

# Nobel prize winner unveils the World's largest diffraction pattern

July 13 2010

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From left to right: Prof. Venki Ramakrishnan, winner of the 2009 Nobel Prize for Chemistry, Anne Griffiths, the textile artist who designed the final art piece, and Dr Myron Smith, from Oxfordshire-based biopharmaceutical company Evotec who achieved the featured diffraction pattern at Diamond, and Prof. Gerd Materlik, Diamond's Chief Executive, with the newly completed World's largest diffraction pattern.

During a visit to Diamond Light Source, the UK's national synchrotron science facility, on Friday 9th July, Prof. Venki Ramakrishnan, winner of the 2009 Nobel Prize for Chemistry, unveiled the World's largest diffraction pattern - an innovative textile project which has had stitches added to it by over 5000 people in the UK, Europe and America.

Diffraction patterns provide scientists with information that can help them to work out the structure of biological and material samples with

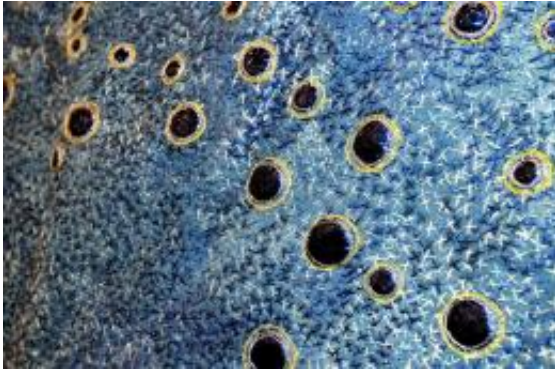
amazing precision. Creating a large-scale textile representation of a scientific achievement that took place at Diamond has brought science and art together, providing a platform for scientists to explain their research to the public in an engaging and imaginative way.

The unveiling was also attended by Ed Vaizey, MP for Wantage & Didcot and Minister for Culture, Communications and the Creative Industries, Anne Griffiths, the textile artist who designed the final art piece, Dr Myron Smith, from Oxfordshire-based biopharmaceutical company Evotec who achieved the featured diffraction pattern at Diamond, and Prof. Gerd Materlik, Diamond's Chief Executive.

“Diffraction patterns allow scientists to visualize the molecules that make up the world around us, including those in the human body. Knowing the structures of the molecules of life is also an important part of our effort to discover new medicines. It is great to see a creative way to communicate what this valuable technique is all about. The completion of the World's largest diffraction pattern is wonderful because it has allowed people who are interested in science to take part directly in imaginative science projects. It is also extremely beautiful and I'm sure visitors to Diamond will enjoy seeing it, and learning about the science behind it, for many years to come,” said Prof. Venki Ramakrishnan.

Prof. Gerd Materlik, the Chief Executive of Diamond, explains why they came up with this initiative. He says: “We believe that science is for everyone and we are keen to open it up to all in new and interesting ways. This project to create the World's largest diffraction pattern has been about more than a piece of art or a scientific image - it has been an opportunity for members of the public to engage with and learn about the science happening on their doorstep. We are delighted that after 2 years of touring and gathering stitches, the pattern is complete and ready to go on display here at Diamond for our staff, visiting scientists and the

public to enjoy.”



A close up of cross stitches that the public sewed on the World's largest diffraction pattern

Dr John Barker, Group Leader of X-ray crystallography at Oxfordshire-based biopharmaceutical company Evotec, and his team achieved the featured diffraction pattern during beamtime at Diamond in 2008. He says: “The information we gain from these diffraction patterns is vital to the progression of our research into serious diseases such as Alzheimer’s, Parkinson’s, and pain relief. It is fantastic that one of our diffraction patterns has been used to create this unique work of art whilst at the same time widening access to science. Evotec is delighted to have helped fund this initiative and to see that the pattern is now complete and on display.”

The World’s largest [diffraction pattern](#) can be viewed by the general public on Inside Diamond days, when the science facility opens its doors to visitors who can take a tour inside the doughnut shaped building where the experiments take place.

Provided by Diamond Light Source

Citation: Nobel prize winner unveils the World's largest diffraction pattern (2010, July 13)  
retrieved 23 April 2024 from

<https://phys.org/news/2010-07-nobel-prize-winner-unveils-world.html>

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