Copyright, quotations and figures in your report

Master Nanoscale Engineering

2013-04-05

Céline Andrieu – Michel Serres Library

Stéphanie Lamaison – Michel Serres Library

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Today's training

- Correcting the bibliographies
- What is copyright ?
- How to make quotations and insert citations in the text of your report
- How to insert figures in your report

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Correcting the bibliographies

The evolution of your bibliographies

- Sending in due time → **only 1 work sent after the due date**
- Format (correct use of Zotero) → **good job !**
- Accuracy of each reference → **You can improve some things**
- Relevance and reliability of the references → **I will send your work to M. Kulzer**
- Detailed explanations of your ~~research~~ **information search**

Be careful with Nano Letters citation style !

Reference

The title of the article is missing with this citation style

(1) Pacholski, C.; Kornowski, A.; Weller, H. *Angewandte Chemie International Edition* **2002**, *41*, 1188–1191.

(2) Mo, M.; Yu, J. C.; Zhang, L.; Li, S.-K. A. *Advanced Materials* **2005**, *17*, 756–760.

(3) Li, Z.; Xu, F.; Sun, X.; Zhang, W. *Crystal Growth & Design* **2008**, *8*, 805–807.

(4) Niederberger, M.; Cölfen, H. *Phys. Chem. Chem. Phys.* **2006**, *8*, 3271–3287

List of references:

(1) Eid, C.; Brioude, A.; Salles, V.; Plenet, J.-C.; Asmar, R.; Monteil, Y.; Khoury, R.; Khoury, A.; Miele, P. *Nanotechnology* **2010**, *21*, 125701.

(2) Journet, C.; Picher, M.; Jourdain, V. *Nanotechnology* **2012**, *23*, 142001.

(3) Kim, D. Y.; Yoo, J. B.; Berdinsky, A. S.; Park, C. Y.; Han, I. T.; Jung, J. E.; Jin, Y. W.; Kim, J. M. *Diamond and Related Materials* **2005**, *14*, 810–814.

(4) Magrez, A.; Seo, J. W.; Smajda, R.; Mionić, M.; Forró, L. *Materials* **2010**, *3*, 4871–4891.

You can improve the accuracy of some references

3. N, K. *et al.* In vitro cell migration and invasion assays. *Mutation research* (2012).at <http://pubmed.cn/22940039>

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You can improve the accuracy of some references

[3]Pietrement, O. Imagerie et Caractérisation Nanomécanique des Surfaces par Microscopie à Force Atomique. Ph.D. Thesis, Université de Reims, December 2000.

[5]Neumann, T. Determining the elastic modulus of biolgical sample using atomic force microscopy. JPK Instruments. Application report.

[8]Trunfio-Sfarghiu, A.-M.; Berthier, Y.; Meurisse, M.-H.; Rieu, J.-P. Role of nanomechanical properties in the tribological performance of phospholipid biomimetic surfaces. *Langmuir* **2008**, *24*, 8765–8771.

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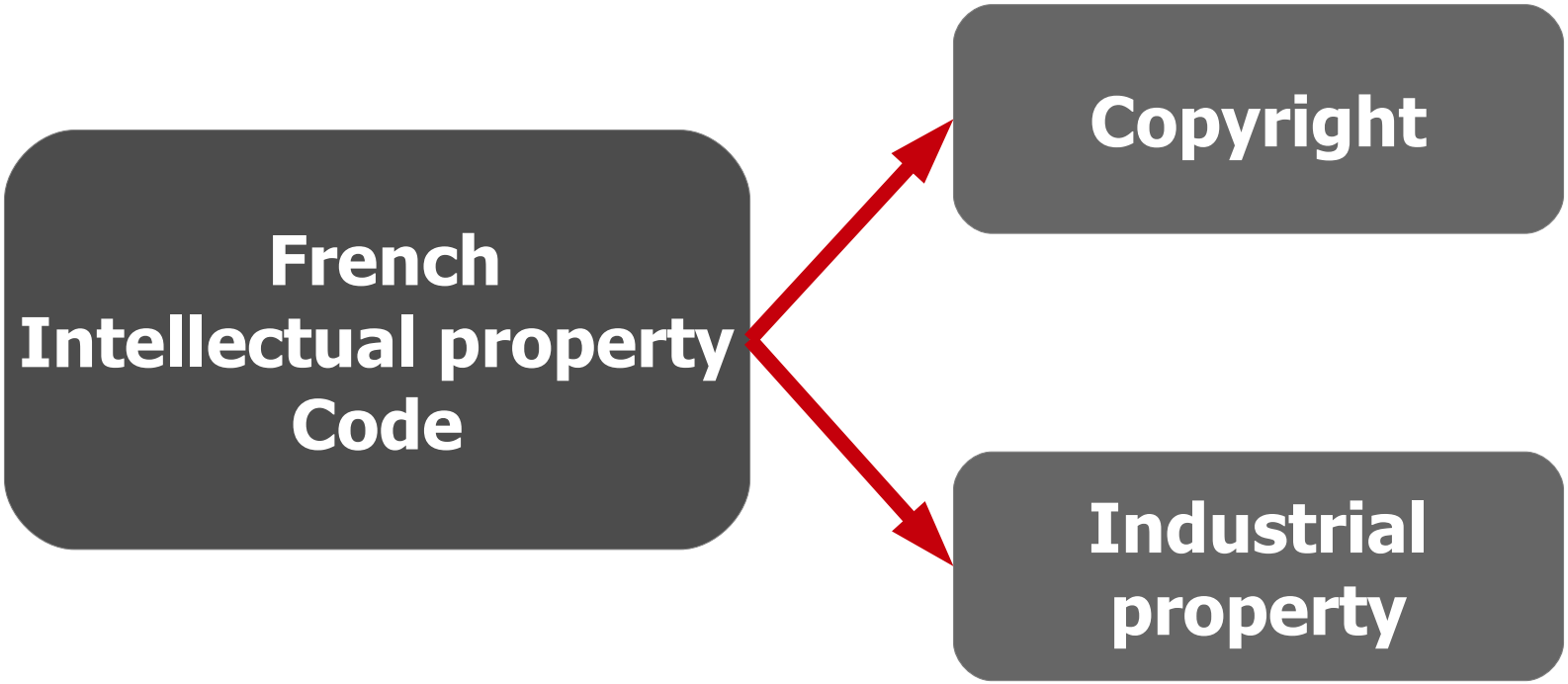
What is copyright ?

« Intellectual property protects the creations of the human mind, the human intellect »

World Intellectual Property Organization.
Basic notions of copyright and related rights


French Intellectual property Code
Copyright
Industrial property

What is covered by Industrial property ?

- Patents
- Drawings
- Trademarks
- Brands

Copyright is :

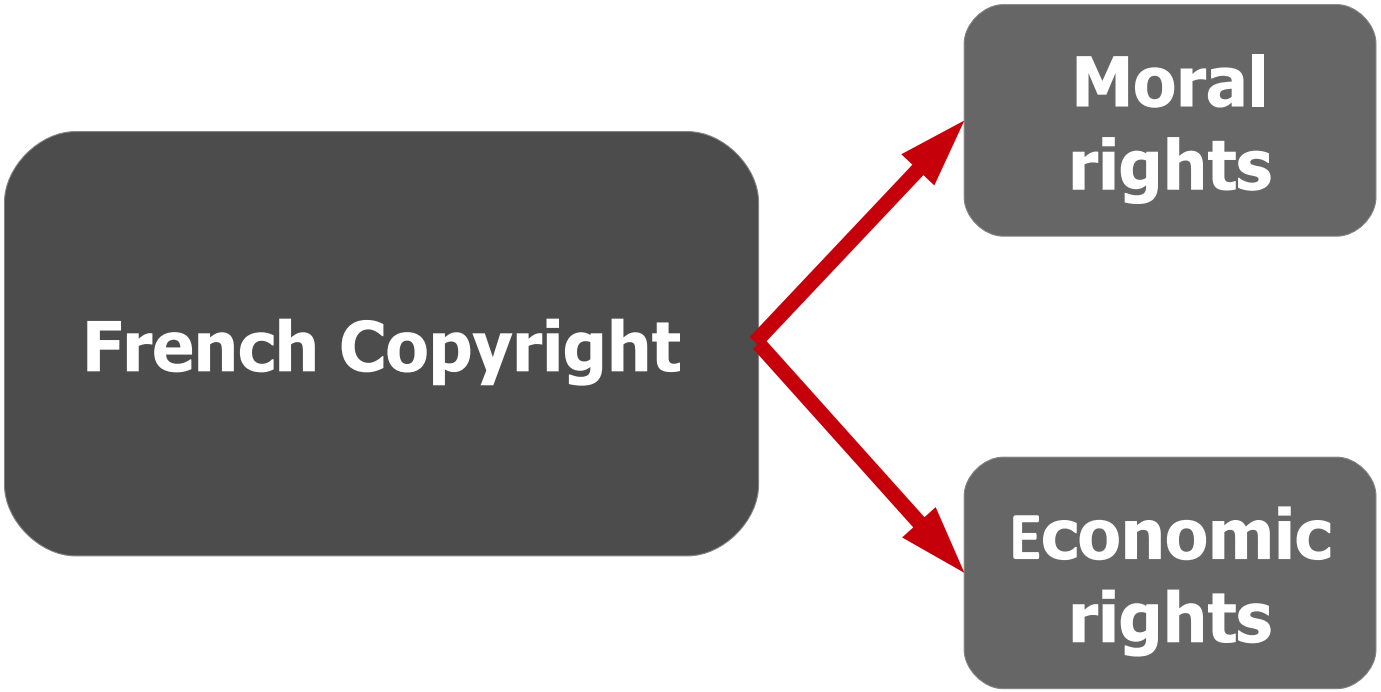
- a **legal term**
- describing **rights** given to **creators**
- for their **literary, scientific and artistic works**

Copyright is :

- a **legal protection**
- given by governments to **authors** of **original works**
- that have been '**fixed' in a tangible medium of expression**.

What is covered by Copyright ?

- Literary, artistic, scientific works (novels, poems, newspapers, computer programs...)
- Films, musical compositions, choreography...
- Paintings, drawings, photographs, architecture...
- Maps, technical drawings...


French Copyright
Moral rights
Economic rights

Economic rights

The owner of rights **gets money** from **the use of his work** :

→ **reproduction of the work** = making copies

→ communication to the public...

Moral rights

Right of paternity or 'attribution' :

→ right to claim the **authorship** of the work

What does 'All rights reserved' mean ?

© : the owner may use his property **exclusively**

→ to use a work, you have to ask for **an authorization to the author**

→ the author can get money from this use, written in a **license**

→ you have to **cite the source** and **the name of the author**

Limitations on rights

- For **teaching purposes**
- Such as the **American 'fair use'**
- Such as the **French exception** in order to analyse and criticize a work

Works in the public domain

- Works which are not covered by copyright
- 70 years after the author's death
- Or on a voluntary basis (from the author)

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The writing of your report

How works (texts and figures) can be used without violating copyright laws ?

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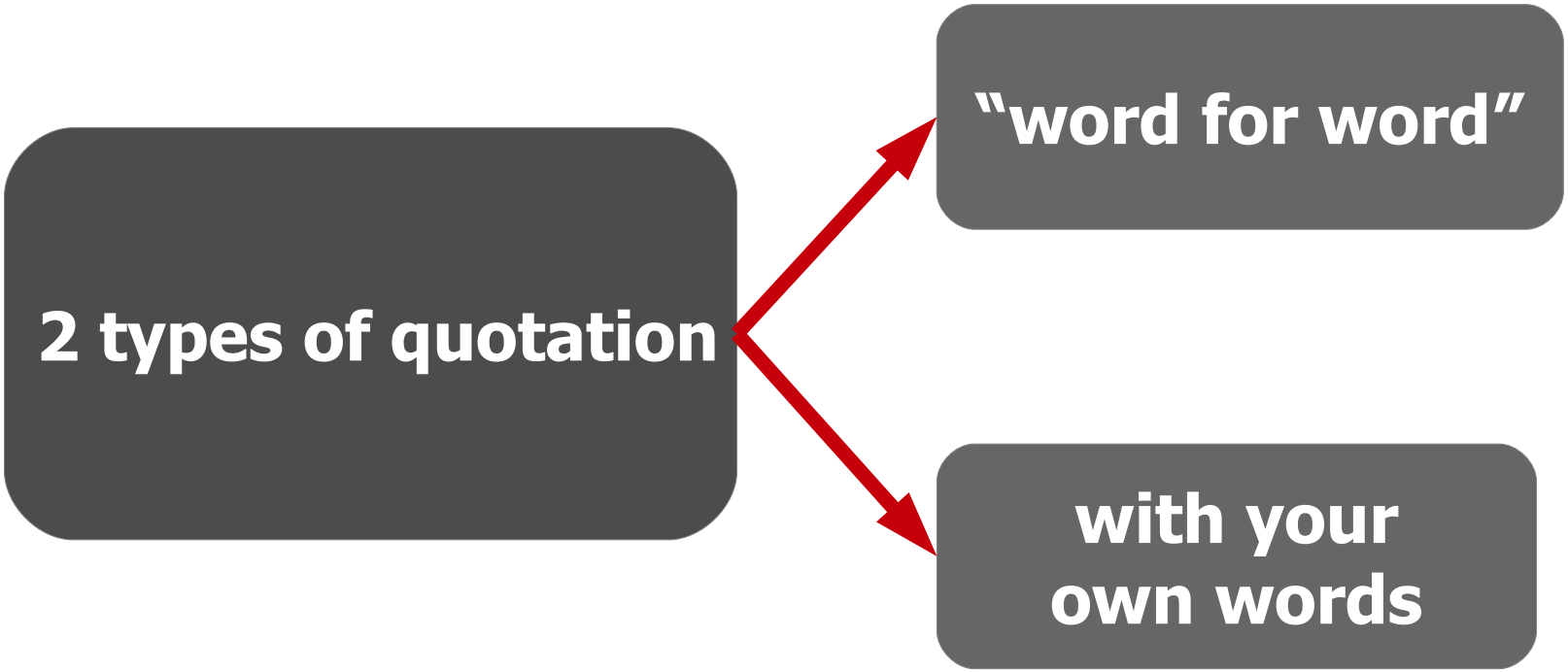
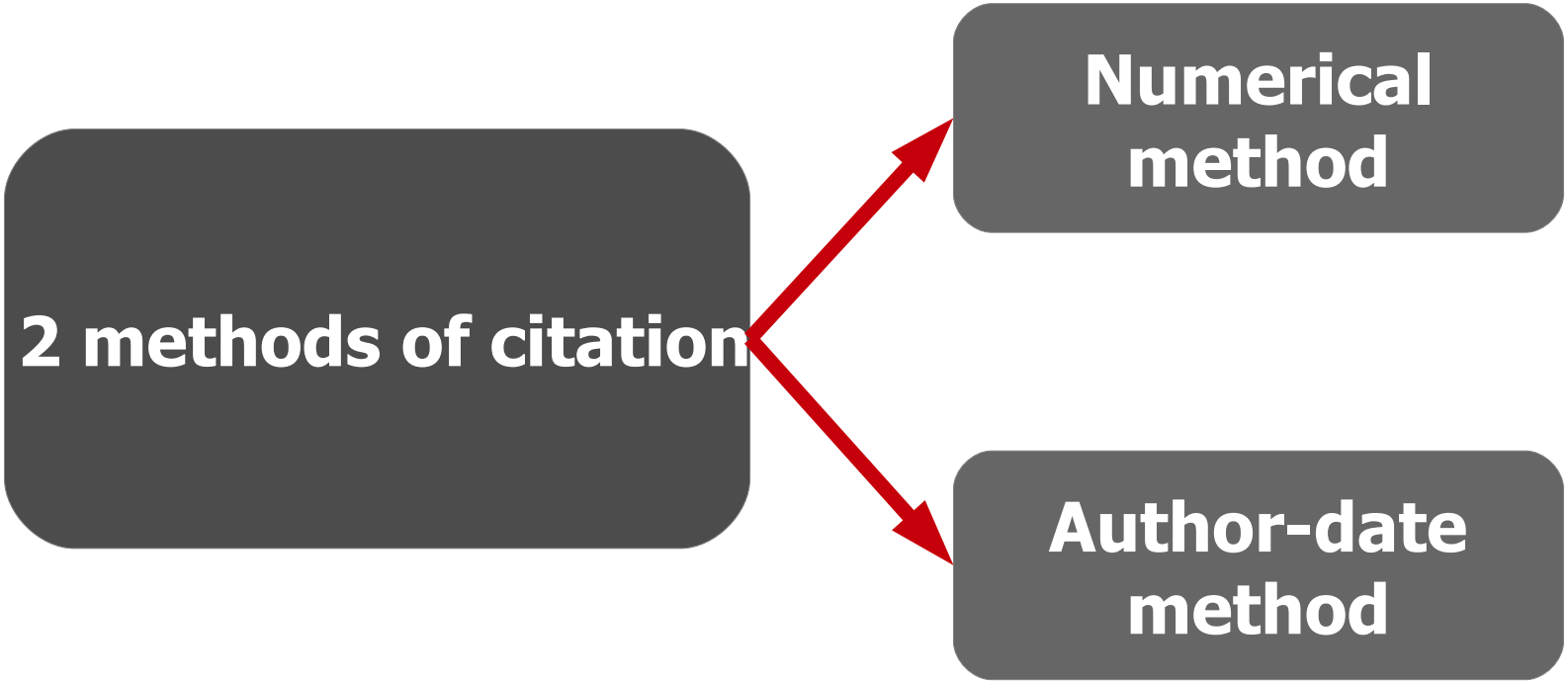

2 types of quotation
"word for word"
with your own words

The quotation

- **Word for word** (within quotation marks) : has to be compatible with fair practice → **short quotation**
- You have to **cite the source** and **the name of the author** you are citing
- **Only for a text**, not for a picture


2 methods of citation
Numerical method
Author-date method

Quotations and numerical method

Short quotation within quotation marks

Markers within brackets = in-text citations

Introduction

Nanoscience can be defined as the "science and engineering involved in the design, synthesis, characterization and application of materials and devices whose smallest functional organization in at least one dimension is on the nanometer scale." [1] Nanoscience and nanotechnologies have a huge potential to bring benefits in areas as diverse as drug development, water decontamination, information and communication technologies, as well as the production of stronger, lighter materials. [1] In 2000, the National Nanotechnology Initiative (NNI) was started by President Clinton. NNI is a multiagency U.S. government program which supports research and development, infrastructure, education and commercialization of nanotechnology. The 2006 NNI budget request was $1.05 billion. [2] The National Science Foundation received $305 million for fiscal year 2005 of which $89 million would be spent by the National Institutes of Health on nanotechnology, including nearly $30 million for the National Cancer Institute's new Alliance for Nanotechnology in Cancer. Nanoscience is definitely a growing domain in many different fields; particularly in medicine and it has been estimated that the total global investment in nanotechnologies as of 2007 was five billion euros. The number of published patents has also greatly increased: it went from 531 patents in 1995 to 1976 in 2001. [1]

Numerical method

Bibliography

[1] Sahoo, S. K.; Parveen, S.; Panda, J. J. The present and future of nanotechnology in human health care. *Nanomedicine: Nanotechnology, Biology and Medicine* **2007**, *3*, 20–31.

[2] Koo, O. M.; Rubinstein, I.; Onyuksel, H. Role of nanotechnology in targeted drug delivery and imaging: a concise review. *Nanomedicine: Nanotechnology, Biology and Medicine* **2005**, *1*, 193–212.

[3] Braga, P. C.; Ricci, D. *Atomic force microscopy biomedical methods and applications*; Humana Press: Totowa, New Jersey, 2004.

[4] Atomic Force Microscopy overview http://www.nanoscience.com/education/afm.html (accessed Jan 17, 2012).

[5] Kuznetsov, Y. G.; Malkin, A. J.; McPherson, A. Atomic force microscopy studies of living cells: visualization of motility, division, aggregation, transformation, and apoptosis. *J. Struct. Biol.* **1997**, *120*, 180-191.

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Inserting markers in your report with

zotero

3 examples of citation style with numerical method

- **Nature**
- **American Chemical Society** (brackets, with titles)
- **IEEE**

Nature citation style
In-text citation

Markers as a superscript

as materials which have at least one dimension at the nanoscale. The most important characteristics of nanomaterials are their small size and their large surface area. This leads them exhibiting specific physical and chemical properties, which vary dramatically from their bulk forms[1].

The synthesis of nanomaterials is a complex process and hence several techniques are available. In general, they are classified in two categories: (1) top-down and (2) bottom-up. Top-down refers to the traditional microfabrication methods in which externally controlled tools are used to 'cut' materials into the desired shape. Examples of top-down methods are mechanical milling, spark explosion, or photolithographic process. By contrast, bottom-up approaches use the chemical properties of single component (atoms or molecules) gathered for building self-organized or self-assembled desired nanostructures. Examples are chemical methods such as sol-gel, microemulsion or hydrothermal synthesis which are employed for the synthesis of nanoparticles from their atomic or molecular state. Bottom-up also includes the chemical surface modification methods that are used to self-assemble nanostructures[2].

Nature citation style Bibliography

References

1. Tchoul, M. N. *et al.* Assemblies of Titanium Dioxide-Polystyrene Hybrid Nanoparticles for Dielectric Applications. *Chem. Mater.* **22,** 1749–1759 (2010).
2. Fa, W., Yang, C., Gong, C., Peng, T. & Zan, L. Enhanced photodegradation efficiency of polyethylene-TiO2 nanocomposite film with oxidized polyethylene wax. *J. Appl. Polym. Sci.* **118,** 378–384 (2010).

ACS (brackets, with titles) In-text citation

Markers within round brackets

as materials which have at least one dimension at the nanoscale. The most important characteristics of nanomaterials are their small size and their large surface area. This leads them exhibiting specific physical and chemical properties, which vary dramatically from their bulk forms(*1*).

The synthesis of nanomaterials is a complex process and hence several techniques are available. In general, they are classified in two categories: (1) top-down and (2) bottom-up. Top-down refers to the traditional microfabrication methods in which externally controlled tools are used to 'cut' materials into the desired shape. Examples of top-down methods are mechanical milling, spark explosion, or photolithographic process. By contrast, bottom-up approaches use the chemical properties of single component (atoms or molecules) gathered for building self-organized or self-assembled desired nanostructures. Examples are chemical methods such as sol-gel, microemulsion or hydrothermal synthesis which are employed for the synthesis of nanoparticles from their atomic or molecular state. Bottom-up also includes the chemical surface modification methods that are used to self-assemble nanostructures(*2*).

ACS (brackets, with titles) Bibliography

References

(1) Tchoul, M. N.; Fillery, S. P.; Koerner, H.; Drummy, L. F.; Oyerokun, F. T.; Mirau, P. A.; Durstock, M. F.; Vaia, R. A. Assemblies of Titanium Dioxide-Polystyrene Hybrid Nanoparticles for Dielectric Applications. *Chem. Mater.* **2010**, *22*, 1749–1759.

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IEEE citation style
In-text citation

Markers within square brackets

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IEEE citation style Bibliography

References

[1] M. N. Tchoul, S. P. Fillery, H. Koerner, L. F. Drummy, F. T. Oyerokun, P. A. Mirau, M. F. Durstock, et R. A. Vaia, « Assemblies of Titanium Dioxide-Polystyrene Hybrid Nanoparticles for Dielectric Applications », *Chem. Mater.*, vol. 22, nº 5, p. 1749□1759, mars 2010.

[2] W. Fa, C. Yang, C. Gong, T. Peng, et L. Zan, « Enhanced photodegradation efficiency of polyethylene-TiO2 nanocomposite film with oxidized polyethylene wax », *J. Appl. Polym Sci.*, vol. 118, nº 1, p. 378–384, 2010.

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How to insert figures in your report

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Different types of figures

Graphs

The second question investigates the point of view of people that have heard about nanotechnology. These results are shown in figure 21.

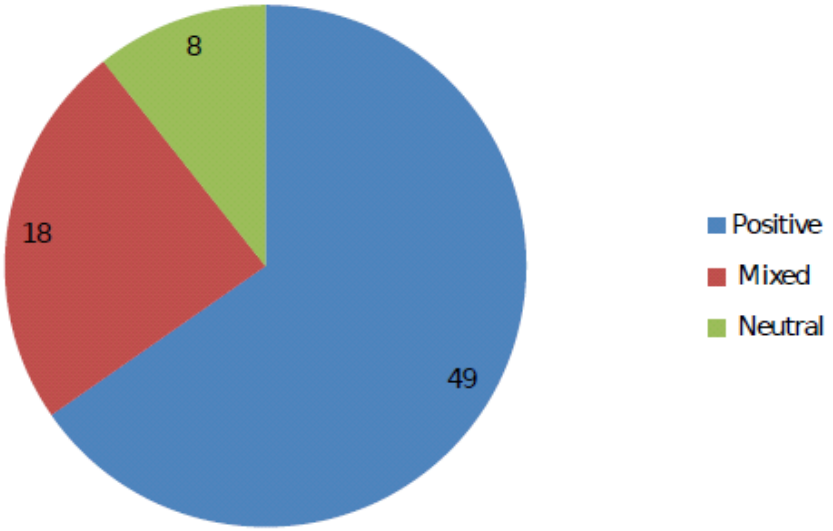

Figure 21: Point of view exposed to people that heard about Nanotechnology

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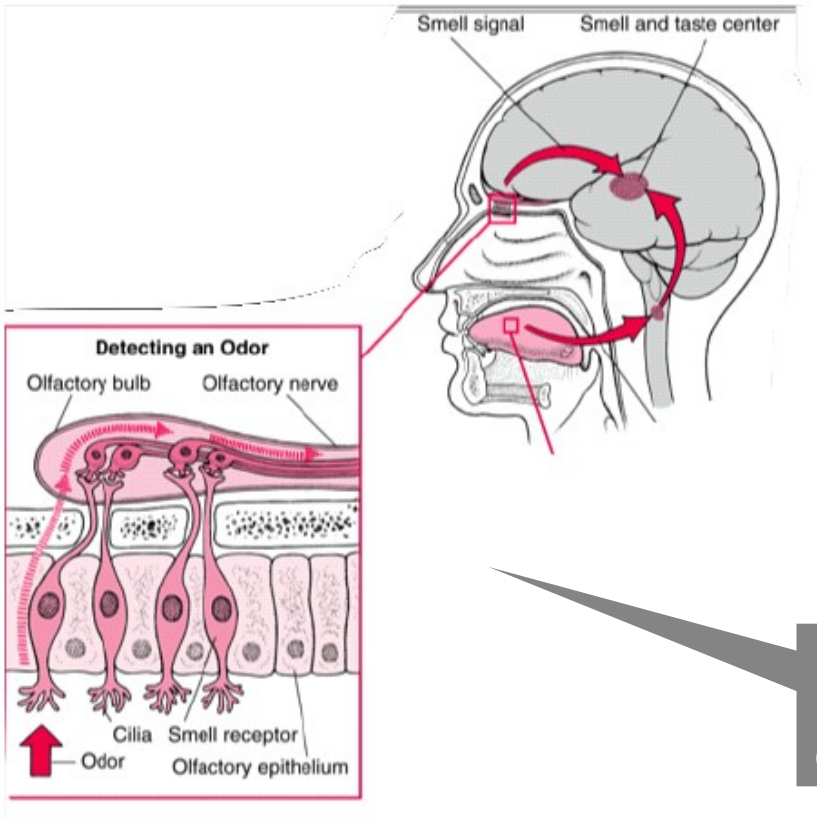
Tables

Type of nanomaterial	Encapsulant	Indicator	Therapeutic improvement
Polyisohexylcyanoacrylate NPs	DOX	Hepatocellular Carcinoma	Higher antitumor efficacy than native doxorubicin and can overcome multiple drug resistance phenotype.
PLGA NPs	Paclitaxel	Various cancers	Effective in chemotherapeutic and photothermal destruction of cancer cells
Gold NPs (AuNPs)	-	Various cancers	Effective as radiation sensitizers for cancer therapy
Chitosan NP (CNP)	siRNA	Ovarian cancer	Increased selective intratumoral delivery and significant inhibition of tumor growth compared to controls
Cetyl alcohol/polysorbate NPs	Paclitaxel	Brain tumor	Higher brain and tumor cell uptake, thus leading to greater cytotoxicity; also effective towards p-glycoprotein expressing tumor cells.
Lipid nanocapsules	Etoposide	Glioma	Greater cytotoxicity. Can overcome p-glycoprotein dependent multidrug resistance.
P (4-vinylpyridine) particles	-	Antimicrobial agent	These particles can be used to inhibit bacterial growth for various bacteria as biocolloids
Chitosan-alginate NPs	Carboplatin	Retinoblastoma	Enhanced antiproliferative activity and cytotoxicity of NPs in comparison with native carboplatin
Poly (3- hydroxybutyrate-co-3-hydroxyoctanoate) NPs	DOX	Various cancers	Effective in selective delivery of anticancer drug to the folate receptor-overexpressed cancer cells

Table 4.1: Nanoparticles used as therapeutic agents. [2]

Pictures



Photographs, maps, drawings…

Figure 6: Overview of the olfactory neurons. Source: Jacewicz[18]

The caption of a figure

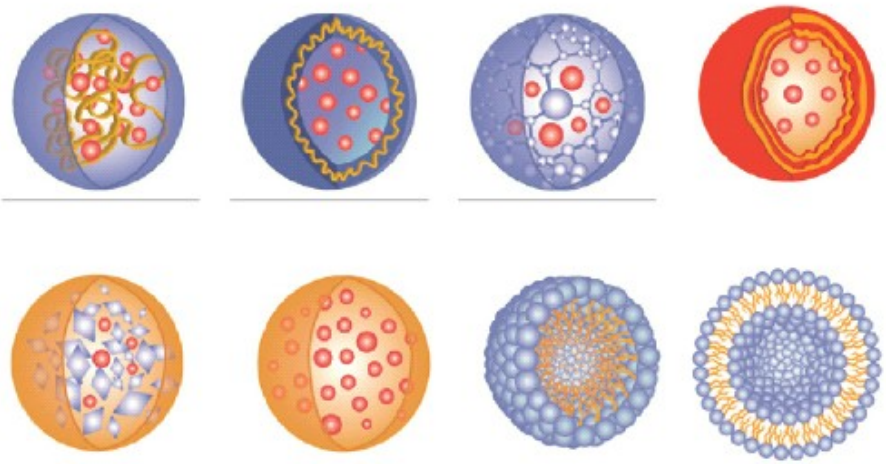


Figure 4: Examples of nanocarrier delivery vehicles. Source: Mihranyan et al.[28]

The title below

The number of the figure : to call it in the text of the report (Fig. 1...) and to insert a list of figures at the end of the report

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Which rights to use which figures ?

Picture found on the web

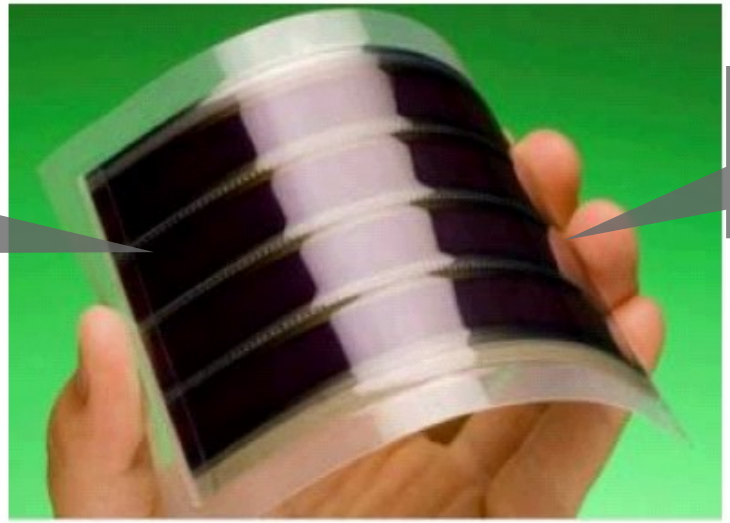

Figure 9 DSSC cell

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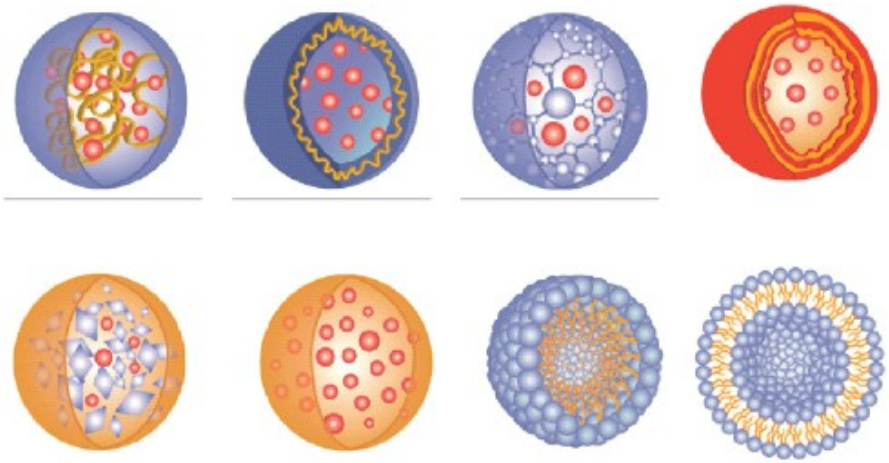

Figure 4: Examples of nanocarrier delivery vehicles. Source: Mihranyan et al [28]

Source → in-text citation with marker referred to the final bibliography

To create his own figure from another one

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Polyisohexylcyanoacrylate NPs	DOX	Hepatocellular Carcinoma	Higher antitumor efficacy than native doxorubicin and can overcome multiple drug resistance phenotype.
PLGA NPs	Paclitaxel	Various cancers	Effective in chemotherapeutic and photothermal destruction of cancer cells
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Cetyl alcohol/polysorbate NPs	Paclitaxel	Brain tumor	Higher brain and tumor cell uptake, thus leading to greater cytotoxicity; also effective towards p-glycoprotein expressing tumor cells.
Lipid nanocapsules	Etoposide	Glioma	Greater cytotoxicity. Can overcome p-glycoprotein dependent multidrug resistance.
P (4-vinylpyridine) particles	-	Antimicrobial agent	These particles can be used to inhibit bacterial growth for various bacteria as biocolloids
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Poly (3- hydroxybutyrate-co-3-hydroxyoctanoate) NPs	DOX	Various cancers	Effective in selective delivery of anticancer drug to the folate receptor-overexpressed cancer cells

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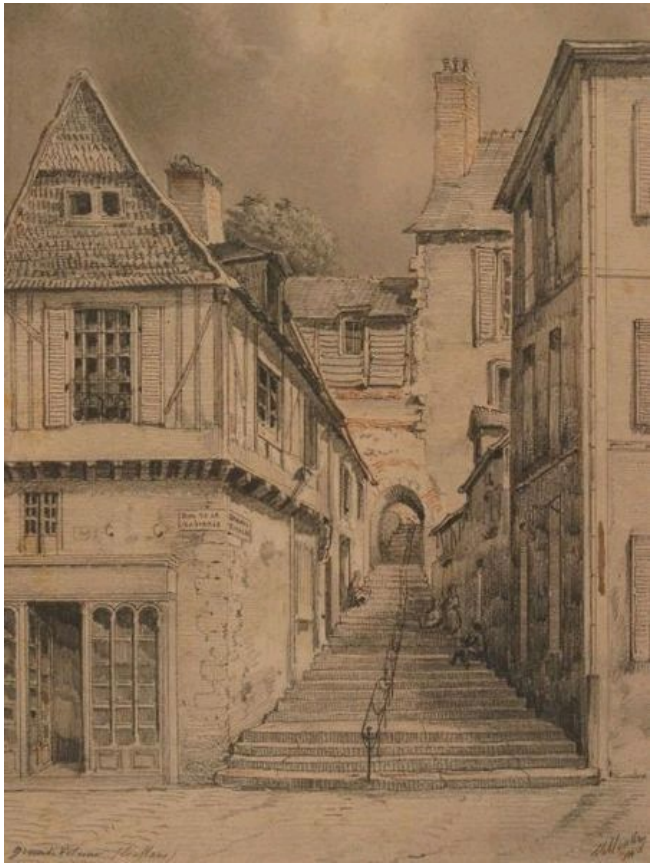

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Grande poterne.JPG **Louis Moullin (1817–1876)**

title

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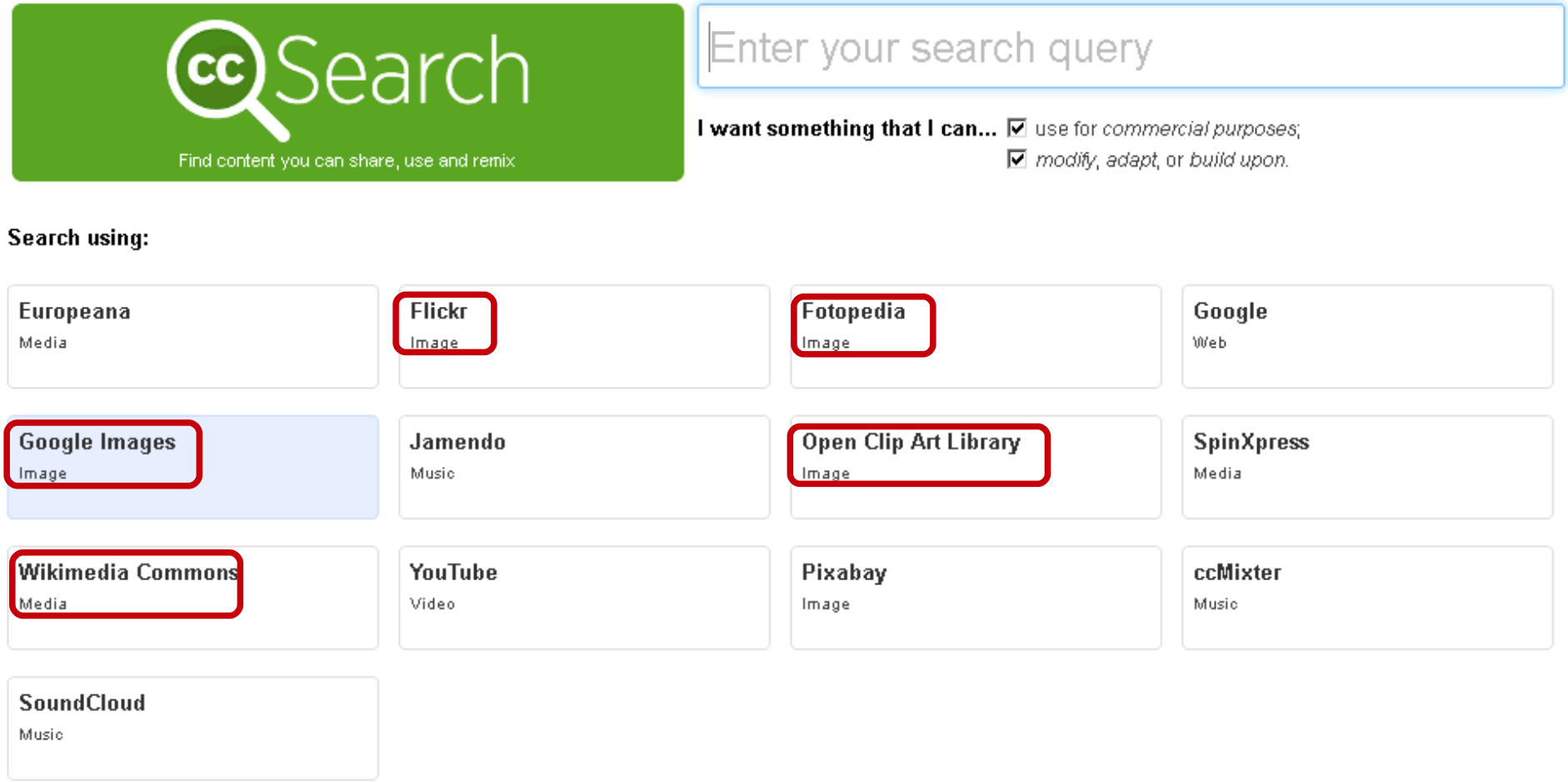

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