EUROPEAN PATENT OFFICE U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 1357

DATE: AUGUST 1, 2022

PROJECT MP10325

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

<u>Action</u>	Subclass	Group(s)
SCHEME:		
Titles Changed:	H01J	1/53, 1/54, 1/56, 1/58, 1/60, 1/62, 1/64,
\mathcal{E}		1/68, 1/70, 1/72, 1/74, 1/76, 1/78
	H01J	3/02, 3/04, 3/06, 3/07, 3/08, 3/10, 3/12,
		3/14, 3/16, 3/18, 3/20, 3/22, 3/24, 3/26,
		3/28, 3/30, 3/32, 3/34, 3/36, 3/38
	H01J	9/045, 9/323, 9/505
	H01J	29/20, 29/385, 29/39, 29/58, 29/865
	H01J	31/28
	H01J	37/32, 37/32183
	H01J	43/08, 43/28
	H01J	49/0418, 49/286, 49/38, 49/406, 49/4245,
		49/4265
	H01J	2211/00
	H01J	2217/00, 2217/49285
DEFINITIONS:		
Definitions Deleted:	H01J	29/39, 31/28
(no frozen (F) symbol definitions should		
be deleted)		
Definitions New:	H01J	1/53, 1/54
	H01J	3/04
	H01J	9/045, 9/323, 9/505
	H01J	29/385
	H01J	37/32183
	H01J	2211/00
	H01J	2217/00
Definitions Modified:	H01J	1/00
	H01J	3/00, 3/02, 3/26
	H01J	25/42, 25/50
	H01J	29/00, 29/58
	H01J	31/00
	H01J	37/32
	H01J	49/406, 49/4245

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

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	\boxtimes	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. DEF	FINIT	IONS
	\boxtimes	A. New or Modified Definitions (Full definition template)
	\boxtimes	B. Modified or Deleted Definitions (Definitions Quick Fix)
3.	REV	ISION CONCORDANCE LIST (RCL)
4. 🗌	CHA	NGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5.	СНА	NGES TO THE CROSS-REFERENCE LIST (CRL)

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1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

SUBCLASS H01J-ELECTRIC DISCHARGE TUBES OR DISCHARGE LAMPS

Type*	Symbol	Inden t Level Numb er of dots (e.g. 0,1, 2)	Title "CPC only" text should normally be enclosed in {curly brackets}**	<u>Transferred to</u> #
М	H01J 1/53	1	Electrodes intimately associated with a screen on or from which an image or pattern is formed, picked-up, converted, or stored	
M	H01J 1/54	1	Screens on or from which an image or pattern is formed, picked-up, converted, or stored; Lumines cent coatings on vessels	
M	H01J 1/56	2	acting as light valves by shutter operation, e.g. for eidophor	
M	H01J 1/58	2	acting by discolouration, e.g. halide screen	
M	H01J 1/60	2	Incandescent screens	
M	H01J 1/62	2	Luminescent screens; Selection of materials for luminescent coatings on vessels	
M	Н01Ј 1/64	3	characterised by the binder or adhesive for securing the luminescent material to its support	
M	H01J 1/68	3	with superimposed luminescent layers	
M	H01J 1/70	3	with protective, conductive, or reflective layers	
М	H01J 1/72	3	with luminescent material discontinuously arranged, e.g. in dots or lines	
M	H01J 1/74	4	with adjacent dots or lines of different luminescent material	
M	H01J 1/76	3	provided with permanent marks or references	
M	H01J 1/78	2	Photoelectric screens; Charge-storage screens	
M	H01J 3/02	1	Electron guns	
M	H01J 3/04	1	Ion guns	
M	H01J 3/06	1	two or more guns being arranged in a single vacuum space, e.g. for plural-ray tubes (H01J 3/07 takes precedence)	

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Type*	Symbol	<u>Inden</u>	<u>Title</u>	Transferred to#
		<u>t</u>	"CPC only" text should normally be	
		<u>Level</u>	<pre>enclosedin{curly brackets}**</pre>	
		Numb		
		<u>er of</u> <u>dots</u>		
		(e.g.		
		$\frac{0.2.}{0.1.}$		
		<u>2)</u>		
M	H01J 3/07	1	Arrangements for controlling convergence	
	**********		of a plurality of beams	
M	H01J 3/08	1	Arrangements for controlling intensity of	
			ray or beam(H01J3/02, H01J3/04 take precedence)	
M	H01J 3/10	1	Arrangements for centring ray or beam	
			(H01J3/02, H01J3/04 take precedence)	
M	H01J 3/12	1	Arrangements for controlling cross-section	
			of ray or beam; Arrangements for correcting aberration of beam, e.g. due to	
			lenses (H01J3/02, H01J3/04 take	
			precedence)	
M	H01J 3/14	1	Arrangements for focusing or reflecting	
			ray or beam(H01J3/02, H01J3/04 take	
			precedence)	
M	H01J 3/16	2	Mirrors	
M	H01J 3/18	2	Electrostatic lenses	
M	H01J 3/20	2	Magnetic lenses	
M	H01J 3/22	3	using electromagnetic means only	
M	H01J 3/24	3	using permanent magnets only	
M	H01J 3/26	1	Arrangements for deflecting ray or beam	
M	H01J 3/28	2	along one straight line or along two perpendicular straight lines	
M	H01J 3/30	3	by electric fields only	
M	H01J 3/32	3	by magnetic fields only	
M	H01J 3/34	2	along a circle, spiral, or rotating radial line	
M	H01J 3/36	1	Arrangements for controlling the ray or	
112	11010 0,00	-	beamafter passing the main deflection	
			system, e.g. for post-acceleration or post-	
			concentration	
M	H01J 3/38	1	Mounting, supporting, spacing, or	
			insulating electron-optical or ion-optical	
1/	11011 0/045	4	arrangements	
M M	H01J 9/045 H01J 9/323	4	{Activation of assembled cathode} {Sealing leading-in conductors into a	
IVI	пон 9/343	3	discharge lamp or a gas-filled discharge	
			device}	
M	H01J 9/505	2	{Regeneration of cathodes}	
M	H01J 29/20	4	characterised by the lumines cent material	
M	H01J 29/385		{Photocathodes comprising a layer which	
		5	modified the wave length of impinging	
			radiation }	
M	H01J 29/39	4	Charge-storage screens	

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<u>Type</u> *	<u>Symbol</u>	<u>Inden</u>	Title	Transferred to#
		<u>t</u> <u>Level</u>	"CPC only" text should normally be enclosed in {curly brackets}**	
		<u>Numb</u>		
		er of		
		<u>dots</u> (e.g.		
		$\frac{\langle c, \underline{c}, c$		
		<u>2)</u>		
M	H01J 29/58	2	Arrangements for focusing or reflecting	
M	H01J 29/865	2	ray or beam {Vacuumlocks}	
M	H01J 31/28	3	with electron ray scanning the image	
1,1	11010 01/20		screen	
M	H01J 37/32	1	Gas-filled discharge tubes (heating by	
			discharge H05B)	
M	H01J 37/32183	5	{Matching circuits}	
M	H01J 43/08	3	Cathode arrangements (construction of photo cathodes H01J40/06, H01J40/16,	
			H01J47/00, H01J49/08)	
M	H01J 43/28	2	Vessels {, e.g. wall of the tube};	
		_	Windows; Screens; Suppressing undesired	
			discharges or currents	
M	H01J 49/0418	4	{for laser desorption, e.g. matrix-assisted	
			laser desorption/ionisation [MALDI]	
			plates or surface enhanced laser des orption/ionisation [SELDI] plates }	
M	H01J 49/286	4	{with energy analysis, e.g. Castaing filter	
111	11010 19/200	•	(in cathode-ray or electron-beamtubes	
			H01J29/84; electron-orion-optical	
			arrangements for separating electrons or	
			ions from an analysing or processing beam	
			H01J37/05; micro- or spot-analysing tubes H01J37/252)}	
M	H01J 49/38	4	Omegatrons {; using ion cyclotron	
			resonance}	
M	H01J 49/406	4	{with multiple reflections}	
M	H01J 49/4245	5	{Electrostatic ion traps (H01J 49/422 takes	
	11011 40/4065		precedence)}	
M	H01J 49/4265	5	{Controlling the number of trapped ions; preventing space charge effects}	
M	H01J 2211/00	0	Plasma display panels with alternate	
			current induction of the discharge, e.g.	
			AC-PDPs	
M	H01J 2217/00	0	Gas-filled discharge tubes	
M	H01J 2217/49285	4	Associated optical means	

^{*}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.

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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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2. A. DEFINITIONS (new)

H01J 1/53

References

Informative references

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

Electrodes of cathode ray tubes or electron beam tubes	H01J 29/08
intimately associated with a screen on or from which an	
image or pattern is formed, picked-up, converted or stored	
Screens of cathode ray tubes or electron beam tubes on or	H01J 29/10
from which an image or pattern is formed, picked up,	
converted or stored	

H01J 1/54

References

Informative references

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

Electrodes of cathode ray tubes or electron beam tubes intimately associated with a screen on or from which an	H01J 29/08
image or pattern is formed, picked-up, converted or stored	
Screens of cathode ray tubes or electron beam tubes on or	H01J 29/10
from which an image or pattern is formed, picked up,	
converted or stored	

H01J 3/04

References

Informative references

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Ion beam tubes	H01J 27/00
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H01J 9/045

References

Informative references

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

Description of cathods	1104 1 0/505
Regeneration of cathode	H01J 9/505

H01J 9/323

References

Informative references

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

Sealing-in wires directly into the envelope during the manufacture, installing, removal or maintenance of incandescent lamps or parts thereof	H01K 3/20
Joining pieces of glass to pieces of other inorganic	C03C 27/00
material; Joining glass to glass other than by fusing	

H01J 9/505

References

Informative references

Activation of assembled cathode	H01J 9/045

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H01J 29/385

References

Informative references

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

Luminescent layers sensitive to UV and X-ray	C09K 11/00,
	G21K 4/00

H01J 37/32183

References

Informative references

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

Impedance-matching networks	H03H 7/38
Automatic matching of load impedance to source	H03H 7/40
impedance	

H01J 2211/00

References

Informative references

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

Plasma display panels making use of direct current	H01J 2217/00
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H01J 2217/00

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Informative references

Plasma display panels with alternate current induction of	H01J 2211/00
the discharge	

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2. A. DEFINITIONS (modified)

H01J 1/00

<u>Insert</u>: The following new Relationships with other classification places section

and text.

Relationships with other classification places

- If in field emission devices the cathode structure or material is the relevant detail, classification is provided in H01J 1/30-H01J 1/316 and, where applicable, H01J 2201/30-H01J 2201/317. If however the control electrode structure of the field emission devices (i.e. form/structure, material or relative arrangement of the gate electrode(s) or the focusing electrode(s)) is the relevant detail, classification is provided in H01J 3/021-H01J 3/022 and, where applicable, H01J 2203/0204-H01J 2203/0292. If the cathode structure or material of a general field emission device and of a field emission display or a flat panel electron emission lamp (as LCD backlight) is disclosed, classification is provided in H01J 1/30-H01J 1/316 and in H01J 29/04, H01J 2329/04-H01J 2329/0492, H01J 31/127 or H01J 63/00.
- Carbon nanotube (CNT) emitters are classified in H01J 1/304 and H01J 2201/30469, the manufacture thereof in H01J 9/025. When the CNT material or the manufacture thereof is of interest, also C01B 32/00 or C01B 32/158 is assigned.
- PZT (lead zirconate titanate) emitter materials are classified in H01J 2201/306 and C04B 35/491.

References

Limiting references:

<u>Delete</u>: The following row from the Limiting references table.

Details only described with reference to or clearly only applicable to discharge tubes or discharge lamps of a single basic kind	H01J 11/00, H01J 13/00, H01J 15/00, H01J 17/00, H01J 21/00, H01J 25/00, H01J 27/00,
	H01J 31/00,

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H01J 33/00,
H01J 35/00,
H01J 37/00,
H01J 40/00,
H01J 41/00,
H01J 43/00,
H01J 45/00,
H01J 47/00,
H01J 49/00,
H01J 61/00,
H01J 63/00,
H01J 65/00

Special rules of classification

<u>Delete</u>: The last two bullet points so that only the following bullet point remains:

 Details are classified in H01J 1/00 and - in case of a more detailed relevant Indexing Code subgroup - also in H01J 2201/00.

H01J3/00

Insert: The following new Relationships with other classification places section and text.

Relationships with other classification places

- Details are additionally classified using the relevant Indexing Codes of H01J 2203/00.
- Control electrode structures of field emission devices (i.e. structures where the form/structure, material or relative arrangement of the gate electrode(s) or the focussing electrode(s) is the relevant detail) are classified in H01J 3/021-H01J 3/022 and, where applicable, H01J 2203/0204-H01J 2203/0292 (i.e. under "electron guns"). If only the cathode structure or material is the relevant detail, classification is provided in H01J 1/30-H01J 1/316 and, where applicable, H01J 2201/30-H01J 2201/317.

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 If the control structures of a general field emission device and of a field emission display or a flat panel electron emission lamp (as LCD backlight) is disclosed, classification is provided in H01J 3/021-

H01J 3/022 and H01J 29/467, H01J 29/481, H01J 2329/4604-H01J 2329/4695, H01J 31/127 or H01J 63/00.

References:

<u>Delete</u>: The Limiting references section and table.

Informative references:

<u>Insert</u>: The following NEW row into the Informative references table.

Arrangements of electrodes and associated parts of	H01J 29/46
cathode ray tubes or electron beam tubes for generating or controlling the ray or beam, e.g. electron-optical	
arrangement error arrangement	

Delete: The Special rules of classification section and text.

H01J 3/02

References

Delete: The Informative references section and table.

Insert: The following NEW Application-oriented references section and table.

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Electron guns for cathode ray tubes	H01J 29/48
Electron guns for discharge tubes with provision for introducing objects or material to be exposed to the discharge	H01J 37/06

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H01J3/26

References:

Delete: The Limiting references section and table.

Replace: The existing Informative references table with the updated one below.

Informative references:

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

Arrangements for directing or deflecting the discharge along a desired path	H01J 37/147
Circuit arrangements for producing saw-tooth pulses or other deflecting voltages or currents	H03K

H01J 25/42

Insert: The following NEW Special rules of classification section and text.

Special rules of classification

Looping references between H01J 25/42 and H01J 25/50 have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: H01J 25/50 is an informative reference to H01J 25/42

H01J 25/50

<u>Insert</u>: The following NEW Special rules of classification section and text.

Special rules of classification

Looping references between H01J 25/50 and H01J 25/42 have been identified. Until this inconsistency is resolved in IPC, the current classification practice in CPC is as follows: H01J 25/42 is an informative reference to H01J 25/50

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H01J 29/00

Definition statement

Replace: The existing Definition statement with the updated one below.

Details of cathode ray tubes or of electron beam tubes of the types covered by group H01J 31/00, as far as the details are an integral component of (structurally combined with) the tubes.

In particular: Electrodes; Screens (e.g. luminescent screens); Electron-optical arrangements (e.g. control electrodes, electron guns, focusing and deflection arrangements); Vessels; Optical or photographic arrangements structurally combined with the vessel; Leading-in arrangements; Seals; Means forming part of the tube for the purpose of providing electrical connection to it; Means for obtaining or maintaining the desired pressure within the tube; Selection of substances for gas fillings; Circuit elements structurally associated with the tube.

Relationships with other classification places

<u>Insert</u>: The following NEW Relationships with other classification places section and table.

- Classification of the type of tube in H01J 31/00 and of the relevant details in H01J 29/00 is obligatory.
- The Indexing Codes H01J 2329/00 are numbered in correspondence to subgroups of H01J 29/00, but in much more detail.
- Groups H01J 29/48 H01J 29/51 take precedence over groups H01J 29/52-H01J 29/68.
- Details of electron emission display panels (e.g. field emission display panels) are classified obligatory in both H01J 29/00 and H01J 2329/00, even for details for which H01J 2329/00 does not provide a more detailed relevant subgroup than H01J 29/00.
- Details of other tubes of H01J 31/00, in particular of classical cathode ray tubes, are classified in H01J 29/00 and - in case of a more detailed relevant Indexing Code subgroup - also in H01J 2229/00.
- Details of cathode-ray or electron stream lamps, in particular of flat panel electron emission lamps as LCD backlight, are classified in H01J 63/00.

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- If an electron emission display panel and a flat panel electron emission lamp as LCD backlight is disclosed, classification in H01J 29/00, H01J 2329/00, H01J 31/127 and H01J 63/00 is provided.
- When details are disclosed for different types of flat panel displays (e.g. plasma display panels, electron emission display panels, LCD display panels, OLED display panels), classification is provided for each type thereof.

References

<u>Delete</u>: The Limiting references section and table.

<u>Delete</u>: The Special rules of classification section and text.

H01J 29/58

References

Delete: The Limiting references section and table.

Insert: The following NEW Informative references section and table.

Informative references

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

	Control electrodes for flat display tubes	H01J 29/467
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H01J 31/00

References:

Limiting references:

<u>Insert</u>: The reference symbol H01J 33/00 to the following reference table row so it

reads as follows:

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, , , ,	H01J 25/00, H01J 33/00,
tubes	H01J 35/00, H01J 37/00

Informative references:

Replace: The text associated with the reference symbol shown below:

Apparatuses or processes specially adapted for the manufacture of	H01J 9/00
electric discharge tubes, discharge lamps, or parts thereof	

Special rules of classification

Replace: The text of the special rules of classification section with the updated text below:

 Most electron emission display panels, comprising matrix-arrayed electron emission sources and pixels / pixel groups, are classified in H01J 31/127. If the arrangement of the electron emission sources and of the pixels / pixel groups is not indicated, e.g. in case of a front filter of a general electron emission display panel (with the filter being integral with the front substrate of the panel), H01J 31/123 is provided.

H01J37/32

References:

Limiting references:

Replace: The existing Limiting references section table with the updated one below.

Heating by discharge H05B	
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Informative references:

Insert: The following NEW row in the Informative references table:

Chemical coating	C23C 8/36, C23C 14/24, C23C 14/34, C23C 14/35, C23C 16/50
processes using	
plasma	

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Replace: The reference symbols for the following table rows:

Treatment of semiconductors	H01L 21/30, H01L 21/46
Testing or measuring during manufacturing of semiconductor devices	H01L 22/00

Special rules of classification

Replace: The existing text of the Special rules of classification with the updated text

below:

Cathodic sputtering is covered in H01J 37/3402-H01J 37/3476 and in H01J 37/34 if related to non-magnetron cathodic sputtering. General plasma processing aspects (e.g. gas control or material of the vessel) related to cathodic sputtering are covered by H01J 37/32009-H01J 37/32917.

H01J 49/406

Definition statement

Delete: The text "e.g. WO20007044696" from the Definition statement.

References

Insert: The following NEW Informative references section and table.

Informative references

Electrostatic trap	os	H01J 49/4245

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H01J 49/4245

Definition statement

Delete: The text "e.g. US6888130" from the Definition statement.

References

Insert: The following NEW Limiting references and Informative references

sections and table.

Limiting references

This place does not cover:

Two-dimensional RF ion traps H01J 49/422
--

Informative references

Multi-reflection time of flight spectrometers	H01J 49/406
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2. B. DEFINITIONS QUICK FIX

<u>Symbol</u>	Location of change (e.g., section title)	Existing reference symbol or text	Action; New symbol; New text
H01J29/39	Full Definition		Delete entire definition
H01J31/28	Full Definition		Delete entire definition

Notes:

Use this Definitions Quick Fix (DQF) table to:

- Delete an entire definition
- Delete an entire section
- Change a reference symbol
- Delete a reference symbol
- Delete text in a References section
- Correct one error in spelling, article use, or verb tense

Otherwise, use the standard template.

Reminder: Never delete F symbol definitions.

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