EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 1332

DATE: AUGUST 1, 2022

PROJECT MP11664

The following classification changes will be effected by this Notice of Changes:

Action	**Subclass**	**Group(s)**
SCHEME:		
Titles Changed:	H01G	11/00, 11/06, 11/10, 11/24, 11/26, 11/30, 11/32, 11/46, 11/68, 11/70
	H01G	15/00
Notes New:	H01G	subclass
DEFINITIONS:		
Definitions New:	H01G	2/00, 4/00, 5/00, 7/00, 9/00, 11/00

No other subclasses/groups are impacted by this Notice of Changes.

This Notice of Changes includes the following *[Check the ones included]:*

1. CLASSIFICATION SCHEME CHANGES
   - ☒ A. New, Modified or Deleted Group(s)
   - ☐ B. New, Modified or Deleted Warning(s)
   - ☒ C. New, Modified or Deleted Note(s)
   - ☐ D. New, Modified or Deleted Guidance Heading(s)
2. DEFINITIONS
   - ☒ A. New or Modified Definitions (Full definition template)
   - ☐ B. Modified or Deleted Definitions (Definitions Quick Fix)
3. ☐ REVISION CONCORDANCE LIST (RCL)
4. ☐ CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5. ☐ CHANGES TO THE CROSS-REFERENCE LIST (CRL)

CPC NOTICE OF CHANGES 1332

DATE: AUGUST 1, 2022

PROJECT MP11664

1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

SUBCLASS H01G – CAPACITORS

Type*	**Symbol**	**Indent Level Number of dots (e.g. 0, 1, 2)**	**Title "CPC only" text should normally be enclosed in {curly brackets}****	**Transferred to#**
M	H01G 11/00	0	Hybrid capacitors, i.e. capacitors having different positive and negative electrodes; Electric double-layer [EDL] capacitors; Processes for the manufacture thereof or of parts thereof	
M	H01G 11/06	2	with one of the electrodes allowing ions to be reversibly doped thereinto, e.g. lithium-ion capacitors [LICs]	
M	H01G 11/10	1	Multiple hybrid or EDL capacitors, e.g. arrays or modules (housings, cases, encapsulations or mountings thereof H01G 11/78)	
M	H01G 11/24	2	characterised by structural features of the materials making up or comprised in the electrodes, e.g. form, surface area or porosity; characterised by the structural features of powders or particles used therefor	
M	H01G 11/26	2	characterised by their structure, e.g. multi-layered, porosity or surface features	
M	H01G 11/30	2	characterised by their material	
M	H01G 11/32	3	Carbon-based	
M	H01G 11/46	3	Metal oxides	
M	H01G 11/68	2	characterised by their material	
M	H01G 11/70	2	characterised by their structure	
M	H01G 15/00	0	Structural combinations of capacitors or other devices covered by at least two different main groups of this subclass with each other (involving at least one hybrid or electric double-layer [EDL] capacitor as the main component H01G 11/08)	

*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate

entries, as determined by intellectual reclassification; T = existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

NOTES:

- **No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- U groups: it is obligatory to display the required "anchor" symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups). Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types.
- "Transferred to" column must be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the "Transferred to" column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: "< administrative transfer to XX>", "<administrative transfer to XX and YY simultaneously>", or "<administrative transfer to XX, YY, ...and ZZ simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be "additional information".
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations "ADD" or "INV": <administrative transfer to XX ADD> , <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the "D" entries of 2000-series or Y-series groups may not require a destination ("Transferred to") symbol, however it is required to specify "<no transfer>" in the "Transferred to" column for such cases.
- For finalisation projects, the deleted "F" symbols should have <no transfer> in the "Transferred to" column.
- For more details about the types of scheme change, see CPC Guide.

C. New, Modified or Deleted Note(s)

SUBCLASS H01G – CAPACITORS

Type*	Location	Old Note	New/Modified Note
N	H01G		In this subclass, group H01G 11/00 takes precedence over groups H01G 4/00 and H01G 9/00.

*N = new note, M = modified note, D = deleted note

NOTE: The "Location" column only requires the symbol PRIOR to the location of the note. No further directions such as "before" or "after" are required.

2. A. DEFINITIONS (new)

H01G 2/00

Definition statement

This place covers:

Details common to two or more main types of devices covered by this subclass, e.g. special adaptation for mounting; cooling, heating and ventilating arrangements; housings, encapsulations and protection or prevention arrangements.

Relationships with other classification places

This group covers details of capacitors that are not provided for in a single one of groups H01G 4/00-H01G 11/00.

For example, encapsulations specific to fixed capacitors H01G 4/224, encapsulations specific to hybrid or EDL capacitors H01G 11/78, whereas group H01G 2/10 covers encapsulations where the type of capacitor is unspecified or the encapsulation is generally applicable to several types of capacitors as covered by groups H01G 4/00-H01G 11/00.

H01G 4/00

Definition statement

This place covers:

Non-electrolytic, fixed capacitors, per se, e.g. thin or thick film capacitors, details thereof, e.g. electrodes, dielectrics, housings and encapsulations, structural combinations thereof with each other, e.g. stacked, multilayer, feed-through or anti-noise capacitors, or with electrolytic devices covered by this subclass, or with other electric elements not covered by this subclass where the structure consists mainly of a capacitor. Processes of manufacture thereof.

H01G 5/00

Definition statement

This place covers:

Non-electrolytic, variable capacitors per se, in which the capacitance is varied by mechanical means, e.g. using variation of effective area of electrode, using variation of distance between electrodes, e.g. capacitors making use of microelectromechanical systems (MEMS), or using multiple capacitors. Details thereof or structural combinations thereof with each other, with electrolytic devices covered by this subclass, or with other electric elements not covered by this subclass where the structure consists mainly of a capacitor. Processes of manufacture thereof.

H01G 7/00

Definition statement

This place covers:

Non-electrolytic, variable capacitors per se, in which the capacitance is varied by non-mechanical means, e.g. electrets, ferroelectric capacitors. Details thereof or structural combinations thereof with each other, with electrolytic devices covered by this subclass, or with other electric elements not covered by this subclass where the structure consists mainly of a capacitor. Processes of manufacture thereof.

H01G 9/00

Definition statement

This place covers:

Electrolytic capacitors per se, e.g. liquid or solid capacitors, details thereof, e.g. terminals, electrolytes, electrodes, housings, and processes of manufacture thereof. Electrolytic rectifiers, detectors, switching devices, light-sensitive or temperature-sensitive devices per se and details thereof. Structural combinations thereof with each other, with non-electrolytic capacitors or with other electric components not covered by this subclass. Processes of manufacture thereof.

H01G 11/00

Definition statement

This place covers:

Hybrid capacitors, i.e. capacitors having different positive and negative electrodes; electric double-layer [EDL] capacitors; processes for the manufacture thereof or of parts thereof.

More specifically the following subjects are covered:

- Capacitors using combined reduction-oxidation reactions at electrode surfaces or at the interface electrode/electrolyte, e.g. redox arrangement or solion.

- Structural combinations, e.g. assembly or connection, of hybrid or EDL capacitors with other electric components, at least one hybrid or EDL capacitor being the main component, or multiple hybrid or EDL capacitors, e.g. arrays or modules, including stacked hybrid or EDL capacitors.

- Arrangements or processes for adjusting or protecting hybrid or EDL capacitors e.g. against electric or thermal overloads as well as reformation or processes for removal of impurities.

- Electrodes thereof, e.g. characterized by structural features of the materials making up or comprised therein or characterized by their material, e.g. based on carbon, metal oxides, conductive polymers or specially adapted for lithium-ion capacitors.

- Other components of hybrid or EDL capacitors covered include separators, electrolytes e.g., solid, liquid, current collectors and terminals.

- Cases; housings; encapsulations; mountings including gaskets or sealing and fixing or assembling a hybrid or EDL capacitive element in a housing, e.g. mounting electrodes, current collectors or terminals in containers or encapsulations.

- Processes for the manufacture of hybrid or EDL capacitors, or components thereof, including processes specially adapted for the manufacture of the electrodes.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Carbon or inorganic carbon compounds thereof	C01B 32/00
Active carbon compounds	C01B 32/30
Compositions of ceramic materials	C04B 35/00
Polymeric films or sheets	C08J 5/18
Thin film capacitors for integrated circuits	H01L 28/40
Batteries or fuel cells in general	H01M
Cases, mountings of batteries	H01M 50/10, H01M 50/20
Separators for batteries	H01M 50/40
Terminals of a battery	H01M 50/543
Carbonaceous material for inserting or intercalating light metals	H01M 4/587
Carriers or collectors of a battery	H01M 4/64
Li-accumulators	H01M 10/052
Accumulators characterised by the material used as electrolytes	H01M 10/056
Hybrid cells, i.e. electrochemical generators having two different types of half-cells, the half-cell being an electrode-electrolyte combination of either a primary, a secondary, or a fuel cell	H01M 12/00
Circuit arrangements or systems for supplying or distributing electric power; systems for storing electric energy	H02J
Circuit arrangements for charging or depolarising batteries or for supplying loads from batteries; with parallel operation in networks using both storage and other dc sources, e.g. providing buffering	H02J 7/00, H02J 7/34
Capacitors embedded in printed circuits	H05K 1/162
Casings for electrical apparatus in general	H05K 5/00

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

electrochemical storage device	means a battery, accumulator or capacitor
collector	means a conductive component in intimate contact with an electrode material in an hybrid or EDL capacitor
electrolyte	refers to an ionic-conducting liquid or solid ensuring electric conduction between electrode active parts or electric double layers, inside hybrid or EDL capacitors

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

- "electrochemical capacitor", "EDL capacitor", "ultracapacitor", "supercapacitor" and "hybrid capacitor"