can be altered through co-crystal synthesis.

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KN-17

Celebrating Crystallography. Ted Baker. *School of Biological Sciences, University of Auckland, Auckland, New Zealand.*
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Crystallography provides a unique window on the natural world. Its ability to "see" the atomic and molecular structures of materials, whether from biology, chemistry or other areas of science, can give new insights into how things are and present wonderful opportunities for creativity and applications. This lecture will trace the historical development of crystallography, celebrating its contributions to understanding the world around us.
Crystallography was initially the province of philosophers and mathematicians who marvelled at the beauty and symmetries of crystals and speculated about what these might mean. The idea gradually developed that external form must reflect internal structure, with Louis Pasteur providing one of the first and most important demonstrations of this idea. The discovery of X-ray diffraction in the early 1900s changed crystallography radically, with a series of great pioneers such as William and Lawrence Bragg, Dorothy Hodgkin, J. D. Bernal, Linus Pauling, Max Perutz, Francis Crick and others showing how crystallography could help reveal the mysteries of chemistry and biology. Subsequent generations of crystallographers have also led the way in showing how knowledge of atomic and molecular structures can be usefully applied in areas such as the development of new therapeutics or novel materials. Finally it is also apparent that the structures themselves carry connections between biology, chemistry mathematics and even art and architecture.
These are all good reasons to celebrate the ways in which crystallography provides such a stimulating and satisfying discipline.

Keywords: crystallography; history; applications