

International Union of Crystallography

Transfer of Copyright

Recent changes in copyright laws in various countries make necessary a more formal handling of copyright transfer, from author to publisher, than has been the case in the past. Until now the act of submission of a manuscript has generally been understood to convey the author's copyright interests to the publisher, to the extent that national laws permit. Usually the only existing copyright was that which the publisher had obtained. Under the new laws (in some countries) copyright exists from the moment of creation of the work, whether or not formal application for copyright is made. It is held by the author except in the case of 'works for hire', in which case copyright is held by the person or organization for whom the 'work for hire' was produced.

This copyright must now be specifically transferred *in writing* in order for the publisher to obtain the usual copyright privileges and accompanying responsibilities, such as the right to allow the reprinting of the abstract, the authority to give permission to others to use a figure or diagram in scholarly works, the legal power to take steps to prevent unauthorized copying for commercial profit, *etc.* If this kind of copyright is not held by the publisher, all future requests for reproduction of all or part of an article, or even for the making of multiple copies by some libraries, will have to be approved by the author (or, in the case of 'works for hire', his employer). In some cases this will be impossible because the author is deceased or has left the field and cannot be located. In all cases it would be cumbersome and an impediment to the free flow and dissemination of scientific information. This impediment can easily be avoided by having the copyright vested in the publisher who is then able to give blanket permission in advance, with no further formality required, for one-time scholarly use. This is what the IUCr has been doing and, with the co-operation of the authors, will continue to do, as is made clear on the inside front cover of each issue of each IUCr journal where the following statement appears:

'Individual readers of this journal, and non-profit libraries acting for them, are permitted to make "fair use" of the material in it, such as to copy an article for use in teaching or research. Permission is granted to quote short passages and illustrations from this journal in scientific works with no further formality than the customary acknowledgement of the source. Republication or systematic or multiple reproduction of any material in this journal (including abstracts) is permitted only under licence from the International Union of Crystallography; in addition, the Union may require that permission also be obtained from one of the authors. Enquiries and requests should be addressed to the Executive Secretary, International Union of Crystallography, 13 White Friars, Chester CH1 1NZ, England.'

For these reasons, the Executive Committee of the IUCr has determined that, henceforth, a Transfer of Copyright Agreement must be executed by the author (or other copyright holder) for each contribution, including invited papers, before it can be considered for publication in either *Acta Crystallographica* or *Journal of Applied Crystallography*.^{*} The transfer will become effective only if and when the contribution is accepted for publication. In drawing up this document, the Editors and the Executive Committee have tried to maintain sensitivity to the fact that the copyright situation may differ from country to country, although most countries do subscribe to international copyright conventions. Further, it is particularly desired that the present rights of the authors should not be restricted in any way. For that reason, the Transfer Agreement retains certain important parts of the copyright with the author.

Anyone wishing further information should contact the Executive Secretary, International Union of Crystallography, 13 White Friars, Chester CH1 1NZ, England.

^{*} The Transfer of Copyright Agreement may be photocopied from page 157 of *Notes for Authors* in the January 1978 issue of *Acta Crystallographica*, Section A or copies may be obtained from any of the editors or the Executive Secretary.

International Union of Crystallography

Acta Crystallographica: Change in Editorship

Professor A. J. C. Wilson recently asked to be released from his task as Editor of *Acta Crystallographica* as from 31 December 1977. Dr S. C. Abrahams (Bell Laboratories, Murray Hill, New Jersey 07974, USA) has been appointed by the Executive Committee of the Union to succeed Professor Wilson as Editor. Professor J. Wyart and Professor H. Lipson also retired as Co-editors of the journal at the end of 1977. Professor M. M. Woolfson, of the University of York, has been appointed a British Co-editor. Dr Abrahams's initial appointment will be until the Twelfth General Assembly of the Union, to be held in 1981, and is subject to confirmation by the Eleventh General Assembly in Warsaw in August 1978.

Professor Wilson, who was then Professor of Physics at University College, Cardiff, succeeded Professor P. P. Ewald as Editor of and Chairman of the Commission on *Acta Crystallographica* at the beginning of 1960. Prior to that he had been Editor of *Structure Reports* since its creation in 1948. In 1963 he was elected a Fellow of the Royal Society and in 1965 he moved to the University of Birmingham as Professor of Crystallography.

In 1960 *Acta Crystallographica* consisted of 1056 pages. The size of the journal continued to grow steadily until it was necessary to divide it into its present two parts in 1968: Section A, on crystal physics, diffraction, theoretical and general physics and Section B, on structural crystallography and crystal chemistry. At the same time *Journal of Applied*

Crystallography was created. With the publication of this new journal the Commission on *Acta Crystallographica* was replaced by the Commission on Journals, under the chairmanship of Professor Wilson. Under his leadership, *Acta* continued to attract the very best papers on crystallography and has consolidated its standing as the leading international crystallographic journal, with the result that the size of the journal has grown steadily. Efforts to contain the size of the journal have been made by strict refereeing procedures, concerted efforts by Co-editors to persuade authors to shorten their papers, the introduction of the supplementary deposition scheme for material such as tables of structure factors and, more recently, of thermal parameters, and the introduction in Section B of Short Structural Papers as a means of reporting crystal structure determinations concisely and in a standard format. In spite of all these efforts the size of the journal in 1976 was 1038 pages in Section A and 3360 for Section B. In 1976 *Acta* contained 1011 full-length articles, short structural papers or short communications as compared with 213 in 1960.

The Executive Committee of the Union would like to take this opportunity to express its deepest gratitude and appreciation, on behalf of the Union and the international crystallographic community, to Professor Wilson for 18 years of devoted service to the Union as Editor of *Acta Crystallographica*. It is confident that Dr Abrahams will continue to maintain the high standards set by his predecessors and is most grateful to him for agreeing to undertake the Editorship of the journal.

Professor Wyart has been a Co-editor of the journal since it was first published, in 1948. His contribution to the development of the journal and to crystallography in general has been immense. His thesis in 1930, on the structure of zeolites, described some of the first structure

determinations made in France using X-rays. His subsequent interest in hydrothermal synthesis led to the synthesis of granite. He prepared many of the symmetry group drawings for the 1935 edition of *International Tables*. From 1928 he worked under Professor C. Mauguin; in 1948 he succeeded Professor Mauguin and was Director of the Laboratoire de Minéralogie-Cristallographie of the University of Paris until his retirement in 1973. He created and for a long time directed the Centre de Documentation of the Centre National de la Recherche Scientifique. He was a member of the Commission on *Structure Reports* from 1948 to 1951 and from 1954 to 1963, and was a Section Editor for several years. He was a member of the Executive Committee of the Union from 1948 to 1951, a Vice-President from 1951 to 1954 and President from 1957 to 1960. The Executive Committee is greatly indebted to Professor Wyart for the many ways he has served the Union since its creation.

Professor H. Lipson, who recently retired as Professor of Physics at the University of Manchester Institute of Science and Technology (UMIST), has been a Co-editor of *Acta Crystallographica* since 1956. A notice concerning Professor Lipson's retirement from UMIST has been published in *Journal of Applied Crystallography* [(1977), **10**, 430]. After working at the University of Manchester, the National Physical Laboratory and the University of Cambridge, Professor Lipson was appointed Head of the Physics Department at UMIST in 1945. He was elected a Fellow of the Royal Society in 1957 and made a Companion of the Order of the British Empire in 1976. With the exception of Professor Wyart, Professor Lipson is the longest serving Co-editor of the journal and the Union is most indebted to him for his many years of service in this capacity. During this period he has dealt with over 4000 papers submitted for publication in the journal.

International Union of Crystallography

Polarization ratio for X-rays – A survey by the Commission on Crystallographic Apparatus

The Commission on Crystallographic Apparatus is conducting a survey of measured values of the polarization ratio for crystal-monochromated X-ray beams. This note summarizes the definition of this ratio, mentions techniques for its measurement, emphasizes that the objective of the survey is to establish the range of values observed in practice, and is an invitation to all interested people to participate.

The polarization factor in a typical X-ray diffraction experiment is

$$P = (1 + K \cos^2 2\theta)/(1 + K),$$

where K is the polarization ratio, the ratio of the beam power with π polarization to that with σ polarization. A fractional error in P will be directly reflected as a fractional error in the results. Thus it is important that P (or, equivalently, K) be accurately determined. For example, in an experiment using unmonochromated characteristic radiation, K is very nearly unity.

In the case of crystal monochromated radiation, the situation is more complicated. Consider for concreteness the case where the planes of diffraction for the monochromator and for the sample are parallel. There is apparently a common, tacit 'argument' which goes like this. 'The highest possible integrated intensities are achieved with a crystal in mosaic form. Since monochromators are chosen to give the highest possible beam power, it is probable that the polarization ratio will be very close to that given by an ideally mosaic monochromator, $\cos^2 2\theta_M$ in this geometry. In any case, the limits on K are probably $\cos^2 2\theta_M$ and the value for an ideally perfect monochromator, $\cos 2\theta_M$ '.

It was realized independently by a number of workers that the above argument is specious (Jennings, 1968; de Wolff, 1968; Olekhovich, 1969). The correct reasoning is more like this: Although appropriate monochromating materials are those which could give a large integrated intensity, it is usually advantageous to arrange the geometry so that desired rays of *both* polarizations are almost totally reflected. Under these conditions, which can be considered an extreme case of secondary extinction, initially unpolarized radiation will be monochromated to a high-power beam with polarization ratio approaching unity. On the basis of this