

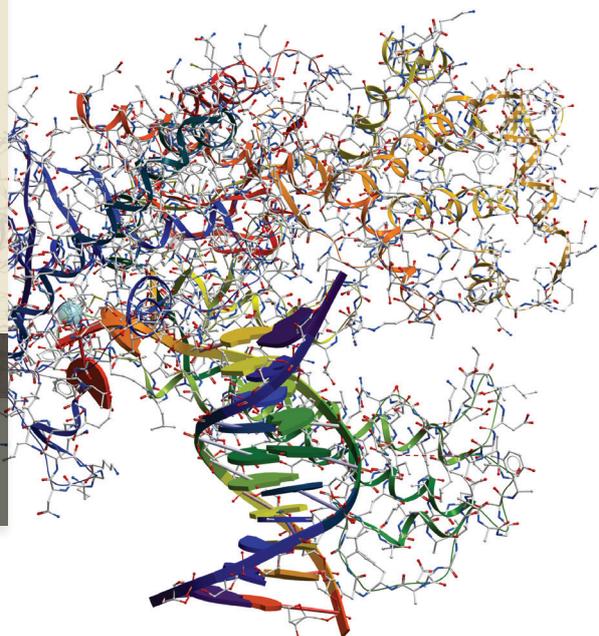


THE UNIVERSITY OF
WESTERN AUSTRALIA

What is X-ray Crystallography and How Did It Transform Our View of the World?

THE INTERNATIONAL YEAR OF CRYSTALLOGRAPHY 2014 (IYCR2014)

A public lecture by **Stephen Curry**, Professor of Structural
Biology, Imperial College London



Just over a hundred years ago a narrow beam of X-rays was fired at a crystal for the very first time. The experiment, an early attempt to investigate the nature of this recently-discovered radiation, showed that it was wavelike and so constituted a new type of light. Although that was in itself a profound discovery, scientists realised immediately that the far more interesting outcome of the experiment was the revelation that X-rays could be used to 'see' the atomic structure of matter in three dimensions at a level of detail beyond the reach of even the most powerful microscopes.

The technique of X-ray crystallography, first used to work out the atomic structure of simple crystals and minerals, has since been applied to the far more elaborate molecular structures found in chemistry and biology. It is arguably one of the greatest scientific advances of the 20th century.

In this lecture Professor Curry will recount the curious origin of the technique (including its Australian roots), explain how it works and discuss how crystallography opened up an entirely new landscape for scientists to explore.

About Stephen Curry

Professor Stephen Curry is a structural biologist in the Faculty of Natural Sciences at Imperial College London. His research group works on a variety of fascinating problems related to different aspects of viral replication. X-ray crystallography is used to elucidate the structures of proteins molecules, in an effort to shed new light on their functions. Current projects include the structures of different host cell proteins recruited by the viral RNA as translation initiation factors. They are also interested in the viral enzymes produced once translation gets going. Most recently they have been studying and investigation of the substrate and inhibitor specificity of the 3C protease from foot-and-mouth disease virus.

In 2011 Stephen took on the position of Director of Undergraduate Studies in the Department of Life Sciences. In addition to this role, his primary teaching involvement is on the undergraduate degree program in Biochemistry. He is also involved in postgraduate teaching on Masters courses and PhD student supervision.

Event Details

Date: Monday 25 August 2014
Time: 6pm
Venue: Theatre Auditorium, University Club UWA
Parking: P3 off Hackett entrance 1
Cost: Free, but RSVP essential via www.ias.uwa.edu.au/lectures/crystallography



This lecture is part of the International Year of Crystallography lecture series at The University of Western Australia, sponsored by the Institute of Advanced Studies and the School of Chemistry and Biochemistry.

Institute of Advanced Studies

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