Professor **J. D. H. Donnay** celebrated his 80th birthday on 6 June 1982. He spoke on *The unveiling of the mystery of the Miller indices* at the 13 May colloquium of the Ottawa Crystallographers Group. Afterwards the crystallographers present held a ceremony to honour his eminent contributions to the study of crystallography.

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Bibliography of Mathematical Crystallography

For many years Professor W. Nowacki of the University of Bern has kept, for his own purposes, a bibliography of mathematical crystallography. In the late 1970's he agreed to make this generally available to interested crystallographers and it had been hoped that it would have been made available on demand as a booklet. However, in view of the high cost of publication, it has instead been decided to make available photocopies of specific sections of Professor Nowacki's typescript on request. In total there are about 4750 references on 286 pages. The sections are as follows:

Introduction (4 pages – this will be sent with all sections)

1. Point groups (10 pages; 159 references)
2. Space groups of E^1 (E = Euclidean space) (2 pages; 25 references)
3. Space groups of E^2 (5 pages; 90 references)
4. Space groups of E^3 (12 pages; 190 references)
5. Nomenclature, Tables (3 pages; 46 references)
6. Space groups of E^4 (4 pages; 60 references)
7. Space groups of E^n ($n \geq 5$) (6 pages; 94 references)
8. Theory of representation (with application to physics) (16 pages; 284 references)
9. Subgroups and supergroups (6 pages; 93 references)
10. Lattice complexes and orbits in E^2 (2 pages; 21 references)
11. Lattice complexes and orbits in E^3 (5 pages; 77 references)
12. Hauptpunkte i.S. Weissenberg's (1 page; 8 references)
13. Space forms (differential geometry) (2 pages; 31 references)
14. Space partitionings of E^2 (10 pages; 181 references)
15. Space partitionings of E^3 (12 pages; 193 references)
16. Space partitionings of E^n ($n \geq 4$) (4 pages; 61 references)
17. Packings of circles (and of other polygons) (2 pages; 25 references)
18. Packings of spheres (and of other polyhedra) (14 pages; 233 references)
19. Groupoids; OD-structures; polytopes; enhancement of symmetry (6 pages; 110 references)
20. Characters (1 page; 4 references)
21. Homology, similarity (3 pages; 33 references)
22. Semicontinua, continua (Lie groups) (1 page; 17 references)
23. Coloured point and space groups in E^n ($n = 0,1,2,...$); magnetic structures (16 pages; 282 references)
24. Generalised crystallography (modulated structures, space–time groups, non-Euclidean spaces), modulated structures (10 pages; 178 references)
25. Quadratic forms, theory of reduction, translation lattices, geometry of numbers, twins, relation: structure-morphology (19 pages; 307 references)
26. Polygons and polyhedra (12 pages; 213 references)
27. Polytopes ($n \geq 4$) (8 pages; 129 references)
28. Theory of graphs, topology (5 pages; 78 references)
29. Isomers, molecular structure (2 pages; 24 references)
30. (a) General chemistry, crystallography, mathematics and physics; (b) History; (c) Symmetry in philosophy, arts and biology (72 pages; 1340 references)

Appendix. Theory of Patterson syntheses and vector sets (but mainly only when point 'atoms' are considered; otherwise it is part of diffraction theory) (12 pages; 159 references).

Within each topic the titles are basically arranged alphabetically and within each author chronologically, although there are significant number of (non-alphabetical) addenda.

The original bibliography (but not the addenda) has been checked as far as possible by R. Allmann (Marburg/Lahn), L. N. Smirnova and L. A. Shuvalov (Moscow) and D. G. Watson (Cambridge). Requests, stating which sections are required, should be sent to The Executive Secretary, International Union of Crystallography, 5 Abbey Square, Chester CH1 2HU, England. Photocopies will be sent at reduced size, *i.e.* two pages per A4 sheet of paper.

Book Reviews

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Nondestructive evaluation of materials. Edited by *John J. Burke* and *Volker Weiss.* Pp. XI + 530. New York and London: Plenum Press, 1979. Price US $49.50.

This volume constitutes the proceedings of the 23rd Sagamore Army Materials Research Conference on the Nondestructive Characterization of Materials, held at the Sagamore Conference Center, New York in August 1976. Leading materials scientists and technologists from universities, industry and government agencies have contributed to this volume, which deals with in-depth studies in the field of nondestructive testing.

The subject matter has been grouped distinctly into four areas, namely, X-ray, sonic, optical and other methods. It is quite a respectable academic piece of work, which is full of interest from both practical and theoretical points of value. Specific topics covered include neutron radiography, polychromatic stress analysis, the Moire method, quantitative magnetic methods and the use of positrons as a nondestructive probe.

Some typographical errors in the text slightly discredit this otherwise valuable book, which is generously backed by well reproduced figures and illustrations. On the whole, this book could be considered a welcome addition to the literature, both as a text and as a work of reference.

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