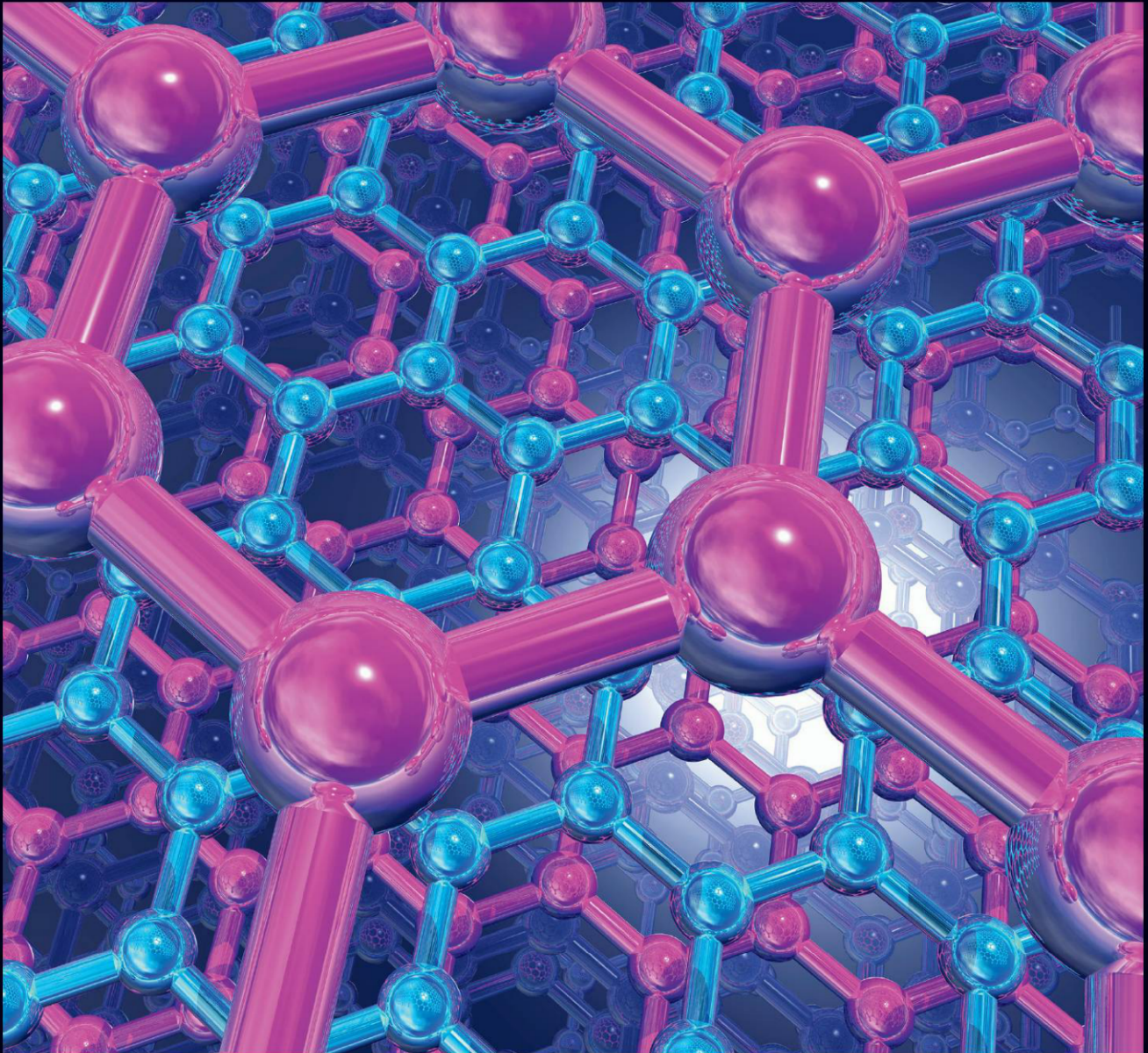


# CNRS INTERNATIONAL MAGAZINE

Quarterly n°34  
SUMMER 2014



**Feeling  
Objects**  
through a Screen

A Continent  
of Plastic  
in the Ocean

The Amazing  
World of  
**Crystals**

LARGEST-EVER  
COSMIC RAY  
DETECTOR



# Solar Energy

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of the world's energy  
consumption for one year.*

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## INTERNATIONAL BORDEAUX NEUROCAMBUS BRAIN CONFERENCE



### "MITOBRAIN: Mitochondrial Functions and Dysfunctions in the CNS"

BORDEAUX, OCTOBER 1-3 2014  
DOMAINE DU HAUT CARRÉ

#### Scientific Organizers

Erwan Bézard  
Giovanni Marsicano  
Giovanni Benard  
Benjamin Dehay  
Gwendal Le Masson  
Sandrine Pouvreau  
Rodrigo Rossignol



#### Invited Speakers

Pascale Belanger, FR  
David Chan, US  
Tamas Horvath, US  
Oliver Kann, DE  
Josef Kittler, UK  
Giovanni Manfredi, US  
Jean-Claude Martinou, CH  
Jeffrey Milbrandt, US  
David G. Nicholls, US  
Jorge Oliveira, PT  
Vladimir Parpura, US  
Serge Przedborski, US  
Pascal Reynier, FR  
Timothy Ryan, US  
Jorgina Salazarlegui, SP  
Anthony Schapira, UK  
Jan Smeitink, NL  
Richard Youle, US  
Elena Ziviani, IT

This meeting aims to promote dialogue between international experts on the role of mitochondria applied to physiological and pathological processes of the CNS, and to improve the therapeutic challenges. More than 200 researchers, coming from different countries and from Neurosciences or Bioenergetics disciplines, will present and share their results.

Abstract submission deadline: 09/09/2014  
Early registration: 09/09/2014

Web: <http://brainconf.u-bordeaux.fr/>  
Contact: [inscriptions@mitobrain2014.com](mailto:inscriptions@mitobrain2014.com)



Inserm université  
de BORDEAUX



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On this cover:  
artist's rendering  
of graphene sheets.

PHOTO : LAGUNA DESIGN/SPL/COSMOS

To mark the centenary of the Nobel Prize in Physics rewarding the discovery of X-ray diffraction (Max Laue, 1914) and the first determination of the internal structure of crystals (Sir William Henry Bragg and William Lawrence Bragg, 1915), the UN has declared 2014 as the International Year of Crystallography.

Crystallography obviously focuses on crystals, precious stones that fill the uninitiated with wonder. But to scientists, crystals are fascinating as much for their internal and external perfection as for their defects, which are often the source of novel or enhanced properties.

Whether it be the design of new medicines or of novel ionic conductors for tomorrow's fuel cells, the improvement of the mechanical properties of materials, or the rational interpretation of Islamic mosaic patterns, crystallography is at the heart of many of today's societal challenges.

For more than two centuries, ever since the pioneering work of Romé de l'Isle and René Just Haüy, France has been one of the cradles of modern crystallography.

Today, the CNRS is very active in this essentially cross-disciplinary field of research, with over

120 laboratories involved—whose various specializations range from physics, chemistry, the Earth sciences, and biology to applied mathematics. Our country abounds in large facilities able to generate extremely powerful X-ray (synchrotron) and neutron beams.

To celebrate this exceptional year, a number of events have been scheduled in France, including a traveling exhibition entitled "Voyage dans le Cristal" (Journey into the Crystal). The exhibition invites visitors to admire the beauty of crystals, discover the power of the radiation-matter interaction that sheds light on the internal structure of crystals, and find out about the broad spectrum of current developments in crystallography. Translated into some ten languages, the exhibition is available for display in other countries.<sup>1</sup>

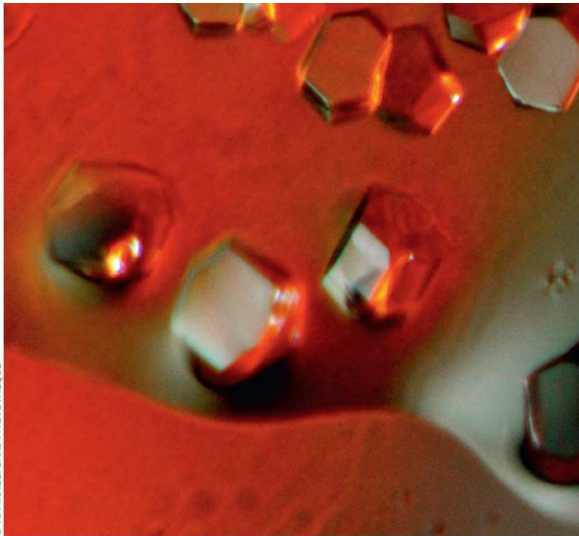
*By René Guinebretière,*  
President of the French Association  
of Crystallography, president of  
the French Committee for the  
International Year of Crystallography



*“Crystallography  
is at the heart  
of many of  
today’s societal  
challenges.”*

1. Information available from: jean-louis.hodeau@grenoble.cnrs.fr





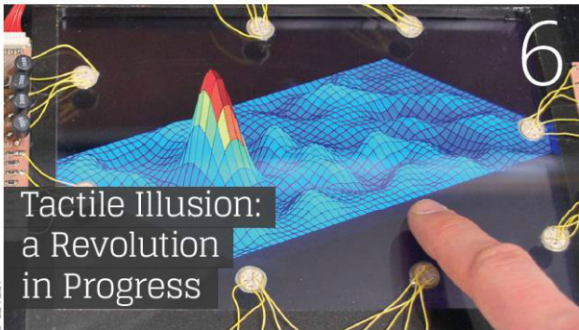
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