

MS47-O2 Close encounters with crystallographers who made historyDavide L.M. Viterbo¹¹. DiSIT, Università del Piemonte Orientale, Viale T. Michel 11, 15121 Alessandria, Italyemail: davide.viterbo@mfu.unipmn.it

I started research in Crystallography in 1962 and during my long career I had the invaluable chance of meeting several crystallographers who are well known for their important contributions to our science. From my first experience in Oxford in 1968, when Dorothy Hodgkin and her group were still fighting with insulin, to my three years in York working with Michael Woolfson and my freindly meetings with Herbert Hauptman, Jerome and Isabella Karle, David Sayre and all the most important contributors to the early developments of direct methods, I could profit from their open attitude not only to enlarge my knowledge of crystallography, but also to acquire a more positive view of human relations. I also had the unique experience of listening to the fascinating lectures on diffraction theory delivered by Paul Ewald, one of the Founding Fathers of X-ray crystallography. Last but not least was my Italian adventure with Carmelo Giacovazzo and the SIR team and my lasting friendship with all of them.

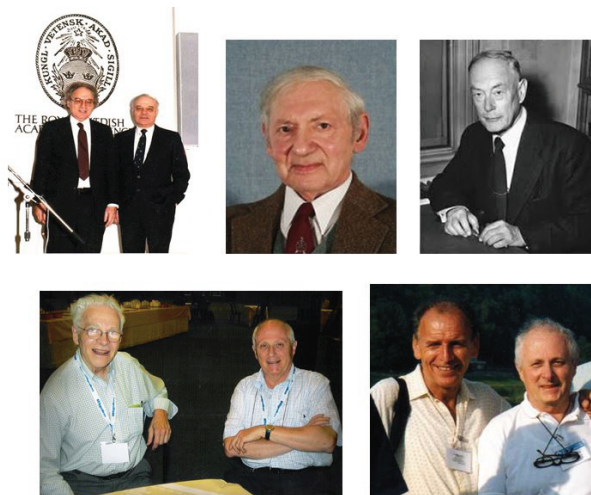


Figure 1. H. Hauptman, J. Karle, M. Woolfson, P. Ewald, D. Sayre, C. Giacovazzo.

Keywords: History of crystallography, important crystallographers

MS47-O3 A (very brief) history of macromolecular crystallographyAlexander Wlodawer¹¹. Macromolecular Crystallography Laboratory, National Cancer Institute, Frederick, MD, USAemail: wlodawer@nih.gov

X-ray crystallography is just over 100 years old as a scientific discipline. Successful determination of the first macromolecular structures (of oxygen carrier proteins, myoglobin and hemoglobin) was first reported about 55 years ago. To celebrate the achievements of crystallographers, the United Nations declared the year 2014 to be “The International Year of Crystallography”. Whereas the celebrations are now over, progress in the field is not slowing down, and close to 100,000 crystal structures of proteins and nucleic acids are now available in the Protein Data Bank. This success was due to many important, often iconic, achievements of crystallographers that led to major advances in our understanding of the structure and function of biological macromolecules. At least 42 scientists received Nobel Prizes in Physics, Chemistry, or Medicine for their contributions that included the use of X-rays or neutrons and crystallography, including 24 who made seminal discoveries in macromolecular sciences. Thus the history of crystallography may be illustrated by the achievements of the recipients of this most prestigious scientific honor. Many technical advances, such as the use of synchrotron radiation and the recent introduction of free electron lasers as X-ray sources, also contributed to making this success possible.

Keywords: crystallography, history, Nobel Prizes