutagenicity, teratogenicity, carcinogenicity, allergic potential)
- health hazards, side effects, and safety of drugs, cosmetics, and their ingredients
- poisoning and treatment

ISSN: 0162-7775

### Flammability

#### Service Code 093

- flammability of materials and test methods for determining it
- relationship of chemical structure to flammability
- enhancing flammability of combustibles
- reducing flammability of materials
- synthesis and use of flame retardants and fireproofing agents

ISSN: 0162-7805

# CA SELECTS Topics

## Food, Drugs, & Cosmetics— Legislative & Regulatory Aspects

### Service Code 08K

- government reports on food, drugs, and cosmetics, such as those found in the U.S. Federal Register and those from governments of other countries
- information on standards of food, drugs, and cosmetics from nongovernment sources
- reports on government actions that affect the commerce of food, drugs, and cosmetics

ISSN: 1051-3914

Information in this topic is drawn from *Chemical Abstracts*.

## Food Toxicity

### Service Code 09A

- mutagenicity, teratogenicity, carcinogenicity, toxic side effects, and health hazards of foods and food additives
- contamination of foods by agrochemicals, nitroso compounds, heavy metals, aromatic hydrocarbons, other toxicants
- analysis of residues of these materials in food

ISSN: 0162-7813

## Occupational Exposure & Hazards

### Service Code 07Y

- occupational exposure and related hazards
- epidemiological studies on workplace exposure of humans to chemicals, biological agents, radiation, and noise

ISSN: 1047-8124

## INORGANIC & PHYSICAL CHEMISTRY

## Adsorption

### Service Code 07K

- phenomena of adsorption as well as the properties of adsorbed substances

Not routinely covered: adsorption by catalysts, zeolites, and molecular sieves

ISSN: 1045-8506

## Bismuth Chemistry

### Service Code 08X

- all aspects of the chemistry of bismuth

ISSN: 1061-5342

## Colloids (Applied Aspects)

### Service Code 041

- emulsions, gels, latexes, micellar solutions, sols, other forms of colloidal dispersions
- uses of these materials in cosmetics, foods, fuels, metals, other products

Excluded: routine applications of silica gel, emulsions, and suspensions

ISSN: 0160-8967

## Colloids (Macromolecular Aspects)

### Service Code 03Z

- macromolecular emulsions, gels, latexes, micellar solutions, sols, other forms of colloidal dispersions
- uses in coatings, elastomers, plastics, textiles, other industries

Excluded: routine applications of silica gel and routine aspects of emulsion or suspension polymerization

ISSN: 0190-9444

## Colloids (Physicochemical Aspects)

### Service Code 04Z

- physical chemistry of colloids, suspensions, dispersions
- sols, gels, emulsions, foams, micellar solutions, particles of near colloidal size

Not routinely covered: photographic emulsions

ISSN: 0160-8975

## Color Science

### Service Code 05Y

- photochromic materials, phosphors, and light-emitting substances with respect to color

Not routinely covered: chemistry of dyes

ISSN: 0885-0127

## Crystal Growth

### Service Code 088

- growth of crystals, dendrites, whiskers, crystallites
- devitrification of glasses
- epitaxial processes
- zone refining

Excluded: metallurgical grain-growth recrystallization

ISSN: 0162-7740

## Electron Spin Resonance (Chemical Aspects)

### Service Code 028

- chemical aspects of electron spin resonance
- electron nuclear double resonance
- electron paramagnetic resonance

ISSN: 0146-4469

## Infrared Spectroscopy (Physicochemical Aspects)

### Service Code 038

- applied and physicochemical aspects of infrared spectroscopy
- infrared lasers
- infrared spectroscopic determination of organic and inorganic substances

ISSN: 0190-9436

## Liquid Crystals

### Service Code 07A

- applications, preparation, properties, and structure of liquid crystals
- cholesteric, nematic, and smectic liquid crystals
- new mesomorphic compounds
- plastic crystals

ISSN: 0148-2351

# CA SELECTS Topics

## Organo-Transition Metal Complexes

### Service Code 054

- organic complexes of copper, silver, gold, titanium, zirconium, hafnium, vanadium, niobium, tantalum, chromium, manganese, molybdenum, tungsten, technetium, rhenium, iron, cobalt, nickel, ruthenium, rhodium, platinum, palladium, osmium, and iridium
- compounds with a bond between a transition metal and carbon
- complexes with bonds between metals and compounds such as phosphines

Not routinely covered: simple metal carbonyls

ISSN: 0160-9130

## Platinum & Palladium Chemistry

### Service Code 07B

- preparation, properties, reactions, uses, and characterization of compounds that contain platinum or palladium

Excluded: alloys

ISSN: 0890-1937

## Proton Magnetic Resonance

### Service Code 062

- chemical aspects of nuclear magnetic resonance (NMR) of hydrogen, deuterium, and tritium
- chemically-induced dynamic nuclear polarization
- internuclear double resonance
- hydrogen spin coupling
- nuclear magnetic relaxation, nuclear spin relaxation, spin-lattice relaxation

Not routinely covered: carbon and heteroatom nuclear magnetic resonance

ISSN: 0190-941X

## Quaternary Ammonium Compounds

### Service Code 07D

- preparation, properties, reactions, and uses of compounds that contain at least one nitrogen atom covalently bonded to four non-hydrogen atoms

ISSN: 0890-1953

## Selenium & Tellurium Chemistry

### Service Code 05J

- all aspects of selenium and tellurium chemistry

ISSN: 0749-7350

## Silicas & Silicates

### Service Code 07E

- preparation, properties, reactions, and uses of synthetic and naturally occurring inorganic compounds that contain silicon tetrahedrally bonded to oxygen
- silica minerals and polysilicates

Not routinely covered: common industrial silicates and zeolites

ISSN: 0890-1961

## Silver Chemistry

### Service Code 079

- chemistry and chemical technology of silver and silver-containing compounds
- silver alloy chemistry
- metallurgy; geology of silver ores and minerals
- silver catalysts
- uses of silver and silver compounds in meteorology, pharmacology, medicine, photography, electronics, dental materials

ISSN: 0148-2440

## Solid State NMR

### Service Code 04L

- methodology and apparatus for solid-state NMR studies
- NMR studies of organic and inorganic compounds in the solid state, as well as experimental results

ISSN: 0895-5824

## Surface Chemistry (Physicochemical Aspects)

### Service Code 066

- physical chemistry and properties of solid surfaces
- adsorption, desorption, adhesion
- surface defects
- surface interactions

Excluded: physical chemistry of thin metallic films, surface states of semi-conductor materials

ISSN: 0146-454X

## Thermochemistry

### Service Code 034

- chemical thermodynamics: heat capacities and thermodynamic functions such as enthalpies, free energies, and entropies for physico-chemical and biochemical processes
- calorimetry

Excluded: activation parameters, equations of state, activities and activity coefficients, phase equilibria and equilibrium constants, thermometry, heat treatments, and thermal effects on physical properties of materials

ISSN: 0162-7864

## MATERIALS

*See also Applied Chemistry, Polymers*

## Activated Carbon

### Service Code 07J

- manufacture, properties, and uses of activated carbon including sorption of volatile solvents, purification of aqueous solutions in the refining of sugar and alcohols, water purification, wastewater treatment, immobile phase in gas chromatography, vacuum technology

ISSN: 1045-8514

## Alkoxyated Oleochemicals

### Service Code 08E

- analysis, preparation, properties, reactions, and uses of ethoxylated and/or propoxylated alcohols
- amides, amines, betaines, fatty acids, glycerides, and quaternary ammonium compounds derived from fats and oils and from lanolin

ISSN: 1051-3884

## Antioxidants

### Service Code 03G

- chemistry of oxidation prevention
- manufacture and new uses of antioxidants

Not routinely covered: simple addition of antioxidants to a composition intended for some other use

ISSN: 0275-7028

# CA SELECTS Topics

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## Ceramic Materials (Journals)

### Service Code 02N

- chemistry, production, and use of oxide and nonoxide ceramics and glass ceramics as structural and building materials, refractories, thermal and electrical insulators, membranes, solid electrolytes, cutting tools, dishware
- chemistry, production, and use of cermets

Not routinely covered: patents

ISSN: 0895-5948

## Ceramic Materials (Patents)

### Service Code 05W

- patents on the chemistry and technology of the ceramic industry, including cermets

ISSN: 0885-0100

## Coatings, Inks, & Related Products

### Service Code 03H

- chemistry, chemical and physical properties, and analysis of decorative and protective coatings
- paints, lacquers, varnishes, organic enamels
- ink vehicles, drying oils, pigments, other components

ISSN: 0275-7036

## Colorants & Dyes

### Service Code 04Y

- isolation, identification, processing, use of natural dyes and pigments
- synthesis, manufacture, properties, use of synthetic dyes and pigments

Not routinely covered: studies not emphasizing the dye itself

ISSN: 0734-8789

## Corrosion-Inhibiting Coatings

### Service Code 05K

- formulation and application of coatings intended to prevent corrosion of metallic surfaces
- mechanisms by which such coatings act

ISSN: 0749-7296

## Cosmetic Chemicals

### Service Code 03J

- synthesis or manufacture of chemical substances of use in cosmetics
- formulation of cosmetic preparations

ISSN: 0275-7044

## Electrically Conductive Organics

### Service Code 06A

- electrical conductors and superconductors based on organic compounds
- TCNQ and TMTSF complexes

ISSN: 0885-0143

## Electronic Chemicals & Materials

### Service Code 06B

- specialty chemicals, materials, and processes involved in the fabrication of solid-state electronic devices
- etchants, photoimaging materials, packaging, lithography materials

ISSN: 0885-0151

## Emulsifiers & Demulsifiers

### Service Code 04A

- preparation, properties, uses of surface-active agents in formation, stabilization, or destabilization of emulsions
- aqueous and nonaqueous emulsions
- applications in cosmetics, food, petroleum, polymer industries

ISSN: 0734-8754

## Fats & Oils

### Service Code 03N

- extraction, analysis, properties, uses
- synthesis and manufacture of analogs

Not routinely covered: uses in organic synthesis or as lubricants

ISSN: 0275-7079

## Formulation Chemistry

### Service Code 06V

- materials used as fillers and inactive agents in processed materials
- drugs, cleaning agents, paints, and cosmetics

ISSN: 0890-1880

## Hot-Melt Adhesives

### Service Code 03S

- preparation, composition, properties, and uses of hot-melt adhesives and sealants

ISSN: 0895-5891

## Lubricants, Greases, & Lubrication

### Service Code 04H

- manufacture, properties, and uses of lubricants
- oils, emulsions, greases, solid lubricants
- additives for lubricants

ISSN: 0734-8738

## Memory & Recording Devices & Materials

### Service Code 06X

- materials used for information storage
- recording tapes and disks, optical disks, and computer memories

ISSN: 0890-1821

## Nonlinear Optical Materials

### Service Code 03W

- materials with nonlinear optical properties
- applications of these materials in optical communications, lasers, waveguides, electrooptical devices, and photoelectric devices

ISSN: 0895-5867

## Oleochemicals Containing Nitrogen

### Service Code 08L

- analysis, preparation, properties, reactions, and uses of amides, amines, betaines, imidazoles, imidazolines, nitriles, and quaternary ammonium compounds derived from fats and oils

ISSN: 1052-1976

# CA SELECTS Topics

## Optical & Photosensitive Materials

### Service Code 02P

- light absorbing, transmitting, and reflective materials: films, coatings, glasses, fibers, mirrors, polarizers, solar collectors
- photochromic and photomagnetic materials
- holographic, optoelectronic, optoacoustic materials; phosphors; laser materials; light-emitting diodes; display, recording, and memory materials; photogalvanic and photographic materials, liquid crystals, biological materials

ISSN: 0195-5063

## Organic Optical Materials

### Service Code 06F

- optical materials based on organic compounds

ISSN: 0885-0186

## Paint Additives

### Service Code 04R

- materials added to paints (pigmented coatings) other than the basic polymeric binders, solvents, pigments
- lacquers, enamels, water-thinned paints
- thickeners, thixotropic agents, biocides, emulsifiers, driers, plasticizers, stabilizers

ISSN: 0734-8762

## Paper Additives

### Service Code 04K

- noncellulosic materials added during papermaking
- chemicals used for treating freshly formed sheets
- sizes, pigments, fillers, bleaching agents, draining aids, protective colloids, flocculating agents, synthetic fibers
- paper coatings and their components

ISSN: 0734-8711

## Photoresists

### Service Code 06J

- materials and technology for fabricating and developing photoresists
- photoresists used in photolithography, printing, microelectronics

ISSN: 0885-0216

## Water-Based Coatings

### Service Code 05T

- formulation, application, and performance of water-borne coatings
- water-soluble coatings, latex coatings, aqueous coatings

ISSN: 0749-7369

## ORGANIC CHEMISTRY

## Free Radicals (Organic Aspects)

### Service Code 06C

- formation, chemical reactions, and reactivities of organic-free radicals
- spectral and other physical properties

ISSN: 0895-5972

## Infrared Spectroscopy (Organic Aspects)

### Service Code 072

- organic, macromolecular, and biochemical aspects of infrared spectroscopy
- spectroscopic characterization of substances

ISSN: 0190-9428

## Novel Sulfur Heterocycles

### Service Code 03R

- synthesis of new sulfur-containing ring systems
- new compounds containing known sulfur heterocycles

Not routinely covered: sulfur-containing peptide macroheterocycles

ISSN: 0275-7109

## Organic Stereochemistry

### Service Code 02R

- conformational and configurational analysis
- steric factors in organic reactions and properties of organic compounds
- asymmetric synthesis, preparation of specific stereoisomers, and stereo-selectivity of organic reactions

Not routinely covered: preparation of specific natural products and their analogs

ISSN: 0195-508X

## Organofluorine Chemistry

### Service Code 046

- synthesis and manufacture of organofluorine compounds
- properties, reactions, and uses of compounds containing a carbon-fluorine bond

Not routinely covered: trifluoroacetic and trifluoromethyl-sulfonic acids, salts, and esters

Excluded: biochemical studies other than agrochemical and toxicological  
ISSN: 0160-905X

## Organophosphorus Chemistry

### Service Code 096

- preparation of organophosphorus compounds
- reactions and applications of organo-phosphorus compounds

Not routinely covered: polymeric organophosphorus compounds

Excluded: uses of polyphosphoric acid  
ISSN: 0162-783X

## Organosulfur Chemistry (Journals)

### Service Code 07F

- journal literature on the chemistry of organic compounds containing sulfur

Not routinely covered: sulfur-containing natural products and their analogs

Excluded: routine uses such as known reagents and solvents where no novelty is reported

ISSN: 1040-7189

## Organotin Chemistry

### Service Code 02T

- preparation, properties, chemical behavior, and uses of compounds containing one or more carbon-tin bonds

ISSN: 0195-5101

## Synthetic Macrocyclic Compounds

### Service Code 03A

- synthesis and applications of macrocyclic compounds and ligands (e.g., crown ethers, macrocyclic tetramines)

Not routinely covered: macrocyclic antibiotics, porphyrins, porphyrin analogs  
ISSN: 0195-5179

# CA SELECTS Topics

## **PATHOLOGY & DRUGS**

*See also Biochemistry, Health Hazards*

### **Allergy & Antiallergic Agents**

#### **Service Code 04I**

- pathogenesis, diagnosis, and biochemistry of various allergic conditions
- asthma, dermatitis, and allergies to foods, drugs, and environmental agents
- antiallergic drug development, structure-activity studies, and immunotherapeutic strategies

ISSN: 1047-8191

### **Alzheimer's Disease & Related Memory Dysfunctions**

#### **Service Code 06L**

- Alzheimer's disease and related dementias
- pathogenesis, diagnosis, and biochemistry of the disease
- studies on drugs that control such dementias

ISSN: 1047-8183

### **Antibacterial Agents**

#### **Service Code 06P**

- design, synthesis, therapeutic use, mode of action, and structure-activity relationships of antibacterial agents

ISSN: 1045-8522

### **Antifungal & Antimycotic Agents**

#### **Service Code 07R**

- antifungal and antimycotic activities of established and developmental drugs
- synthesis, mechanism(s) of action, formulation, and structure-activity relationships

Not routinely covered: studies on agrochemical fungicides

ISSN: 1047-8167

### **Anti-Inflammatory Agents & Arthritis**

#### **Service Code 067**

- biochemistry of arthritis and rheumatism
- effects and mechanism of action of steroidal and non-steroidal inflammation inhibitors
- synthesis and structure-activity relationships of drugs with potential anti-inflammatory activity

ISSN: 0148-2394

### **Atherosclerosis & Heart Disease**

#### **Service Code 069**

- atherosclerosis
- arteriosclerosis
- heart disease
- hypertension
- hypotension
- embolic and thrombotic disorders
- shock
- pharmacology and treatment of cardiovascular disease

ISSN: 0148-2378

### **Beta-Lactam Antibiotics**

#### **Service Code 073**

- synthesis
- biosynthesis
- chemical reactivity
- antimicrobial activity
- pharmacodynamics
- metabolism
- toxicology
- analysis
- formulation

ISSN: 0148-2459

### **Blood Coagulation**

#### **Service Code 086**

- blood-coagulation factors
- vitamin K
- anticoagulants
- blood preservation and preservatives
- blood platelet biochemistry

Not routinely covered: blood-group antigens and blood typing

ISSN: 0162-7732

### **New Antibiotics**

#### **Service Code 03V**

- production, isolation, characterization, structure determination, and antimicrobial activity of antibiotics, both natural and synthetic

Not routinely covered: antiseptics, bactericides, and disinfectants that are strictly synthetic compounds

ISSN: 0895-5875

### **Osteoporosis & Related Bone Loss**

#### **Service Code 07Z**

- osteoporosis and related bone losses
- etiology, diagnosis, pathophysiology, biochemistry, and pharmacology

ISSN: 1047-8132

### **Pharmaceutical Chemistry (Journals)**

#### **Service Code 06Z**

- all aspects of pharmaceutical chemistry
- drug standards, pharmacopeias, formulations, prosthetic materials, surgical goods, and properties of pharmaceuticals
- all nonpatent abstracts published in CA Section 63

ISSN: 0890-1910

### **Pharmaceutical Chemistry (Patents)**

#### **Service Code 07A**

- patents on all aspects of pharmaceutical chemistry
- formulations, prosthetic materials, and surgical goods
- all patent abstracts published in CA Section 63

ISSN: 0890-1929

# CA SELECTS Topics

## Structure-Activity Relationships

### Service Code 04S

- structure-activity relationships of therapeutic agents and compounds that have potential therapeutic use
- structure-activity relationships of mammalian hormonal drugs and agents that have potential hormonal activity
- structure-activity relationships of compounds that have potential use in agriculture as phyto regulators (e.g., lodging control agents) or pesticides (e.g., herbicides, fungicides, insecticides)
- synthesis and QSAR studies

ISSN: 0895-5816

## POLYMERS

*See also Applied Chemistry, Materials*

## Block & Graft Polymers

### Service Code 04N

- preparation, properties, uses of block or segmented polymers
- compositional block copolymers and stereoblock polymers (addition and/or condensation)
- synthesis of graft copolymers: catalytic, mechanistic, kinetic aspects
- properties of resultant polymers
- commercial manufacture

ISSN: 0734-8851

## Composite Materials (Polymeric)

### Service Code 06I

- chemistry, manufacture, and use of composites with plastic (polymeric) matrixes and fibrous, granular, or spherical fillers
- laminated plastics and reinforced elastomers

ISSN: 1040-7154

## Conductive Polymers

### Service Code 05Z

- preparation, properties, and uses of conductive polymers

Not routinely covered: polymers compounded with antistatic agents

ISSN: 0885-0135

## Elastomers

### Service Code 07M

- preparation, properties, reactions, and uses of elastomers

ISSN: 1045-8557

## Epoxy Resins

### Service Code 03M

- synthesis, curing, properties, uses of macromolecular compounds containing multiple epoxide rings
- application as thermosetting resins, coatings, adhesives

ISSN: 0275-7060

## Fiber-Reinforced Plastics

### Service Code 04T

- properties, processing, use of thermo-plastics and thermosetting resins reinforced by natural or synthetic fibers
- reinforcement by glass or synthetic fibers, individual fibers (oriented or random), or fabrics
- laminated products including fibers for reinforcement

ISSN: 0734-869X

## Fluoropolymers

### Service Code 033

- preparation, properties, and uses of organic polymeric substances with a substantial fluorine content
- fluoroplastics, fluoro rubbers, fluorinated synthetic fibers, and fluoropolymer coatings

ISSN: 0895-5921

## Heat-Resistant & Ablative Polymers

### Service Code 095

- polymers that are stable at high temperatures (e.g., plastics, fibers, rubbers, coatings)
- polymeric ablative materials
- means for increasing thermal stability of polymers (e.g., heat-stabilizer additives)
- relation of thermal stability to chemical structure

ISSN: 0162-7821

## Ion-Containing Polymers

### Service Code 02L

- theoretical and practical aspects
- polyelectrolytes
- polymers with ions in the main chain (ionene polymers)
- polymers with ions in side groups (ionomers)
- use as coagulants or flocculants

Not routinely covered: ion-exchange resins

ISSN: 0195-5020

## New Plastics

### Service Code 04J

- newly synthesized or newly reported thermoplastic and thermosetting resins

ISSN: 0734-8673

## Novel Polymers from Patents

### Service Code 04P

- patents mentioning newly reported polymeric materials

ISSN: 0734-8819

## Photosensitive Polymers

### Service Code 05P

- preparation, properties, and uses of light-sensitive polymers
- photocurable coatings and sheet material
- plastics sensitized for degradation by light after disposal

Not routinely covered: synthesis of photosensitizers for use in polymer compounding

ISSN: 0749-7326

## Plastic Films

### Service Code 02U

- manufacture, properties, fabrication, and applications of polymeric films

Not routinely covered: coating films

ISSN: 0195-511X

## Plastics Additives

### Service Code 04D

- materials added to thermoplastic and thermosetting resins to modify properties
- plasticizers, inert and reinforcing fillers, pigments, heat and light stabilizers, antioxidants, blowing agents

Not routinely covered: crosslinking agents

ISSN: 0734-8681

## Plastics Fabrication & Uses

### Service Code 03T

- processes of chemical or chemical engineering interest for fabricating polymers or compositions containing them
- molding, extruding, laminating, impregnating
- leather substitutes, ion-exchange resins, adhesives

ISSN: 0275-7125

# CA SELECTS Topics

## Plastics Manufacture & Processing

### Service Code 03Z

- manufacture, testing, compounding, and processing of polymeric materials for use as resins or unsupported films
- natural resins of industrial interest
- additives for plastics and resins (e.g., crosslinking agents, plasticizers, fillers, foaming agents, pigments)

ISSN: 0275-7133

## Polyacrylates (Journals)

### Service Code 07C

- polymers prepared from acrylic and/or methacrylic acid esters
- homopolymers and copolymers of acrylates with each other and with other unsaturated monomers

ISSN: 0890-1945

## Polyacrylates (Patents)

### Service Code 07N

- patent literature dealing with preparation, properties, and uses of polymers and copolymers from acrylic acid and/or methacrylic acid esters

ISSN: 1045-8549

## Polyesters

### Service Code 04X

- chemistry of polyesters: preparation, properties, formulation, use
- polyester fibers
- monomer solutions of unsaturated polyesters used in fiber-reinforced plastics and laminates

Not routinely covered: polymers obtained by addition polymerization of unsaturated esters (e.g., acrylate, methacrylate)

ISSN: 0734-8703

## Polyimides

### Service Code 04B

- preparation, properties, and uses of polymers that contain imide linkages in the main chain
- preparation, properties, and uses of polyamic acids that are usually prepared as the first stage in the synthesis of polyimides

ISSN: 0895-5840

## Polymer Blends

### Service Code 04F

- morphology and physical and mechanical properties of mixtures of polymers
- applications
- factors affecting compatibility of polymers

ISSN: 0734-8827

## POLYMER DEGRADATION See Chemical Reactions

## Polymer Morphology

### Service Code 02V

- crystallinity and noncrystalline ordering on a supramolecular level in polymeric materials and their effect on physical and chemical properties of natural and synthetic polymers
- polymeric liquid crystals
- orientation of fibers and films if structural changes are emphasized

ISSN: 0195-5128

## Siloxanes & Silicones

### Service Code 04E

- preparation, properties, reactions, and uses of monomeric, oligomeric, and polymeric compounds, the basic structure of which consists of alternating silicon and oxygen atoms

ISSN: 0895-5832

## Synthetic High Polymers

### Service Code 03X

- organic and physical chemistry of linear and branched synthetic organic and inorganic polymers
- kinetics and mechanisms of polymerization
- manufacture of common monomers
- determination of mechanical, thermal, electrical, optical, solution, and chemical properties of polymers

Excluded: synthesis and properties of polymers intended for use as elastomers, fibers, or coatings

ISSN: 0275-7168

## SPECTROSCOPY

See also Analytical Chemistry

## Atomic Spectroscopy

### Service Code 02A

- atomic absorption, emission, and fluorescence in optical regions, i.e., infrared, visible, and ultraviolet
- applications in spectrochemical analysis

ISSN: 0195-4911

## Electron & Auger Spectroscopy

### Service Code 027

- electron spectroscopy
- Auger electron spectroscopy
- ESCA
- x-ray photoelectron spectroscopy
- photoexcitation spectroscopy
- photoemission spectroscopy

Not routinely covered: x-ray spectroscopy as an analytical tool

ISSN: 0146-4450

## Raman Spectroscopy

### Service Code 078

- all aspects of Raman spectroscopy
- methodology, apparatus, experimental results, theoretical treatments, books, reviews

ISSN: 0148-2432

## Spectrochemical Analysis

### Service Code 06M

- spectroscopic techniques used in chemical analysis
- optical absorption, atomic emission, atomic absorption spectrometry
- colorimetry, fluorimetry, fluorometry, phosphorimetry
- visible, IR, UV, and microwave spectrometry

ISSN: 0885-0232