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SHORT COMMUNICATION

Acta Cryst. (1995). **B51**, 892

Experimental and theoretical determination of electronic properties in L-dopa. Erratum. By S. T. HOWARD, M. B. HURSTHOUSE and C. W. LEHMANN, *School of Chemistry and Applied Chemistry, University of Wales College of Cardiff, Cardiff CF1 3TB, Wales*, and E. A. POYNER, *Pharmaceutical Science Institute, Aston University, Aston Triangle, Birmingham B4 7ET, England*

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Abstract

The reference number in the deposit footnote on p. 330 [Howard, Hursthouse, Lehmann & Poyner (1995). *Acta Cryst.* **B51**, 328–337] was incorrectly quoted as SE0154. The correct reference number is CR0467.

All relevant information is given in the *Abstract*.

Book Reviews

Works intended for notice in this column should be sent direct to the Book-Review Editor (R. F. Bryan, Department of Chemistry, University of Virginia, McCormick Road, Charlottesville, Virginia 22901, USA). As far as practicable, books will be reviewed in a country different from that of publication.

Acta Cryst. (1995). **B51**, 892–893

Highlights of chemistry as mirrored in Helvetica Chimica Acta. Edited by M. V. KISAKUREK and E. HEILBRONNER. Pp. v + 985. Basel: Verlag Helvetica Chimica Acta and Weinheim: VCH Verlagsgesellschaft mbH, 1994. Price DM 248. ISBN 1-906390-08-X.

In the highly charged atmosphere of nationalism accompanying the first world war, chemists in neutral Switzerland faced a problem. Accustomed to publishing their work in the chemical journals of their larger neighbors, chemists who, before the war would have made their choice of journal solely on the basis of linguistic convenience or the desire to reach as wide an audience as possible through the use of the German language, the *lingua franca* of the chemical world of the day, hesitated, during wartime, to make choices that might be interpreted as gestures of moral or even material support for one or other of the combatant nations. And, of course, no matter which journal was chosen, the potential audience was greatly reduced. The Swiss Chemical Society, with some help from its friends in industry, resolved this issue by deciding to publish its own journal, neatly finessing the question of language parity by giving it the latinized title *Helvetica Chimica Acta*. To further emphasize Swiss neutrality, only contributions from Swiss laboratories were initially accepted. The story of the founding of the journal and its subsequent editorial history are entertain-

ingly and informatively described by Edgar Heilbronner and Volkan Kisakurek in their introduction to this delightful volume, issued to commemorate *Helvetica's* 75th anniversary.

The main body of the book is a series of charmingly subjective and necessarily idiosyncratic historical reviews of selected areas of chemistry as they have developed in articles in the journal over the first 75 years of its existence. Here are: Venanzi on coordination chemistry; Heimgartner and Hansen on structure and mechanisms in organic chemistry and, later, on organic photochemistry; Guggisberg and Hesse on alkaloid research; Eugster on carotinoid chemistry; Ohloff on flavor and perfume chemistry (a particularly Swiss strength occupying the attention of most of the giants); Zollinger on color chemistry; Tamm on carbohydrates, plant and microbial substances; Kalvoda on steroids; chemists from Hoffmann–La Roche on vitamins; Woggon on triterpenes; Günthard and Heilbronner on physical chemistry; Bürgi and Dunitz on structural chemistry. A rich feast, indeed!

Vladimir Prelog, in his introductory preface, declines the invidious task of identifying individual landmark contributions, leaving that choice to the reader. Your reviewer is no more anxious than he to play that game. Like Professor Prelog, I simply observe that many major contributions are highlighted, as are many meritorious lesser ones. To be mentioned at all in a work of this kind always produces a warm feeling (and, presumably, not to be mentioned produces a converse one!). I was, therefore, pleased to find my own modest contribution to

the stereochemistry of the cycloalkanes cataloged. It was made while I was a post-doctoral fellow in Jack Dunitz's laboratory, and was, with Dunitz and Shearer's analysis of cyclododecane in the same issue, the first three-dimensional X-ray structure determination, from single-crystal data, of an organic compound to be reported in *Helvetica*. (An earlier three-dimensional analysis of adamantane, by Nowacki in 1945, was based on 16 reflections measured from a powder sample.) Seeing the reproduction of the title of the paper brought back two memories. The first was of all-night sessions in 1958, seated in front of a then state-of-the-art electronic computer (*ERMETH*) that disgorged, with almost uninterrupted regularity, one structure factor every 62 s! The second was the recollection that, in those days, only articles written in one of the official Swiss languages were considered, and that the formidable Emile Cherbulliez would be passing judgement on my school-boy French!

Most of the reviews in this book on organic topics are in German, with the *Introduction*, Venanzi's article and the physical and structural reviews being given in English. However, even in these latter topics, most of the papers cited are in German. English language articles did not appear in the journal until the late 1960's, although, with characteristic Swiss business acumen, the editorial board cheerfully accepted paid advertisements in that language at a much earlier date! The acceptance of English, coupled with the opening of *Helvetica* to articles from outside Switzerland, did much to move the journal into the front rank of chemical periodicals, where it remains today. Articles in the Swiss languages still account for about 20% of the journal's contents, stubbornly resisting the spread of English as the new *lingua franca*. When I recently asked a Swiss friend, impressively fluent in English, why he and a senior colleague had elected to publish an important and lengthy article in *Helvetica* in German, when an English version would have attracted a much wider audience, he replied, 'Ah, but it would not have had the *exactness*!' A comment in the tradition of the quotation from Boileau cited by the editors as embodying Cherbulliez's editorial philosophy – *Ce que l'on conçoit bien s'énonce clairement et les mots pour le dire arrivent aisément*'. The more so in one's native tongue.

Books of this kind are not to be read at a sitting, but provide an unending source of historical gems when dipped into over time. Who would not rejoice to rediscover the series title from Firmenich AG – 'Sur l'arôme de viande de boeuf grillée', or the splendid 'Analysen alter Weine – 1834er Yvorne und 1840er Glacier' of 1919, whose authors assured their readers in closing that 'Zum Schluss sei neben der Wiedergabe dieser Analysenwerte immerhin erwähnt, dass beide Weine sich noch in guter Verfassung befanden. Der 1834er Yvorne war im Geruch reintönig, im Geschmack etwas hart, mit sogenannter Sulfatfirme. Der 1840er Glacier duftete stark nach Estern; im Geschmack war er etwas brandig'. More seriously, background literature references in hosts of contemporary papers are brought to life by these reviews, making easier, in Prelog's words, 'the task of evaluating the merits of one's predecessors'. This is an enjoyable pursuit, even when one is in danger of becoming a predecessor! For the young, who are in the vanguard of the advance of science, the work can be recommended as helping to instill a sense that they too will one day provide the shoulders for others to stand upon. All of the contributors are to be congratulated for their part in this wonderful labor of love. Not only Swiss chemists, but all with an interest in the development of chemistry should find the

book stimulating and enjoyable. I don't intend to part with my already well worn review copy!

ROBERT F. BRYAN

Department of Chemistry
University of Virginia
Charlottesville
VA 22901
USA

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Modern crystallography. Vol. 2. Structure of crystals. (Second enlarged edition.) Edited by B. K. VAINSHTEIN, V. M. FRIDKIN and V. L. INDENBOM. Pp. xx + 520. Berlin: Springer-Verlag, 1994. Price DM 119. ISBN 3-540-56848-4.

This is the second volume in the ongoing republication of *Modern Crystallography*, which has previously appeared in English translation in the Springer series in *Solid-State Sciences* (this volume as No. 21). A review of Vol. 1 of the second edition, by Douglas Dorset [*Acta Cryst.* (1995), **B51**, 264], has already been published earlier this year. The first edition of this volume was reviewed in 1983 by Professor J. Auleytner [*Acta Cryst.* (1983), **A39**, 272].

This second volume qualifies as a new edition solely on the basis of the addition of a 90pp. sixth chapter, entitled 'Advances in Structural Crystallography', written by Professor Vainshtein and nine colleagues. The earlier chapters remain virtually unchanged from the previous edition. Of 233 literature citations in these earlier chapters, only 18 cite work published after 1983. Of these 18, only six cite work published after 1990, and four of them are a general reference to the second edition of Vol. 1. The five original chapters deal with 'Principles of Formation of the Atomic Structure of Crystals', 'Principal Types of Crystal Structure', 'Band Energy Structure of Crystals', 'Lattice Dynamics and Phase Transitions' and 'The Structure of Real Crystals'.

The new chapter contains 11 sections, of widely varying quality, reviewing structural topics that came into prominence in the eighties and early nineties. Three sections are written by Professor Vainshtein himself. The first of these is a six-page review of fullerenes and fullerides, through 1992. The second, written in collaboration with V. I. Simonov, is a useful review of superconductivity and superconducting structures. Here literature citations are given through 1993. The third section reviews developments in the structural investigation of biomolecular crystals, with discussions of NMR methods and molecular dynamics calculations. Here, again, the bulk of the work discussed dates from before 1990, with but a brief mention of more recent achievements, such as the increasing use of MAD phasing and time-resolved studies using synchrotron radiation.

The remaining sections of the chapter are devoted to later developments in the crystal chemistry of silicates, the use