

12th International Workshop on Molecular and Physical Gastronomy

Flavour through Cooking

10-12 May 2023

2. for references :

Herve.this@inrae.fr

It began in 1992, in Erice



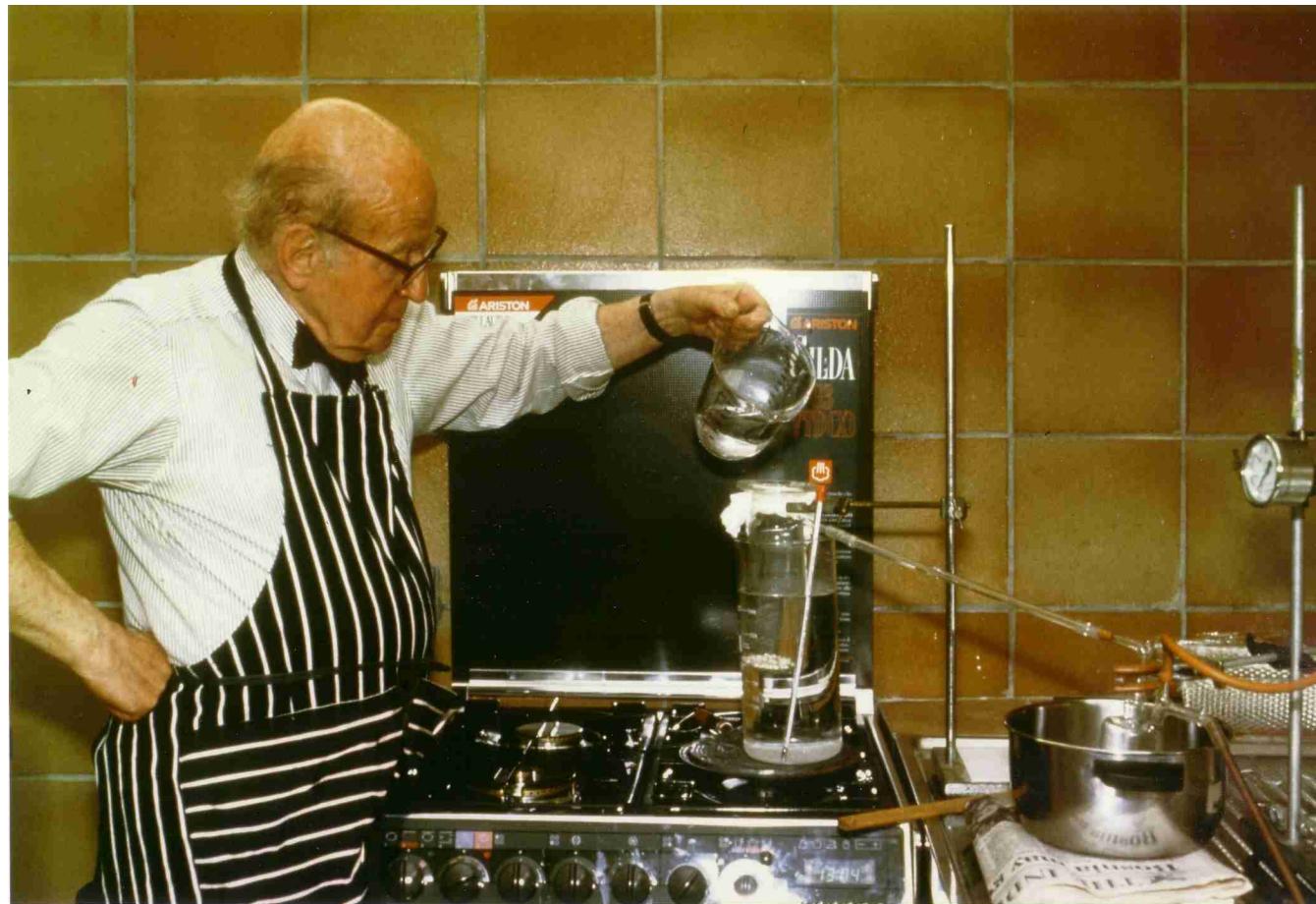
Always with Cremant (from Alsace)



Friends from all over the world



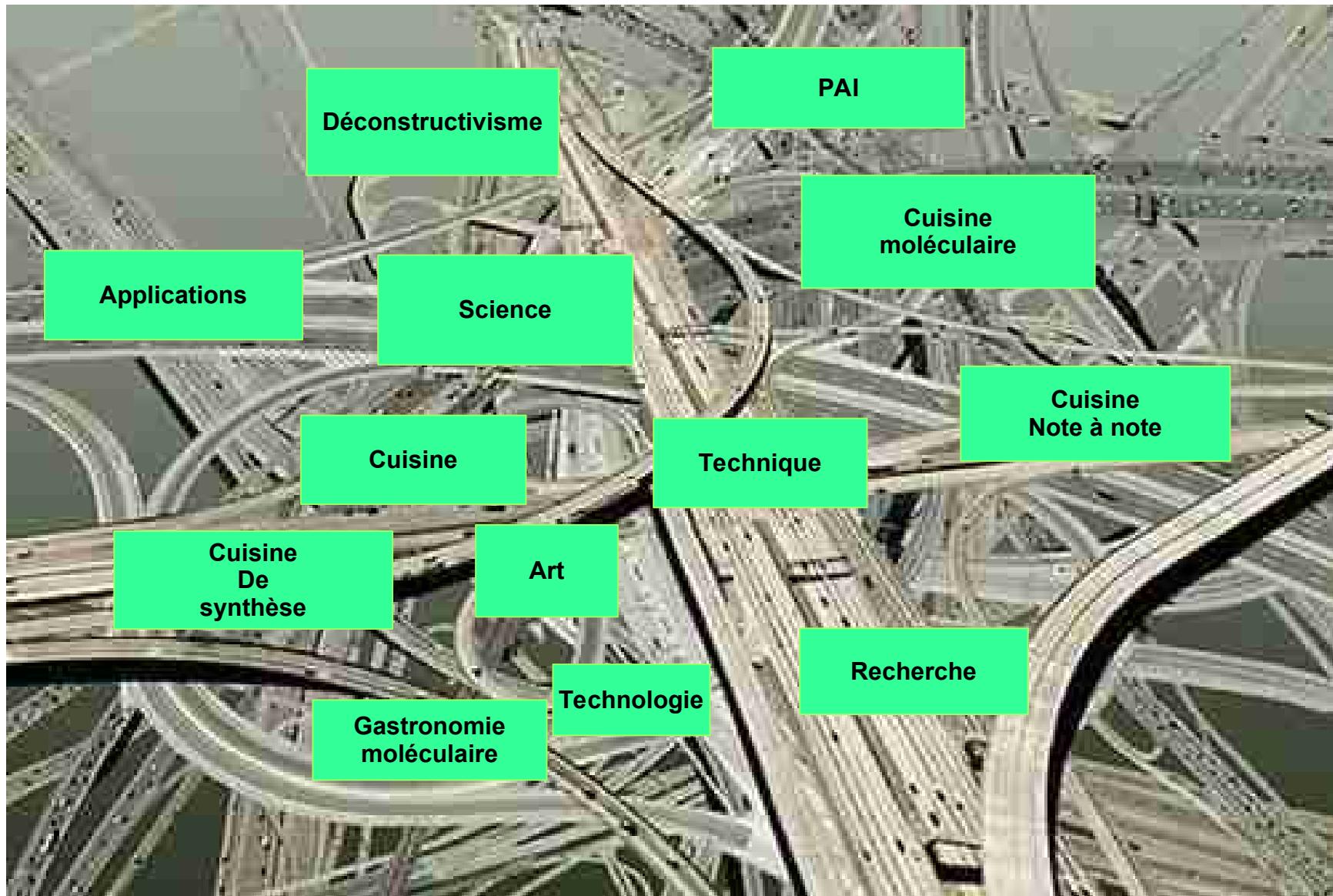
And with experiments





Avoiding confusions

Confusion !



First a simple idea: activities are defined by a goal and a method



Technique, technology, science

**Technique
(Cooking)**

**Food
Technology
and
Engineering**

**Sciences
of nature
(Physics, chemistry,
Biology...
And
Molecular Gastronomy)**



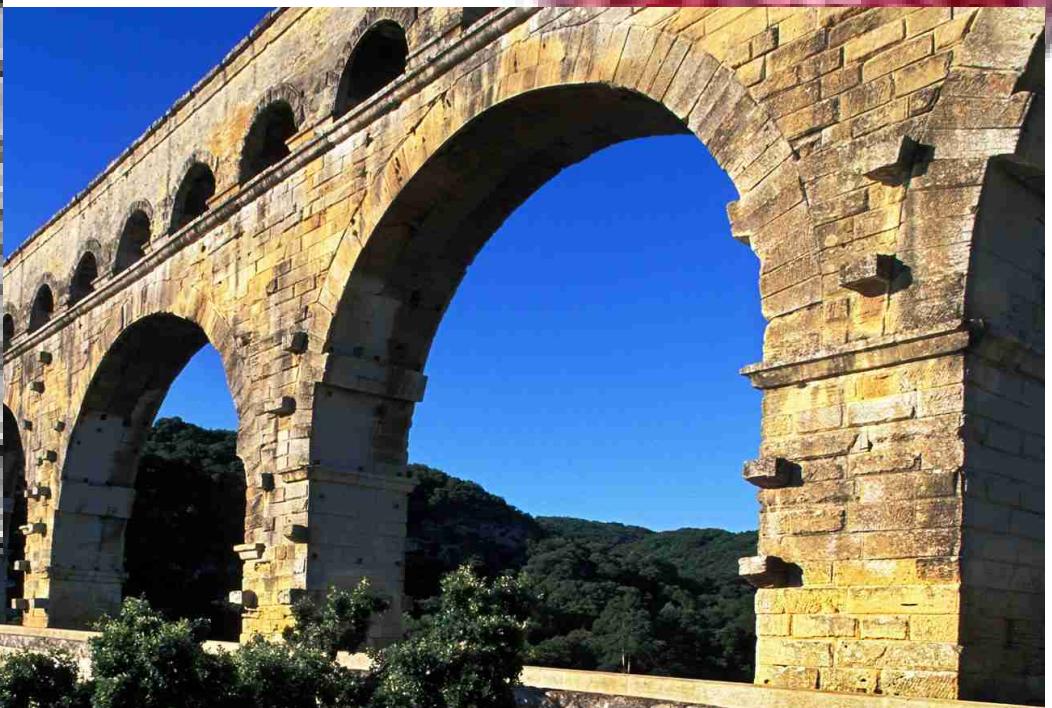
**Food
(dishes)**

**Knowledge
(mechanisms)**

1. Technique : to produce goods



With great “care”



But for cooking, there is also a question of « art »



2. Technology: studying and improving technique



3. Sciences of nature (chemistry, physics): looking for the mechanisms of phenomena



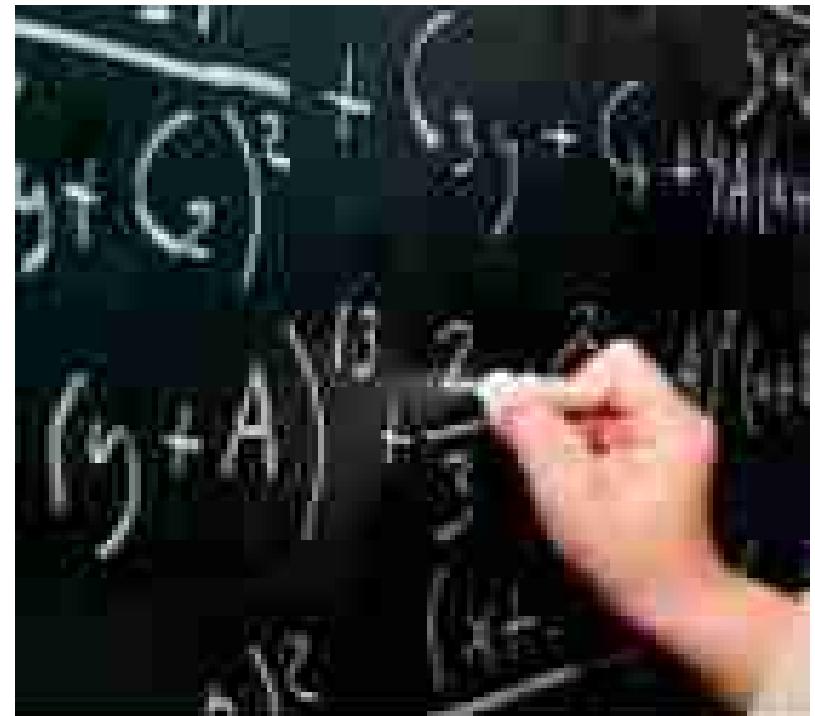
A first pillar: experiment !

- "Un bon moyen pour atteindre la vérité, c'est de **préférer l'expérience à n'importe quel raisonnement**, puisque nous sommes sûrs que lorsqu'un raisonnement est en désaccord avec l'expérience il contient une erreur, au moins sous une forme dissimulée. Il n'est pas possible, en effet, qu'une expérience sensible soit contraire à la vérité. Et c'est vraiment là un précepte qu'Aristote plaçait très haut et dont la force et la valeur dépassent de beaucoup celles qu'il faut accorder à l'autorité de n'importe quel homme au monde«
- Galilée (1564-1642)



A second pillar: calculation

“Philosophy [nature] is written in that great book which ever is before our eyes -- I mean the universe -- but we cannot understand it if we do not first learn the language and grasp the symbols in which it is written. **The book is written in mathematical language**, and the symbols are triangles, circles and other geometrical figures, without whose help it is impossible to comprehend a single word of it; without which one wanders in vain through a dark labyrinth.”

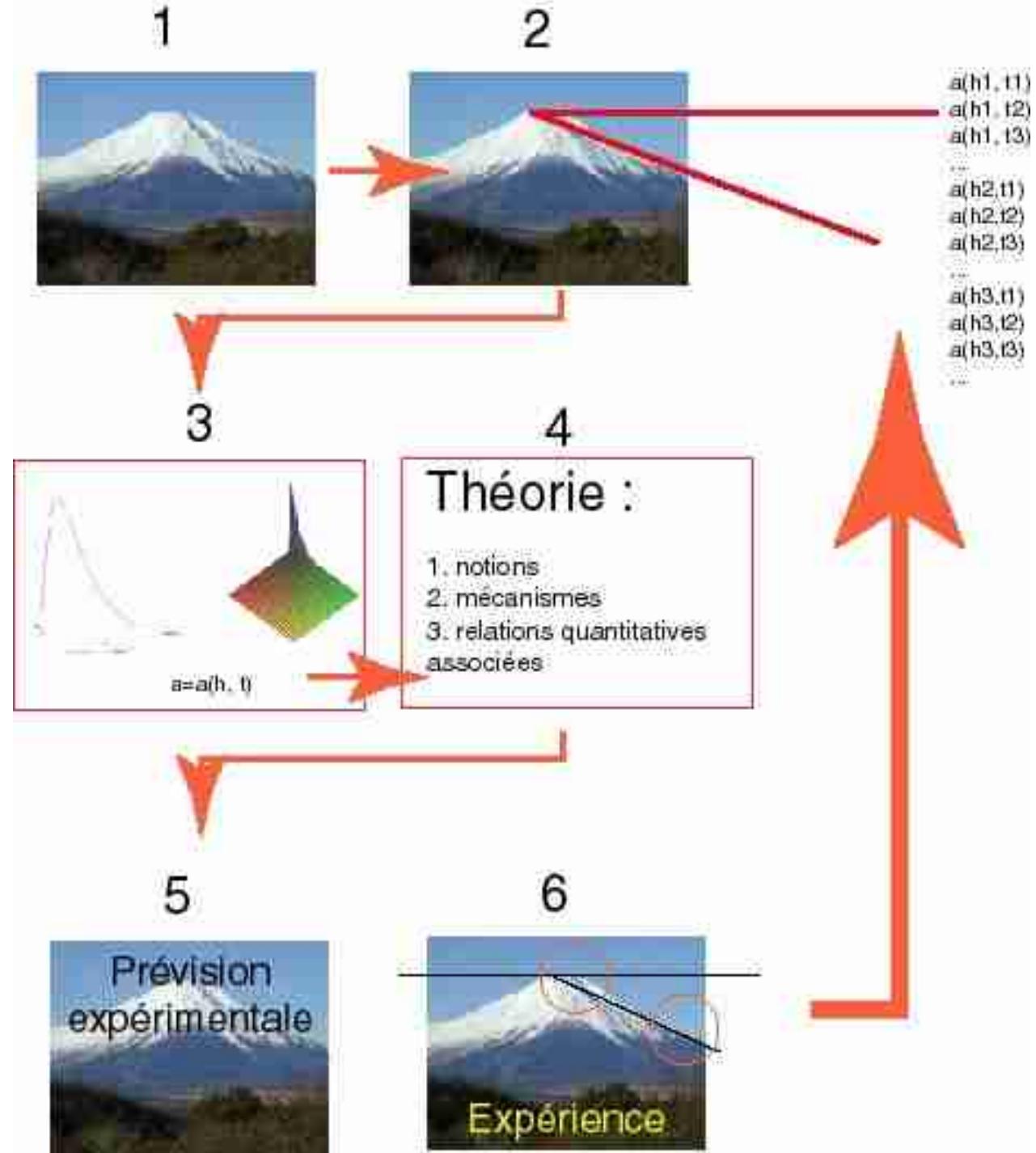




Francis Bacon (1561-1626)

« Nous ne saurions trop recommander de ne rien avancer en matière d'histoire naturelle, qu'il s'agisse des corps ou des vertus, qui ne soit (autant que faire se peut) **nombré, pesé, mesuré, déterminé** ; car ce sont les oeuvres que nous avons en vue, et non les spéculations. »

A view of the method of sciences of nature.



This is applied to...











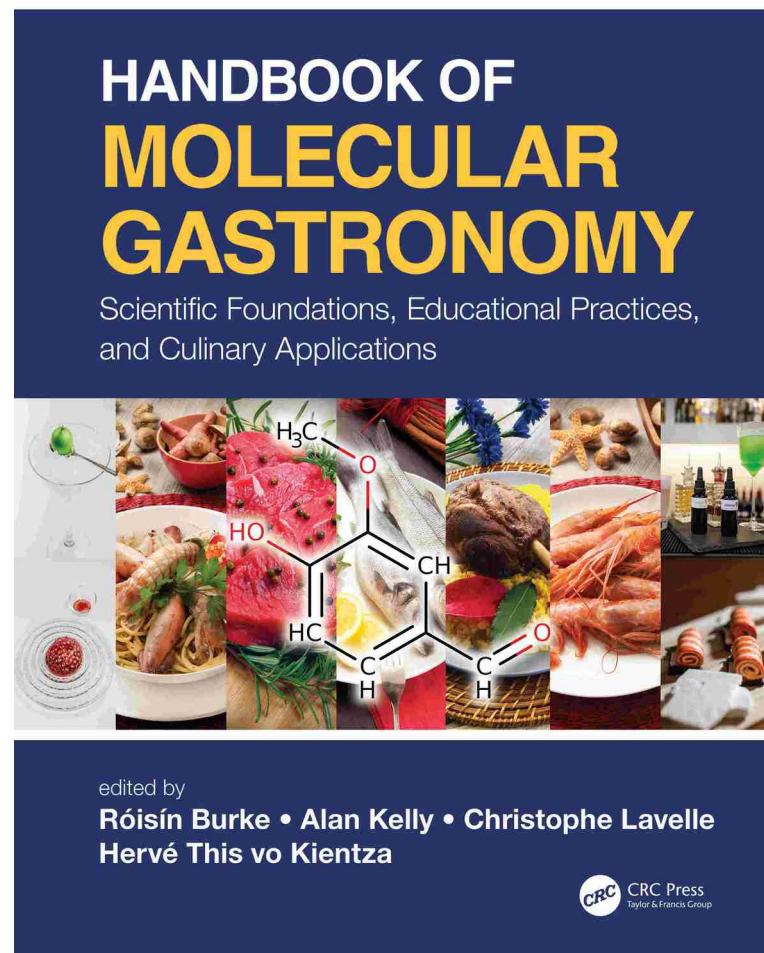


12th Int. Workshop on Molecular and Physical Gastronomy

Flavour through cooking



2021 : An important step



A tool for our group : don't hesitate to submit manuscripts

Home > AgroParisTech > Départements de formation et de recherche

Share this page

International Journal of Molecular and Physical Gastronomy

The Editorial Board

The Editorial Board of this Journal is made of: Thomas Vilgis, Max Planck Institute, Mainz, Germany Weon-Sun Shin, Hanyang University, Seoul, South Korea Juan Valverde, (...)

The International Journal of Molecular and Physical Gastronomy

Molecular and Physical Gastronomy (Molecular Gastronomy, for short) is the scientific activity which looks for the mechanisms of phenomena occurring during culinary (...)

INTERNATIONAL CENTRE FOR MOLECULAR GASTRONOMY AGROPARISTECH INRAE

Centre international de gastronomie moléculaire

International Centre for Molecular and Physical Gastronomy

- 1 Scientific and technology research.
- 2 Education.

3 Events and international networking

A Portal for Molecular Gastronomy in the World

International Journal of Molecular and Physical Gastronomy

- 1 The Journal itself
- 2 Some information on this journal.

3 Guide for Authors

Other Events

The International Workshops on Molecular and Physical Gastronomy

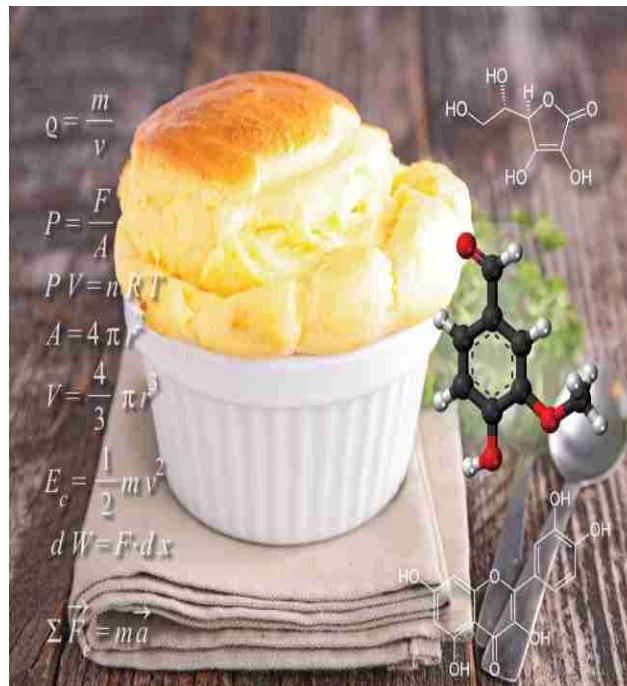
- 4 About this by Note Clicking ("synthetic cooking")

Int J Mol Phys Gast

The content of this Journal

1. Editorials : <http://www.agroparistech.fr/-1-Editorials-.html>
2. Science Section : <http://www.agroparistech.fr/The-Scientific-Section.html>
3. Letters to the Editors : <http://www.agroparistech.fr/Letters-to-the-Editors.html>
4. Publications by University students :
5. Educational Applications of Molecular Gastronomy :
<http://www.agroparistech.fr/Educational-Applications,2207.html>
6. Technological Applications of Molecular Gastronomy :
<http://www.agroparistech.fr/Technological-Applications,2211.html>
7. Comments : <http://www.agroparistech.fr/Comments,2213.html>
8. News :<http://www.agroparistech.fr/In-Brief,2209.html>

And recently



$F = \frac{1}{4 \pi \epsilon_0} \frac{q_1 q_2}{r^2}$

$P = A \epsilon \sigma T^4$

$E = m c_p \Delta T$

$\phi = -\lambda \frac{\Delta T}{\Delta x}$

$S = k_B \ln(\Omega)$

$\gamma = \frac{\partial}{\partial a} F$

$p(E) = K \exp\left(-\frac{E}{k_B T}\right)$

**Calculating
and Problem
Solving Through
Culinary
Experimentation**

Hervé This vo Kientza

 CRC Press
Taylor & Francis Group



Celebrate rationality !



herve.this@inrae.fr