

Opening Remarks by Soveacha Ros on behalf of Anne Lemaistre, UNESCO Representative
IUCr-UNESCO Rigaku OpenLab in Cambodia
Institute of Technology of Cambodia, Phnom Penh
07 July 2014

Excellences, Ladies and Gentlemen,

We are here today to officially launch the training week of *IUCr – UNESCO Rigaku OpenLab in Cambodia* organized by the Institute of Technology in Cambodia and supported by UNESCO. This training event is the first of its kind in Cambodia.

Following a proposal from Morocco, in July 2012 the UN General Assembly proclaimed 2014 as the International Year of Crystallography (IYCr2014). In January, 2014, IYCr2014 was launched in Paris by UNESCO. IYCr2014 commemorates the centennial of the birth of X-ray crystallography. Even though crystallography underpins all the sciences today, it remains relatively unknown to the general public. One aim of the Year will be to promote education and public awareness through a variety of activities.

The International Year of Crystallography is being organized jointly by the International Union of Crystallography (IUCr) and UNESCO. It will complement two other international years led by UNESCO within the United Nations system, by contributing to the follow-up of the International Year of Chemistry (2011) and providing an introduction to the planned International Year of Light (2015). UNESCO is implementing all three years through its International Basic Sciences Programme.

IYCr2014 is the well-deserved celebration of the many successes and advances that crystallography has allowed to many branches of science, including chemistry, biology, physics, pharmaceuticals and medicine, mineralogy, materials science, mathematics, cultural heritage and art sciences, as well as a new starting point for the birth of the second century of modern crystallography.

Excellences, Ladies and Gentlemen,

Crystallography positively influences our lives in many ways. It plays a significant role in our daily lives and forms the backbone of industries which are increasingly reliant on knowledge generation to develop new products, including the agro-food, aeronautic, **automobile**, beauty care, computer, electro-mechanical, pharmaceutical and mining industries. Crystallography has shaped the history of the 20th century. It has made a vital contribution to our understanding of the very basis of life itself, as revealed some 60 years ago that the structure of DNA was a double helix. In the past 50 years, the structures of more than 90,000 biological molecules have been revealed by crystallographers, with implications for health care.

Crystallographers not only study the structure of materials but also provide their discoveries to other scientists to make further use for other scientific purposes. For example, the *fingerprint* creation is the result of the work of crystallographers.

Excellences, Ladies and Gentlemen,

Crystallographers are active in more than 80 countries, 53 of which are members of the International Union of Crystallography. The Union ensures equal access to information and data for all its members and promotes international cooperation. There is a need to broaden the base of crystallography in order to give more developing countries expertise in this critical field for their scientific and industrial development. This is all the more urgent in that crystallography will play a key role in the transition to sustainable development in coming decades.

The future global economy will be determined by progress in cutting-edge fields. However, crystallography in Cambodia needs to be further enhanced. Therefore, IYCr2014 aims at improving public awareness of the field, boost access to instrumentation and high-level research, nurture “home-grown” crystallographers in developing nations, and increase regional and international collaborations for the benefit of future *green* generations.

Excellences, Ladies and Gentlemen,

The IUCr-UNESCO OpenLab is a network of operational crystallographic laboratories based mainly in Africa, Asia and South America, and implemented in partnership with industry. The OpenLabs will enable students in less-developed countries to have hands-on training in modern techniques and expose them to cutting-edge research in the crystallography. At the same time, we shall recognize that many countries still lack expertise in crystallography. This is why UNESCO and the International Union of Crystallography (IUCr) are joining forces to highlight the crystallography in 2014.

UNESCO has supported the OpenLabs globally in order to show how crystallography works in partnership with strong private companies. Since the beginning of 2014, UNESCO has been celebrating the launch of many OpenLabs in Argentina, Côte d’Ivoire, Morocco, South Africa and Uruguay and today in Phnom Penh, Cambodia.

Excellences, Ladies and Gentlemen,

It is clear that crystallography will be necessary for cultivating the scientific innovation within countries, such as Cambodia, that prioritize sustainable development in the national strategic development plan. Investment in science, technology and innovation is essential for economic development and social progress. Research and development in green technologies can contribute to economic and social progress while at the same time preserve the environment and build inclusive growth for Cambodia. In this spirit, UNESCO reaffirms our continued commitment to supporting Cambodia as the country upgrades and invests in Science, Technology and Innovation for sustainable development.

Thank you!