

EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 492

DATE: JANUARY 1, 2018

PROJECT RP0508

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

<u>Action</u>	<u>Subclass</u>	<u>Group(s)</u>
DEFINITIONS:		
Definitions Modified:	C01B	32/00, 32/05
	C01B	32/152, 32/158, 32/162, 32/164, 32/168,
	C01B	32/172, 32/178, 32/18, 32/194
	C01B	32/25
	C01B	32/30, 32/342, 32/348
	C01B	32/90

The following subclasses/groups are also impacted by this Notice of Changes (indicate subclasses/groups outside of the project scope, such as those listed in the CRL): C04B

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)

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2. A. DEFINITIONS (modified)

C01B32/00

Definition statement

This place covers:

Replace: The existing **Definition statement** with the following new paragraph:
Carbon and inorganic compounds thereof. Included in this group are processes and apparatus used in obtaining these products.

Insert: A new **Relationships with other classification places** section and the following new paragraph:

Relationships with other classification places

C01B 32/60 covers preparation of carbonates or bicarbonates in general. Percarbonates are covered by C01B 15/10 and particular individual carbonates are covered by the relevant groups in C01B - C01G according to the cation.

References

Limiting references

Delete: The following rows from the **Limiting references** table:

This place does not cover:

Compounds of carbon and hydrides of metals	C01B6/00
Compounds of carbon and nitrogen	C01B21/00
Compounds of carbon and nobles gases	C01B23/00
Gas carbon production	C10B

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Replace: The symbol in the following row from:

Percarbonates	C01B15/00
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to:

Percarbonates	C01B15/10
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Insert: The following new **Informative references** section and new rows:

Informative references

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

Separation of vapours by condensation	B01D 5/00
Separation by sublimation	B01D 7/00
Separation of gases or vapours by adsorption	B01D 53/02
Separation of gases or vapours by absorption	B01D 53/14
Separation of gases or vapours by diffusion	B01D 53/22
Processes of preparing hydrogen	C01B 3/00
Processes of preparing urea or its derivatives	C07C 273/00
Purifying or modifying the chemical composition of combustible gases containing carbon monoxide	C10K
Processes or apparatus for liquefying or solidifying gases or gaseous mixtures	F25J 1/00
Processes or apparatus for separating the constituents of gaseous mixtures involving the use of liquefaction or solidification	F25J 3/00

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Insert: The following new **Special rules of classification** section:

Special rules of classification

In this main group and the subclass **C01B**, the last place priority rule is applied, i.e. at each hierarchical level, in the absence of an indication to the contrary, a compound is classified in the last appropriate place, however, the main groups **C01B 21/00** and **C01B 23/00** take precedence over this main group.

Preparation of intercalation compounds of graphite with fluorine are classified in **C01B 32/22**.

C01B32/05

Definition statement

This place covers:

Replace: The existing **Definition statement** with the following new paragraph:

Preparation or purification of carbon products not referred to in **C01B32/15**, **C01B32/20**, **C01B32/25** or **C01B32/30**, e.g. carbon gel, carbon aerogel, mesoporous carbon, ordered porous carbon or carbon.

References

Delete: The entire **Limiting references** section and table.

Insert: A new **Informative references** section and following rows:

Informative references

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

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Carbon obtained by using ultra high pressure, e.g. for the formation of diamond	B01J 3/06
Processes of growing single crystal carbon or homogeneous polycrystalline carbon	C30B

C01B32/152

Definition statement

This place covers:

Replace: The existing **Definition statement** with the following new paragraph:

All types of fullerenes, and their preparation; after-treatments thereof, e.g. purification, sorting, functionalization or dispersion in solvents.

C01B32/158

References

Delete: The entire **Limiting references** section:

Informative references

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

Insert: The following new row into the **Informative references** table:

Fine structural details of nanotubes	C01P 2004/13
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Special rules of classification

Replace: The second paragraph in **Special rules of classification**
“Mere references to ...e.g. on the nanotube growing technique or after-treatment.”

with the following new paragraph:

Mere references to "carbon nanotubes" in a document in the absence of other details do not lead to a classification in [C01B32/158](#). For example, a reference to a "carbon nanotube" grown on a substrate used for a semiconductor device is not sufficient for requiring a classification in [C01B32/158](#). If, however, the document includes specific details on how the nanotube is produced, treated, modified or purified which do not seem trivial, then the document is classified in [C01B32/158](#) - [C01B32/178](#). In other terms, documents referring to carbon nanotubes are not automatically classified in [C01B32/00](#) unless there is emphasis, e.g. on the nanotube growing technique or the after-treatment.

C01B32/162

Definition statement

Replace: The existing **Definition statement** with the following new paragraph:

This place covers:

Catalysts, from which nanotubes were grown, e.g. composition, distribution, particle size or morphology.

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C01B32/164

References

Delete: The entire **Limiting references** section.

Insert: A new **Informative references** section and the following row.

Informative references

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

Production of carbon nanotubes in batches	C01B32/16, C01B32/162 or C01B32/166
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C01B32/168

References

Delete: The entire **Limiting references** section.

Insert: A new **Informative references** section and the following row.

Informative references

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

Coatings of a carbon nanotube by a layer or a film, e.g. by a metallic layer or an oxide layer (to form a layered product)	B32B
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C01B32/172

Definition statement

Replace: The existing **Definition statement** with the following new paragraph:

This place covers:

Methods for sorting or isolating as-grown mixtures of carbon nanotubes according to their (n, m) structural form, e.g. diameter, bandgap or electronic type (metallic versus semiconducting).

C01B32/178

Special rules of classification

Replace: The existing paragraph in the **Special rules of classification** with the following new paragraph:

A document mentioning the storage of a gas using the physisorption or chemisorption properties of carbon nanotubes should be classified in the group concerned, for example a document addressing the storage of hydrogen should be classified in [C01B3/00](#), and further classified in the sorbent field, e.g. in [B01J20/00](#).

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C01B32/18

Insert: A new **Glossary of terms** section with the following rows:

Glossary of terms

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

Nanoonion	Structure in which a plurality of graphene sheets are closed concentric spherical shell shape.
Nanoscroll	Similar to that of a multi-walled carbon nanotube, but with a spiral-like rolled-up geometry and open edges at the ends.
Nanohorn	Described as graphene sheets rolled up into the shape of a cylinder and its tip is closed.
Nanocone	Described as graphene sheets made into the shape of a conical structure.
Nanowall	Two-dimensional structure in which the graphene sheets are oriented perpendicular to the substrate.

C01B32/194**Definition statement**

Replace: The existing **Definition statement** with the following new paragraph:

This place covers:

After-treatment of graphene, e.g. sorting, derivatising or dispersing of graphene.

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C01B32/25

References

Delete: The entire **Limiting references** section.

Insert: A new **Informative references** section with the following rows:

Informative references

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

Formation of diamonds by using ultra-high pressure	B01J3/06
Single crystal or polycrystalline structure in which the grains are aligned in a preferential direction	C30B

C01B32/30

Insert: A new **Glossary of terms** section with the following rows.

Glossary of terms

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

Active carbon	Highly adsorptive carbon material with porous structure.
Gaseous activating agent	Gases, such as steam, for use to develop the pore structure of active carbon.
Non-gaseous activating agent	Chemicals, such as zinc chloride, for use to develop the pore structure of active carbon.

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Insert: A new **Synonyms and Keywords** section and new paragraph:

Synonyms and Keywords

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

- Activated carbon
- Active carbon
- Carbon molecular sieve

C01B32/342

Definition statement

This place covers:

Replace: The existing **Definition statement** with the following new paragraph:

Activation in the presence of non-gaseous activating agents, e.g. ZnCl₂, H₃PO₄ or KOH.

C01B32/348

Definition statement

This place covers:

Insert: The punctuation period “.” at the end of the sentence.
Activation in the presence of a metallic compound, e.g. ZnCl₂.

C01B32/90

References

Delete: The entire **Limiting references** section.

Insert: A new **Informative references** section and the following row:

Informative references

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

Alloys	C22C
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4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

<u>CPC</u>	<u>IPC</u>	<u>Action*</u>
C01B32/382	C01B32/354	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 not included in the CICL table above.
- E and M symbols are not included in the CICL table above unless a change to the existing IPC is desired.

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5. CROSS-REFERENCE LIST (CRL)

Scheme references impacted by this revision project

<u>Location of reference to be changed</u>	<u>Referenced subclass or group to be changed</u>	<u>Action; New reference symbol; New text</u>
C01B35/00	C01B32/956	C01B32/991

Definitions references impacted by this revision project

<u>Location of reference to be changed</u>	<u>Referenced subclass or group to be changed</u>	<u>Section of definition</u>	<u>Action; New reference symbol; New text</u>
C01B33/00	C01B32/956	Special rules	C01B23/00
C04B35/563	C01B32/956	Informative references	<u>Delete current text and replace with:</u> Preparation of boron carbide powders C01B32/991
C04B35/565	C01B32/956	Informative references	<u>Delete current text and replace with:</u> Preparation of silicon carbide powders C01B32/956
C04B2235/3821	C01B32/956	Informative references	<u>Delete current text and replace with:</u> Preparation of boron carbide powders C01B32/991
C04B2235/3826	C01B32/956	Informative references	<u>Delete current text and replace with:</u> Preparation of silicon carbide powders C01B32/956

NOTES:

- The CRL tables above are used for changes to locations **outside** of the project scope. Changes to references in scheme titles or definitions **inside** the project scope will be reflected in the “scheme change” template or one of the “definition” templates.
- In addition to other changes proposed in the tables above, in the column titled “Referenced subclass or group to be changed,” **referenced** D symbols should indicate an action of “delete” or should indicate a replacement symbol and **referenced** F symbols should indicate a replacement symbol.
- When a reference is deleted, text related to that reference will also be deleted unless other references or a range of references associated with the same text remain.