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Application of representation analysis to the magnetic structure of nickel chromite spinel: erratum.

By E. F. Bertaut and J. Dulac, *CNRS and CENG, Grenoble, France*

(*Received* 19 *September* 1979)

Abstract

In Bertaut & Dulac [*Acta Cryst.* (1972), **28**, 580–588], for clerical reasons an error has crept in so that the numerical moment values of y and z components of Cr_1 are to be interchanged. One should read in the *Abstract* and in relation (8.9):

$S_z(Cr_1) = -0{\cdot}73$ (instead of $-0{\cdot}45$);
$s_y(Cr_1) = \ 0{\cdot}45$ (instead of $+0{\cdot}73$).

All information is given in the *Abstract*.

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Commission on Journals Chemical Nomenclature

The attention of authors submitting papers to *Acta Crystallographica* and *Journal of Applied Crystallography* is directed to the requirement that chemical nomenclature should be consistent, clear and unambiguous and conform to the rules of nomenclature established by the International Union of Pure and Applied Chemistry, the International Union of Biochemistry and other appropriate bodies. For IUPAC rules, see *Nomenclature of Inorganic Chemistry, Definitive Rules*, 1970 (1971), London: Butterworths; *Nomenclature of Organic Chemistry, Sections A,B,C,D,E,F & H*, revised ed. (1979), Oxford: Pergamon Press. Additional important references include: inorganic boron compounds, *IUPAC Inf. Bull.* (1970), No. 8; carbohydrates, *IUPAC Inf. Bull.* (1970), No. 7; steroids, *Pure Appl. Chem.* (1972), **31**, Nos. 1–2; *Biochemical Nomenclature and Related Documents* (1978), London: Biochemical Society. An index to all IUPAC nomenclature publications is available from the IUPAC Secretariat, Bank Court Chambers, 2–3 Pound Way, Cowley Centre, Oxford OX4 3YF, England. French versions of IUPAC rules for nomenclature of inorganic and organic compounds are available from Le Secrétariat, Société Chimique de France, 250 rue Saint-Jacques, Paris V, France; German versions from Verlag Chemie GmbH, Postfach 1260/1280, D-6940 Weinheim, Federal Republic of Germany; a Russian version of the organic rules only from PIK VINITI, Oktyabrsky prospekt 403, Lyubertsy 140010, Moscovskaya oblast' 10, USSR.

Rigid and consistent conformance to these rules throughout a manuscript is not required but the approved names of compounds should be given at least once. In particular, all papers in *Acta Crystallographica*, Section B, reporting crystal structure determinations and all Crystal Data in *Journal of Applied Crystallography* should include the approved name(s) of the compound(s) in the title of the paper or in a footnote to the title. Any paper in *Acta Crystallographica*, Section A, or in *Journal of Applied Crystallography* dealing with the crystal physics or the properties of a particular material should also include the approved name of the compound concerned.

Advice on chemical nomenclature may be obtained from Dr K. L. Loening, Director of Nomenclature, Chemical Abstracts Service, PO Box 3012, Columbus, Ohio 43210, USA; and on the particular nomenclature of inorganic compounds from Professor Y. Jeannin, Laboratoire de Chimie des Métaux de Transition, Université Pierre et Marie Curie, 4 place Jussieu, 75230 Paris CEDEX 05, France. Enquiries may also be addressed to Dr J. E. Derry, International Union of Crystallography, 5 Abbey Square, Chester CH1 2HU, England.

Book Reviews

Works intended for notice in this column should be sent direct to the Book-Review Editor (J. H. Robertson, School of Chemistry, University of Leeds, Leeds LS2 9JT, England). As far as practicable books will be reviewed in a country different from that of publication.

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Кристаллы. М. П. Шаскольская. (**Crystals.** By M. P. Shaskolskaya) Pp. 208. Moscow: 'Nauka', 1978. Price Rb. 0.40.

This little volume deals in an introductory fashion with many aspects of crystal growth in natural circumstances and in laboratory and factory conditions including conditions of weightlessness in space. The book is addressed to young readers and non-specialists interested in science. It is written in a popular easy-to-read style.

The first part begins with a presentation of the 'world of crystals' and describes the crystalline state as the natural form of solids. It delivers basic information about the form and structure of crystals and closes with a comprehensive description of the crystals of ice and gem stones.

The second part deals with the mineralogical aspects of crystal growth inside the earth. Examples of melt growth from volcanic lava and of solution growth in different natural

circumstances, such as salt lakes and caverns, are presented in an attractive way. Vapour growth is also described for the case of snow formation in clouds. This part ends with some information about the crystals brought back from the moon.

The third part deals with artificial conditions of crystal growth. Hydrothermal and solution growth, melt growth and vapour growth are presented and illustrated with many examples, such as syntheses of quarz, ruby and diamond. Various applications of these crystals are also indicated. In this part, interesting descriptions are presented of the growing of single-crystal devices with desired shapes (often very sophisticated shapes) – such that they do not have to be cut or polished afterwards. This section is particularly instructive in illustrating the variety of applications of crystals in modern techniques.

The book is clearly written and combines simple and practical information on crystal growth and on the applications of single crystals with information on the development of this branch of science. The contribution of Russian scientists in the field is emphasized and the examples of natural sources of minerals are taken from the territory of the USSR; therefore the book is addressed mainly to Russian readers.

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Chemical physics of solids and their surfaces. Vol. 7. Senior reporters M. W. ROBERTS and J. M. THOMAS. Pp. viii + 184, Figs. 75, Tables 7. London: The Chemical Society, 1978. Price £22.50, $55.00.

This volume of the series of *Specialist Periodical Reports* is made up of a number of topics in some specialized areas of solid-state chemistry and physics.

In the first chapter *Defects and microstructures in feldspars* (A. C. McLaren), the nature and the crystal structure of the feldspars are briefly reported. The use of the electron microscope and of conventional optical techniques for the detection of defects, microstructures and solid-state precipitations in feldspars is also discussed.

The article *The use of atom–atom potentials in interpreting the behaviour of organic molecular crystals* (S. Ramdas and J. M. Thomas) describes the method for the determination of some parameters from the experimental data on a homogeneous class of compounds (hydrocarbons). In the same class the method of atom–atom potentials is shown to be very useful in the study of molecular conformations in perfect crystals, where the description is particularly complete. But it is also successful for other applications such as the study of polymorphic transitions and disorder in molecular crystals.

The report on *The characterization and properties of small metal particles* (Y. Takasu and A. M. Bradshaw) treats an argument of very recent interest. After considering the new interesting properties of the metallic particles (clusters) and their surface reactivity, the reporters briefly discuss the 'catalyst models' prepared *in situ*. The cluster approach to solid-state physics is broached, correlating the bulk and surface properties of single crystals with those of the model. This approach can be tackled by means of many computational methods, *e.g.* HF, MO, SCEP, CNDO and *ab initio*. The interconnections of small metal particle research with solid-state physics and chemistry and with nucleation theory are made evident.

Neutron scattering from adsorbed molecules, surfaces and intercalates (P. G. Hall and C. J. Wright) reports a brief description of neutron (inelastic) powder diffractometers and compares them with X-ray powder diffractometers. Comparisons with data obtainable by means of IR and NMR techniques are also reported for diffusion measurements. The most recent studies on the two-dimensional structures of physisorbed and chemisorbed gases on graphite, metal and oxide surfaces are reported. Furthermore, a paragraph is devoted to the topical subject of the structural investigation of new intercalated phases.

The article *Photo-induced reactivity at oxide surfaces* (R. I. Bickley) summarizes in a complete way the mechanism in photoelectronic and photoelectrochemical processes. The most recent developments in this area may improve the knowledge of, for example, storage of information, control of light intensities and energetically favoured methods to decompose water into its constituents.

The final chapter *Reflection–absorption infrared spectroscopy* (J. Pritchard) describes the physical basis of the new powerful technique which allows the observation of characteristic spectra from monolayers of substrates. Some examples of detection of inorganic and organic gases adsorbed on metal surfaces are given.

All the reports summarize the recent literature up to 1977 and the total coverage amounts to over 600 references. The print is quite accurate and the misprints are very few (the most evident is in equation (1) of chapter 5, where a mathematical symbol 'exp' is missing).

The price seems too high for a book of 179 pages of text, although a lot of material is summarized and some theories and techniques concerning solid-state materials science are expertly treated.

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Book Received

The following book has been received by the Editor. Brief and generally uncritical notices are given of works of marginal crystallographic interest; occasionally a book of fundamental interest is included under this heading because of difficulty in finding a suitable reviewer without great delay.

The molten state of matter. By A. R. UBBELOHDE. Pp. xvi + 454. Chichester, John Wiley, 1978. Price £23.50. A review of this book, by J. L. Atwood, has been published in the November 1979 issue of *Acta Crystallographica*, Section B, page 2828.