

MS47. History of crystallography and ECA

crystallographic association brings together experts in the field who develop and promote crystallography.

Keywords: history of crystallography in Croatia

Chairs: Sine Larsen, Howard Flack

MS47-O1 History of crystallography in Croatia

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The international Year of Crystallography 2014 has also marked the 140th anniversary of crystallography in Croatia. That was closely associated with mineralogy. The Department of Mineralogy and Geology was established in 1874 at the Faculty of Philosophy, the University of Zagreb, and prof. Gj. Pilar in 1875 started to teach crystal morphology and optics. The first exhibition of minerals was organised 1846 in Zagreb. The Balkan Peninsula, geodynamically one of the most active in Europe, is abundant with minerals and has been examined intensively by generations of our earth scientists.

X-ray crystallography in Croatia started by M. Paić (1905-1997) who applied powder diffraction in characterization of mercury compounds and in 1933 defended his PhD thesis at Sorbonne. After 2nd world war he returned to Zagreb to be the head of the Physics Dept. at the Faculty of Science, where S. Hondl already established X-ray laboratory (1925-1937). In 1946 D. Grdenić went in Moscow to A. N. Nesmeyanov to study organomercury compounds for his PhD that brought him into contact with A. I. Kitaigorodskii. He returned to Zagreb 1948 and started X-ray structure analysis; in 1952 he founded Laboratory of General and Inorganic Chemistry, Dept. of Chemistry, Faculty of Science. In 1955 he went for two-year postdoctoral studies to D. Hodgkin in Oxford. The experience of these two pioneers in X-ray diffraction and the very elementary equipment gave a chance to establish the first crystallographic groups oriented to physics, structural chemistry, and mineralogy in Zagreb. S. Šćavničar, a mineralogist, used that very equipment to carry out his PhD on the structure of mercury oxochloride under mentorship of Grdenić; his postdoctoral studies followed at Sorbonne. Katarina Kranjc introduced small angle scattering and in 1954, under supervision of M. Paić, she became the first lady who won PhD in physics.

Rudjer Bošković Institute was founded in 1950; in collaboration with the University of Zagreb new scientific disciplines were introduced. X-ray laboratory was founded by Grdenić and new generation came into crystallography. Collaboration with the prominent international crystallographers has enabled us to adopt contemporary methods and develop new ideas. Some of the highlights will be presented in the lecture. National