## EUROPEAN PATENT OFFICE U.S. PATENT AND TRADEMARK OFFICE

## CPC NOTICE OF CHANGES 1217

DATE: JANUARY 1, 2022

## PROJECT MP0516

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

Action	Subclass	Group(s)
SCHEME:		
Titles Changed:	H01M	4/02, 4/36, 4/64, 4/92
	H01M	6/08, 6/14, 6/16, 6/50
	H01M	8/04074, 8/1013, 8/1072, 8/1273, 2008/128,
		8/146
	H01M	10/056, 10/48, 10/63
	H01M	50/569, 50/586, 50/588
Notes Modified:	H01M	4/00
	H01M	8/00
	H01M	10/00
	H01M	12/00

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

I. CLA	ASSIFICATION 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. DEI	FINITIONS
	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. $\square$	CHANGES TO THE CROSS-REFERENCE LIST (CRL)

DATE: JANUARY 1, 2022

## PROJECT MP0516

## 1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

## $SUBCLASS\ H01M-PROCESSES\ OR\ MEANS,\ e.g.\ BATTERIES,\ FOR\ THE\ DIRECT\ CONVERSION\ OF\ CHEMICAL\ ENERGY\ INTO\ ELECTRICAL\ ENERGY$

M   H01M 4/02   1   Electrodes composed of, or comprising, active material	Type*	Symbol	Indent Level	Title  "CPC only" text should normally be enclosed in	Transferred to#
M   H01M 4/02   1   Electrodes composed of, or comprising, active material			Number	{curly brackets}**	
M					
M					
M   H01M 4/36   2   Selection of substances as active materials, active masses, active liquids			<u>1, 2)</u>		
masses, active liquids   M   H01M 4/64   2   Carriers or collectors   M   H01M 4/92   3   Metals of platinum group (H01M 4/94 {, H01M 4/94 {, H01M 4/9058}} take precedence)   M   H01M 6/08   3   with cup-shaped electrodes   M   H01M 6/14   1   Cells with non-aqueous electrolyte   M   H01M 6/16   2   with organic electrolyte (H01M 6/18 takes precedence)   M   H01M 6/50   1   Methods or arrangements for servicing or maintenance, e.g. for maintaining operating temperature (constructional details of current conducting connections for detecting conditions inside cells or batteries, e.g. details of voltage sensing terminals, H01M 50/569   M   H01M 8/04074   4   Heat exchange unit structures specially adapted for fuel cell}   M   H01M 8/1072   5   by chemical reactions, e.g. insitu polymerisation or insitu crosslinking   M   H01M 8/1273   5   Fuel cells with solid halide electrolytes   M   H01M 8/1273   5   Fuel cells with solid halide electrolytes   M   H01M 8/146   2   Fuel cells with molten hydroxide   M   H01M 10/056   2   characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes   Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or	M			material	
M         H01M 4/92         3         Metals of platinum group (H01M 4/94 {, H01M 4/9058} take precedence)           M         H01M 6/08         3         with cup-shaped electrodes           M         H01M 6/14         1         Cells with non-aqueous electrolyte           M         H01M 6/16         2         with organic electrolyte (H01M 6/18 takes precedence)           M         H01M 6/50         1         Methods or arrangements for servicing or maintenance, e.g. for maintaining operating temperature (constructional details of current conducting connections for detecting conditions inside cells or batteries, e.g. details of voltage sensing terminals, H01M 50/569)           M         H01M 8/04074         4         {Heat exchange unit structures specially adapted for fuel cell}           M         H01M 8/1013         4         {Other direct alcohol fuel cells [DAFC]}           M         H01M 8/1072         5         by chemical reactions, e.g. insitu polymerisation or insitu crosslinking           M         H01M 8/1273         5         {Fuel cells with solid halide electrolytes}           M         H01M 2008/128         3         {Fuel cells with solid halide electrolytes}           M         H01M 10/056         2         characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes           M         H01M 10/48         2         Accumulators combined	M	H01M 4/36	2		
A/9058} take precedence	M	H01M 4/64	2	Carriers or collectors	
M         H01M 6/14         1         Cells with non-aqueous electrolyte           M         H01M 6/16         2         with organic electrolyte (H01M 6/18 takes precedence)           M         H01M 6/50         1         Methods or arrangements for servicing or maintenance, e.g. for maintaining operating temperature (constructional details of current conducting connections for detecting conditions inside cells or batteries, e.g. details of voltage sensing terminals, H01M 50/569)           M         H01M 8/04074         4         {Heat exchange unit structures specially adapted for fuel cell}           M         H01M 8/1013         4         {Other direct alcohol fuel cells [DAFC]}           M         H01M 8/1072         5         by chemical reactions, e.g. insitu polymerisation or insitu crosslinking           M         H01M 8/1273         5         {Fuel cells with solid halide electrolytes}           M         H01M 2008/128         3         {Fuel cells with solid halide electrolytes}           M         H01M 10/056         2         characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes           M         H01M 10/48         2         Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or	M	H01M 4/92	3		
M       H01M 6/16       2       with organic electrolyte (H01M 6/18 takes precedence)         M       H01M 6/50       1       Methods or arrangements for servicing or maintenance, e.g. for maintaining operating temperature (constructional details of current conducting connections for detecting conditions inside cells or batteries, e.g. details of voltage sensing terminals, H01M 50/569)         M       H01M 8/04074       4       {Heat exchange unit structures specially adapted for fuel cell}         M       H01M 8/1013       4       {Other direct alcohol fuel cells [DAFC]}         M       H01M 8/1072       5       by chemical reactions, e.g. insitu polymerisation or insitu crosslinking         M       H01M 8/1273       5       {Fuel cells with solid halide electrolytes}         M       H01M 2008/128       3       {Fuel cells with solid halide electrolytes}         M       H01M 8/146       2       {Fuel cells with molten hydroxide}         M       H01M 10/056       2       characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes         M       H01M 10/48       2       Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte         M       e.g. the level or density of the electrolyte         Constructional details of current conducting connections for detecting conditions inside cells or	M		3		
M   H01M 6/50   1   Methods or arrangements for servicing or maintenance, e.g. for maintaining operating temperature (constructional details of current conducting connections for detecting conditions inside cells or batteries, e.g. details of voltage sensing terminals, H01M 50/569)	M		1		
M H01M 6/50 1 Methods or arrangements for servicing or maintenance, e.g. for maintaining operating temperature (constructional details of current conducting connections for detecting conditions inside cells or batteries, e.g. details of voltage sensing terminals, H01M 50/569)  M H01M 8/04074 4 {Heat exchange unit structures specially adapted for fuel cell}  M H01M 8/1013 4 {Other direct alcohol fuel cells [DAFC]}  M H01M 8/1072 5 by chemical reactions, e.g. insitu polymerisation or insitu crosslinking  M H01M 8/1273 5 {Fuel cells with solid halide electrolytes}  M H01M 2008/128 3 {Fuel cells with solid halide electrolytes}  M H01M 8/146 2 {Fuel cells with molten hydroxide}  M H01M 10/056 2 characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes, e.g. mixed inorganic/organic electrolytes, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or	M	H01M 6/16	2		
maintenance, e.g. for maintaining operating temperature (constructional details of current conducting connections for detecting conditions inside cells or batteries, e.g. details of voltage sensing terminals, H01M 50/569)  M H01M 8/04074 4 {Heat exchange unit structures specially adapted for fuel cell}  M H01M 8/1013 4 {Other direct alcohol fuel cells [DAFC]}  M H01M 8/1072 5 by chemical reactions, e.g. insitu polymerisation or insitu crosslinking  M H01M 8/1273 5 {Fuel cells with solid halide electrolytes}  M H01M 2008/128 3 {Fuel cells with solid halide electrolytes}  M H01M 8/146 2 {Fuel cells with molten hydroxide}  M H01M 10/056 2 characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes  M H01M 10/48 2 Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or	M	H01M 6/50	1		
conducting connections for detecting conditions inside cells or batteries, e.g. details of voltage sensing terminals, H01M 50/569)  M H01M 8/04074 4 {Heat exchange unit structures specially adapted for fuel cell}  M H01M 8/1013 4 {Other direct alcohol fuel cells [DAFC]}  M H01M 8/1072 5 by chemical reactions, e.g. insitu polymerisation or insitu crosslinking  M H01M 8/1273 5 {Fuel cells with solid halide electrolytes}  M H01M 2008/128 3 {Fuel cells with solid halide electrolytes}  M H01M 8/146 2 {Fuel cells with molten hydroxide}  M H01M 10/056 2 characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes  M H01M 10/48 2 Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or					
inside cells or batteries, e.g. details of voltage sensing terminals, H01M 50/569)  M H01M 8/04074 4 {Heat exchange unit structures specially adapted for fuel cell}  M H01M 8/1013 4 {Other direct alcohol fuel cells [DAFC]}  M H01M 8/1072 5 by chemical reactions, e.g. insitu polymerisation or insitu crosslinking  M H01M 8/1273 5 {Fuel cells with solid halide electrolytes}  M H01M 2008/128 3 {Fuel cells with solid halide electrolytes}  M H01M 8/146 2 {Fuel cells with molten hydroxide}  M H01M 10/056 2 characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes  M H01M 10/48 2 Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or				temperature (constructional details of current	
terminals, H01M 50/569)  M H01M 8/04074 4 {Heat exchange unit structures specially adapted for fuel cell}  M H01M 8/1013 4 {Other direct alcohol fuel cells [DAFC]}  M H01M 8/1072 5 by chemical reactions, e.g. insitu polymerisation or insitu crosslinking  M H01M 8/1273 5 {Fuel cells with solid halide electrolytes}  M H01M 2008/128 3 {Fuel cells with solid halide electrolytes}  M H01M 8/146 2 {Fuel cells with molten hydroxide}  M H01M 10/056 2 characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes  M H01M 10/48 2 Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or				conducting connections for detecting conditions	
M   H01M 8/1013   4   {Other direct alcohol fuel cells [DAFC]}     M   H01M 8/1072   5   by chemical reactions, e.g. insitu polymerisation or insitu crosslinking     M   H01M 8/1273   5   {Fuel cells with solid halide electrolytes}     M   H01M 2008/128   3   {Fuel cells with solid halide electrolytes}     M   H01M 8/146   2   {Fuel cells with molten hydroxide}     M   H01M 10/056   2   characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes     M   H01M 10/48   2   Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or					
M H01M 8/1072 5 by chemical reactions, e.g. insitu polymerisation or insitu crosslinking  M H01M 8/1273 5 {Fuel cells with solid halide electrolytes}  M H01M 2008/128 3 {Fuel cells with solid halide electrolytes}  M H01M 8/146 2 {Fuel cells with molten hydroxide}  M H01M 10/056 2 characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes  M H01M 10/48 2 Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or	M	H01M 8/04074	4	{Heat exchange unit structures specially adapted for	
M   H01M 8/1273   5   Fuel cells with solid halide electrolytes     M   H01M 2008/128   3   Fuel cells with solid halide electrolytes     M   H01M 8/146   2   Fuel cells with molten hydroxide     M   H01M 10/056   2   Characterised by the materials used as electrolytes     M   H01M 10/48   2   Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or	M	H01M 8/1013		{Other direct alcohol fuel cells [DAFC]}	
M       H01M 8/1273       5       {Fuel cells with solid halide electrolytes}         M       H01M 2008/128       3       {Fuel cells with solid halide electrolytes}         M       H01M 8/146       2       {Fuel cells with molten hydroxide}         M       H01M 10/056       2       characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes         M       H01M 10/48       2       Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or	M	H01M 8/1072	5		
M H01M 2008/128 3 {Fuel cells with solid halide electrolytes}  M H01M 8/146 2 {Fuel cells with molten hydroxide}  M H01M 10/056 2 characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes  M H01M 10/48 2 Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or				<u>insitu</u> crosslinking	
M H01M 8/146 2 {Fuel cells with molten hydroxide}  M H01M 10/056 2 characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes  M H01M 10/48 2 Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or					
M H01M 10/056  2 characterised by the materials used as electrolytes, e.g. mixed inorganic/organic electrolytes  M H01M 10/48  2 Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or				, ,	
e.g. mixed inorganic/organic electrolytes  M H01M 10/48 2 Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or					
M H01M 10/48 2 Accumulators combined with arrangements for measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or	M	H01M 10/056	2		
measuring, testing or indicating the condition of cells, e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or		******			
e.g. the level or density of the electrolyte (constructional details of current conducting connections for detecting conditions inside cells or	M	H01M 10/48	2		
(constructional details of current conducting connections for detecting conditions inside cells or	1				
connections for detecting conditions inside cells or					
batteries, e.g. details of voltage sensing terminals,					
H01M 50/569)	1				

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Type*	<u>Symbol</u>	Indent   Level   Number   of dots   (e.g. 0, 1, 2)	Title  "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	H01M 10/63	2	Control systems (charging or discharging in response to temperature H01M 10/44 {, H01M10/443}; measurement of temperature H01M 10/48 {, H01M10/486})	
M	H01M 50/569	2	Constructional details of current conducting connections for detecting conditions inside cells or batteries, e.g. details of voltage sensing terminals (battery terminal connectors with integrated measuring arrangements G01R 31/364)	
M	H01M 50/586	4	inside the batteries, e.g. incorrect connections of electrodes	
M	H01M 50/588	4	outside the batteries, e.g. incorrect connections of terminals or busbars	

\*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 <u>subclasses</u>, 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} <u>are</u> 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 <u>must</u> 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.

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C. New, Modified or Deleted Note(s)

# $SUBCLASS\ H01M-PROCESSES\ OR\ MEANS,\ e.g.\ BATTERIES,\ FOR\ THE\ DIRECT\ CONVERSION\ OF\ CHEMICAL\ ENERGY\ INTO\ ELECTRICAL\ ENERGY$

Type*	<u>Location</u>	Old Note	New/Modified Note
N	H01M 4/00		Insert the following new note.  NOTE  In classifying electrodes of hybrid cells, the individual half-cells of the hybrid cell are considered separately, e.g. an electrode in the primary half of a primary/fuel type hybrid cell is considered to be a primary-cell electrode covered by H01M 4/06.
M	H01M 8/00	Fuel cells are electrochemical generators wherein the reactants are supplied from outside	Replace the text of the following existing note.  In this group, the following expression is used with the meaning indicated:  • "Fuel cell" means an electrochemical generator wherein the reactants are supplied from outside.
M	H01M 10/00	NOTE Secondary cells are accumulators receiving and supplying electrical energy by means of reversible electrochemical reactions.	Replace the text of the following existing note.  In this group, secondary cells are accumulators receiving and supplying electrical energy by means of reversible electrochemical reactions.
M	H01M 12/00	NOTE  1. This group does not cover hybrid cells comprising capacitor electrodes and battery electrodes, which are covered by group H01G 11/00  2. In this group, hybrid cells are electrochemical generators having	Insert a period at the end of Note 1 as shown below in the updated Note 1.  1. This group does not cover hybrid cells comprising capacitor electrodes and battery electrodes, which are covered by group H01G 11/00.

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Type*	<b>Location</b>	Old Note	New/Modified Note
		two different types	
		of half-cells, the	
		half-cell being an	
		electrode-	
		electrolyte	
		combination of	
		either a primary, a	
		secondary or a fuel	
		cell.	

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.

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## 4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

<u>CPC</u>	<u>IPC</u>	Action*
H01M 8/0494	H01M 8/04858	UPDATED
H01M 8/04947	H01M 8/04858	UPDATED
H01M 2008/1095	H01M 8/10	UPDATED
H01M 8/1273	H01M 8/1246	UPDATED
H01M 2008/1293	H01M 8/12	UPDATED

#### \*Action column:

- For an (N) or (Q) entry, provide an IPC symbol and complete the Action column with "NEW."
- For an existing CPC main trunk entry or indexing entry where the existing IPC symbol needs to be changed, provide an updated IPC symbol and complete the Action column with "UPDATED."
- For a (D) CPC entry or indexing entry complete the Action column with "DELETE." IPC symbol does not need to be included in the IPC column.
- For an (N) 2000 series CPC entry which is positioned within the main trunk scheme (breakdown code) provide an IPC symbol and complete the action column with "NEW".
- For an (N) 2000 series CPC entry positioned at the end of the CPC scheme (orthogonal code), with no IPC equivalent, complete the IPC column with "CPCONLY" and complete the action column with "NEW".

#### NOTES:

- F symbols are <u>not</u> included in the CICL table above.
- T and M symbols are not included in the CICL table above unless a change to the existing IPC is desired.