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U.S. DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

# THE FORD-FLEISCHER FILE OF MINERALOGICAL REFERENCES, 1981-1982 INCLUSIVE

by

Michael Fleischer and Constance M. Schafer

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## 1981-1982 Inclusive

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In 1916, Prof. W.E. Ford of Yale University, having just published the third Appendix to Dana's System of Mineralogy, 6th Edition, began to plan for the 7th Edition. He decided to create a file, with a separate folder for each mineral (or for each mineral group), into which he would place a citation to any paper that seemed to contain data that should be considered in the revision of the 6th Edition. He maintained the file in duplicate, with one copy going to Harvard University, when it was agreed in the early 1930's that Palache, Berman, and Frondel there would have the main burden of the revision. A number of assistants were hired for the project, including C.W. Wolfe and M.A. Peacock to gather crystallographic data at Harvard and Michael Fleischer to collect and evaluate chemical data at Yale.

After Prof. Ford's death in March 1939, the second set of his files came to the U.S. Geological Survey, and the literature has been covered since then by Michael Fleischer. Copies of the literature survey are maintained at the U.S. Geological Survey in Reston, Va., Denver, Colo., and Menlo Park, Cal., and at the U.S. National Museum, Washington, D.C. In addition, the complete file through 1977 has been published as Open-File Report 81-1169.

Since 1978, the references have been entered into a computer, and alphabetized computer print-outs are now published as open-file reports. The first such update of this survey, covering additions to the file from 1978 through 1980, is available as Open-File Report 81-1174. This, the second update, covers additions from 1981 through 1982.

### Coverage of the files

From its inception, it has been intended that the file should contain indicative abstracts of every paper that contains significant data on the physical and chemical properties of minerals. Especially in recent years, the attempt has been made to include references to studies on synthesis and on stability relations of minerals. It is needless to state that there are probably many pertinent references that have been missed, especially in recent years. There is also no doubt that carelessness in the use of the files has very likely caused the loss of some references; this type of loss is difficult to correct.

During the Ford years, the most important mineralogical journals (Mineral. Mag.; Am. Mineral.; Can. Mineral.; Bull. Soc. Fr. Mineral. Cristallogr. (now Bull. Mineral.); Z. Kristallogr.; Tschermaks Mineral. Petrogr. Mitt.; Periodico Mineral.; Neues Jahrb. Mineral., Monatsh.; Neues

Jahrb. Mineral., Beil.-Bd. (now Abh.); and others) were covered directly. In addition, abstract journals were covered (Mineral. Abstr.; Neues Jahrb. Mineral., Ref. (later Zentralbl. Mineral. and Z. Kristallogr.).

Since 1939, the important mineralogical journals have been covered, but Chemical Abstracts and Mineralogical Abstracts are relied on for much of the coverage. Sections of Chemical Abstracts covered (1981-1982) are Nos. 49 (Industrial Inorganic Chemicals), 53 (Mineralogical and Geological Chemistry), 68 (Equilibrium), 69 (Thermodynamics), 75 (Crystallography), and 78 (Inorganic Chemical Reactions). The sections on Magnetism and Spectroscopy, which have occasional references to data on minerals, are not usually checked, in the hope that Mineralogical Abstracts will report these.

It has become evident in the past few years that the coverage of the primary journals listed above is no longer sufficient. This is mainly because of the widespread use of the electron microprobe. Petrological papers, which ten years ago might have a few mineral analyses, now commonly contain many microprobe analyses (a paper with 50 analyses of 8 different minerals is not unusual), and these analyses are often not mentioned in the abstract journals. It has become necessary, beginning in 1980, to check regularly such journals as Contrib. Mineral. Petrol., Chem. Geol., J. Petrol., Lithos, and similar ones. It is certain that many such analyses have been missed in past years.

In each folder (except for minerals described since 1940), there is usually a summary of occurrences. These were prepared by Prof. Ford in the early 1930's, after he had checked specimens in the leading museums of the U.S., England, France, Germany, Austria, and Italy. Many folders have summaries of the chemistry, prepared by Fleischer about 1935. Fleischer, usually between 1975 and 1980, also assembled many summaries of the optical properties, especially in relation to composition.

Michael Fleischer
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