

Poster Presentation

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Crystallography history, a tool for science education

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To introduce Crystallography to the Public, we have organized the crystallography exhibition “Journey into the crystal” in 2009, a “Laue Symposium” in 2012 and a “Bragg symposium, Crystallography for life” in 2013. For the IYCr2014 we have created a set of multilingual hands-on travelling exhibitions to be used in different communities and particularly in emerging countries (in Africa, South America, Asia,...). In addition, we create a set of multilingual tools and other educational material like games to come with these exhibition presentations. A voyage of discovery: Based on this travelling exhibition, we can take visitors on a journey of discovery of matter, but also on a journey through time to the beginnings of crystallography. The public discover why crystal puzzles people so much, why it is so useful to science and why it plays such an important role in our daily lives. With crystallography the public can discover, for example: -1- The myths surrounding diamonds including the surprising fact that diamonds will burn like graphite. Thanks to crystallography, the answer lies in the structure of their chemical bonds. -2- How, in the 18th and 19th centuries, scientists still managed to imagine the architecture of crystals, even though they could not use X-rays to see inside them. -3- Here, use a laser as a source of the light to explain ‘diffraction and learn how the 1895 discovery of the mysterious “X-Rays” inspired the work of Laue and the Braggs, father and son, making it possible to “journey” into the heart of a crystal. -4- The discovery of DNA and the use of crystallography to understand the biological world and thus the secret of life. This knowledge has greatly contributed to the development of new drugs and thus to the expansion of the pharmaceutical industry. -5- Play with card games or mosaics to understand easily the concepts of periodicity and atomic order and see the explanation of crystal’s shape and symmetry. -6- Cultivate crystals,... the specific qualities of crystals make them key materials in many applications and we must take our time to make large crystals...

[1] This presentation is result from issues emerging during the built of the “Voyage dans le Crystal” exhibition (*). We thank the numerous crystallographers which have contributed to this joint work, [2] (*) <http://www.aicr2014.fr/index.php/formation-et-ressources/les-expositions>, [3] (*) <http://www.iycr2014.org/learn/look>



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