

The Glossary, especially in the vacuum of the existence of an up-to-date compendium such as *Mineralogische Tabellen*, is extremely useful and an essential reference work for both professionals and amateurs.

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ROCK-FORMING MINERALS. VOLUME 1A. ORTHOSILICATES (Second Edition). By W. A. Deer, R. A. Howie, and J. Zussman. Longman Group Limited, London and New York, 1982. 919 pages. \$149.95.

Those of us who learned at least some of our mineralogy and petrology about 20 years ago grew up with the five-volume set of DHZ. Probably substantial chunks of at least some theses came out of DHZ. Even today the one-volume condensed DHZ is often in my hand.

I have accordingly read with anticipation through this new edition on orthosilicates. Chapters treat the olivine group (olivine, tephroite and knebelite, monticellite), the humite group (norbergite, chondrodite, humite, clinohumite), zircon, sphene, the garnet group, vesuvianite, sillimanite, mullite, andalusite, kyanite, topaz, staurolite, and chloritoid. Each chapter treats structure, including high pressure-temperature data and site occupancies; chemistry, including trace elements; cation distribution (crystal-crystal and crystal-liquid partitioning for major and trace elements); experimental work (more-or-less every phase diagram containing the mineral in question and every thermodynamic treatment); alteration; optical and physical properties (conventional properties plus habits, absorption spectra, conductivity, diffusivity, thermal expansion, elastic properties, and experimental deformation studies, where such data are available); distinguishing features (optical—the shortest sections in the book); and parageneses in igneous, metamorphic, lunar, and meteoritic rocks.

The first inclination is to compare the new DHZ with the old. The overwhelming comparison is in size: 170 pages on orthosilicates in the old compared to 919 in the new. Part of that expansion is in new subjects, such as site occupancy, spectroscopy, high pressure-temperature structure, trace-element chemistry, and cation distributions. There is, of course, more material on structure, chemical analyses, including electron microprobe analyses (which arrived since the last edition), fabrics, and deformation.

The expansion of the new DHZ by space is revealing: about

double in structure, no change in optics, about triple in major-element chemistry, about 10 times in physical properties, and about 20 times in experimental work. The expansions to a degree reflect the explosion of knowledge and the directions of research in the last 20 years. On the other hand, the authors chose to expand some sections more than others. In any case, the result is that DHZ has changed from a reference book that you comfortably took to the microscope or from which you extracted a comfortable consensus opinion to a reference book that you definitely won't take to the microscope and in which you will find no consensus of opinion at all. The greatly expanded sections, notably on experimental work, represent compendia of everything written up to about 1980. The new material is more-or-less organized, but nothing is critically reviewed or even compared. One thus finds trivial phase diagrams next to important diagrams and one set of data next to a contradictory set of data. The greatly expanded sections are useful compilations of most of the literature that you ought to know on a subject, but any critical evaluation of that literature will be in the reader's hands. Some of the important petrologic topics of the day—for instance, the relation of magmas that crystallize magnesian olivines to depths of generation of abyssal tholeiites—are bypassed due to the compendium nature of information presented.

The old DHZ was, in my opinion, a useful blend of mineralogic and petrologic data. The new DHZ, in my opinion, is a volume written for and useful for petrologists more than mineralogists, the sections on "new mineralogy" (site occupancy, spectroscopy) notwithstanding. In this regard, DHZ should be compared to the *MSA Reviews in Mineralogy*, vol. 5 on "Orthosilicates," which treats mineralogy, chemistry, and petrology of the orthosilicates in fewer pages (381 p.) (and at a lot less cost) but with at least equal and arguably better sections on structure, bonding, physical properties, and cation distributions.

Every library should definitely contain the new DHZ, but I do not foresee the sale of a tremendous number to individual geoscientists. The old DHZ fit a real need for an optics book with authoritative sections on structure and paragenesis. In the new DHZ it is rightly recognized that optics has stood still while a torrent of new analytical techniques and experimental investigations has rushed by. I stand in awe of the time and intelligence involved in compiling a record of that torrent. Unfortunately, in the compilation process the authoritativeness has been lost.

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NOTICES

33rd Annual Clay Minerals Conference September 30–October 3, 1984

The Clay Minerals Society Annual Meeting will be held at Capitol House, Baton Rouge, Louisiana, U.S.A. Field trips will include opportunities to examine Mississippi alluvial valley loess, Atchafalaya swamp and delta deposits, and Mississippi delta sediments and mudlumps. The technical program will include a symposium on clays and clay minerals in the petroleum industry and a workshop on recognition of clays using remote methods. Papers are being solicited with this announcement for

both the symposium and the general session. For further information contact: Ray E. Ferrell, Department of Geology, Louisiana State University, Baton Rouge, Louisiana 70803. Phone: 504/388-5306.

The Kinetics and Mass Transport of Silicate and Oxide Systems Meeting September 13–14, 1984

The Mineralogical Society of Great Britain, Institute of Physics, British Ceramic Society, and Polar Solids Discussion Group will hold a joint meeting at The Geological Society, London on

the topic listed above. The aim of the meeting is to review some of the available experimental and theoretical techniques for investigating the kinetics and mass transport of silicate and oxide systems, and some of their achievements within academic and industrial environments. Sessions will be devoted to: material characterization; mass transport studies; kinetic studies; theoretical/modelling studies; industrially-related problems. Invited speakers will give review-type lectures to introduce the main subject areas. Further details of the meeting and registration forms are available from: Dr. R. Freer, Dept. Electrical & Electronic Engineering, North Staffordshire Polytechnic, Beaconsfield, Stafford, ST18 0AD, Great Britain. Room reservations must be made before February 1, 1984.

NBS Tables of Chemical Thermodynamic Properties

A new single-volume reference containing tables for standard-state thermodynamic properties of inorganic and simple organic compounds has been issued by the Commerce Department's National Bureau of Standards (NBS). The publication will be of particular use to researchers in chemistry and physics, chemical engineers, and manufacturers for the development of new products and the design of chemical and industrial processes.

NBS Tables of Chemical Thermodynamic Properties: Selections for Inorganic and C₁ and C₂ Organic Substances in SI Units represents the results of a major effort to provide evaluated data on enthalpy, Gibbs (free) energy of formation, heat capacity, and entropy for more than 14,000 substances at 25°C. The original data on which the tables are based were drawn from

more than 60,000 references. All of the data have been carefully evaluated and the "best" values for each substance have been assigned. The results have been checked for thermodynamic consistency using specially developed computer programs.

Dr. David R. Lide, Jr., chief of the NBS Office of Standard Reference Data, anticipates the reference will also provide an educational use because the information is given in SI units—energy units of joules, instead of the traditional calorie.

The tables, which were developed by the Chemical Thermodynamics Data Center under the direction of Donald D. Wagman of NBS, are a cumulative revised edition of the widely used NBS Technical Note 270 series of publications on the selected values of chemical thermodynamic properties. The first section of this series appeared in 1965. Other contributors are: William H. Evans, Vivian B. Parker, Richard H. Schumm, Iva Halow, Sylvia M. Bailey, Kenneth L. Churney, and Ralph L. Nuttall.

The tablets have been published for NBS by the American Chemical Society and the American Institute of Physics as *Supplement 2 to the Journal of Physical and Chemical Data*. Copies of the book may be ordered for \$40 prepaid from the American Chemical Society, Books and Journals Division, 1155 Sixteenth Street, N.W., Washington, D.C. 20036.

Abstractors Needed

Mineralogical Abstracts needs abstracting volunteers. Several important journal assignments are available. Please contact Karl A. Riggs, Mineralogical Abstracts Organizers for America, Department of Geology and Geography, Mississippi State University, Mississippi State, Mississippi 39762.

ERRATA

A partisan review of proterozoic anorthosites by S. A. Morse (Vol. 67, 1087–1100). The following reference was omitted:

Yoder, H. S. Jr. (1968) Experimental studies bearing on the origin of anorthosite. In Y. W. Isachsen, Ed., *Origin of Anorthosite and Related Rocks*, p. 13–22. New York State Museum and Science Service Memoir 18, Albany, N.Y. The citation on page 1090 of the text should refer to Yoder (1968). (The volume cited carries both 1968 and 1969 dates.)

Orickite and coyoteite, two new sulfide minerals from Coyote Peak, Humboldt County, California by Richard C. Erd and Gerald K. Czamanske (Vol. 68, 245–254). The formula for rasvumite, p. 245, should read KFe_2S_3 . Chemical formulas appearing on pages 245, 248, 250, and 251 should have all numbers as subscripts. The formula for hydroxycubanite, p. 251, should read $CuFe_2S_3(OH)_2$.

New Mineral Names: *Namuwite* by Adolph Pabst (Vol. 68, 281) should be *Mineral Mag.*, 46 (not 45).

New Mineral Names: *Theisite* by Adolph Pabst (Vol. 68, 282) should be *Mineral Mag.*, 46 (not 45).

New Mineral Names: *Pääkkönenite* by Michael Fleischer (Vol. 67, 858). The name of the mineral should be *pääkkönenite*. It was named for the late Dr. Veikko Pääkkönen. The name of one of the authors was improperly transcribed into Russian. It should have been V. Yletyinen.

New Mineral Names: *Gobbinsite* by Pete J. Dunn (Vol. 68, 642). The chemical formula was given incorrectly. It is $Na_4(Ca, Mg, K)_2Al_6Si_{10}O_{32} \cdot 12H_2O$.

New Mineral Names: *Tobelite* by Pete J. Dunn (Vol. 68, 850). The intensities for diffraction lines 5.12 and 4.486 Å should be 70.

New Mineral Names: *Mooreite* by Pete J. Dunn (Vol. 68, 474). The correct chemical formula for mooreite is $Mg_{9.10}Zn_{4.04}Mn_{1.89}(SO_4)_2(OH)_{26} \cdot 8H_2O$.

New Mineral Names: *Yukonite* by Pete J. Dunn (Vol. 68, 474–475). The diffraction lines given are for yukonite and not pitticite.

New Mineral Names: *Monazite-(Nd)* by Pete J. Dunn (Vol. 68, 849). The senior author's name, Maksimovic, was misspelled.

New Mineral Names: *Rebulite* by Pete J. Dunn (Vol. 68, 644). The name of the third author, P. Engel, was omitted in error.

New Mineral Names: *Lovdarite* by Pete J. Dunn (Vol. 68, 474). The space group should be given as $P2_1am$ (*Pmc*2₁).