





Cité des Sciences et de l'Industrie

Birthdays -

Bénédicte Colnet France Problem supervisor Frederik Søndergaard-Pedersen Denmark Mentor Fernando J. J. Rodriguez Venezuela Student Lara Nobili Italy Mentor

making



The Palais de la découverte ("Discovery palace") and the Cité des sciences et de l'industrie- ("City of sciences and industry") are two scientific museums in Paris you will have - or have had - the occasion to discover.

Both places are really exciting and inspiring, with demonstrations, conferences and interactive exhibits.

The Palais de la découverte, situated in the Grand Palace, was opened for the World exhibition of 1937, for the purpose of "getting the science out of the labs". It was so successful that the French government of the time decided to sustain it. Nowadays, it welcomes more than 600,000 visitors each year, and is the origin of many scientific vocations!

It will close in 2020 to be entirely renovated. During the works, the exhibitions will be in the Cité des sciences et de l'industrie, both being managed by Universcience.

The Cité des sciences et de l'industrie opened in 1986 in the Park de la Villette, formely slaughterhouses. Its purpose is, from the beginning, to give access to scientific and technical knowledge to a large audience, especially children and teenagers, and to spark their interest for the society challenges related to science, research and industry. The farewell dinner will take place there, we hope you'll like it!

PerkinElmer For A Healthier World

PerkinElmer enables researchers, scientists, and clinicians to address their most critical challenges across science and healthcare. With a mission focused on innovating for a healthier world, we deliver unique solutions to serve the life

sciences, diagnostics, food and applied markets. We partner with customers to enable earlier and more accurate insights supported by deep market knowledge and technical expertise with our team of 12,500 employees worldwide.



icho2019.paris



MINISTÈRE DE L'ÉDUCATION NATIONALE



Facebook: @icho2019.paris

У Twitter: @icho2019paris

O Instagram: @icho.official

POUR L'ÉCOLE **DE LA CONFIANCE**





Meteo





Saturday, 27 July 2019

Second and last exam!



Yesterday, students were back at the Pierre-Gilles de Gennes High School to work all morning on the theoretical exam.



Problem T6: A physicist who deals with chemistry



The school where the practical and theo- span of his research subjects, de Gennes retical exams took place was named after Pierre-Gilles de Gennes, a brilliant French attributed it to a certain "Northern romanphysicist. He worked on many different ticism"! He preferred to see himself as topics, such as supraconductors, liquid someone trying to find simple models for crystals, wetting and adhesion. In 1991, he was awarded the Nobel Prize for his research on polymer physics. During his describing the behavior of concentrated long and fruitful career, he often tried to bring researchers from different scientific fields together to comprehend complex systems such as adhesion between polymers and glass.

If the Nobel committee described him as "the Isaac Newton of our time" for the wide

found himself not worthy of this name and complex problems and to describe nature without caricaturing it. For example, when polymer solutions, he invented an easy model that he named "blob". After receiving the Nobel Prize, de Gennes used his fame to pass on his passion for science to the youngest: no better name could have been chosen for a school!

Problems T1 and T8: Nuclei and electrons positions



What is the link between cooking and particle positions? A chemist, Martin Karplus, currently working in the University of Strasbourg! Both a theoretical and physical chemist, he says that the only real chemistry he does is in the kitchen. One of his best-known contributions is the Karplus' equation. This powerful relation determines the relative position of vicinal hydrogen atoms by studying the coupling constants measured between them by

NMR spectroscopy: its use was illustrated in problem T8. Many refinements have been made to this equation, and Karplus feels like a "proud father", saying that it has now grown up, and that it lives its own life, a life of few failures and many successes!

Due to his numerous contributions to multi-scale modeling in chemistry, he was conjointly awarded the Nobel Prize in 2013. The methods he developed lead to a description of chemical systems, associating classical and quantum descriptions, to explain chemical properties on several scales. For instance, the notion of delocalization is defined more accurately, such as in problem T1 and preparatory problems T1 to T3.

87 . Francium

Discovery: 1939 by Marguerite Perey (Paris France) Family: alkali metals Period: 7th

A few of its properties

It is said there is only 30 g of Francium on the earth's crust. It is the most electropositive alkali and the last element discovered in nature. It was identified by Marguerite Perey, protégée of Marie Curie. She discovered and monitored its radioactive signature during actinium purification, and was the first woman elected to the French Academy of Science. She died in 1975 from cancer due to the ingestion of Actinium. The most stable isotope of Francium has a half-life of 22 minutes, and is produced by the disintegration of Actinium-227.

Game of the day

Playing with the elements from the ID cards

You have noticed that the periodic table of the elements was a common theme to our games and the above "Periodic ID card of the day". Looking back at the 7 past elements in sequential order, can you guess why we chose these ones and no others?

Answer - Game of Friday, 26 July

Polonium (Poland), Francium and Gallium (France), Nihonium (Japan) and Germanium (Germany). Among the 32 are also Americium (Americas). Europium (Europe), Scandium (Scandinavia) and latin-derived Copper (Cyprus) and more with states and cities ...







As for the practical exam, students have been working for five hours on the theoretical exam problems!



Vocabulary



Theoretical Exam for some, **Versailles for the others!**



Everybody is carefully listening to the regulations.



