PROCESSES AND PRODUCTS

Class 205 is an integral part of this Class (Class 204), as shown by the position of this box, and follows the schedule hierarchy of this Class, retaining all pertinent definitions and Class lines of this class.

155 .Electrical, or wave energy in magnetic field
156 ..With discharge
157.15 .Processes of treating materials by wave energy
157.2 ..Isotope separation or enrichment
157.21 ...Inorganic product produced
157.22 ....Using laser
157.3 ..Removing a component from normally gaseous mixture
157.4 ..Process of preparing desired inorganic material
157.41 ...Using laser
157.42 ...Using sonic or ultrasonic energy
157.43 ...Using microwave energy
157.44 ...Using ionizing radiation
157.45 ...Boron, phosphorous or silicon containing product produced
157.46 ...Nitrogen containing product produced
157.47 ...Carbon containing product produced
157.48 ...Halogen containing product produced
157.49 ...Sulfur containing product produced
157.5 ...Oxygen containing product produced
157.51 ....Metal oxide or hydrate thereof
157.52 ...Hydrogen containing product produced
157.6 ..Process or preparing desired organic product containing at least one atom other than carbon and hydrogen
157.61 ...Using laser
157.62 ...Using sonic or ultrasonic energy
157.63 ...Using ionizing radiation
157.64 ....Nitrogen, sulfur, phosphorous or silicon containing product produced
157.65 ....Carbocyclic ring containing product produced
157.67 ...Vitamin product produced
157.68 ...Carbohydrate or protein product produced
157.69 ...Heterocyclic product produced
157.7 ....Hetero sulfur containing
157.71 ....Hetero nitrogen containing
157.72 .....Hetero nitrogen ring contains at least two hetero atoms
157.73 ...Phosphorous product produced
157.74 ...Silicon product produced
157.75 ...Heavy metal product produced
157.76 ...Sulfur product produced
157.77 ....Nitrogen containing
157.78 ....Oxygen containing
157.79 .....Halogen containing
157.8 ....Halogen containing
157.81 ...Nitrogen product produced
157.82 ....Oxygen containing
157.83 .....Nitroso or oxime containing
157.84 ......Halogen containing
157.85 ....Carbon triple bonded to nitrogen containing
157.86 ....Halogen containing
157.87 ...Carboxylic acid or derivative product produced
157.88 ....Oxygen other than as part of a carboxylic acid or derivative moiety
157.89 ....Atom other than carbon, hydrogen or oxygen
157.9 ...Alcohol product produced
157.91 ....Fused or bridged ring containing
157.92 ...Ether product produced
157.93 ...Aldehyde or ketone product produced
157.94 ...Halogen product produced
157.95 ....Carbon and halogen only in product
157.96 .....Carbocyclic ring containing
157.97 ......Aryl ring containing
157.98 ....Unsaturated product
157.99 .....Unsaturation in aryl ring
158.1 ....Carbocyclic ring containing
158.11 ....Two or more diverse halogen atoms containing

158.12 ....Four or more carbon atoms containing
158.14 ..At least one carbocyclic ring and only carbon and hydrogen atoms in product produced
158.2 ..Processes of purifying materials
158.21 ...Organic material purified

Note: See subclasses 900-914 for art collections pertaining to subclasses 157.15-157.21.

164 .Electrostatic field or electrical discharge
165 ..Organic
166 ...Vitamins
167 ...Fats, fatty oils, ester type waxes, or higher fatty acids
168 ...Hydrocarbons
169 ....Halogenated or oxidized
170 ....Gaseous
171 .....Acetylene
172 ....Cracking hydrocarbon oils
173 ..Carbon
174 ..Sulfur-oxygen compounds
175 ..Hydrogen peroxide
176 ..Ozone
177 ..Nitrogen compounds
178 ...Arc or spark discharge
179 ....Nitrogen oxides
450 .Electrophoresis or electro-osmosis processes and electrolyte compositions therefor when not provided for elsewhere
451 ..Capillary electrophoresis
452 ...With detailed detection
453 ...With injection
454 ...With adjustment or alteration of electro-osmotic bulk flow
455 ...Using gel-filled capillary
456 ..Gel electrophoresis
457 ...With programmed, cylic, or time responsive control
458 ....Plural rapid changes in direction of electric field (at least 1,000 times total and at more than 1/sec) (e.g., pulsed field, etc.)
459 ...Isoelectric focusing (i.e., using pH variation)
461 ...With analysis or detailed detection
462 ...With posttreatment of gel to purify or recover a desired component
463 ....Destaining
464 ....Blotting
465 ...Preparation in unitary apparatus (e.g., preparative, etc.)
466 ...Using slab gel
467 ....Vertical or inclined
468 ...Electrolyte composition
469 ...Gel composition (other than simple agarose or polyacrylamide)
470 ....Including manufacture or preparation (e.g., molding, gelation, etc.)
471 ..Coating or forming of object
472 ...With control responsive to sensed condition
473 ....Temperature sensed
474 ....Current sensed
475 ...Rubber or vulcanizable gum used to coat or form
476 ....Sheet, web, wire, or filament of indeterminant length formed or coated
477 ...Alternating current
478 ...With irradiation or illumination (e.g., for curing, etc.)
479 ...Coating interior of object
480 ...With regeneration or replenishment of coating bath (e.g., ultrafiltration, ion exchange, measurement followed by addition of concentrated reagent, etc.)
481 ....Using ion exchange material
482 ....Using filter or membrane
483 ...Forming of object
484 ...Plural coating operations
485 ....Using mask
486 ....Including nonelectrophoretic coating
487 .....With heat treatment of a coated layer (e.g., curing, sintering, etc.)
488 ......Organic (e.g., curing thermoset resin, etc.)
489 ...Using bath having designated chemical composition (DCC)

490 ....Resultant coating is solely inorganic
491 .....With heat treatment of coating
492 ....Anodic processes only
493 .....With heat treatment of coating
494 .....And washing, rinsing, or drying of coating
495 .....With pretreatment of substrate or bath
496 .....Bath contains shading or coloring agent (e.g., pigment, etc.)
497 .....Bath contains surface active agent (e.g., soap or detergent, wetting or emulsifying agent, etc.)
498 .....Bath contains carboxyl group
499 ....Cathodic processes only
500 .....With heat treatment of coating
501 .....Bath contains epoxy or epoxide
502 .....Bath contains epoxy or epoxide
503 .....And shading or coloring agent
504 .....And separate crosslinking or curing agent
505 .....Isocyanate
506 .....Bath contains separate crosslinking or curing agent
507 ....With posttreatment of coating (e.g., heat treatment, washing, drying, etc.)
508 ....Bath contains shading or coloring agent, metal oxide, free metal, or free carbon
509 ...With heat treatment of coating
510 ...With pretreatment of substrate (e.g., cleaning, wetting, etc.)
511 ...Using liquid jet
512 ...Continuous movement of substrate through bath
513 ..Hydrocarbon oil separated or purified
514 ...Aqueous system
515 ..Inorganic siliceous or calcareous material prepared, separated, or treated (e.g., clay, earth, concrete, asbestos, glass, etc.)
516 ...Barrier separation (e.g., using membrane, filter paper, etc.)
517 ....Ion selective
518 ..Barrier separation (e.g., using membrane, filter paper, etc.)
519 ...With control responsive to sensed condition
520 ...Ion selective
521 ....Combined with manufacture or pretreatment of barrier
522 ....Using both anion and cation selective membranes
523 .....Alternating anion and cation selective membranes
524 .....And using ion exchange material (e.g., suspended particles, etc.)
525 .....With prevention of scale buildup or fouling of membrane
526 .....Gas or vapor treated
527 .....Biological material prepared, recovered, or treated (e.g., urine, etc.)
528 .....Regeneration of liquid electrolyte
529 .....Metal or metal salt recovered or removed
530 .....Organic material prepared, recovered, or treated
531 .....Acid prepared, recovered, or treated
532 .....And using nonion selective membrane
533 .....And using ion exchange material (e.g., suspended particles, etc.)
534 .....And using bipolar membrane
535 ....And using nonion selective membrane
536 ....And using ion exchange material (e.g., suspended particles, etc.)
537 ....Using bipolar membrane
538 .....Water splitting
539 ....Using anion selective membrane
540 ....Biological material prepared, recovered, or treated (e.g., urine, etc.)
541 ....Organic material prepared, recovered, or treated

542 ...Combined with diverse-type separation (e.g., electro-osmotic barrier separation combined with centrifugal separation, etc.)
543 ...Biological material prepared, recovered, or treated (e.g., urine, etc.)
544 ...Organic material prepared, recovered, or treated
545 ..With use of nonelectrical field or force to separate (e.g., magnetic, centrifugal, etc.)
546 ..Absorbent strip electrophoresis (e.g., using cellulose acetate or paper strip, etc.)
547 ..Dielectrophoresis (i.e., using nonuniform electric field)
548 ..Isoelectric focusing (i.e., using pH variation)
549 ..Isotachophoresis (i.e., displacement electrophoresis) or measurement of ion or particle mobility
550 ..Ionophoresis
551 ..Solid sorption or desorption
553 ..Bulk separation of solids and liquids (e.g., dewatering solids, clarifying water, etc.)
554 .Electrical (including simultaneous electrical and magnetic) separation or purification of liquid or magnetic treatment of liquid (other than separation)
555 ..With control responsive to sensed condition
556 ..With measuring, testing, or sensing
557 ..Using magnetic field
558 ..With simultaneous use of liquid-liquid extraction solvent
559 ..Predominantly hydrocarbon
560 ...Removing solids
561 ....With addition of agent to facilitate removal
562 ....Using cohesive filter or solid packing
563 ...Resolving emulsion or dispersion
564 ....Using interrupted or pulsed direct current field
565 ....Using modified alternating current (other than standard 50 Hz or 60 Hz sine wave) field
567 ....Using modifying agent
568 .....Gas or vapor
569 .....Dielectric liquid
570 .....Water
571 ..Removing solids
572 ...Using cohesive filter or solid packing
573 ..Resolving emulsion or dispersion
192.1 .Coating, forming or etching by sputtering
192.11 ..Ion beam sputter deposition
192.12 ..Glow discharge sputter deposition (e.g., cathode sputtering, etc.)
192.13 ...Measuring or testing (e.g., of operating parameters, property of article, etc.)
192.14 ...Coating inorganic material onto polymeric material
192.15 ...Specified deposition material or use
192.16 ....Wear or abrasion resistant
192.17 ....Electrical contact material
192.18 ....Piezoelectric
192.2 ....Ferromagnetic
192.21 ....Resistor
192.22 ....Insulator or dielectric
192.23 .....Silicon containing
192.24 ....Superconductor
192.25 ....Semiconductor
192.26 ....Optical or photoactive
192.27 .....Reflective
192.28 .....Absorptive
192.29 .....Transparent conductor
192.3 ....With sputter etching
192.32 ..Sputter etching
192.33 ...Measuring or testing (e.g., of operating parameters, end point determination, etc.)
192.34 ...Ion beam etching (e.g., ion milling, etc.)
192.35 ...Etching specified material
192.36 ....Organic
192.37 ....Silicon containing
192.38 .Vacuum arc discharge coating
193 **APPARATUS**
194 .Electrolytic
400 ..Analysis and testing
401 ...Fault testing of sensor or component

402 ...Regeneration or activation
403.01 ...Biological material (e.g., microbe, enzyme, antigen, etc.) analyzed, tested, or included in apparatus
403.02 ....Disposable apparatus or apparatus having removable section (e.g., removable cartridge, etc.)
403.03 .....Plural measuring sections or zones
403.04 .....Enzyme included in apparatus
403.05 ......With semipermeable membrane
403.06 ....With semipermeable membrane
403.07 .....For blocking passage of macromolecules (molecular weight greater than or equal to 8,000)
403.08 ......Lipid included in apparatus
403.09 ......Enzyme included in apparatus
403.1 .....Enzyme included in apparatus
403.11 ......Glucose oxidase
403.12 ....With diverse enzyme or catalyst (e.g., bienzyme or coenzyme system, glucose oxidase with Pt catalyst, etc.)
403.13 .....And microelectrode (i.e., at least one electrode dimension is less than 500 microns)
403.14 ....Enzyme included in apparatus
403.15 ....Electrode containing free carbon
404 ...Corrosion
405 ...Titration
406 ...With significant electrical circuitry or nominal computer device
407 ...With significant display or analytical device
408 ...With means for temperature or pressure compensation
409 ...With means providing specified-flow condition or flow-path
410 ....Solid electrolyte means
411 ....Three or more electrodes
412 ...Three or more electrodes
413 ...Liquid electrode, e.g., Hg, Na, etc.
414 ...Gel electrolyte
415 ...Selectively permeable membrane
416 ...Ion-sensitive electrode
417 ....Liquid ion-exchanger
418 ....Organic membrane
419 ....Inorganic membrane
420 .....Glass ion-selective membrane
421 ...Solid electrolyte
422 ....Liquid sample sensor
423 .....With fugitive protective element
424 ....Gas sample sensor
425 .....With impressed current means
426 .....Planar electrode surface
427 .....With gas reference material
428 ......With protective element
429 ....Protective element is a layer
430 ...Moisture absorbing electrolyte
431 ...Gas sensing electrode
432 ....With gas diffusion electrode
433 ...Measuring carbon or pH
434 ...Involving plating, coating or stripping
435 ...Standard reference electrode
196.01 ..Object protection
196.02 ...With control means responsive to sensed condition
196.03 ....And programmed, cyclic, or time responsive control means
196.04 ....Internal battery
196.05 ...With programmed, cyclic, or time responsive control means
196.06 ...With measuring, testing, or sensing means
196.07 ....Internal battery
196.08 ...With gas or vapor removing or treating means
196.09 ...Plural cells used or protected
196.1 ...Internal battery
196.11 ....Resistor or impedance in series between anode and object
196.12 ....With fluid filter
196.13 ....With bypass means
196.14 ....Anode moving relative to object
196.15 ....With fluid inlet or outlet means used or protected
196.16 .....Dielectric coating, casing, or section
196.17 ....Rigid anode with rigid support
196.18 .....More than half of anode is or has coating, covering, or shield
196.19 ......Dielectric coating, covering, or shield

196.2 ....Flexible cable, chain, or wire anode or support
196.21 ....Earth grounded object or protection means
196.22 ....Copper and zinc electrically coupled or alloyed into one or more electrodes
196.23 ....Anode contains aluminum
196.24 .....And magnesium
196.25 .....And zinc
196.26 ...Resistor or impedance in series between power supply and object
196.27 ...Alternative energy supply (e.g., solar panel, thermoelectric or piezoelectric power supply, etc.)
196.28 ...Rotating electrode
196.29 ...Magnetic mounting means
196.3 ...Rigid anode with rigid support
196.31 ....Threaded coupling for rigid anode or rigid support
196.32 .....Dielectric thread
196.33 ...Flexible cable, chain, or wire anode or support
196.34 ....Plural anode sections on single cable, chain, or wire
196.35 .....Helically wound
196.36 ...Earth grounded object or protection means
196.37 ...Vessel protected (e.g., steam boiler, etc.)
196.38 ...Anode contains precious metal or free carbon
..With movable electrode means
198 ...Work conveyer
199 ....Rotary
200 .....With base treatment
201 .....Loose article
202 ....Endless
203 .....With base treatment
204 ......With current control
205 .....With current control
206 ...Continuous strip or filament electrode
207 ....With base treatment
208 .....Stripping
209 .....Mechanical working
210 .....Heat treatment means
211 ....With current control
212 ...Rotary
213 ....Barrels and rotary receptacles
214 .....Swinging or tilting receptacles
215 ....With base treatment
216 .....Stripping
217 .....Mechanical working
218 ....With current control
219 ...Liquid electrode
220 ....With electrode recirculation means
221 ....With oscillator, reciprocator or agitator
222 ...Electrode oscillator, reciprocator or agitator
223 ....With current control
224 R ...Localized area applicators
224 M ....Electrochemical machining
225 ...Electrode feeding or withdrawal means
226 ....With base treatment
227 ..Cells with base treatment means
228.1 ..With current, voltage, or power control means responsive to sensed condition
228.2 ...Fluid level sensing means
228.3 ...Fluid flow sensing means
228.4 ...Fluid pressure sensing means
228.5 ....Gaseous fluid
228.6 ...Electrolyte property sensing means (e.g., temperature, concentration, pH, conductivity, etc.)
228.7 ...Workpiece property sensing means (e.g., mass, coating thickness, etc.)
228.8 ...Workpiece presence, position, or movement sensing means
228.9 ...Having auxiliary electrode
229.1 ....Reference electrode as or with auxiliary electrode
229.2 ...And programmed, cyclic, or time responsive control means
229.3 ....For controlling waveform supplied to working electrode
229.4 ..With programmed, cyclic, or time responsive current, voltage, or power control means
229.5 ...For controlling waveform supplied to working electrode
229.6 ...For simultaneously reversing polarity of working and counter electrodes
229.7 ...Having specified circuit details

229.8 ..With means for measuring, testing, or sensing current, voltage, or power
229.9 ...Having auxiliary electrode
230.1 ....Reference electrode as or with auxiliary electrode
230.2 ..With current, voltage, or power control means
230.3 ...Mechanical
230.4 ...For inhibiting short circuits
230.5 ...Switch or connector
230.6 ...For controlling waveform
230.7 ...Having auxiliary electrode
230.8 ...Having specified circuit details
232 ..Cells with electrolyte treatment means
233 ...Leacher, dissolver or extractor
234 ....Recirculation
235 .....With filter
236 .....With heater or cooler
237 ...Recirculation
238 ....With filter
239 ....With heater or cooler
240 ...With filter
241 ...With heater or cooler
242 ..Cells
243.1 ...Fused bath
244 ....Plural cells
245 ....With feeding and/or withdrawal means
246 .....Gas feeding
247 .....Gas withdrawal
247.1 ....With magnetic field effect compensating means
247.2 ....With means for cleaning electrode element
247.3 ....Refractory hard material (RHM) containing electrode
247.4 ....With cell lining or coating
247.5 .....Thermal effect compensating means
248 ...Internal battery
249 ....Filter or loose electrode type
250 ...Liquid electrode
251 ....Diaphragm type
252 ...Diaphragm type
253 ....Plural cells
254 .....Bipolar electrode
255 ......With feeding and/or withdrawal means
256 ....Gas
257 .....With feeding and/or withdrawal means
258 ......Gas
259 ....Basket-type electrode
260 ....Concentrically arranged electrodes
261 ....With agitator
262 ....With heater or cooler
263 ....With feeding and/or withdrawal means
264 .....And filter
265 .....Gas feeding
266 .....Gas withdrawal
267 ...Plural cells
268 ....Bipolar electrode
269 ....With feeding and/or withdrawal means
270 .....Gas
271 ...Portable
272 ...Concentrically arranged electrodes
273 ...With agitator
274 ...With heater or cooler
275.1 ...With feeding and/or withdrawal means

[See the Search Notes for FOR Collections associated with this subclass or its indents (if there are indents).]

276 ....And filter
277 ....Gas feeding
278 ....Gas withdrawal
278.5 ....Parallel plate type electrodes
279 ..Elements
280 ...Electrodes
281 ....Electroforming molds or strips plates
282 ....With diaphragm
283 .....Perforated or foraminous electrode
284 ....Perforated or foraminous
285 .....Work holder
286.1 ....With electrode supporting means

[See the Search Notes for FOR Collections associated with this subclass or its indents (if there are indents).]

287 .....Work container
288 .....Electrodes with lateral extensions
288.1 .....And dielectric gasket or spacer
288.2 .....And additional electrical conductor of diverse material
288.3 .....Including resilient means (e.g., spring, etc.)
288.4 .....Including threaded connector
288.5 ......Having wedge or tapered tightening means
288.6 .....Hook or loop
289 ....With lateral extensions
290.01 ....Laminated or coated (i.e., composite having two or more layers)

[See the Search Notes for FOR Collections associated with this subclass or its indents (if there are indents).]

290.02 .....Actinide series element (i.e., Ac, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No, or Lr) or compound containing
290.03 .....Having three or more layers
290.04 ......Rare earth metal (i.e., Sc, Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, or Lu) or compound containing
290.05 ......Organic compound containing
290.06 ....And noble metal (i.e., Ru, Rh, Pd, Os, Ir, Pt, Ag, or Au) or compound containing
290.07 ....And free carbon containing
290.08 ......Noble metal (i.e., Ru, Rh, Pd, Os, Ir, Pt, Ag, or Au) or compound containing
290.09 ....Plural metal oxides containing
290.1 .....Rare earth metal (i.e., Sc, Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, or Lu) or compound containing
290.11 .....Organic compound containing
290.12 .....Refractory metal (i.e., Ti, V, Cr, Zr, Nb or Cb, Mo, Hf, Ta, or W) or compound containing
290.13 ......Surface layer contains electrolytically exposed refractory metal or compound
290.14 .....Noble metal (i.e., Ru, Rh, Pd, Os, Ir, Pt, Ag, or Au) or compound containing
290.15 .....Free carbon containing
291 ....Composition
292 .....Metallic
293 ......Alloys
294 .....Carbon containing
295 ...Diaphragms
296 ....Organic
297.01 ...Electrode support or work holder

[See the Search Notes for FOR Collections associated with this subclass or its indents)if there are indents).]

297.02 ....Magnetic support
297.03 ....Vacuum support
297.04 ....Float or buoyant support
297.05 ....Mask for workpiece
297.06 ....Workpiece rack
297.07 .....Adjustable
297.08 ......Mechanized
297.09 ......Including resilient means (e.g., spring, etc.)
297.1 .....Including resilient means (e.g., spring, etc.)
297.11 .....Porous enclosure
297.12 .....Grid or grating
297.13 .....Including threaded connector
297.14 ....Including resilient means (e.g., spring, etc.)
297.15 ....Including threaded connector
297.16 ....Hook or loop
298.01 .Coating, forming or etching by sputtering
298.02 ..Coating
298.03 ...Measuring, analyzing or testing
298.04 ...Ion beam sputter deposition
298.05 ...Ion plating
298.06 ...Triode, tetrode, auxiliary electrode or biased workpiece
298.07 ...Specified gas feed or withdrawal
298.08 ...Specified power supply or matching network
298.09 ...Specified cooling or heating
298.11 ...Specified mask, shield or shutter
298.12 ...Specified target particulars

298.13 ....Target composition
298.14 ...Specified anode particulars
298.15 ...Specified work holder
298.16 ...Magnetically enhanced
298.17 ....Flux passes through target surface
298.18 .....Focusing target (e.g., conical target, plural inclined targets, etc.)
298.19 .....Planar magnetron
298.2 ......Moving magnetic field or target
298.21 .....Cylindrical or curved magnetron target
298.22 ......Moving magnetic field or target
298.23 ...Moving workpiece or target
298.24 ....Indeterminate length moving workpiece
298.25 ....Multi-chamber (e.g., including air lock, load/unload chamber, etc.)
298.26 ....Plural diverse treatment stations, zones, or coating material source within single chamber
298.27 ....Plural modes of movement (e.g., planetary, epicyclic, etc.)
298.28 ....Rotational movement
298.29 ....Oscillatory movement
298.31 ..Etching
298.32 ...Measuring, analyzing or testing
298.33 ...Specified gas feed or withdrawal
298.34 ...Auxiliary electrode, bias means or specified power supply
298.35 ...Multi-chamber, load/unload means or moving workpiece
298.36 ...Beam or directed flux etching (e.g., ion beam, etc.)
298.37 ...Magnetically enhanced
298.38 ...Microwave excitation
298.39 ...Plural parallel plates (e.g., desmearing reactor, etc.)
298.41 .Vacuum arc discharge coating
600 .Electrophoretic or electro-osmotic apparatus
601 ..Capillary electrophoresis type
602 ...With control means responsive to sensed condition
603 ...With detailed detection system (e.g., including a light source and a camera, etc.)
604 ...With injector
605 ...Gel filled
606 ..Gel electrophoresis type
607 ...With control means responsive to sensed condition
608 ...With programmed, cyclic, or time responsive control means
609 ....Plural rapid changes in direction of electric field (at least 1,000 times total and at more than 1/sec) (e.g., pulsed field, etc.)
610 ...Isoelectric focusing (i.e., uses pH variation)
612 ...With detailed detection system (e.g., including a light source and a camera, etc.)
613 ...With means for posttreatment of gel to purify or recover a desired component
614 ....Blotter (e.g., membrane, etc.)
615 ...Unitary preparation apparatus (e.g., preparative means, etc.)
616 ...Slab gel
617 ....Curved
618 ....Vertical or inclined
619 .....With gel shaping or molding means (e.g., comb, ribbed insert, gel injectors, etc.)
620 ....With gel shaping or molding means (e.g., comb, ribbed insert, gel injectors, etc.)
621 ....With liquid heat exchange means to cool gel slab during electrophoresis
622 ..Coating or forming means
623 ...With moving or movable electrode
624 ....And means for posttreatment of coating (e.g., drying, heating, curing, etc.)
625 ....Coating interior of object or article (e.g., water main, automobile body, etc.)
626 ...With means for regeneration or replenishment of coating bath or electrolyte
627 ..Barrier separator (e.g., electrodialyzer, etc.)

628 ...With control means responsive to sensed condition
629 ...With moving or movable electrode
630 ...Ion selective
631 ....With bipolar membrane
632 ....And ion exchange material (e.g., suspended ion exchange resin particles, etc.)
633 ....Both anion and cation selective membranes
634 .....Alternating anion and cation selective membranes
635 ......Tortuous path-type frame or membrane spacer
636 ......With foraminous or perforated membrane support or spacer (e.g., screen, perforated plate, fabric, etc.)
637 ....And nonion selective membrane
638 ....With foraminous or perforated membrane support or spacer (e.g., screen, perforated plate, fabric, etc.)
639 ...With foraminous or perforated membrane support or spacer (e.g., screen, perforated plate, fabric, etc.)
640 ...Cylindrical barrier (e.g., filter, membrane, etc.)
641 ..Absorbent strip (e.g., cellulose acetate, paper strip, etc.) type
642 ...Movable strip
643 ..Dielectrophoretic (i.e., uses nonuniform electric field)
644 ..Isoelectric focusing (i.e., uses pH variation)
645 ..Isotachophoretic (i.e., displacement electrophoretic) or means to measure ion or particle mobility
647 ..Particle bed separator (e.g., inert particles, ion exchange beads, etc.)
648 ..Bulk separator for solids and liquids (e.g., to dewater solids, clarify water, etc.)
649 ...With moving or movable electrode
650 ..With moving or movable electrode
660 .Apparatus for electrical (including simultaneous electrical and magnetic) separation or purification of liquid or magnetic treatment of liquid (other than separation)
661 ..With control means responsive to sensed condition
662 ...Liquid level sensing means
663 ..With programmed, cyclic, or time responsive control means
664 ..With magnetic separating means
665 ..With filter (e.g., electrostatic filter, etc.)
666 ..Plural separate treatment chambers or zones
667 ..Probe type
668 ..With moving or movable electrode
669 ...Rotating or rotatable
670 ..Concentric electrodes
671 ...Cylindrical or annular
672 ..Parallel plate-type electrodes
673 ...Vertical flat plates
674 ..Porous, perforated, or grid electrode

CROSS-REFERENCE ART COLLECTIONS

900 **EFFECTING A CHANGE IN ISOMERIZATION BY WAVE ENERGY**
901 **EFFECTING A COLOR CHANGE BY WAVE ENERGY**
902 **PRODUCTION OF DESIRED COMPOUND BY WAVE ENERGY IN PRESENCE OF A CHEMICALLY DESIGNATED NONREACTANT CHEMICAL TREATING AGENT (EXCLUDING WATER, CHLOROFORM, CARBON TETRACHLORIDE, METHYLENE CHLORIDE OR BENZENE)**
903 .Inorganic chemical treating agent
904 ..Metal treating agent
905 ...Heavy metal agent
907 .Silicon or boron treating agent
908 .Phosphorus treating agent
909 .Heavy metal treating agent
910 .Sulfur treating agent
911 .Nitrogen treating agent
912 .Oxygen treating agent
913 ..Peroxide agent

914 .Only carbon, hydrogen or halogen atom in treating agent

FOR 937 ...Biological, e.g., microbe, enzyme, antigen, etc. (204/403)

FOREIGN ART COLLECTIONS

FOR 000 **CLASS-RELATED FOREIGN DOCUMENTS**

Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

FOR 920 **ELECTROLYTIC OBJECT PROTECTION APPARATUS (204/196)**
FOR 921 .Internal battery (204/197)
FOR 922 **ELECTROLYTIC CELLS WITH CURRENT CONTROL MEANS (204/228)**
FOR 923 .With fluid pressure, flow, or level intercontrol (204/229)
FOR 924 ..Gaseous fluid (204/230)
FOR 925 .Auxiliary electrode (204/231)
FOR 926 **ELECTROLYTIC FUSED BATH CELLS (204/243 R)**
FOR 927 .Bath current distribution, magnetic field control (204/243 M)
FOR 930 **ELECTROLYTIC CELLS WITH FEEDING AND/OR WITHDRAWAL MEANS (204/275)**
FOR 931 **ELECTROLYTIC ELECTRODE ELEMENTS WITH SUPPORTING MEANS (204/286)**
FOR 932 **LAMINATED OR COATED ELECTROLYTIC ELECTRODE ELEMENTS (204/290 R)**
FOR 933 .Dielectric film-forming metal base, insoluble conductive coating (204/290 F)
FOR 934 **ELECTROLYTIC ELECTRODE SUPPORTS AND WORK HOLDERS (204/297 R)**
FOR 935 .Workpiece held by magnetism or suction (204/297 M)
FOR 936 .Workpiece rack (204/297 W)
APPARATUS (204/193)
.Electrolytic (204/194)
..Analysis and testing (204/400)

DIGESTS

DIG 3 **AUXILIARY INTERNALLY GENERATED ELECTRICAL ENERGY**
DIG 4 **ELECTROLYSIS CELL COMBINED WITH FUEL CELL**
DIG 5 **MAGNETIC PLUS ELECTROLYTIC**
DIG 6 **UNUSUAL NON-204 USES OF ELECTROLYSIS**
DIG 7 **CURRENT DISTRIBUTION WITHIN THE BATH**
DIG 8 **AC PLUS DC**
DIG 9 **WAVE FORMS**
DIG 12 **ELECTROCHEMICAL MACHINING**
DIG 13 **PURIFICATION AND TREATMENT OF ELECTROPLATING BATHS AND PLATING WASTES**