**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, parasiticides, 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, immunooassay) 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 061
  - 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: 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

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

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

Surface Analysis
Service Code 02Y
• analytical chemistry of surfaces technology
• analytical use of ESCA, Auger spectrosopy, photoelectron spectroscopy
ISSN: 0195-5152

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

Thermal Analysis
Service Code 03B
• DTA, thermogravimetry, differential scanning calorimetry
• evolved-gas analysis, thermodilatometry, thermoelectrometry, thermosonimetry
ISSN: 0195-5187

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

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

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

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

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

APPLIED CHEMISTRY
See also Materials, Polymers

Coal Science & Process Chemistry
Service Code 024
• coal liquefaction
• coal gasification and coal combustion
• coal mine gases
• brown coal, carbonization
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ISSN: 0146-4426

Corrosion
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• marine corrosion
• corrosion inhibition and prevention
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• 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

#### 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, photoelectro-chemical 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

#### 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

#### 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

#### 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

#### 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 091**
- 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

#### 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

#### Free Radicals
**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

#### 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

#### Metallo Enzymes & Metallo Coenzymes
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- mechanisms by which metals are bound to enzymes
ISSN: 0160-9114
**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, photoreactivation, 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

### Porphyrins
**Service Code 02W**
- chemical and biochemical aspects of porphyrins
- porphyrin analogs (e.g., phthalocyanines)
- porphyrin complexes (e.g., chlorophylls)
Not routinely covered: polymeric porphyrins, 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 (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

### 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

### 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

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, carbidic, 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 03F
- 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

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
<table>
<thead>
<tr>
<th>Topic</th>
<th>Service Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymer Degradation</td>
<td>04Q</td>
<td>chemical, photochemical, radiocchemical, mechanical, thermal, and oxidative degradation of polymers&lt;br&gt;kinetics and mechanisms of degradative reactions&lt;br&gt;ISSN: 0734-8835</td>
</tr>
<tr>
<td>Polymerization Kinetics &amp; Process Control</td>
<td>06K</td>
<td>kinetic studies on addition, condensation, and other types of polymerization&lt;br&gt;the engineering of polymerization processes&lt;br&gt;determination of rate constants for initiation, propagation, and termination, as well as chain transfer&lt;br&gt;automated and nonautomated methods for monitoring and changing conditions to assure product uniformity&lt;br&gt;optimization of reaction conditions&lt;br&gt;ISSN: 0885-0224</td>
</tr>
<tr>
<td>Radiation Chemistry</td>
<td>064</td>
<td>radiation chemistry and biochemistry&lt;br&gt;radiation chemistry in aqueous and non-aqueous systems&lt;br&gt;energy transfer and ionic reactions&lt;br&gt;Excluded: photochemical, spectral, and laser aspects&lt;br&gt;ISSN: 0146-4523</td>
</tr>
<tr>
<td>Radiation Curing</td>
<td>05R</td>
<td>treatment of polymers with electron beams, gamma rays, and other forms of ionizing radiation&lt;br&gt;crosslinking of plastics, vulcanization of elastomers, hardening of coatings by radiochemical methods&lt;br&gt;Not routinely covered: treatment of polymers with visible, IR, or UV radiation&lt;br&gt;ISSN: 0749-7342</td>
</tr>
<tr>
<td>Ion Chromatography</td>
<td>06W</td>
<td>principle and application of ion chromatography in analytical procedures&lt;br&gt;ISSN: 0890-1899</td>
</tr>
<tr>
<td>Paper &amp; Thin-Layer Chromatography</td>
<td>063</td>
<td>theory and applications&lt;br&gt;paper chromatography&lt;br&gt;plate chromatography&lt;br&gt;thin-layer chromatography&lt;br&gt;equipment and materials&lt;br&gt;ISSN: 0146-4515</td>
</tr>
<tr>
<td>Fuel &amp; Lubricant Additives</td>
<td>02I</td>
<td>manufacture, development, and use of additives for fuels and lubricants&lt;br&gt;petroleum-based and nonpetroleum-based products&lt;br&gt;ISSN: 0195-4997</td>
</tr>
<tr>
<td>Synfuels</td>
<td>02Z</td>
<td>production of fuels from new sources&lt;br&gt;gasohol&lt;br&gt;gasification of coal, oil shale, tar sands, biomass&lt;br&gt;processes and equipment for synfuel production&lt;br&gt;ISSN: 0195-5160</td>
</tr>
<tr>
<td>Computers in Chemistry</td>
<td>043</td>
<td>online and offline uses of computers in chemistry&lt;br&gt;data processing, information retrieval&lt;br&gt;process control, programmed calculations, computer simulation models&lt;br&gt;ISSN: 0160-9025</td>
</tr>
<tr>
<td>New Books in Chemistry</td>
<td>075</td>
<td>all new books in chemistry and chemical engineering cited in CA&lt;br&gt;monographs, series publications, conference proceedings containing at least 49 pages&lt;br&gt;ISSN: 0148-2416</td>
</tr>
<tr>
<td>Drug &amp; Cosmetic Toxicity</td>
<td>090</td>
<td>toxic manifestations of drugs, cosmetics, and ingredients of drug and cosmetic preparations&lt;br&gt;e.g., mutagenicity, teratogenicity, carcinogenicity, allergic potential&lt;br&gt;health hazards, side effects, and safety of drugs, cosmetics, and their ingredients&lt;br&gt;poisoning and treatment&lt;br&gt;ISSN: 0162-7775</td>
</tr>
<tr>
<td>Flammability</td>
<td>093</td>
<td>flammability of materials and test methods for determining it&lt;br&gt;relationship of chemical structure to flammability&lt;br&gt;enhancing flammability of combustibles&lt;br&gt;reducing flammability of materials&lt;br&gt;synthesis and use of flame retardants and fireproofing agents&lt;br&gt;ISSN: 0162-7805</td>
</tr>
</tbody>
</table>
### 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 both Chemical Abstracts and the business-related Chemical Industry Notes

#### Food Toxicity

**Service Code 094**
- 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

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## 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 032**
- 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 042**
- 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 074**
- applications, preparation, properties, and structure of liquid crystals
- cholesteric, nematic, and smectic liquid crystals
- new mesomorphic compounds
- plastic crystals

ISSN: 0148-2351
## 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 carbenes

ISSN: 0160-9130

## 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 polylsilsalates

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

## 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

## 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

## 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

**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

## 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

## Alkoxylated 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**

**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
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

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 phytoregulators (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) matrices 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

Plastis 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
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 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 polymers that contain silicon and oxygen atoms
• preparation, properties, reactions, and uses of monomeric, oligomeric, and polymeric compounds of silicon and oxygen atoms
• 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