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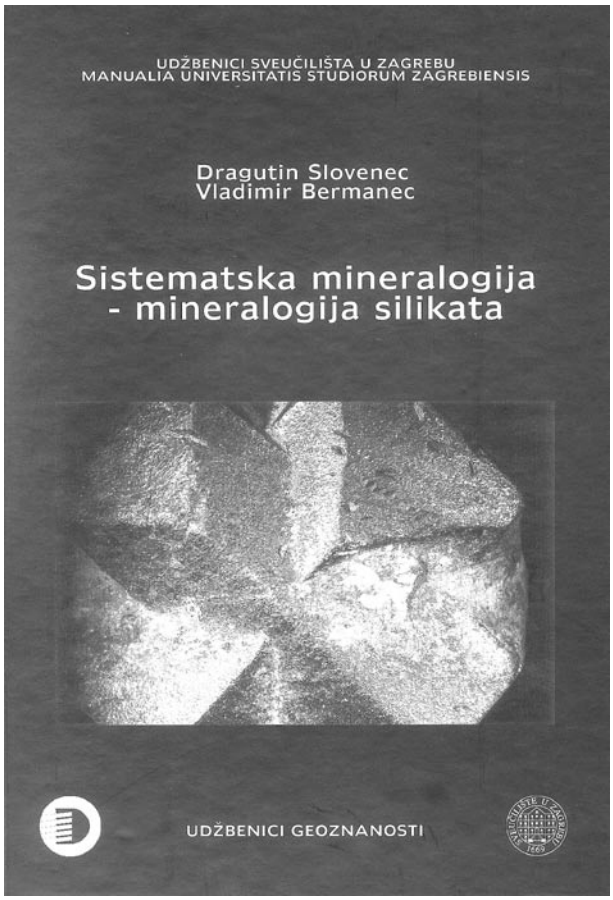
BOOK REVIEW

Dragutin SLOVENEC & Vladimir BERMANEC: Sistematska mineralogija – mineralogija silikata

(*Systematic Mineralogy – Silicate Minerals* – in Croatian)
359 p., 297 illustrations + 21 tables, Denona, Zagreb, ISBN 953-97778-4-4

This book, together with its companion volume on non-silicate minerals (Bermanec, 1999 – see this journal issue for the other book review) is a most welcome addition to geoscience textbooks written in the Croatian language. Both authors are professors of mineralogy at the University of Zagreb, Dragutin Slovenec (Faculty of Mining, Geology and Petroleum Engineering) and Vladimir Bermanec (Faculty of Sciences). The result of their joint effort is a textbook of great importance for Croatian mineralogists, crystallographers and geologists in general since the last text dealing with systematic mineralogy at undergraduate/graduate level was published in Croatia almost half a century ago. It is therefore also to be appreciated that the book has been accepted by the Senate of the University of Zagreb as an official textbook of the university (*Manualia Universitatis Studiorum Zagrabiensis*).



The text describes, catalogues and classifies all the most important silicate mineral species currently recognized. Although the general layout of the volume is traditional, with a classic systematic treatment of mineral groups, the authors also focus on the behaviour of minerals in relation to geological processes. A knowledge of how minerals respond to a changing geological environment is fundamental to our understanding of many dynamic earth processes. Thus, in the text silicate minerals are treated in terms of the behaviour of crystalline materials under changing conditions of temperature, pressure and the chemical environment. Concepts required to understand mineral behaviour are often complex but are presented here in simple, non-mathematical terms and will be easy to understand for the undergraduate mineralogy student. Nevertheless, it is also a very useful reference work for graduate education and scientific research.

The initial pages of the book feature a preface and a general introduction to the structure and classification of silicate minerals, followed by a thorough treatment of the silicate classes and groups. The Nesosilicates (Ch. 1), Nesosilicates with additional anions/ Nesosubsilicates (Ch. 1A), Sorosilicates (Ch. 2), Cyclosilicates (Ch. 3), Inosilicates (Ch. 4), Heterophyllosilicates (Ch. 4A), Phyllosilicates (Ch. 5) and Tectosilicates (Ch. 6). The silicate minerals are classified into homologous groups, sharing a similar structural type. Entries define individual minerals by name and chemical formula. Descriptions contain crystallographic data and information on morphology, physical properties, chemical composition, relationship with other minerals and occurrences. Coverage is carefully balanced.

There are 3 useful appendices – a list and abbreviations of rock-forming and ore minerals (Appendix 1), a list of obsolete mineral names for pyroxenes, amphiboles, micas and zeolites, according to the recommendation of the International Mineralogical Association – IMA (Appendix 2) and a list of ill-defined materials and mixtures, according to IMA (Appendix 3). The vol-

ume ends with an extensive list of references (including some difficult to locate sources from eastern Europe) and a mineral index of those mineral species treated in the text. It is also important to note that much of the data presented in the book are based on research perfomed by the authors and their groups.

One of the strengths of this work are its 297 illustrations, which include colour photographs of minerals (most of them taken by author V. Bermanec), crystal structure diagrams and other drawings. There are 21 tables in contrast colour layout, with information on the minerals described. Most of the photographed mineral specimens are from sample collections housed in Croatian museums and university departments and are thus readily available for further investigations. Again, different to earlier textbooks and research papers written in Croatian, this work uses terminology (i.e. mineral names) in accordance with the proposals of the Commission on New Minerals and Mineral Names (CNMMN) of the International Mineralogical Association (IMA), based on the original spelling of the names of persons, localities and similar (with only a few exceptions in cases where traditional Croatian names have been in frequent use for a long time).

In summary, this well written and well presented book – together with its companion volume on non-silicate minerals, has been well worth the long wait. It will certainly become a standard textbook for Croatian-speaking students of mineralogy and a useful reference companion for professional mineralogists, petrologists and geologists, as well as for mineral collectors and amateur enthusiasts. The publisher should be commended for the excellent production quality of this volume.

Goran KNIEWALD

Center for Marine and Environmental Research
Rudjer Bošković Institute
POB 180
HR-10002 Zagreb, Croatia
e-mail: kniewald@irb.hr